

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CRÜZR SADDLES LLC,

Petitioner,

v.

TETHRD, LLC,

Patent Owner.

Case No. IPR2025-01407

Patent No. 11,964,175

DECLARATION OF TOBE SHERRILL

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I, Tobe Sherrill, being over the age of 18 and competent to make the statements herein, hereby declare that:

I. INTRODUCTION

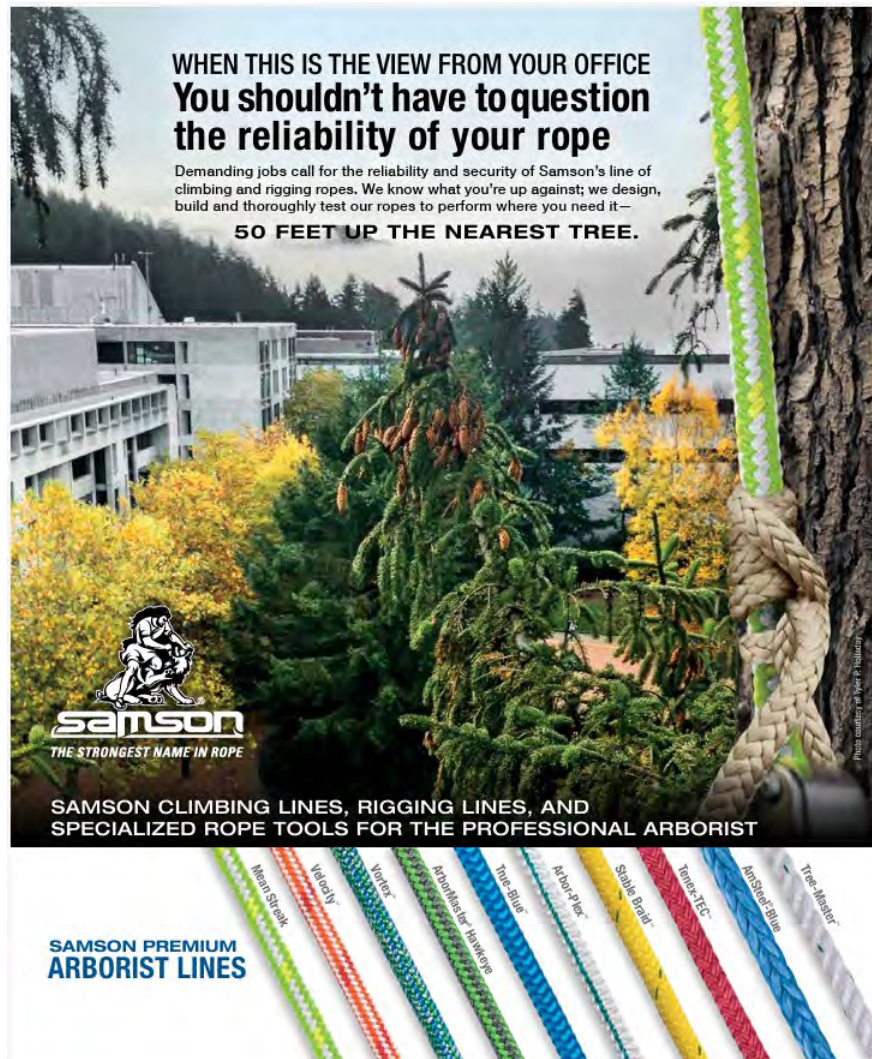
1. My name is William Tobias (“Tobe”) Sherrill. I reside in Greensboro, North Carolina. My residential address is 2 Henderson Court, Greensboro, North Carolina 27410.

2. I founded Rope Logic and Splicing Operations (<https://ropelogic.com/>) in around 1992, a company specializing in high-performance rope splicing, rigging solutions, and arborist rope technology. Rope Logic was, and continues to be, dedicated to advancing safety and efficiency in arboriculture through innovative rope systems and hands-on splicing expertise.

3. In 1960, my father William Tuttle (“Tut”) Sherrill founded Sherrill, Inc., dba Sherrilltree (<https://sherrilltree.com/>), and I led the company from March 1983 until December 2011. Sherrilltree was, and continues to be, a premier provider of arborist equipment, climbing gear, and tree care supplies, serving professionals as well as recreational climbers, arborists, and saddle hunters. The company has been a trusted industry leader for over 40 years, based in Greensboro, North Carolina, and remains committed to quality, innovation, and customer education.

4. Attached hereto as Exhibit A is a true and correct copy of the Sherrilltree Master Catalog from 2016. This catalog is a representative illustration of the products and services offered by Sherrilltree during the past four decades.

5. For example, since the early 1980s, and under my active leadership from 1983-2011, Sherrilltree supplied—and continues to supply today—not only climbing ropes (including Samson’s Amsteel-Blue rope) and other arborist-related equipment, but also sophisticated rope splicing services:



Ex. A at 13.



Ex. A at 4.

6. Through my training and extensive experience, I am very familiar with the technology involved in this matter, including the harnesses, saddles, slings, bridges, ropes, splices, hitches, knots, hardware, and other components used by recreational climbers, arborists, saddle hunters, and other professionals and active sportspersons.

7. In around 1997, I played a key role in developing throw line equipment and invented the Big Shot, a groundbreaking tool that revolutionized canopy access techniques in arboriculture. The Big Shot emerged from years of refining slingshot designs and overcoming manufacturing challenges. On March 30, 1999, I obtained U.S. Patent No. 5,887,577, titled “Apparatus for Propelling a Projectile” for that innovation.

8. I am also the named inventor on U.S. Patent No. 5,056,240, entitled “Overshoes for Protecting Clean Floors from Soiled Shoes or Boots” (issued October 15, 1991), and U.S. Patent No. 10,035,674, titled “Apparatus for Protecting and Dispensing Paper Products” (issued July 31, 2018).

9. I also filed patent applications on several of my other developments in the field, including a rope cannon for dispensing and organizing ropes (circa 2012), a carabiner trap (circa 1999), and webbed swim gloves (circa 1981). I understand that those applications did not become U.S. patents.

10. Accordingly, from my experience with the patenting process, I am generally familiar with the procedures for filing and obtaining a U.S. patent, as well as the basic legal standards for demonstrating patentability, such as the concepts of novelty and nonobviousness.

11. Additionally, I pioneered the use of detailed catalogs and visual guides as educational tools for tree workers, helping standardize best practices in

the industry. My work also emphasized the importance of trade shows and hands-on demonstrations in fostering professional growth and networking.

12. In 2012, I received the prestigious Millard F. Blair Exceptional Contribution to Practical Arboriculture Award from the International Society of Arboriculture (“ISA”). Ex. B at 3.



The video player shows a man and a young boy smiling. The man is wearing a blue shirt and the boy is wearing a blue helmet. The video title is "2012 Millard F. Blair Exceptional Contribution to Practical Arboriculture Award -- Tobe Sherrill". The video is from the International Society of Arboriculture (ISA) channel, which has 5.26K subscribers. The video has 145 views and was uploaded on Aug 24, 2012. The description states: "The ISA Awards of Distinction are the highest honors awarded by the International Society of Arboriculture (ISA). Nominations are submitted annually by members and industry professionals for nine different award categories. The entries are reviewed by the ISA Awards Committee and approved by the ISA Board of Directors. Each year, the award recipients are announced and honored at the ISA Annual International Conference. The Millard F. Blair Exceptional Contribution to Practical Arboriculture Award is granted to individuals in recognition of their substantial contributions to practical arboriculture."

145 views Aug 24, 2012

The ISA Awards of Distinction are the highest honors awarded by the International Society of Arboriculture (ISA). Nominations are submitted annually by members and industry professionals for nine different award categories. The entries are reviewed by the ISA Awards Committee and approved by the ISA Board of Directors. Each year, the award recipients are announced and honored at the ISA Annual International Conference. The Millard F. Blair Exceptional Contribution to Practical Arboriculture Award is granted to individuals in recognition of their substantial contributions to practical arboriculture.

<https://www.youtube.com/watch?v=AZivjdVQV8s>

13. I remain an active leader in the arboriculture industry, frequently participating in events such as ArborFest (<https://www.arborfestexpo.com/>), where I share insights on climbing techniques, gear innovation, and industry trends with fellow professionals. My contributions have helped shape modern arborist practices and equipment standards.

14. Throughout my career, I have prioritized safety, innovation, and education in arboriculture, working closely with climbers, manufacturers, and industry organizations to advance best practices. My contributions include product testing, rope splicing advancements, and the development of specialized arborist tools that are now industry standards.

15. I hold a bachelor's degree in Commercial Arts and Industrial Design from Appalachian State University (1979-1983), where I developed the creative and technical skills that later influenced my work in product design and arborist equipment development.

16. I have been retained as an expert witness by Petitioner Crüzr Saddles LLC, through its counsel Sterlington, PLLC, to provide professional opinions on the '175 Patent, the prior art to that patent, and whether a person of ordinary skill in the art ("POSITA") would have found the claims of U.S. Patent No. 11,964,175 ("the '175 Patent") obvious in view of that prior art. Based on my extensive industry experience and examination of the available information, including

particularly the information that I have reviewed in connection with the analysis for this consulting project, I conclude that a POSITA would have found each of those patent claims obvious.

17. I have been informed that the '175 Patent was filed on July 18, 2022 and issued on April 23, 2024. I also understand from the face of the '175 Patent that the patent is a continuation of Application No. 17/231,717, filed on April 15, 2021, now U.S. Patent No. 11,504,556, and a continuation of U.S. Patent Application No. 16/736,345, filed on January 7, 2020, now abandoned. In rendering my opinions, I have considered the prosecution history of the '175 Patent during its examination at the USPTO.

18. I am not and have never been an employee of Crüzr. I also have not consulted with or provided any other services to Crüzr in the past. Similarly, I have never been an employee of Tethrd and I also have not consulted with or provided any other services to Tethrd in the past. I have been retained by Crüzr in this proceeding to provide my independent analysis of the issues raised in the Petition for *inter partes* review of the '175 Patent.

19. I am being compensated at my normal hourly consulting rate (for non-Sherrilltree consulting) of \$400/hour for my work in this proceeding, including studying this matter, preparing this declaration, and providing any cross-examination testimony. My compensation is not contingent upon the outcome of

this proceeding or the particular testimony or opinions that I express. I have personal knowledge of the facts stated in the declaration, and I am willing to competently testify to them if and when called to do so.

20. Between now and such time that I may be asked to testify, I expect to continue my review, evaluation, and analysis of evidence presented during this proceeding. I expect to review the declarations and other evidence submitted by Tethrd's expert(s). I expressly reserve the right to amend or supplement this declaration, as appropriate, after considering the opinions set forth by Tethrd's expert(s). I also reserve the right to review and consider that information in further developing or refining my opinions.

II. MATERIALS CONSIDERED AND BASIS FOR TESTIMONY

21. In forming my opinions, I have reviewed the '175 Patent, portions of its file history, and the other materials cited in my declaration. The bases for my opinions include the following: (i) my education and training directed to suspension harnesses, ropes, splicing, and related subjects; (ii) my more than 40 years of experience in the rope splicing and arborist field; and (iii) my review of certain documents as cited in my declaration. These documents include the documents listed above.

III. LEGAL PRINCIPLES

A. Person of Ordinary Skill in the Art

22. I understand that there are certain issues of patent law that require analysis from the perspective of a “person of ordinary skill in the art” (“POSITA”).

23. I understand that a patent claim is evaluated from the perspective of a POSITA, which I understand is a hypothetical person considered to have the skill level and knowledge of a particular field related to an alleged invention claimed in a patent, who is capable of understanding and practicing the technology described in the patent at issue. I further understand that this hypothetical skilled artisan is presumed to have before him or her all of the relevant prior art. I understand that this hypothetical person can be more than one person or a team of people of different disciplines.

24. The discussions in this Declaration are intended to convey the state of the art and the knowledge of a POSITA generally prior to the earliest effective filing date of the patent application that issued as the respective '175 Patent, which I understand is April 15, 2021 in Crüzr's view, or January 7, 2020 in Tethrd's view, the latter of which is based on the filing date of the first provisional application.

25. In this context, I have been asked to also define the level of a POSITA with regard to the '175 Patent. In defining the level of a POSITA, I have been informed that a list of non-exhaustive factors to consider include: (1) the type of problems encountered in the art; (2) the prior art solutions to those problems; (3) the rapidity with which inventions are made; (4) the sophistication of the technology; and (5) the education level of active workers in the field.

26. A review of the prior art reveals that a person of ordinary skill in the art here would not necessarily have extensive academic credentials. Rather, a POSITA would typically have been an active sportsman (*e.g.*, bow hunter, hammock camper, or yachtsman), a professional arborist, or safety harness specialist. Accordingly, I propose the following definition of a POSITA:

A person of ordinary skill in the art at the time of the invention would have had a high school education and would have had approximately 1-2 years of experience in designing, constructing, and/or modifying harness structures and their component parts (including having experience with saddles, slings, ropes, knots, and basic splicing techniques) used in applications such as saddle hunting, tree care and management, outdoor suspension hammocks, nautical/sailing lines, and safety harnesses.

27. From my own education, training, research, knowledge, and experience in this field, I have an understanding of what a POSITA would have

known and understood in the 2020 time frame. At that time, I was at least at the level of a POSITA with respect to the '175 Patent.

28. All of my opinions set forth herein are provided from the perspective of a POSITA at the time of the invention of the '175 Patent.

B. Novelty & Obviousness

29. Counsel for Crüzr has explained to me the rules under patent law for evaluating the claims of an issued patent to determine whether or not a claim is patentable over the prior art.

30. I understand that patent claims are interpreted in light of the claims, specification, and prosecution history, including amendments made to narrow the scope of the claims, and accompanying remarks. I understand that claims are to be viewed from the perspective of a person having ordinary skill in the art at the time of the alleged invention, as discussed above.

31. I understand that a patent claim is invalid for lack of novelty (also called “anticipation”) if what is claimed is not new. Anticipation occurs if within the “four corners” of a single prior art reference each and every limitation of the claimed invention is disclosed, either explicitly or inherently. Where a claim recites a range of values, a prior art reference anticipates the element if the prior art discloses an example within the claimed range. I further understand that a person is not entitled to a patent if the invention was known or used by others in this

country, or patented or described in a printed publication in this or a foreign country, before the priority date of the patent.

32. I understand that a patent is invalid if the invention claimed in the patent was put into public use or placed “on sale” in the United States by anyone more than one year before the patent application was filed.

33. I have been advised that, under the inherency doctrine, an unstated aspect of a prior art reference is considered to be inherently disclosed if the aspect is necessarily present in the disclosure, such that a POSITA would recognize that the inherent aspect naturally flows from the disclosure.

34. I understand that a claim may be independent or dependent, and that a dependent claim incorporates all of the limitations of the claim or claims from which it directly or indirectly depends. For a dependent claim to be anticipated by a prior art reference, each limitation of the dependent claim (as well as each limitation of the claim(s) from which it depends) must be disclosed in the same single prior art reference.

35. I understand that a claim is invalid as obvious if the subject matter of the claim as a whole would have been obvious at the time the invention was made to a POSITA in view of a prior art reference or a combination of prior art references.

36. I also understand that the following factors should be considered in determining whether or not a claim would have been obvious: the level of ordinary skill in the art; the scope and content of the prior art; the differences between the prior art and the claims at issue; and whatever secondary considerations may be present.

37. I am informed that a claimed invention may be found obvious where the claimed invention could have been made, for example, by or through: (a) combining various claimed elements known in the prior art according to known methods to yield a predictable result; (b) making a simple substitution of one or more known elements for another to obtain a predictable result; (c) using a known technique to improve the same type of device or method in the same way; (d) applying a known technique to a known device or method ready for improvement to yield a predictable result; (e) choosing from a finite number of identified, predictable solutions with a reasonable expectation of success or, in other words, the solution was one which was “obvious to try”; (f) a known work in one field of endeavor prompting variations for use in either the same field or a different field based on design incentives or other market forces in which such variations were predictable to a skilled artisan; and/or (g) teaching, suggestion, or motivation in the prior art that would have led a POSITA to modify the prior art reference or combine the teachings of prior art references to arrive at the claimed invention.

38. I understand that an invention may be found obvious if the prior art would have suggested the claimed invention to a POSITA, if a POSITA would have had a reasonable expectation that the invention would work to accomplish its intended purpose, or the combination of the invention would not have been uniquely challenging or difficult for a POSITA.

39. I further understand that any of the following may provide a “reason” for combining elements known in the art: a need or problem known in the field of endeavor at the time of invention and addressed by the patent; an obvious use of familiar elements beyond their primary purposes; or a design need or market pressure to solve a problem. If common sense would lead a POSITA to a predictable variation of the art, then that variation is likely to be obvious and unpatentable.

40. Based on my analysis, as set forth in greater detail in this Declaration, it is my opinion that a POSITA would have found that claims 1-14 of the '175 Patent would have been obvious in view of the prior art discussed herein regardless of which priority date is applied (April 15, 2021 or January 7, 2020).

IV. BACKGROUND AND PRELIMINARY MATTERS

A. The Long History of Rope Harnesses, Rope Knots, and Rope Splicing, Including Users Frequently Modifying Their Equipment Components in Myriads of Ways

41. Ropes, rope splicing, and knots have a long history that goes back centuries, particularly in the nautical and sailing arts. The uses of ropes and joining techniques were adopted and advanced several decades ago in subsequent arts, such as safety ropes and harnesses. In about the past two decades, that technology was further employed and adapted in other similar arts, such as outdoor suspension hammocks and tree care and management slings and harnesses. Most recently, during about the past decade, those same technologies were adopted in the field of saddle hunting.

42. In each of those contexts, the many types of useful ropes and the voluminous and often complex joining techniques (*e.g.*, splices and knots) were shared openly and publicly for the benefit of the community. That public sharing was amplified with the advent of the Internet, in which such information could be shared worldwide.

B. The Frequent Public Sharing of Splicing Techniques and Component Modifications on The Internet via, For Example, Popular YouTube Videos and Active Internet Message Boards

43. Historically, members of the arborist, hammock, and saddle hunting communities openly shared information about their various equipment components

and their do-it-yourself (“DIY”) modifications to those components. That public sharing was generally intended to freely provide information to members of their community or other interested persons, helping to develop the knowledge base and disseminate information to like-minded individuals, including the goal of advancing safety, comfort, and cost-savings. When Internet video sharing (*e.g.*, YouTube) and Internet message boards came into existence, the public sharing of information grew exponentially, including the dissemination of innumerable online discussions, videos, and photographs.

44. While patents in these arts do exist, they are nowhere near as voluminous as in other arts (*e.g.*, semiconductors, pharmaceuticals, cellular technologies, etc.). In general, members of these communities typically did not file patent applications on their contributions, largely because of the general sense that the various equipment components and modifications were already known by others, were already in the public domain, and/or were obvious modifications. In addition, the level of ordinary skill in the art here is not as high as in other arts, so persons of ordinary skill were not particularly patent-savvy.

C. Tethrd Provided None of the Most Relevant Prior Art (e.g., YouTube Videos and Internet Message Board Threads) to the Patent Examiners in the '175 Patent Application or Any of its Family Members

45. I understand that Tethrd did not disclose *any* of the publicly shared information on the Internet about saddle hunting equipment and modifications to various equipment components (including saddle bridges) to the USPTO. As outlined below, much of that information would have been highly material to the claims of the '175 Patent. Particularly in view of the dearth of patents in this art, that Internet prior art would have been highly relevant for the patent examiners to have fully evaluated the patentability of the claims of the '175 Patent.

D. The Challenged '175 Patent

1. A Fully Buried Bridge Was Well-Known in the Prior Art

46. I understand that Tethrd asserts that its “main body” (or saddle bridge), which has one end buried through its body to create a double-thickness rope, is a patentable innovation:

The disclosure relates to harness rope structures and more particularly pertains to ***a new harness rope structures*** for utilizing eye splices having ***fully buried rope ends which extend completely into their mating counterparts a sufficient distance such that a double layer of rope is created.***

Ex. 1001, Col. 1:38-42 (emphases).

47. In the field of the '175 Patent, this feature—splicing a rope to create a double layer thickness—is frequently referred to as a rope splice being “fully buried”.

48. Initially, as discussed below, the '175 Patent's claims are significantly narrower than a fully buried bridge in which the ends are buried “a sufficient distance such that a double layer of rope is created”. The claims recite that the two rope ends are “adjacent to each other”, which the '175 Patent teaches is within a distance of 3.0” or less. The claims also recite that both the eye loop and the friction hitch loop are “configured to engage” the bridge loops, which the '175 Patent teaches means spliced to interlock with the bridge loops. In any event, a fully buried bridge was well-known in the prior art, none of which was disclosed to the USPTO.

49. For example, in as early as 2012, Samson Rope Technologies, Inc. (“Samson”), the well-known manufacturer of synthetic ropes such as Amsteel, provided ubiquitous splicing instructions for making a “fully buried” eye-and-eye tail splice:

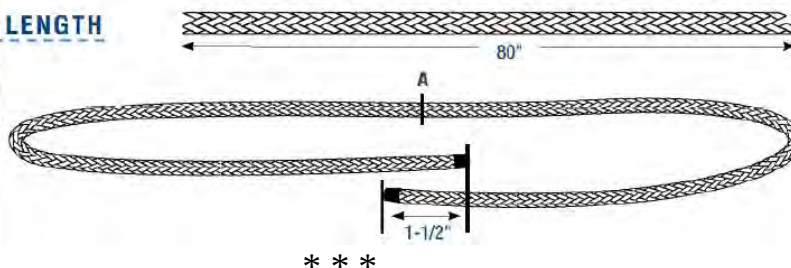
SAMSON SPLICING INSTRUCTIONS

12-Strand Eye-and-Eye Tail Splice

STEP 1

MARKING TAIL LENGTH

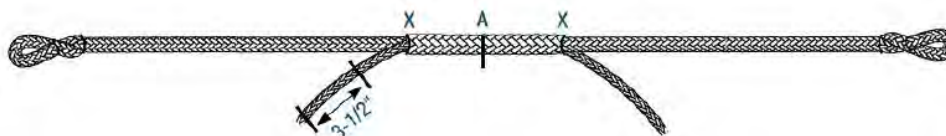
Mark the center point of the rope. This is Mark A. Bring both ends of the rope towards the center point as shown and overlap the tails 1-1/2".



STEP 7

MARKING AND CUTTING ENDS

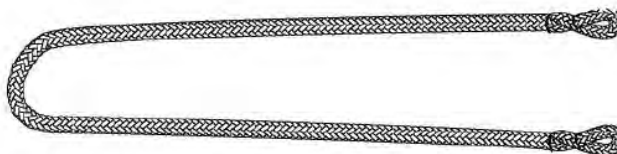
Smooth all slack from the rope, working from the Brummels to the center mark. Mark where the tapered ends exit the rope at both Marks X. Pull both tapered ends out from Mark X, measure 3-1/2" from previous mark where the tapers exited at Mark X (this is the section of both tapered ends that overlap in the center section), and cut off at an angle.



STEP 8

FINISHING SPLICE

Milk all slack from the Eye-and-Eye Tail. The goal is to keep the diameter and fullness of the rope consistent tied into a climbing hitch. When all slack has been removed and the diameter is consistent, lock stitch the eyes at both ends.



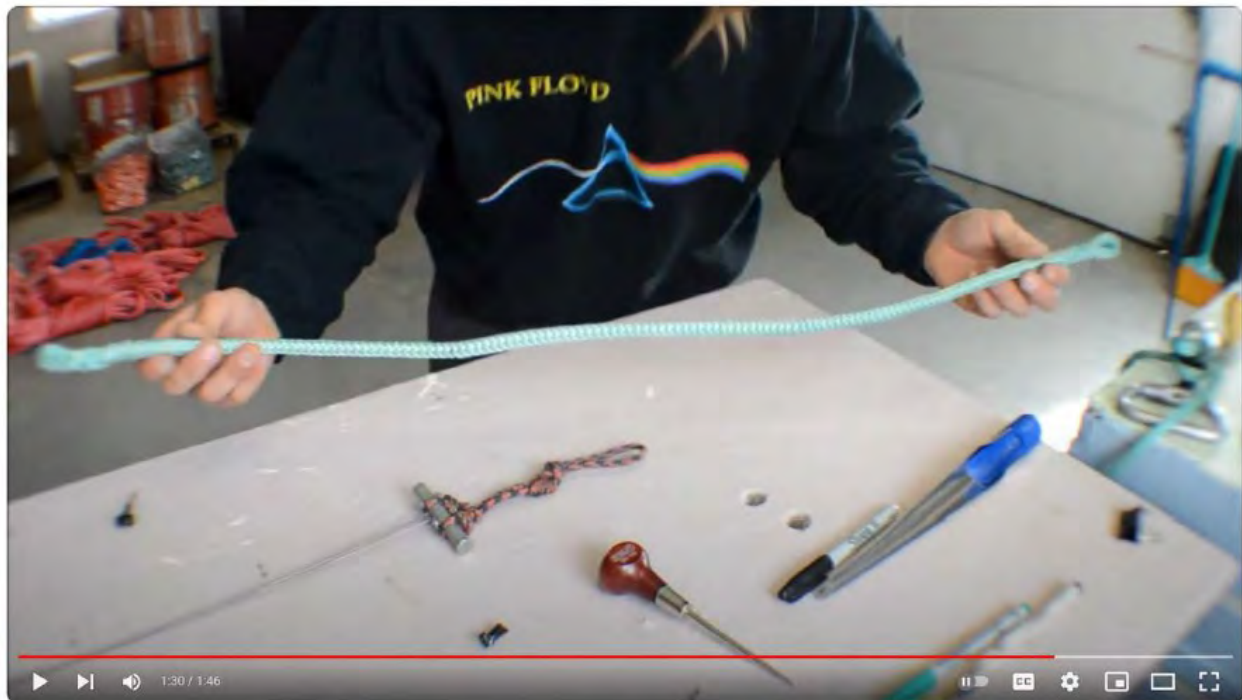
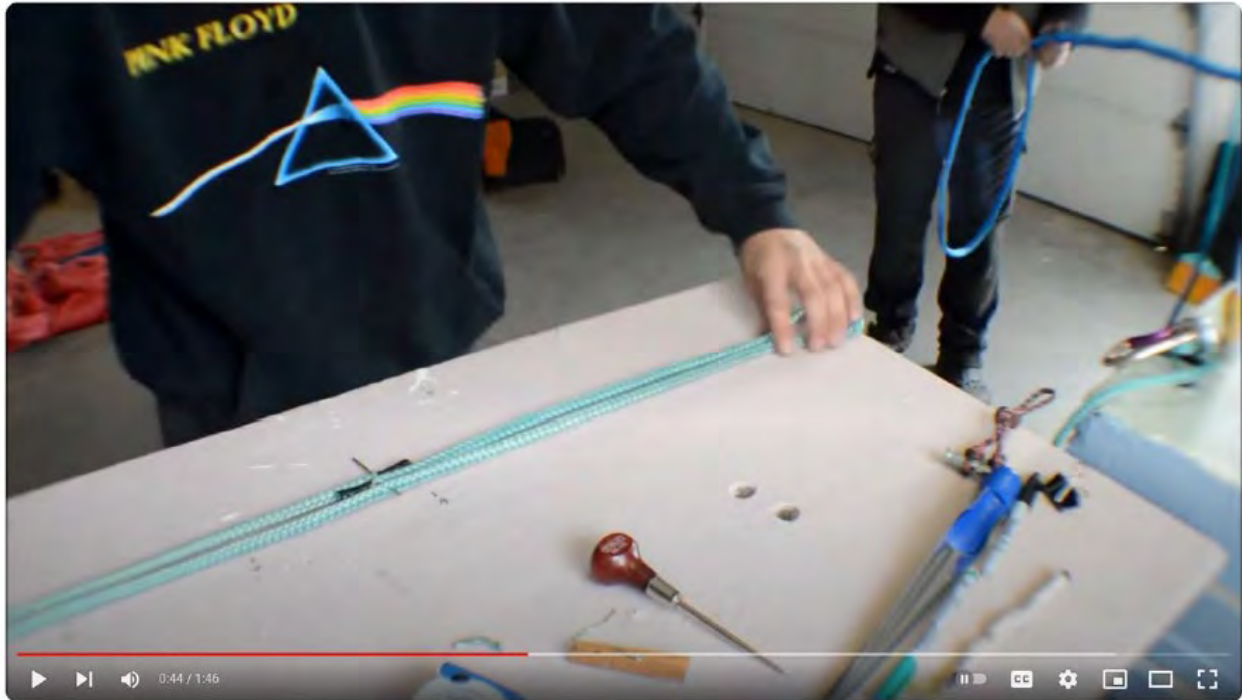
SamsonRope.com | Email CustServ@SamsonRope.com | Tel +1.360.384.4669

© 2012 Samson Rope Technologies, Inc. All rights reserved. (1010 11/04/12)

Ex. 1018 at 1-3.¹

¹ Amsteel is a 12-strand single braid rope. <https://www.samsonrope.com/utility/amsteel> ("AmSteel is a non-rotational, Samthane coated, 12-strand single braid that yields high strength and low stretch . . .").

50. Creating such a fully-buried bridge has been commonly done for more than a decade, as shown in this 2013 YouTube video:



How to Splice an eye and eye tail



ArbCan

1,721 subscribers

Subscribe

1,846 views Apr 5, 2013

A 'how to' splice video.....

Ex. 1128 at 1-2.

51. For further examples, arborists and saddle hunters frequently discussed making such fully-buried bridges in online forums:

Oct 30, 2012 #6



NickfromWI
Participating member
Location:
Los Angeles, CA

Okay, good call on sticking with technora rope here. A spliced loop will be quite stiff. But I have made icetail eye-eyes where the tails ran the full length of the sling making them about 7/16" in diameter and they would still hold a prusik. Honestly, you're not going to be out that much \$ if you just make it and see if it does what you want it to do.

This might be a good time to have ABR stitch one for you!

love
nick

Ex. 1124 at 5.

Aug 7, 2017 #15



GBlevins92
Well-Known Member
Joined: Nov 26, 2016
Messages: 782

I just tied my fixed bridge a few days ago with 1/4" amsteel I was worried that it would feel too small at first but I really liked it, I actually ended up burying enough of the tail on both ends that it was buried all the way to the middle of the bridge so it did make it a little thicker.

Sent from my iPhone using Tapatalk

Report

Like Reply

Ex. 1060 at 6.



swampsnyper
Well-Known Member
Joined: Mar 10, 2015
Messages: 4,463
Location: Warrior, Al

Aug 23, 2018 #34

Yes, actually. With the amsteel bridge there was a "hump" that was catching when the bridge slid through the carabiner. (Edit: this was due to the buried ends of the splice) Nothing major, but it irked me.

If you make a good taper on the ends of the amsteel bury, you won't feel that hump. You can even make the tapered ends from each side over lap each other in the center of the bridge for best results but it's hard to do. Trying to over lap them, I seem to always get a few straggler strands of the bury sticking out of the outer amsteel, but it's just cosmetic.

 Guff Dawg and Nutterbuster

Ex. 1106 at 5.



Peterk1234
Well-Known Member

Feb 4, 2018 #1

problem. I used 1/4" amsteel for the bridge, although it looks a lot bigger because I buried as much line as possible.



Ex. 1076 at 1-2.



Peterk1234

Well-Known Member

Feb 11, 2018

#5

TRINITY HART said:

Not to be critical, but your bridge looks a bit tattered. It may be from the splices on your rope, I can't tell. Just a safety concern.

That was my first bridge; just a test. Not tattered though. You are probably looking at the blind stitches. They are just not that blind 😊

Here is the final version. A bit longer and a bit cleaner. I only blind stitched one end and I have the tag ends buried almost the entire length of my 33 inch bridge. It is solid.



Ex. 1105 at 2.

52. Such fully buried bridges—in which the spliced ends meet in the middle of the bridge and the eye loop is spliced to interlock with the first bridge loop—disclose the “main body” recited in Claim 1 claims of the ’175 Patent.

53. While the above examples of fully buried bridges have spliced tag ends that meet ***in the center*** of the bridge, additional prior art discussed in the unpatentability claim charts below disclose fully buried bridges in which the spliced ends meet ***at the end*** of the bridge (and also that the eye loop is spliced to interlock with the first bridge loop). Accordingly, a fully buried bridge was well-known in the prior art and not innovative.

2. An UHMWPE (e.g., Amsteel) Bridge Was Well-Known in the Prior Art

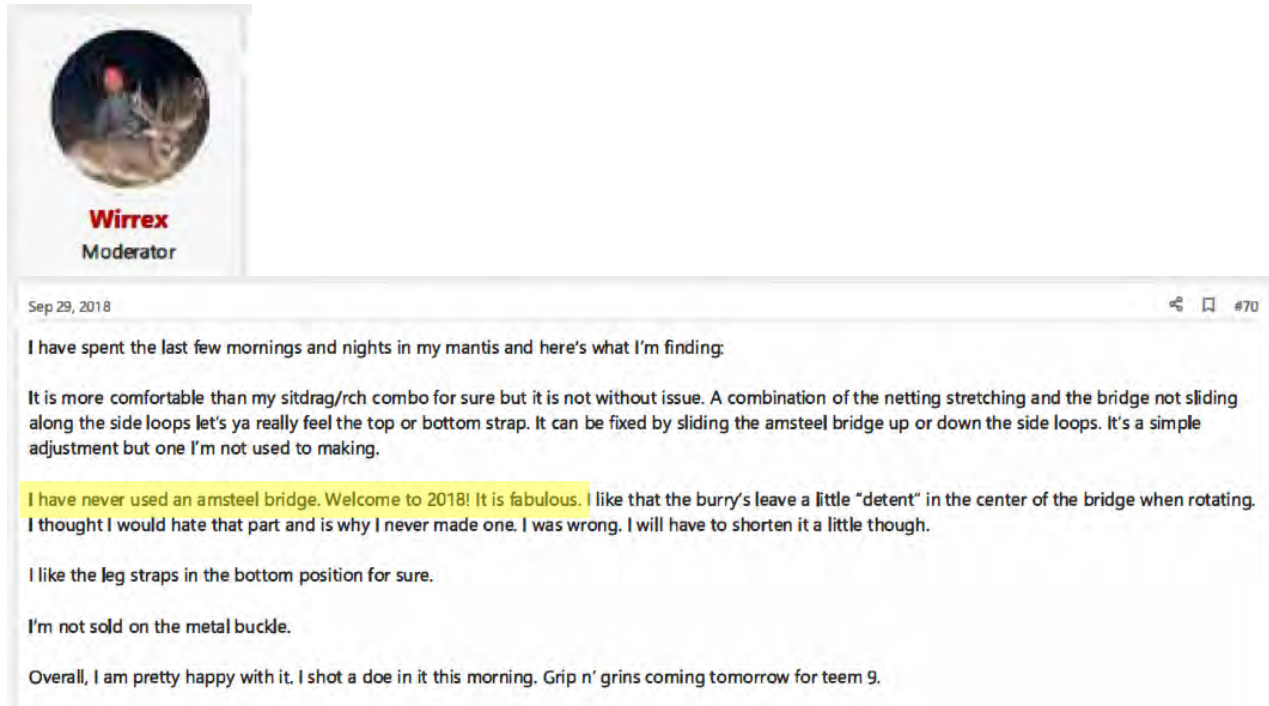
54. I understand that Tethrd asserts that making its “main body” (or saddle bridge) from Amsteel—a brand of ultra-high molecular weight polyethylene (UHMWPE) rope, which is lightweight and very strong—is an advance in the art:

The prior art relates to harness ropes which are generally conventional and ***utilize rope materials that are of inferior strength but which have a higher coefficient of friction and a higher weight to strength ratio.***

Ex. 1001, Col. 1:53-56.

55. To the contrary, Amsteel bridges and slings were well-known in the prior art, which I understand were not disclosed to the USPTO.

56. Perhaps the most well-known prior art Amsteel bridge was the bridge that **Tethrd** itself sold with its own Mantis saddle, which Tethrd introduced into the marketplace in 2018:



Ex. 1096 at 2.



Allegheny Tom
Well-Known Member
SH Member

Joined: Feb 4, 2018
Messages: 6,330
Location: Western Pennsylvania

Dec 29, 2018 #6

Seems like bridges are modified as much or more as any other piece of saddle component..

I changed my Kestrel bridge to Amsteel. Mantis comes with Amsteel but IMO, it's much too long.

I think all newbies need to start out with a bridge material that is somewhat adjustable. Learning to splice Amsteel is very easy, so there is no excuse for not experimenting with a the length of an Amsteel bridge.

Bridge length is important to comfort. Figure out what length works best for YOU.

Ex. 1122 at 3.



Mantis Saddle - Setup and Directions



Tethrd Nation
48.6K subscribers

Subscribe

83,192 views Dec 30, 2018

1:28
connects your bridge is made of AM steel
1:30
blue 1/4 inch it's very strong almost
1:34
8,000 pound breaking strength it also
1:36
has a benefit of being ultra light
1:38
weather resistant and it slides very
1:41
easily in and out of our climbing
1:42
carabiners these are your lineman loops

Ex. 1131 at 1, 3-4. Accordingly, an Amsteel bridge was well-known in the prior art and not innovative.

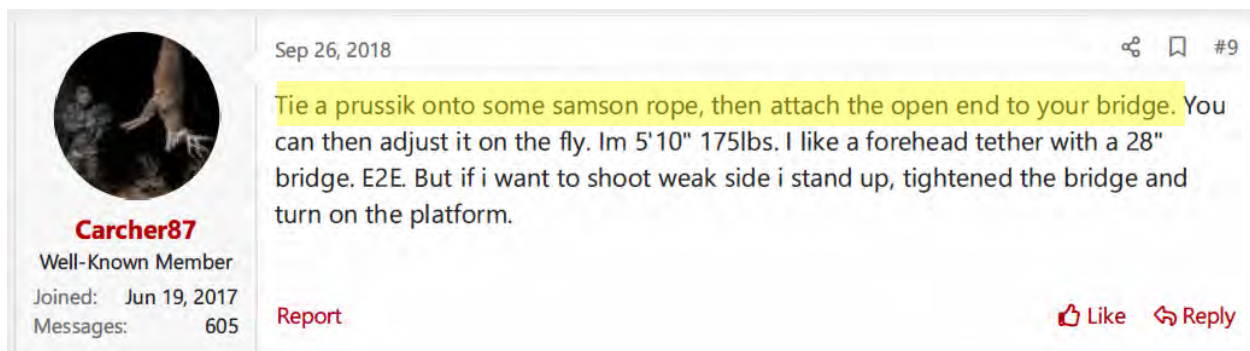
3. A Closed Loop Friction Hitch (e.g., Prusik Hitch) Was Well-Known in the Prior Art

57. I understand that Tethrd also asserts that using a closed loop “friction hitch” with a saddle bridge is an advance in the art. *See* Claim 1. A common type of closed loop friction hitch is called a “Prusik hitch” (and sometimes imprecisely called a “Prusik knot”). When the friction hitch is loosened, the bridge can freely slide through the hitch; and when the hitch is tightened, the bridge is held firmly by the hitch due to friction between the ropes. Thus, a friction hitch allows the usable length of the bridge to be adjustable.

58. Initially, as discussed below, the '175 Patent's claims are significantly narrower than a closed loop friction hitch being used with a bridge. The claims

recite that both the eye loop and the friction hitch loop are “configured to engage” the bridge loops, which the ’175 Patent teaches means spliced to interlock with the bridge loops. In any event, using a closed loop friction hitch with a bridge was well-known in the prior art.

59. For example, an eye-to-eye bridge was fixed in length, and many arborists and saddle hunters preferred an adjustable length bridge, which could be accomplished by removing one of the bridge’s eye loops and replacing it with a friction hitch (*e.g.*, a Prusik hitch):



Ex. 1067 at 4.



Ontariofarmer

Well-Known Member

SH Member

Joined: Dec 25, 2015

Messages: 5,261

Sep 22, 2017

I am going to try my bridge with a prussic for now.



If I do this I can quietly lengthen my bridge if I wish to move around the tree. Or adjust for a leaning or sitting position.

No carabiners either.

Ex. 1051 at 1-2. Accordingly, using a closed loop friction hitch with a saddle bridge was well-known in the prior art and not innovative.

4. Using an UHMWPE Friction Hitch (e.g., Amsteel Prusik Hitch) on an UHMWPE Line (e.g., Amsteel Rope) Was Well-Known in the Prior Art

60. I understand that Tethrd also asserts that using an Amsteel friction hitch (e.g., a Prusik hitch) on an Amsteel saddle bridge was an innovation, and claims this combination in Claim 10 of the '175 Patent (“wherein the main body and the friction hitch each are comprised of U[H]MWPE”). While some uninformed commentators may have been unaware of such usage in the prior art, a POSITA would have known that the prior art regularly taught that usage. Several such examples are illustrated below:

61.

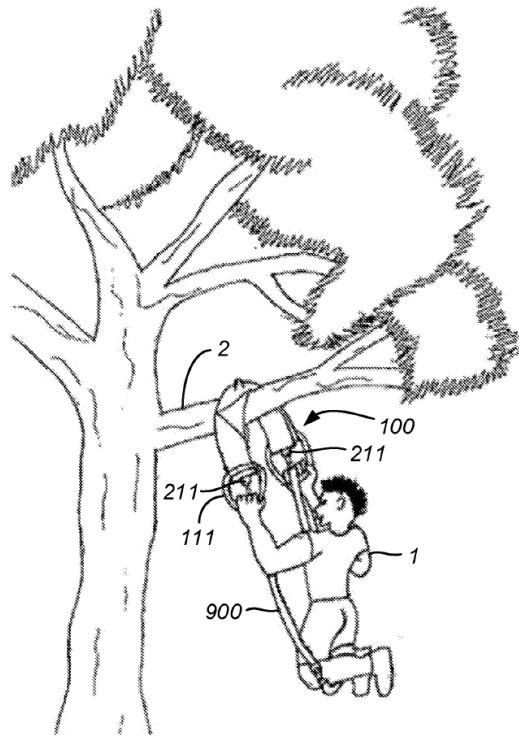


FIG. 9

In some embodiments of the method, the strap-like apparatus is removed from the user's body and wrapped about a stable vertical or horizontal structure such as a tree or pole . . .

* * *

In some embodiments of the apparatus, the strap-like apparatus or components thereof comprise wear-resistant material comprising . . . Dyneema® . . . [or] Ultra High Molecular Weight Polyethylene (UHMWPE)”

* * *

In some embodiments, the suspension line **1080** further comprises an adjustment device; friction hitch, or knot used to attach a

loop of cord around a rope or to create a length adjustment. . . . In some embodiments, the adjustment device, friction hitch, or knot is a Prusik knot 1085.

Ex. 1019 ¶¶ [0116], [0242], [0286].

62.

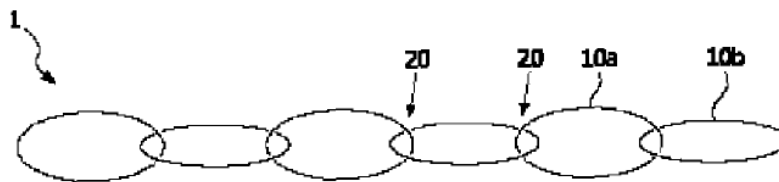


FIG. 1

Ex. 2021, Fig. 1.

The invention relates to a chain suitable to moor or anchor boats, to lash cargo in road, rail, water and air transportation or for conveying, hoisting, suspending or lifting applications, said chain comprising a plurality of interconnected links.

* * *

A further advantage of the use of polyolefin multifilament yarns, and particularly UHMPWE multifilament yarns, in the links of a chain is that an unexpectedly high static chain strength is obtained.

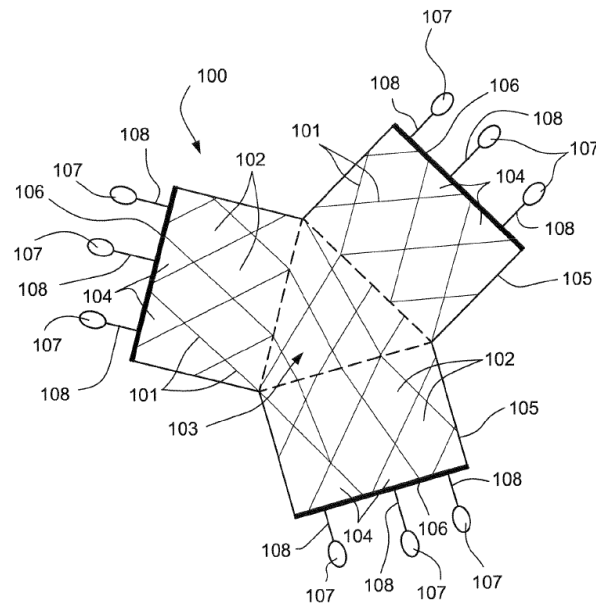
* * *

The advantage of a roundsling is that connections to each other . . . can be made with simple known knots, hitches or bends, which also show relatively high knot strength retention. . . . The person skilled in the art may easily select other suitable knots, for example the so-

called double ring hitch, the Kellig hitch, or Prusik and Klemheist knots.

Ex. 2021, Cols. 1:12-15, 3:35-38, 5:6-18.

63.



Ex. 1022 at 2.

This object is achieved according to the invention with an air cargo net wherein the attachment fittings are connected to the border rope by replaceable connecting ropes.

The connecting rope is an auxiliary rope that is replaceably attached to the net rope and fitting, for example by knotting.

* * *

In a preferred embodiment the polymer fibres are high-strength fibres . . . like . . . fibres made from ultra-high molar mass, also called ultra-high molecular weight, polyethylene (UHMWPE), such as yarns marketed with trademarks Dyneema® or Spectra®. A net made of

these high-performance fibres has a significantly lower weight than a net made from conventional fibres, but a higher initial cost price.

* * *

In another preferred embodiment the connecting rope **108** comprises high-strength fibres as described above, more preferably high tenacity fibres made from ultra-high molar mass polyethylene.

* * *

In a preferred embodiment of the invention the connecting rope **108** is an endless rope or tape, generally called a sling. The advantage of a sling is that connections to a fitting having an eye, as well as to a net mesh, can be made with simple known knots, hitches or bends, which also show relatively high knot strength retention. . . . The skilled person can easily select other suitable knots, for example the so-called double ring hitch, the Kellig hitch, or Prusik and Klemheist knots.

Ex. 1022, Cols. 2:30-34, 3:21-26, 5:3-6, 26-40.

64.

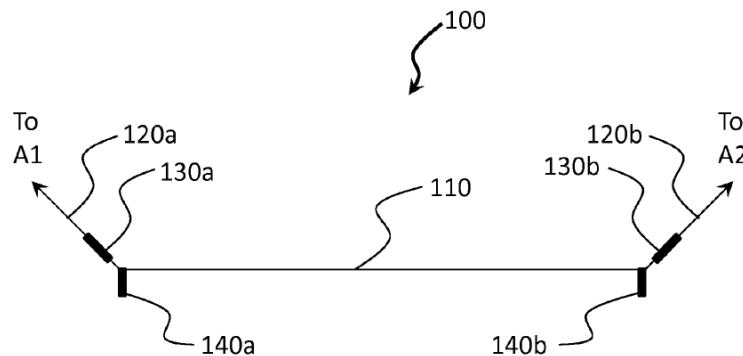


Fig. 2

Ex. 1023, Fig. 2.

The present invention relates generally to hammocks

* * *

[R]opes **110**, **120a**, and **120b** are preferably comprised of a single length of 3 mm Dyneema® rope While 35 m of 3 mm Dyneema® rope is preferred in this embodiment, other lengths, thicknesses and brands of line, such as Ultra-high-molecular-weight polyethylene (UHMWPE, UHMW), for example, Spectra® may be used

* * *

Tensioners **130a** and **130b** are preferably used to maintain tension in and to prevent slippage of ropes **120a** and **120b** Alternatively, knots could be used in place of tensioners **130a** and **130b** (e.g., taut-line hitch)²

Ex. 1023, Cols. 1:9, 4:1-14, 5:9-28 (footnote added).

65. Accordingly, using an Amsteel friction hitch (*e.g.*, a Prusik hitch) on an Amsteel rope has long been taught by the prior art.

² A “taut-line hitch” is a type of adjustable friction hitch. *See*

<https://knots3d.com/en/taut-line-hitch-knot>.

E. The Prosecution History of the '175 Patent

66. I understand that the three inventors of the '175 Patent are Walter Ernest Power, II; Gregory Alan Godfrey; and Carl Eugene Kossuth, III, and Tethrd LLC was the assignee and applicant. The application was filed on July 18, 2022, assigned with application No. 17/867,553, published on November 3, 2022 with Publication No. 2022/ 0347501A1, and eventually issued as Pat. No. 11,964,175 on April 23, 2024.

67. I understand that the first and only office action was a non-statutory double patenting rejection over the '556 Patent on December 14, 2023; there were no substantive rejections over any prior art. I further understand that Tethrd filed a terminal disclaimer in response to the office action, and the application was allowed on January 30, 2024.

F. Claim Construction

68. I understand that the first step in analyzing a patent claim begins with an analysis of the wording of the claim itself, also referred to as “claim construction.”

69. I understand that claim terms in an *inter partes* review should be accorded their ordinary and customary meaning as understood by a POSITA at the time of the invention, in light of the patent specification and the prosecution

history pertaining to the patent. I further understand that when the specification expressly defines terms used in the claims or when it defines terms by implication, it acts as a dictionary.

70. As set forth herein, I apply these principles to my discussion below of the '175 Patent's claims with respect to Claims 1-14.

1. The Claim Preamble is Limiting

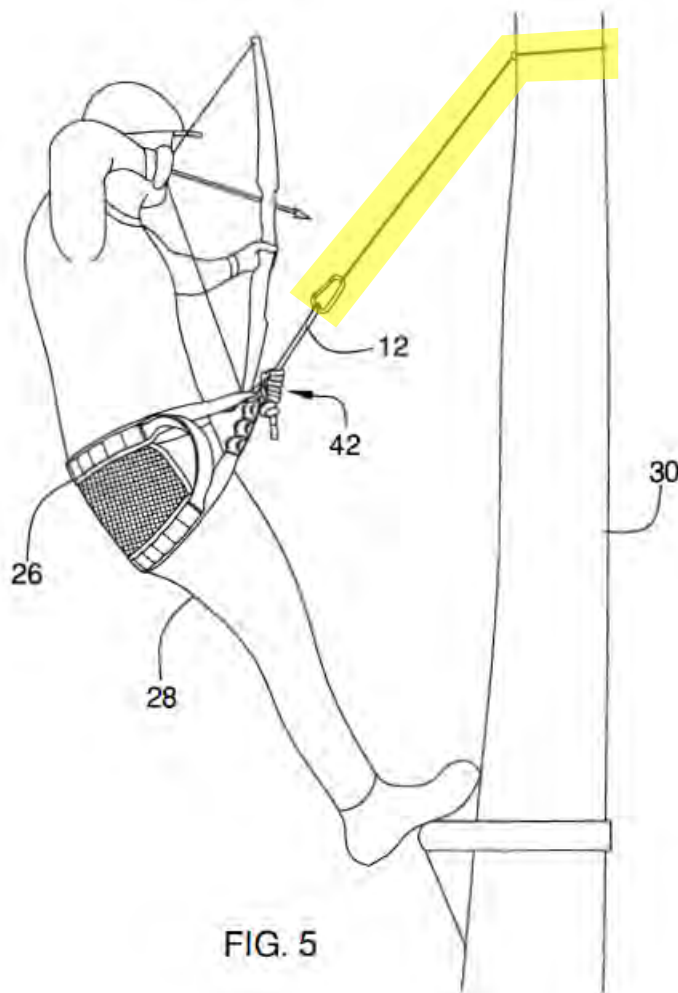
71. The claim preamble provides the context for the invention—"a bridge rope assembly"—and provides the antecedent basis for claim terms in the body of the claim, namely, "a first bridge loop" and "a second bridge loop". Further the claim preamble provides important structural information that informs a POSITA regarding the physical relationships of the elements in the body of the claim, namely, that (i) the "bridge rope assembly" is "configured to couple together a tree rope" to other components of the assembly; and (ii) the "first bridge loop and [the] second bridge loop [are] on a harness", not disembodied components as recited in the body of the claim. Therefore, for the '175 Patent here, the preamble gives meaning to Claim 1. A POSITA would not have been able to understand Claim 1 without the preamble of Claim 1 which is "necessary to give life, meaning, and vitality" to the claim.

2. “Configured to Couple Together a Tree Rope” Has a Hazy Outer Boundary, But Includes At Least a Tree Tether Rope and a Carabiner

72. The claim preamble recites that the bridge assembly is “is “configured to couple together a tree rope” with other components of the assembly. This recital renders Claim 1 (and hence all of the ’175 Patent’s claims) indefinite because it fails to provide a POSITA with an understanding of the ***outer boundaries*** of the claims.

73. To elaborate, while the preamble of Claim 1 recites that the bridge assembly is “configured to couple together a tree rope . . .”, none of the claims provide any further recital about either the “tree rope” or how the bridge assembly is “configured” for coupling to the tree rope. Further, other than the recitals themselves in the preamble of Claim 1, the terms “tree rope” and “couple” are found nowhere in the ’175 Patent’s specification.

74. Figure 5 of the ’175 Patent does depict a line or strap that encircles a tree and connects to the bridge assembly, but those elements are unnumbered and not discussed elsewhere in the patent’s specification:



Ex. 1001, Fig. 5.

75. A POSITA would understand from Figure 5 that the highlighted element would likely be a lineman's rope, a tree tether, or a similar component made from some type of cordage or webbing, and that the connection to the bridge assembly would likely be via a carabiner, a ring, a knot, or a splice of some kind. Accordingly, while the outer boundary of Claim 1 is unclear, the claim would include within its scope, among other things, a tree tether rope and a carabiner, which are the elements disclosed in the prior art at issue here.

76. The ordinary meaning of “configure” and “configured” is “to design or adapt to form a specific configuration or for some specific purpose.”³ Thus, in the context of the ’175 Patent, the recited bridge rope assembly would be designed or constructed in a particular manner.

77. The ordinary meaning of “couple” is “to fasten, link, or associate together in a pair or pairs” or “to join; connect”.⁴ Thus, in the context of the ’175 Patent, the connection or joining could be direct or indirect, *e.g.*, through one or more intermediate elements.

78. In the context of the ’175 Patent, the ordinary meaning of a “tree rope” is “a line (or other cordage) or webbing (or other strap) that encircles a tree trunk, including a lineman’s rope and a tree tether”. Thus, the preamble phrase should be construed as “A bridge rope assembly designed or constructed in a particular manner to connect or join, either directly or indirectly, a line (or other cordage) or webbing (or other strap) that encircles a tree trunk, including a lineman’s rope and a tree tether, to a first bridge loop and a second bridge loop, the bridge rope assembly including:”

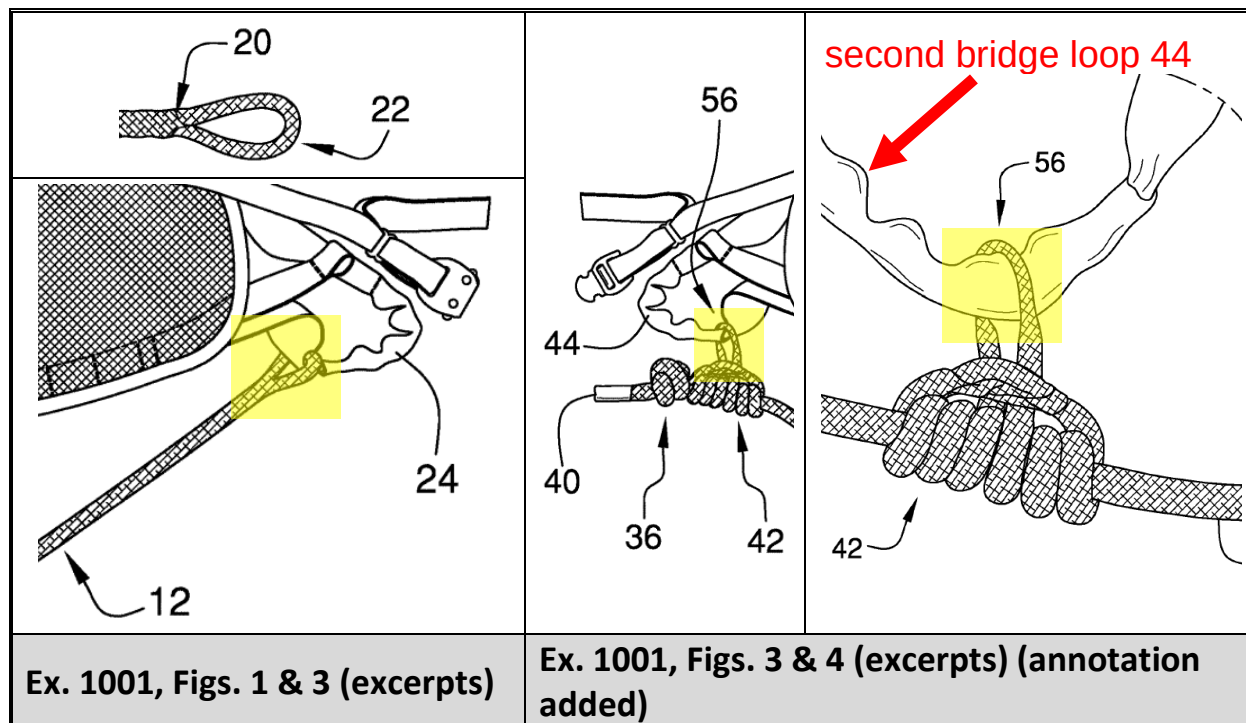
³ <https://www.collinsdictionary.com/dictionary/english/configure>

⁴ <https://www.collinsdictionary.com/dictionary/english/couple>

3. “Being Configured to Engage” Means “Spliced to Interlock With”

79. Claim 1 of the '175 Patent recites “the eye loop being configured to engage the first bridge loop” and “the friction hitch being configured to engage the second bridge loop”. Notably, the patent drafter did **not** simply recite that “the eye loop connects the first bridge loop” or that “the friction hitch connects the second bridge loop”. Instead, the patent drafter used the “configured to engage with” language to emphasize that the eye loop and the friction hitch were specially constructed to interlock with the bridge loops.

80. As shown in the left-hand column below, the '175 Patent repeatedly explains how the spliced “eye loop” of the main body and the friction hitch each “engages” a “bridge loop” of the saddle:



The eye loop [22] is configured to engage a first bridge loop [24] of a harness. (Abstract; Col. 1:63-64). The eye loop 22 is configured to engage a first bridge loop 24 of a harness 26 (Col. 3:8-9). [T]he eye loop 22 of the main body 12 is engaged on the first bridge loop 24 of the harness 26. (Col. 5:33-34).	The friction hitch 42 is . . . configured to engage a second bridge loop 44 of the harness 26. (Col. 4:43-46). The narrow portion 56 of the closed loop 46 [of the friction hitch 42] will typically be engaged with the second bridge loop 44 (Col. 5:43-44).
---	--

81. Similarly, as shown in the right-hand columns above, the '175 Patent repeatedly explains how a “friction hitch” also “engages” a second bridge loop of the saddle on the opposite side. The use of the term “engage” is entirely consistent in the text and figures of the '175 Patent, showing that the eye loop is spliced around the first bridge loop such that the bridge loop passes directly through the eye loop, creating a permanent attachment. Similarly, the friction hitch is spliced around the second bridge loop such that the bridge loop passes directly through the friction hitch, again creating a permanent attachment.

82. With respect to the main body, the patent teaches that the claimed “configured to” is a particular type of rope splicing:

The main body 12 has a **splice 20** therein to form an eye loop 22 in the main body 12. The **splice 20** may be a **straight splice** or a **locked brummel splice**. Each is well known in the art of rope manipulation

within the harness arts. Generally, a ***locked brummel splice*** may be preferred as any buried tags (portions of rope extended within another portion of rope) cannot back themselves out as they are effectively “locked” in place with a knot. A downside of the ***locked brummel*** is the knot itself at the splice **20** which creates a bulge in the rope where the knot is formed. Buried tags that are the product of a ***straight splice*** are not locked in place and therefore can back themselves out when not under tension. However, a ***straight splice*** can be secured in place by stitching the resultant tag(s) in place once the tag is in a buried condition if desired. Generally, as it will be understood below, it is the ***splice 20*** which creates one or two tags ***which is important***.

Ex. 1001, Cols. 2:58 – 3:7 (emphases added).

83. With respect to the friction hitch, the ’175 Patent also teaches that the claimed “configured to” is a particular type of rope splicing:

Using conventional methods, the closed loop **46** is formed at with a ***splice 54*** drawn together by ends **50** and **52** being drawn through the ***splice 54***. As with the main body **12**, the ***splice 54*** may be a ***locked brummel splice 54*** or a ***straight splice*** with the same disadvantages as mentioned above except with two tag lines, as shown in FIG. **9**, instead of one. The first **50** and second **52** ends are then drawn through, or buried, in the continuous loop **46** with the first end **50** being positioned on one side of the ***locked splices 54*** and the second end **52** being positioned on the other side of the ***locked splices 54***.

Ex. 1001, Col. 4:55-65 (emphases added).

84. The ordinary meaning of “configure” and “configured” is “to design or adapt to form a specific configuration or for some specific purpose,”⁵ and the ordinary meaning of “engage” is “to interlock with or cause to come into frictional driving contact with” or “to mesh together”.⁶ Accordingly, the claim term “being configured to engage” should be construed to mean the “spliced to interlock with”.

4. “Adjacent to” Means “Within a Distance of 3.0 Inches or Less from”

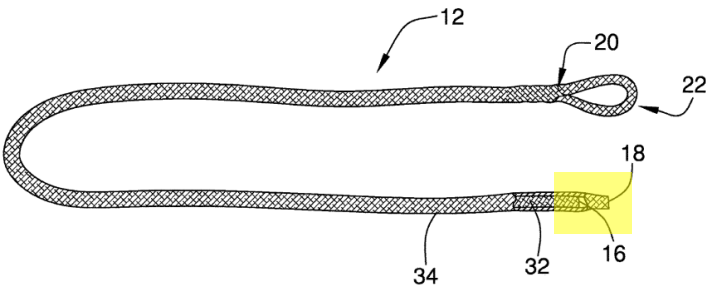
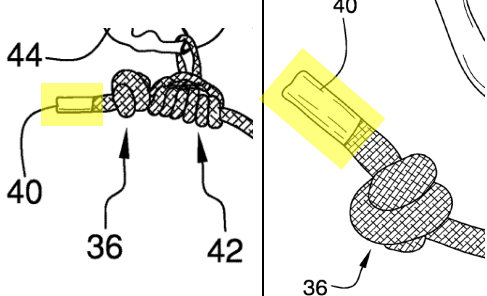
85. Claim 1 of the ’175 Patent recites that “the first end is positioned within the second portion adjacent to the second end” and Claim 4 of the ’175 Patent recites “a stop knot in the second portion adjacent to the second end”.

86. The ordinary meaning of “adjacent” is “next to each other” or “near or close (to something); adjoining”.⁷ As shown in the left-hand column below, the ’175 Patent repeatedly explains that the “first end” of the main body is positioned “adjacent” to, or “less than 2.0 inches” (or “between 0.5 inches and 3.0 inches”) from the “second end” of the main body:

⁵ <https://www.collinsdictionary.com/dictionary/english/configure>

⁶ <https://www.collinsdictionary.com/dictionary/english/engage>

⁷ <https://www.collinsdictionary.com/dictionary/english/adjacent>

	
Ex. 1001, Fig. 1	Ex. 1001, Figs. 3 & 4 (excerpts)
The first portion extends through the second portion of the main body such that the first end is positioned adjacent to the second end. A distance between the first and second ends is less than 2.0 inches. (Abstract; Cols. 1:66 – 2:3). [T]he eye loop 22 is positioned proximate a central area of the rope 14 such that the first end 16 can be extended adjacently to the second end 18, wherein the first 32 and second 34 portions each extend away from the eye loop 22. The first end 16 will typically remain within the second portion 34 and will be located less than 2.0 inches from the second end 18. (Col. 3:19-25). The second end 18 extends away from the eye loop 22 between 0.5 inches and 3.0 inches farther away than the first end 16 extends away from the eye loop 22, and more preferably less than 2.0 inches farther away. (Col. 3:52-55). The widening of the second portion 34 . . . allows the first portion 32 to nearly extend through the second portion 34. (Col. 4:25-29).	The main body 12 includes a stop knot 36 in the second portion 34 adjacent to the second end 18 and therefore the stop knot 36 further includes the first portion 32 adjacent to the first end 16. The stop knot 36 may comprise, for example, a double fisherman's knot. (Col. 26-30). The junction of the first 16 and second 18 ends may be covered with a securing member or otherwise bonded together with known methods and/or mechanical structures. (Col. 3:31-33). Shrink wrap 40 is then applied over the second 34 portion at a junction of the first end 16 and second portion 34. (Col. 4:29-31).

87. Similarly, as shown in the right-hand column above, the '175 Patent repeatedly explains how both ends of the main body extend through the stop knot and the shrink wrap at the very end of the main body, and that a “securing member” is positioned at the “juncture” of the two ends. The ordinary meaning of “juncture” is “a point or line of joining or connection; joint”.⁸

88. The use of the term “adjacent” is entirely consistent in the text and figures of the '175 Patent, showing that the two ends of the main body are positioned no more than 2.0 inches (or at the very most 3.0 inches) from each other. Therefore, in light of the patent’s specification, the claim term “adjacent to” should be construed to mean the “within a distance of 3.0 inches or less from”.

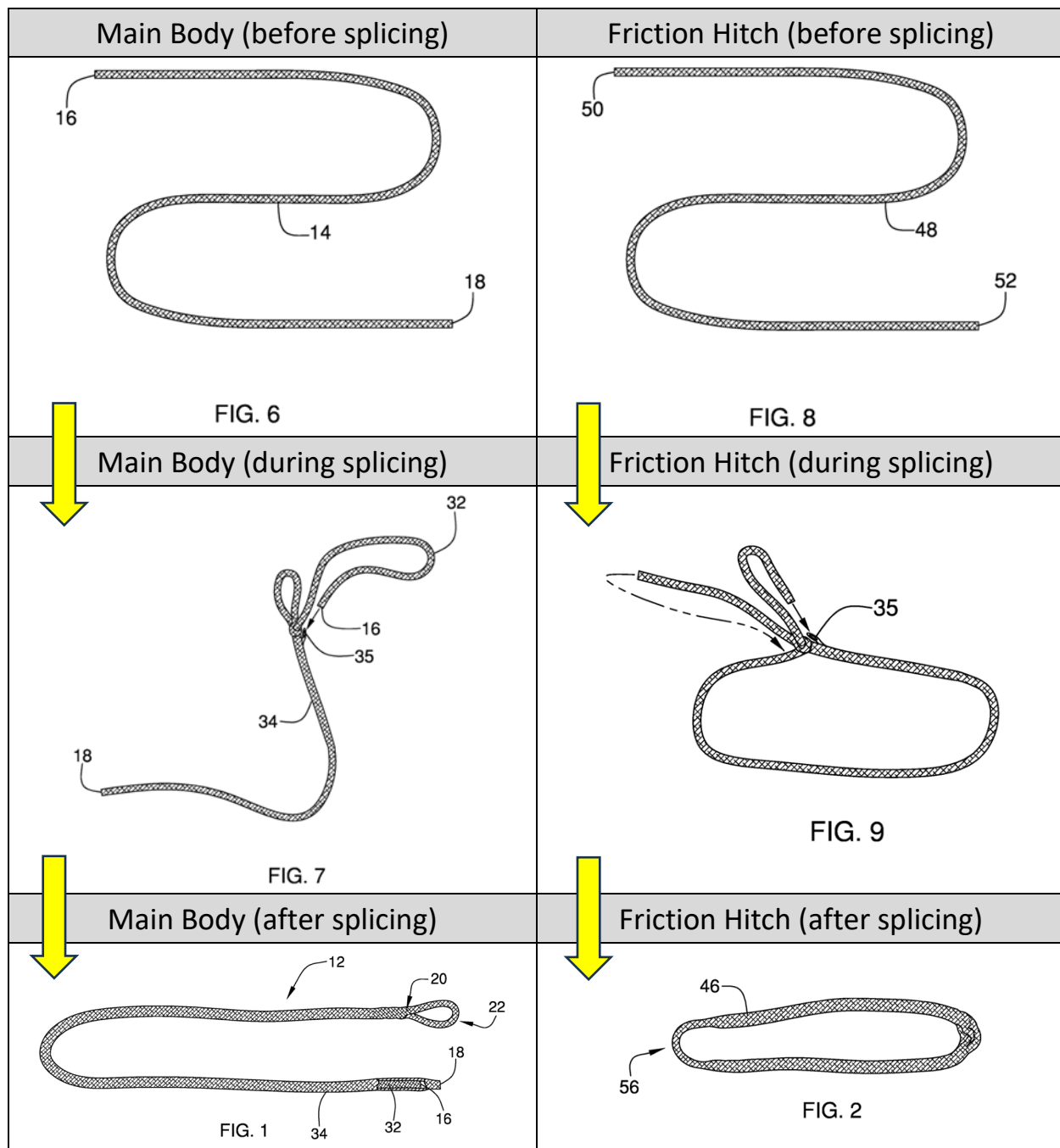
5. “Length” Means “Linear Measurement Before Splicing”

89. With respect to the claimed “main body”, Claim 2 recites the “the rope has a length from the first end to the second end between 72.0 inches and 126.0 inches”. Similarly, with respect to the claimed “friction hitch”, Claim 7 recites “the closed loop has a length between 40.0 inches and 60.0 inches”. While the word “length” is normally unambiguous, here the lengths of the each of the ropes shrink during the splicing process. *E.g.*, Ex. 1001, Col. 4:25-29 (“The

⁸ <https://www.collinsdictionary.com/dictionary/english/juncture>

widening of the second portion **34** to accept the first portion **32** causes the second portion **34** to shorten in length which allows the first portion **32** to nearly extend through the second portion **34**.”). Accordingly, the claims should be construed to clarify that the “lengths” recited are the linear measurements *before* splicing.

90. In using the term “length”, each of these claims is directed to the starting length of the rope before splicing, as shown in the figures below:



91. With respect to the main body, the '175 Patent teaches that “[t]he rope **14** may have a *length* from the first end **16** to the second end **18** between 72.0 inches and 126.0 inches.” Ex. 1001, Col. 3:47-48 (emphasis added). Similarly, with respect to the friction hitch, the '175 Patent teaches that “[t]he single

rope **48** of the closed loop **46** has a **length** between 40.0 inches and 60.0 inches . . .
.” *Id.*, Col. 5:8-9 (emphasis added) (emphasis added). These distances would be understood by a POSITA to be the linear measurements of the ropes before splicing.

92. The above understanding is confirmed by the patent drafter’s consistent use of the word “length” when referring to a linear measurement **before** splicing (Claims 2 and 7), as opposed to using other terms (viz., “distance” and “circumference”) when referring to measurements **after** splicing (Claims 3, 8-9, and 12-14). Accordingly, the claim term “length” should be construed to mean the “linear measurement before splicing”.

6. “Distance Of” Means “Linear Measurement After Splicing From the Base of”

93. Claims 3 and 12 of the ’175 Patent recite “a **distance of** the eye loop to the second end” “is between 24.0 inches and 40.0 inches”. Because the claim recites a distance with respect to an “eye loop”, the claimed distance is related to a linear measurement after splicing of the eye loop.

94. This limitation is arguably ambiguous in its use of the preposition “of”—the claimed distance could be measured from the tip of the eye loop, the center of the eye loop, the base of the eye loop, or perhaps some other location on the eye loop. However, the ’175 Patent’s specification provides guidance in this

regard, teaching that “[t]he distance from the stop knot 36 to the eye loop 22 is approximately 31.0 inches”. Ex. 1001, Col. 4:39-40. Figure 3 of the ’175 Patent illustrates this claimed feature:

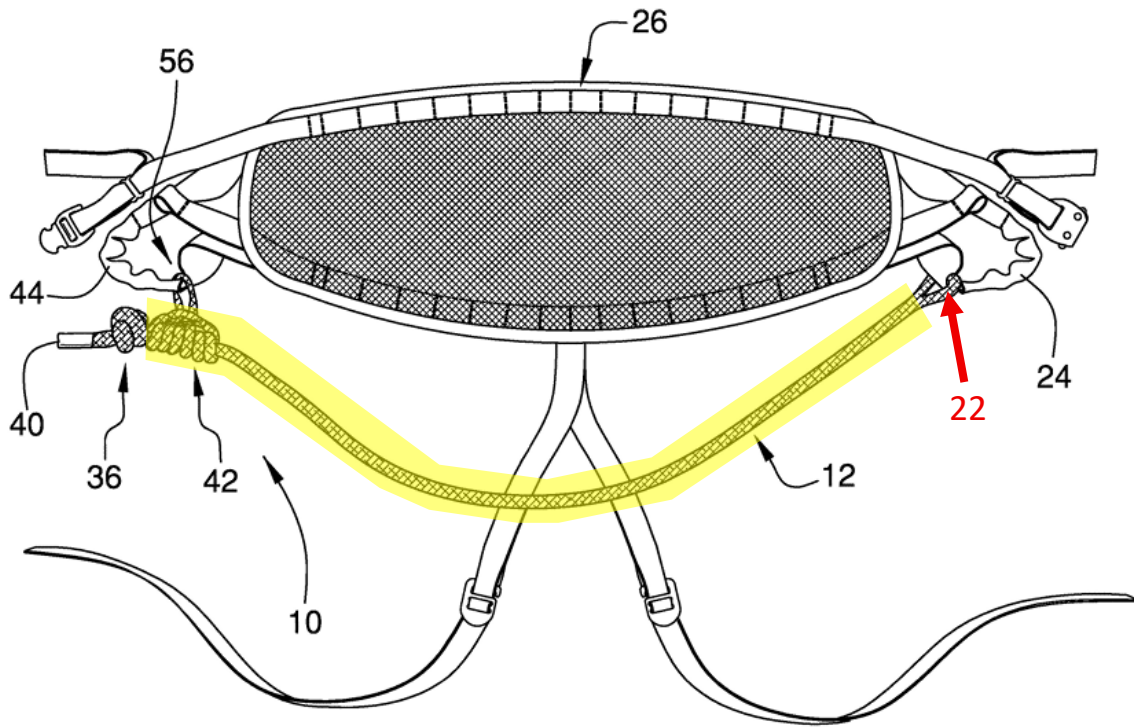


FIG. 3

Ex. 1001, Fig. 3.

95. The disclosed “approximately 31.0 inches” measurement is generally a parameter for the adjustability of the bridge (*i.e.*, the claimed “main body”). In particular, when loosened, the friction hitch 42 can be adjusted (or slid) from the stop knot 36 on one end (for the maximum length of the bridge) to the base of the eye loop 22 on the other end (for the minimum length of the bridge). *Id.* The friction hitch would not be adjusted beyond the base of the eye loop because the

main body widens at that location due to the eye loop configuration, and the first bridge loop also creates a functional limit. *Id.* In Claim 1, the recited “between 24.0 inches and 40.0 inches” is related to the adjustability of the bridge (albeit to the “second end” as opposed to the “stop knot”). *Id.* Accordingly, the claim term “distance of” should be construed to mean the “linear measurement after splicing from the base of”.

V. THE PRIOR ART

A. The State of the Art

96. As discussed above, the relevant prior art here includes not only hunting saddles, but also tree care and management slings and harnesses, safety ropes and harnesses, outdoor suspension hammocks, nautical/sailing lines, and ropes and splices in general. Thus, the art was very well-developed in the 2020 time frame.

B. Analogous Art Here Includes Hunting Saddles, Tree Care and Management Slings and Harnesses, Outdoor Suspension Hammocks, Safety Ropes and Harnesses, Nautical/Sailing Lines, and Ropes and Splices in General

97. The '175 Patent states that “[t]he disclosure relates to harness rope structures” Ex. 1001, Col. 1:38. While the disclosure is directed to a hunting saddle, the claims are not limited to saddle hunting. The relevant prior art here includes not only hunting saddles, but also tree care and management slings and harnesses, safety ropes and harnesses, outdoor suspension hammocks,

nautical/sailing lines, and ropes and splices in general.

C. SaddleHunter Message Board Posts (Exs. 1048-1123)

98. The SaddleHunter Internet message board is a well-known and popular message board for the saddle hunting community. See <
[https://saddlehunter.com/ community/index.php](https://saddlehunter.com/community/index.php)>. I understand that the message board's current statistics are as follows:

Forum statistics	
Threads:	60,505
Messages:	883,041
Members:	22,870
Latest member:	Tbone613

Id.

99. I understand that the SaddleHunter message board was started in around 2014. The message board was well-known and frequently used by the saddle hunting community in the 2020 time frame and earlier.

100. In their myriads of discussions about saddle hunting equipment and modifications thereto, members of the saddle hunting community regularly also referenced information from the hammock and arborist arts, including discussions about ropes, splices, and knots. For example, I understand that the following threads on the SaddleHunter message board refer to “hammock”:

	Ex. 1048 - SaddleHunter - A different whoopie (p1).pdf
	Ex. 1071 - SaddleHunter - DIY Back Band...Material for prusik[Q] (p1).pdf
	Ex. 1072 - SaddleHunter - Diy shorter mantis bridge (p2).pdf
	Ex. 1082 - SaddleHunter - How to make an Amsteel Bridge (p2).pdf
	Ex. 1094 - SaddleHunter - New Saddle Nightmare! (p4).pdf
	Ex. 1110 - SaddleHunter - Splicing rope[Q] (p2).pdf

101. I understand that the following threads on the SaddleHunter message board refer to “arborist”:

	Ex. 1060 - SaddleHunter - Amsteel bridge question (p1).pdf
	Ex. 1079 - SaddleHunter - H2 vs tethrd[Q] (p10).pdf
	Ex. 1086 - SaddleHunter - Linemans Belt-Flip line questions (p1).pdf
	Ex. 1094 - SaddleHunter - New Saddle Nightmare! (p4).pdf
	Ex. 1097 - SaddleHunter - Paracord (p1).pdf
	Ex. 1100 - SaddleHunter - Replacing the bridge carabiner[QQ] (p1).pdf
	Ex. 1112 - SaddleHunter - Splicing rope[Q] (p4).pdf
	Ex. 1116 - SaddleHunter - Tethrd Phantom’s Bridge Knot (p1).pdf

102. I understand that the following thread on the SaddleHunter message board refer to “TreeBuzz”:



Ex. 1064 - SaddleHunter - Amsteel Prussic (p1).pdf

103. I understand that the following threads on the SaddleHunter message board refer to “YouTube”:



Ex. 1049 - SaddleHunter - Adjustable Amsteel bridge (p1).pdf



Ex. 1054 - SaddleHunter - Adjustable bridge ideas[Q] (p1).pdf



Ex. 1060 - SaddleHunter - Amsteel bridge question (p1).pdf



Ex. 1067 - SaddleHunter - Bridge length (p1).pdf



Ex. 1076 - SaddleHunter - Finished my sitdrag and harness (p1).pdf



Ex. 1084 - SaddleHunter - John Eberhart's Kestrel modifactions (p6).pdf



Ex. 1087 - SaddleHunter - Locked brummel on both sides of bridge[Q] (p1).pdf



Ex. 1097 - SaddleHunter - Paracord (p1).pdf



Ex. 1105 - SaddleHunter - Sitdrag loop question (p1).pdf



Ex. 1109 - SaddleHunter - Splicing rope[Q] (p1).pdf



Ex. 1110 - SaddleHunter - Splicing rope[Q] (p2).pdf



Ex. 1113 - SaddleHunter - Splicing rope[Q] (p5).pdf

D. ArboristSite Message Board Posts (Exs. 1024-1025)

104. The ArboristSite Internet message board is a well-known and popular message board for the tree care and management community. See <
<https://www.arboristsite.com/>>. I understand that the message board's current statistics are as follows:

Forum statistics	
Threads:	321,728
Messages:	7,197,275
Members:	78,460
Latest member:	Alex Whitla

Id.

105. I understand that The ArboristSite message board was started in around 2001. The message board was well-known and frequently referenced by not only the arborist community, but also the saddle hunting community, in the 2020 time frame and earlier.

E. TreeBuzz Message Board Posts (Ex. 1124)

106. The TreeBuzz Internet message board is also a well-known and popular message board for the tree care and management community. See <

<https://www.treebuzz.com/forum/> >. I understand that the message board's current statistics are as follows:

Forum statistics	
Threads:	49,625
Messages:	771,117
Members:	19,919
Latest member:	Randyman

Id.

107. I understand that the TreeBuzz message board was started in around 2001. The message board was well-known and frequently referenced by not only the arborist community, but also the saddle hunting community, in the 2020 time frame and earlier.

F. HammockForums Message Board Posts (Exs. 1026-1045)

108. The HammockForums Internet message board is a well-known and popular message board for the hammock camping community. See <
<https://www.hammockforums.net/forum/forum.php> >. I understand that the message board's current statistics are as follows:

Hammock Forums - Hammocks and hammock camping - Elevate Your Perspective Statistics	
Threads: 152,490 Posts: 2,082,652 Members: 62,848 Active Members: 832	
Welcome to our newest member, Mtnscy77	

Id.

109. I understand that the HammockForums message board was started in

around 2006. The message board was well-known and frequently referenced by not only the hammock camping community, but also the saddle hunting community, in the 2020 time frame and earlier.

110. I understand that the following threads on the HammockForums message board refer to the “L-36” website:

	Ex. 1030 - HammockForums - Continuous Loop pictoral (p15).pdf
	Ex. 1035 - HammockForums - Go to resource for learning Amsteal splicing tutorials[Q] (p1).pdf
	Ex. 1036 - HammockForums - Is this a known method of splicing a continuous loop[Q] (p1).pdf

111. I understand that the following threads on the HammockForums message board refer to “YouTube”:

	Ex. 1029 - HammockForums - Continuous loop bury length question (p1).pdf
	Ex. 1030 - HammockForums - Continuous Loop pictoral (p15).pdf
	Ex. 1033 - HammockForums - Everything you always wanted to know about Amsteel but were afraid to...
	Ex. 1035 - HammockForums - Go to resource for learning Amsteal splicing tutorials[Q] (p1).pdf
	Ex. 1037 - HammockForums - Prusik knot with Zing It (p1).pdf
	Ex. 1040 - HammockForums - strongest type of rope for prusik hitch[Q] (p1).pdf

G. L-36.com (Exs. 1046-1047)

112. L-36.com is popular website that is frequently referenced in the prior art as a useful source of information and instructions for splicing rope, particularly

Amsteel. As noted above, I understand that the L-36.com website is referenced as a reliable source of splicing instructions in the HammockForums message board.

H. Samson Splicing Instructions (Ex. 1018)

113. Samson Rope Technologies, Inc. is the manufacturer of a variety of rope products, including particularly the Amsteel rope discussed extensively in the prior art and claimed in the patent as UHMWPE (see Claims 10 & 11). The Samson splicing instructions are frequently referenced in the prior art as a useful source of information and instructions for splicing synthetic rope, particularly Amsteel.

VI. THE CHALLENGED CLAIMS ARE UNPATENTABLE

114. Based on my review and analysis of the prior art material submitted with the Petition and my discussion above, at the time of the claimed inventions a POSITA would have found Claims 1-14 of the '175 Patent to have been obvious, as set forth in the detailed claim charts provided below.

A. Ground 1: Claims 1-14 are Anticipated and/or Obvious Over The Tethrd Phantom Saddle YouTube Videos and The DIY Utilibridge YouTube Video and SaddleHunter Forum Posts

115. **Ground 1** relies on the correct priority date for the '175 Patent of April 15, 2021.

1. Ground 1 – Claim Chart

116. The following claim chart sets forth sets forth the details of **Ground 1**

for the unpatentability of Claims 1-14 of the '175 Patent in view of the YouTube videos describing the Tethrd Phantom Saddle (**Ex. 1132**) (alt. Exs. 1133, 1116) and the YouTube video (**Ex. 1125**) and SaddleHunter forum posts (alt. Exs. 1073, 1074, 1075) describing the Tethrd Phantom Saddle and the DIY Utilibridge:

1. A bridge rope assembly configured to couple together a tree rope to a first bridge loop and a second bridge loop on a harness, the bridge rope assembly including:

YouTube - Tethrd Mantis VS The Phantom Saddles (**Ex. 1132**)



Tethrd Mantis VS The Phantom Saddles



Hunt Appalachia
6.99K subscribers

Subscribe

39,805 views Jan 21, 2020



(e.g., Ex. 1132 @ 15:14)

—OR—

YouTube - Tethrd PHANTOM Review and How-To Tutorial! (Ex. 1133)



Tethrd PHANTOM Review and How-To Tutorial!



Average Jack Archery
63K subscribers

Subscribe

48,326 views Jan 26, 2020

	 (e.g., Ex. 1133 @ 2:18)
a main body comprising a rope having a first end and a second end, the main body having a splice therein to form an eye loop in the main body, the eye loop being configured to engage the first bridge loop, the main body comprising a first portion including the first end and a second portion including the second end, the first portion extending through the second portion of the main body	YouTube - Tethrd Mantis VS The Phantom Saddles (Ex. 1132 at 11)  Tethrd Mantis VS The Phantom Saddles Hunt Appalachia 6,99K subscribers 39,805 views Jan 21, 2020

such that the first end is positioned within the second portion adjacent to the second end; and

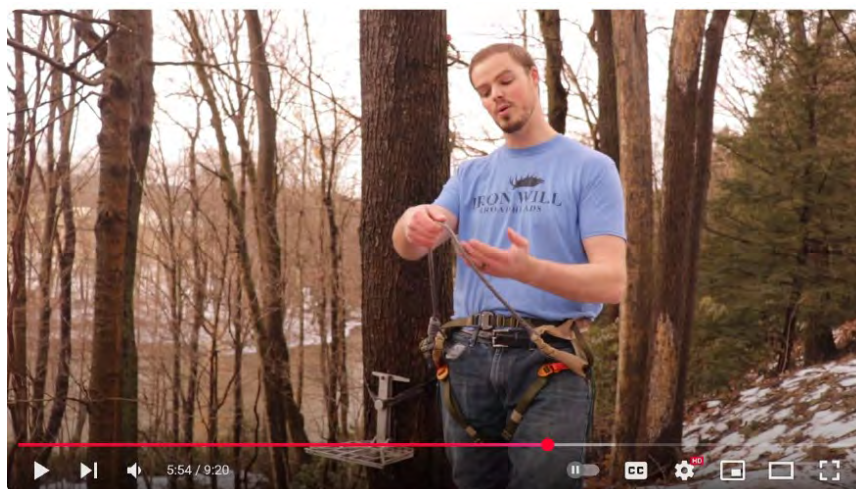
7:51
but the beauty in this bridge is the
7:55
construction of it so this is a quarter
7:58
inch piece of AM steel that is spliced
8:00
all the way back through itself and it's



(e.g., Ex. 1132 @ 8:00)

—OR—

YouTube - Tethrd PHANTOM Review and How-To Tutorial! (Ex. 1133 at 10-11)



Tethrd PHANTOM Review and How-To Tutorial!



Average Jack Archery
63K subscribers

Subscribe

48,326 views Jan 26, 2020

5:51

system is really slick it's an entire

5:53

piece of AM steel where the berry' is

5:55

all the way through the entire length

* * *

6:14

also allowing that buried to go from one

6:16

end to the other it gave this other

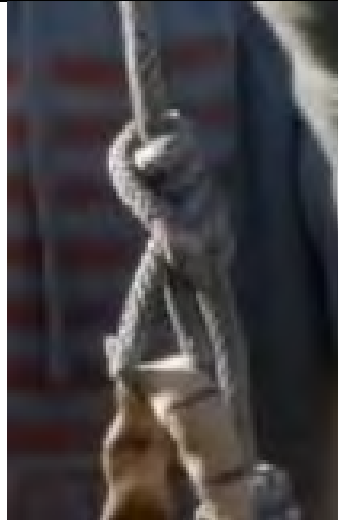


(e.g., Ex. 1133 @ 2:13)

—OR—

Saddle Hunter - Tethrd Phantom's Bridge Knot (Ex. 1116 at 1)

	 flinginairos Well-Known Member Apr 13, 2020 #2 The bridge on the Phantom is spliced all the way back through itself so it's essentially not a hollow core rope anymore. The prussic is made from 3/16 spliced continuous loop and the main line of the bridge is 1/4" spliced back inside and is a little less than 1/2" final diameter. It was fully drop tested and the prussic slid less than 1/4" with a 300lb dummy falling 6'. It works very well!
a friction hitch being positioned on the main body between the second end and the eye loop, the friction hitch being configured to engage the second bridge loop, the friction hitch comprising a closed loop.	YouTube - Tethrd Mantis VS The Phantom Saddles (Ex. 1132 at 11) 8:00 all the way back through itself and it's 8:03 using a 3/16 prusik that is a continuous 8:07 loop splice so there's no extra knots on 8:10 the AM steel it's just a prusik knot so 8:13



(e.g., Ex. 1132 @ 8:00)

—OR—

YouTube - Tethrd PHANTOM Review and How-To Tutorial! (Ex. 1133 at 11)

6:16

end to the other it gave this other

6:18

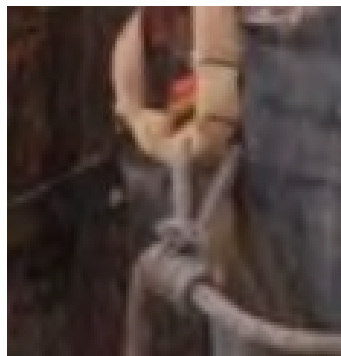
completely knotless prusik which is also

6:21

just buried in on itself so you don't

6:23

any other knots here it gave it enough



(e.g., Ex. 1133 @ 2:13)

—OR—

Saddle Hunter - Tethrd Phantom's Bridge Knot (Ex. 1116 at 1)



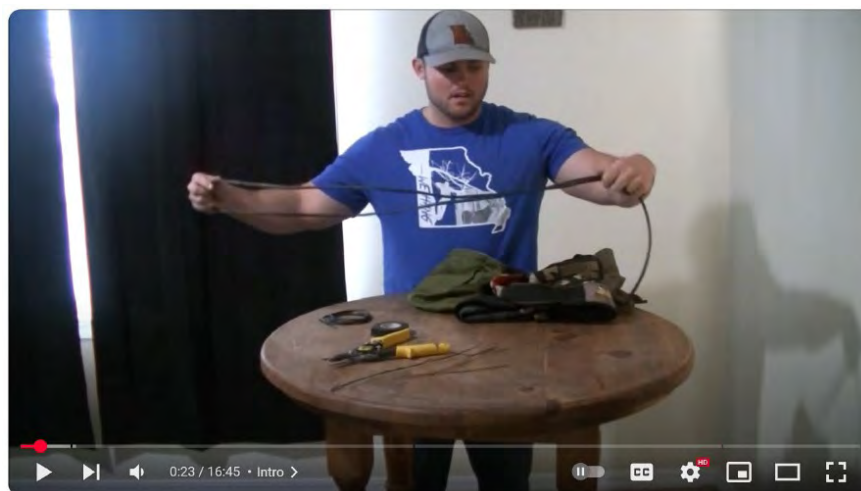
Apr 13, 2020

#2

The bridge on the Phantom is spliced all the way back through itself so it's essentially not a hollow core rope anymore. The prussic is made from 3/16 spliced continuous loop and the main line of the bridge is 1/4" spliced back inside and is a little less than 1/2" final diameter. It was fully drop tested and the prussic slid less than 1/4" with a 300lb dummy falling 6'. It works very well!

2. The bridge rope assembly according to claim 1, wherein the rope has a length from the first end to the second end between 72.0 inches and 126.0 inches.

YouTube - DIY Utilibridge (Ex. 1125 at 2)



DIY Utilibridge



Pushing Up Daisies
143 subscribers

Subscribe

25,267 views Jan 19, 2020

0:18

and what the kit is gonna consist of is

0:22

8 feet of quarter inch am steel gonna

—OR—

SaddleHunter - DIY utilibridge (p1) (Ex. 1075 at 1)



Nugget
Well-Known Member

Feb 18, 2020

I ordered my amsteel last week and DIYed the bridge this afternoon. Takes about 20 minutes from start to finish and is surprisingly easy to do. The required amsteel can be orderd at amsteelblue.com or through customamsteelproducts.com.

You'll need:

8ft of 1/4" amsteel for the bridge

40in of 1/8" amsteel for the prusik or 44" of 3/16" amsteel. I prefer the 3/16".

The how to on YouTube is by Trevor Byrd at:

DIY Utilibridge



	You'll need: 8ft of 1/4" amsteel for the bridge 40in of 1/8" amsteel for the prusik or 44" of 3/16" amsteel. I prefer the 3/16".
3. The bridge rope assembly according to claim 1, wherein a distance of the eye loop to the second end is between 24.0 inches and 40.0 inches.	YouTube - Tethrd Mantis VS The Phantom Saddles (Ex. 1132 at 4)  Tethrd Mantis VS The Phantom Saddles  Hunt Appalachia 6.99K subscribers Subscribe 39,805 views Jan 21, 2020 2:14 the the phantom will go from basically 2:16 zero to about thirty inches —OR— YouTube - DIY Utilibridge (Ex. 1125 at 2)



DIY Utilibridge



Pushing Up Daisies

143 subscribers

Subscribe

25,267 views Jan 19, 2020

16:05

the length here from the actual we're

16:17

looking at approximately thirty it's

16:22

hard to see that about thirty six after

16:25

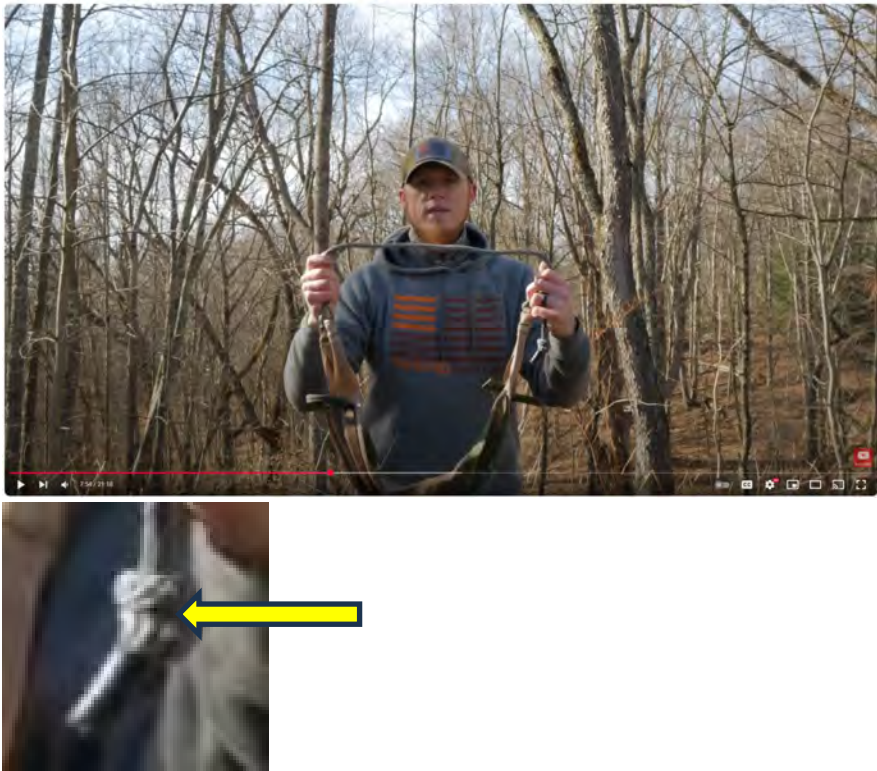
the knot it'll be about 34 inches of

16:28

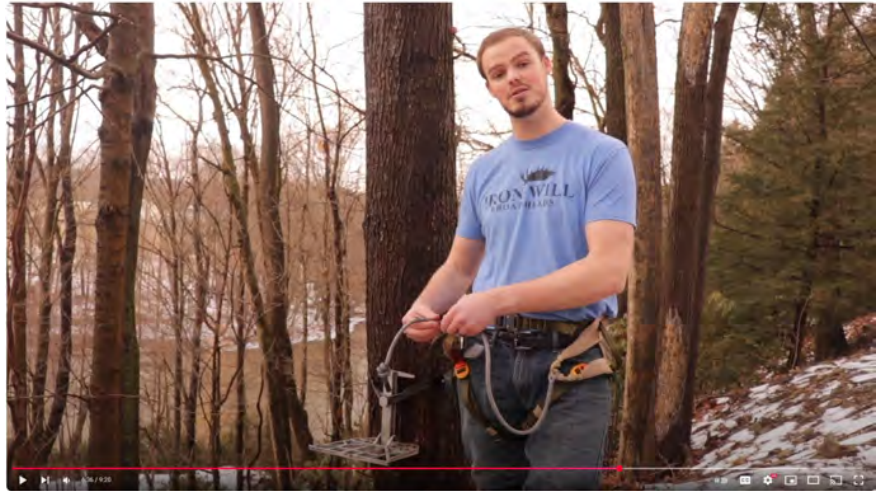
adjustability that's it alright guys if

—OR—

SaddleHunter - DIY utilibridge (p1) (Ex. 1075 at 5)

	 Ontariofarmer Well-Known Member
	Mar 7, 2020 #20 With 8 feet of 1/4 how long did the bridge end up total? I like to run my bridge kinda long off my lineman loops on my TL ambush lite. Currently I have tubular webbing I've made as the bridge but was like the adjustability of the utility bridge. Thanks Between the stopper knots about 36 inches
4. The bridge rope assembly according to claim 3, wherein the main body includes a stop knot in the second portion adjacent to the second end.	YouTube - Tethrd Mantis VS The Phantom Saddles (Ex. 1132)  (e.g., Ex. 1132 @ 7:54) —OR—

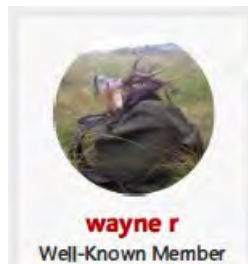
YouTube - Tethrd PHANTOM Review and How-To Tutorial! (Ex. 1133)



(e.g., Ex. 1133 @ 6:36)

—OR—

SaddleHunter - DIY utillibridge (p1) (Ex. 1075 at 2)



Feb 21, 2020

Real simple to do I am liking it so far, regards wayne

Share



—OR—

YouTube - DIY Utilibridge (Ex. 1125 at 12)



DIY Utilibridge



Pushing Up Daisies
143 subscribers

Subscribe

25,267 views Jan 19, 2020

16:05
the length here from the actual we're
16:17
looking at approximately thirty it's
16:22
hard to see that about thirty six after
16:25
the knot it'll be about 34 inches of
16:28
adjustability that's it alright guys if

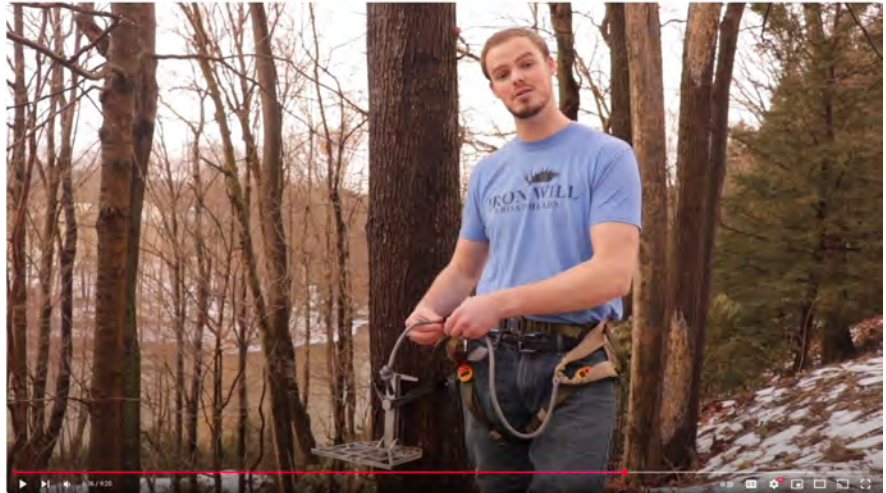
—OR—

SaddleHunter - DIY Utilibridge (p2) (Ex. 1074 at 1)

	Hunter260 Well-Known Member
	Jan 11, 2020 #21 What are you guys using for a stopper knot on the Amsteel? Everything I read about Amsteel, and my own experience, says that it doesn't hold knots very well. Seems like a big fat splice of some kind would work better. I just tied a double overhand knot
5. The bridge rope assembly according to claim 4, further including a securing member being positioned on the main body at a juncture of the first and second ends to retain the first and second ends at a static position relative to each other.	YouTube - Tethrd Mantis VS The Phantom Saddles (Ex. 1132) (e.g., Ex. 1132 @ 7:54)

—OR—

YouTube - Tethrd PHANTOM Review and How-To Tutorial! (Ex. 1133)



(e.g., Ex. 1133 @ 6:36)

—OR—

YouTube - DIY Utilibridge (Ex. 1125)



DIY Utilibridge



Pushing Up Daisies
143 subscribers

Subscribe

25,267 views Jan 19, 2020



(e.g., Ex. 1125 @ 15:56)

—OR—

SaddleHunter - DIY utillibridge (p1) (Ex. 1075 at 2)



Feb 21, 2020

Real simple to do I am liking it so far, regards wayne

Share



6. The bridge rope assembly according to claim 4, wherein the closed loop comprises a single rope being formed into the closed loop.

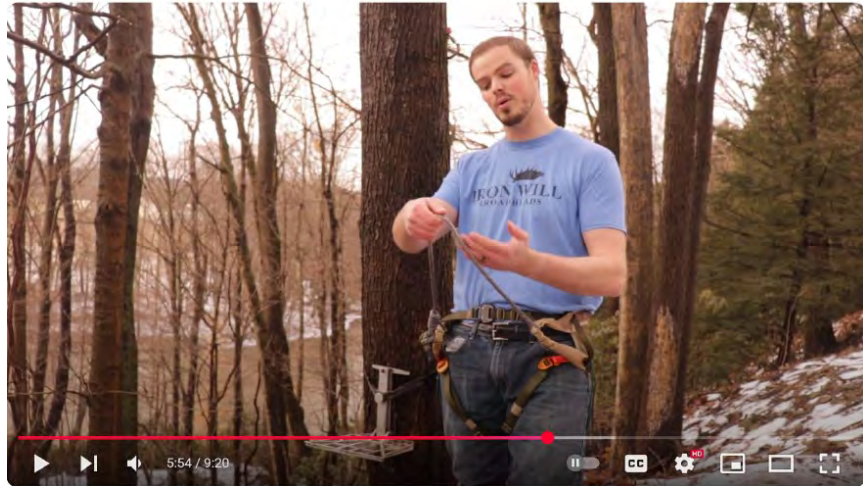
YouTube - Tethrd Mantis VS The Phantom Saddles (Ex. 1132 at 11)



8:00
all the way back through itself and it's
8:03
using a 3/16 prusik that is a continuous
8:07
loop splice so there's no extra knots on
8:10
the AM steel it's just a prusik knot so
8:13

—OR—

YouTube - Tethrd PHANTOM Review and How-To Tutorial! (Ex. 1133 at 11)



6:16

end to the other it gave this other

6:18

completely knotless prusik which is also

6:21

just buried in on itself so you don't

6:23

any other knots here it gave it enough

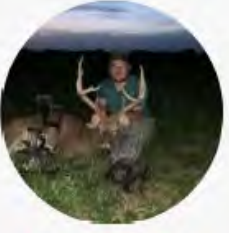
—OR—

Saddle Hunter - Tethrd Phantom's Bridge Knot (p1) (Ex. 1116 at 1)



	Apr 13, 2020 #2 The bridge on the Phantom is spliced all the way back through itself so it's essentially not a hollow core rope anymore. The prussic is made from 3/16 spliced continuous loop and the main line of the bridge is 1/4" spliced back inside and is a little less than 1/2" final diameter. It was fully drop tested and the prussic slid less than 1/4" with a 300lb dummy falling 6'. It works very well!
7. The bridge rope assembly according to claim 6, wherein the single rope of the closed loop has a length between 40.0 inches and 60.0 inches.	YouTube - DIY Utilibridge (Ex. 1125 at 2, 7) DIY Utilibridge Pushing Up Daisies 143 subscribers Subscribe 25,267 views Jan 19, 2020 0:25 have 40 inches of eighth inch and steel * * * Continuous Loop 7:56 loop so this is 40 inches right here —OR—

	SaddleHunter - DIY utillibridge (p1) (Ex. 1075 at 1) 
	Feb 18, 2020 I ordered my amsteel last week and DIYed the bridge this afternoon. Takes about 20 minutes from start to finish and is surprisingly easy to do. The required amsteel can be orderd at amsteelblue.com or through customamsteelproducts.com. You'll need: 8ft of 1/4" amsteel for the bridge 40in of 1/8" amsteel for the prusik or 44" of 3/16" amsteel. I prefer the 3/16". The how to on YouTube is by Trevor Byrd at: DIY Utilibridge  You'll need: 8ft of 1/4" amsteel for the bridge 40in of 1/8" amsteel for the prusik or 44" of 3/16" amsteel. I prefer the 3/16".
8. The bridge rope assembly according to claim 7, wherein the closed loop has a total circumference of between 20.0 inches and 30.0 inches.	SaddleHunter - DIY utillibridge (p1) (Ex. 1075 at 4) 

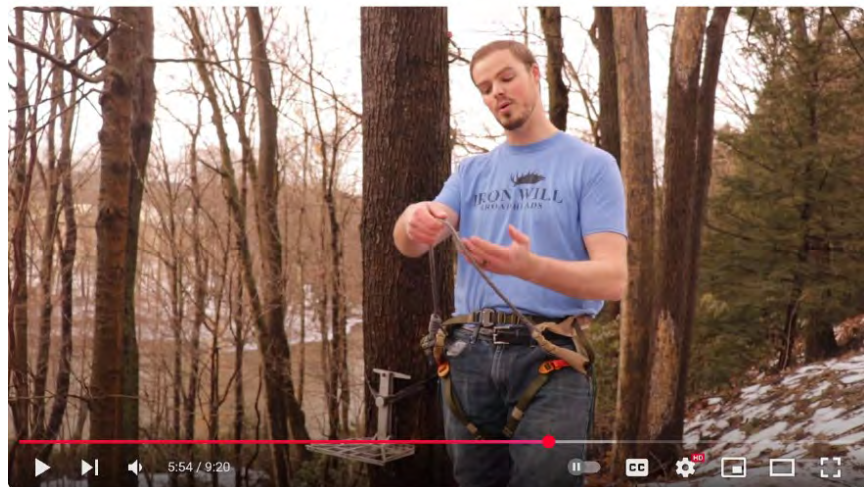
	Mar 5, 2020 #10 How big of a 3/16" amsteel continuous loop did you need to make for the recon? Well I started with 40 inches on the first loop and made the second loop from a 48 inch loop. 40 inches was difficult to work with. 48 inches is loose. I think I would try 42 or 44 inches. So an 11 inch loop would be good I expect. You can see the difference on this recon sling So an 11 inch loop would be good I expect. [11" loop = 22" circumference]
	—OR— SaddleHunter - DIY Utilibridge (p1) (Ex. 1073 at 2)  Hunter260 Well-Known Member
	Jan 11, 2020 #3 Interesting. What size did your continuous loop for the prussic come out to? Do you think it's too long/short or the right length? The continuous loop is probably closer to 2 feet around. It's too long honestly, but I wanted to be able to girth hitch it to remove it.
9. The bridge rope assembly according to claim 1, wherein	[SAME AS CLAIM 8]

the closed loop has a total circumference of between 20.0 inches and 30.0 inches	
10. The bridge rope assembly according to claim 9, wherein the main body and the friction hitch each are comprised of U[H]MWPE.	YouTube - Tethrd Mantis VS The Phantom Saddles (Ex. 1132 at 11)  Tethrd Mantis VS The Phantom Saddles  Hunt Appalachia 6,99K subscribers Subscribe 39,805 views Jan 21, 2020

7:51
but the beauty in this bridge is the
7:55
construction of it so this is a quarter
7:58
inch piece of AM steel that is spliced
8:00
all the way back through itself and it's
8:03
using a 3/16 prusik that is a continuous
8:07
loop splice so there's no extra knots on
8:10
the AM steel it's just a prusik knot so

—OR—

YouTube - Tethrd PHANTOM Review and How-To Tutorial! (Ex. 1133 at 10-11)



5:51

system is really slick it's an entire

5:53

piece of AM steel where the berry' is

5:55

all the way through the entire length

* * *

6:14

also allowing that buried to go from one

6:16

end to the other it gave this other

6:18

completely knotless prusik which is also

6:21

just buried in on itself so you don't

6:23

any other knots here it gave it enough

6:25

bite because we all know that am steel

6:27

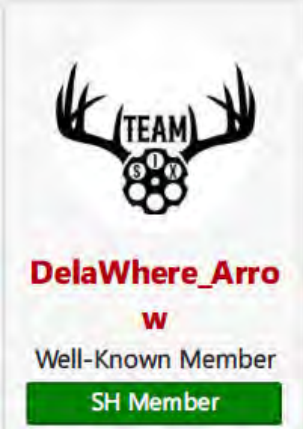
is a very

6:27

like small diameter rope and it's hard

—OR—

Saddle Hunter - Tethrd Phantom's Bridge Knot (p1) (Ex. 1116 at 1)

	 DelaWhere_Arro W Well-Known Member SH Member
	Apr 13, 2020 #1 Hey y'all, been a while since I've posted but I was looking at the Phantom saddle and though it's quite cool, I noticed some things that rang my safety alarm: the Amsteel bridge is adjustable with a prusik of exactly the same diameter and material. Is there a climbing instructor, arborist, or anyone else who can explain why
11. The bridge rope assembly according to claim 1, wherein the main body is comprised of UHMWPE.	[SAME AS CLAIM 10]
12. The bridge rope assembly according to claim 9, wherein a distance of the eye loop to the second end is between 24.0 inches and 40.0 inches.	[SAME AS CLAIM 3]
13. The bridge rope assembly according to claim 12, wherein the closed loop has a total circumference of	[SAME AS CLAIM 8]

between 20.0 inches and 30.0 inches.	
14. The bridge rope assembly according to claim 12, wherein a distance between the first and second ends is less than 2.0 inches.	[SAME AS CLAIM 1]

2. Ground 1 – Reasons to Combine

117. A POSITA would have been readily motivated to combine the prior art of Ground 1. The primary YouTube videos of Exhibits 1132 and 1133 both describe the Tethrd Phantom Saddle, which includes a bridge rope (the “main body” claimed in the ’175 Patent) that Tethrd named the “UtiliBridge”. The secondary other YouTube video (Ex. 1125) and the SaddleHunter forum posts (Exs. 1125 & 1073-1075) all describe a do-it-yourself bridge for the Tethrd Phantom saddle, or a “DIY Utilibridge”. Thus, all of these prior art references discuss a bridge for the Tethrd Phantom.

118. The primary YouTube videos of Exhibits 1132 and 1133 each disclose the claimed concepts of (a) a spliced eye loop (*e.g.*, a locked Brummel) whose tag end is fully buried to the end of the bridge; and (b) a continuous loop friction hitch (*e.g.*, a Prusik hitch) on the end opposite the eye loop, thus rendering Claims 1, 4-6, 10-11, and 14 wholly anticipated (or at a minimum readily obvious). The remaining claims with entirely expected and wholly unsurprising quantitative

limitations (*viz.*, Claims 2-3, 7-9, and 12-13) are disclosed in the secondary DIY Utilibridge references, rendering those claims obvious in combination with the primary references.

B. Ground 2: Claims 1-14 Would Have Been Obvious Over the Aero Hunter Kestrel Saddle and G2 Outdoors DIY Saddle YouTube Video in View of the YouTube Videos, the SaddleHunter Forum Posts, and the HammockForums Forum Posts Describing Modifications to the Components Thereof

119. **Ground 2** assumes *arguendo* that the priority date for the '175 Patent is (incorrectly) **January 7, 2020**. **Ground 2** relies, in part, on third-party printed publications that published during the one-year grace period from January 7, 2019 – January 6, 2020.

1. Ground 2 – Claim Chart

120. The following claim chart sets forth the details of **Ground 2** for the unpatentability of Claims 1-14 of the '175 Patent in view of the YouTube video describing the Aero Hunter Kestrel saddle and the G2 Outdoors DIY saddle (**Ex. 1134**) and the YouTube videos (**Exs. 1126, 1129, 1130**) and the SaddleHunter forum posts (**Exs. 1054, 1061, 1082, 1090, 1099, 1107**) (alt. Exs. 1064, 1066, 1072, 1078, 1081, 1098, 1100, 1103) describing various modifications to the Samson Predator rope bridge and the Samson Amsteel rope bridge, respectively, used with those saddles, as well as the HammockForums forum posts (**Ex. 1038**) (alt. Exs. 1032, 1041) providing basic parameters and techniques for splicing a

continuous loop friction hitch (e.g., Prusik hitch):

1. A bridge rope assembly configured to couple together a tree rope to a first bridge loop and a second bridge loop on a harness, the bridge rope assembly including:

YouTube - Tree Saddle Bridge Basics (Ex. 1134)



Tree Saddle Bridge Basics

G2 Outdoors
26.9K subscribers

Subscribe

425

Share

Ask

Download

Clip

42,402 views Jan 24, 2018 #saddlehunting #saddlehunter #TethrdNation



(e.g., Ex. 1134 at 1:36)

1:20

very well so not my favorite bridge **this**

1:24

is the arrow hunter Kestrel this is a

1:26

fantastic bridge it comes with Samson

1:28

predator this is an 11 millimeter

1:30

climbing rated rope extremely strong

1:33

slides very well through a bridge **this**

1:36

is a great bridge option this is the

—OR—



Tree Saddle Bridge Basics

G2 Outdoors
26.5K subscribers

Subscribe

425

Share

Ask

Download

Clip

42,402 views Jan 24, 2018 #saddlehunting #saddlehunter #TethrdNation



(e.g., Ex. 1134 at 2:55)

1:36

is a great bridge option this is the

1:38

bridge I use on my DIY saddle so I made

1:41

this saddle and I use quarter inch am

1:43

steel-blue this is a very very thin rope

1:46

a very very slippery rope

1:48

there's no knots in this rope generally

* * *

2:00

this bridge is spliced back into itself

2:03

there's no knots it's a little bit

2:04

stronger you don't lose as much strength

2:06

in the rope so there's really no right

a main body comprising a rope having a first end and a second end, the main body having a splice therein to form an eye loop in the main body, the eye loop being configured to engage the first bridge loop, the main body comprising a first portion including the first end and a second portion including the second end, the first portion extending through the second portion of the main body such that the first end is positioned within the second portion adjacent to the second end; and	SaddleHunter - Prusik Knots (p1) (Ex. 1099 at 4) 
	Aug 20, 2019 #9 I don't know if it makes a difference, but I made my bridge with a full bury (meaning the entire length of the bridge has Amsteel in the core) so the Amsteel is more dense...it doesn't have the "give" that a single strand of Amsteel has. Does that double Amsteel allow a Prusik to grip better? I don't know.
	—AND—

YouTube - Hunting SOB's How to Splice Samson Predator Rope (Ex. 1130)



Hunting SOB's How to Splice Samson Predator Rope

Hunting SOB's
1.48K subscribers

Subscribe

67

Share

Ask

Download

Clip

6,344 views Jul 22, 2019

0:22

what's up guys a Jeremy here with hunting uh Sophie's again and I threw

0:28

out on the side 100 pages of saddle hunter and sell hunter nation basically the slots here of the sampson

0:35

predator and wrote if anybody's ever told you this is easy there's one guy on there and he said he had no trouble with

0:41

it but a lot of people do have trouble with it but i've got some tips and tricks that are actually gonna go

0:47

through the squats i couldn't find any videos online of actually splicing this

—AND—

SaddleHunter - Amsteel Brummel Lock ? (p1) (Ex. 1061)

	Mag1 Well-Known Member
	May 30, 2019 #1 Quick question on doing a Brummel lock. Can you do one side around say a saddle loop? I'm actually trying to make my own soft fid for trying to make up some predator eye splices, and need to loop it thru the finger trap type material while making the lock. I thought you could do one side, but I cannot figure out the correct wording on a google search to get any results..... justbseen another post on g2's video, I'll have to recheck that one. It's been awhile. Thanks
	—AND— YouTube - How to Add a Webbing Bridge to a Tree Saddle (Ex. 1126) How to Add a Webbing Bridge to a Tree Saddle Gary Blevins 207 subscribers Subscribe 64 Share Download 7,487 views Apr 3, 2019



(e.g., Ex. 1156 at 2:56)

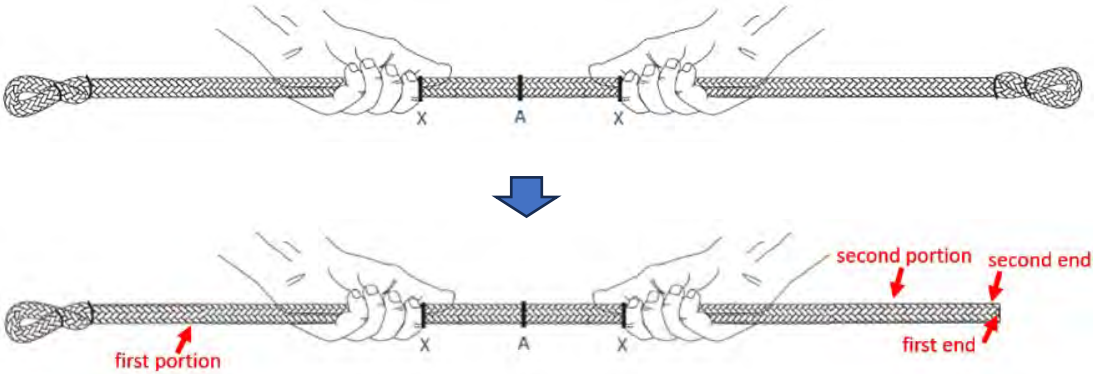
	0:14 the only things are really looking crazy 0:17 about on the Manus the way it comes is 0:19 for me the bridge too long and so a 0:24 hundred with it all season with the 0:31 original bridge on it and I played 0:35 around to see if a shorter bridge may be 0:39 more comfortable and so I'll put 0:40 different bridges on it and just let the 0:42 original one on it to see what I would 0:46 like it my previous set will have 0:48 24-inch bridge and it seems that's what 0:51 I that's the magic number for midgets on 0:53 this Center also like the 24-inch bridge 0:56 and so I'm going to cut this one off and * * *
--	---

1:14
thing off with if you want to see you
1:17
know how different bridges affect your
1:20
comfort one thing I use was a Whoopie
1:23
sling I might be wondering what what
1:26
Whoopie sling is you've never seen one
1:28
you have a fixed loop of one end and
1:30
then this other end you can make the
1:35
look bigger okay
1:38
or you can short it down but whenever
1:41
you pull on it from both directions it
1:44
doesn't slip so you can actually use
1:46
this as an adjustable bridge so you can

—OR—

Saddle Hunter - Before I become a cutter (p1) (Ex. 1066 at 5)



	Oct 19, 2018 #16 Cut it! Put the longer bridge. Helped me get comfortable.
	
a friction hitch being positioned on the main body between the second end and the eye loop, the friction hitch being configured to engage the second bridge loop, the friction hitch comprising a closed loop.	YouTube - Hunting Saddle Modifications - DIY (Ex. 1129) Hunting Saddle Modifications - DIY DIY Sportsman 74.3K subscribers Subscribe 43,547 views Jun 3, 2018

3:20
flopping around so what I've done is
3:23
I've tied a friction hitch this was just
3:25
a prusik onto the other side of my
3:28
saddle so I got the free end tight end
3:32
of the saddle and then the actual
3:33
sliding portion of it is on that bridge
3:35
rope and what this basically gives me is
3:38
it gives me an adjustable length for
3:41
that bridge so when I'm walking into the

—AND—

Saddle Hunter - Smallest diameter on tether rope (p1)
(Ex. 1107 at 3)



Jun 18, 2018

#7

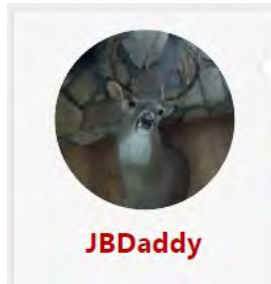
1/4" amsteel in a continuous loop worked extremely well for me for several hours yesterday on the Predator rope that came with the Kestrel. No slippage on my bridge or tether. I put it through several "tests" and it worked great.



	—OR— SaddleHunter - Sewn webbing bridge ? (p1) (Ex. 1103 at 3-4)  Spur Active Member
	Feb 4, 2019 #9 With amsteel, you can try a whoopie sling out of 1/4 inch amsteel so you can adjust until you find the right length before making it permamnent, or alternatively just some good climbing rope girth hitched one end and a prussik on the other to find that ideal length for the bridge. At least that is how I will be doing it when my amsteel comes in 😊
	SaddleHunter - Sewn webbing bridge ? (p1) (Ex. 1103 at 3)  Blacksmith Well-Known Member SH Member
	Feb 5, 2019 #10 Im using 11mm. locked Brummel on left side and a pruisic on the right. Just ordered some sewn pruisics to do away w/the big knots. I like to adjust my bridge once in awhile along w/my tether height. Someone posted a vid. showing not to run rope into webbing as it would cut the web

2. The bridge rope assembly according to claim 1, wherein the rope has a length from the first end to the second end between 72.0 inches and 126.0 inches.

SaddleHunter - How to make an Amsteel Bridge (p2)
(Ex. 1082 at 3-4)



JBDaddy

Well-Known Member

Mar 29, 2018

#29

So I'm planning a 20-36" adjustable bridge, with a 4 inch fixed loop around my saddle webbing at one side, a carabiner on the adjustable side, and a 4 inch tail (with a bead on it to prevent it from ever getting sucked too far into the adjustment bury). My math is coming out to about 7 feet of amsteel to start with.



—OR—

SaddleHunter - Replacing the bridge carabiner?? (p1)
(Ex. 1100 at 5)

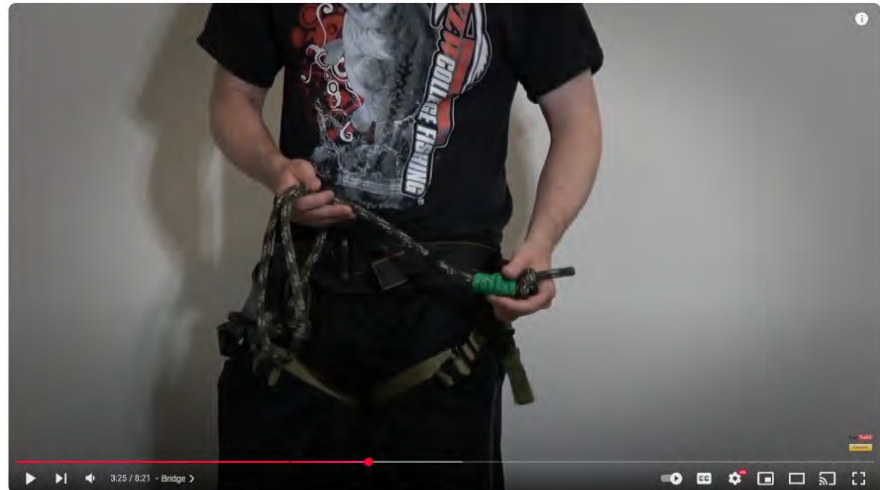


Ontariofarmer

Well-Known Member

	Mar 8, 2018 #11 Craig Foster What long of a piece of Amsteel did you start out with? I used 8 feet and buried the end of the whopie sling back into itself instead of a knot. I think you could get away with 7 feet easy if you used a knot like @g2outdoors did. Or if you don't want it 40 inches you can shorten it.
3. The bridge rope assembly according to claim 1, wherein a distance of the eye loop to the second end is between 24.0 inches and 40.0 inches.	SaddleHunter - Mantis Bridge Length (p1) (Ex. 1090 at 3)  GCTerpfan Moderator Staff member
	Aug 10, 2018 #4 Most people that are talking about shortening their bridge are referring to the Kestrel. The bridge on the Kestrel came extremely long so many people, including myself shorten it to somewhere between 24"-30". The Mantis already comes set up at 30", So, it's less likely you will have to adjust the Mantis bridge length.
	SaddleHunter - Mantis Bridge Length (p1) (Ex. 1090 at 3)  Apex7 Well-Known Member

	Aug 10, 2018 #5 I like about a 26 inch bridge. My bridge is made out of predator rope it's the one that came with my Kestrel. I have a ropeman on it so it's adjustable . Works great for me . I back it up with a prusik .
	—OR— SaddleHunter - Replacing the bridge carabiner?? (p1) (Ex. 1100 at 3)  Ontariofarmer Well-Known Member
	Mar 8, 2018 #8 I just put a whoppie sling made out of 6 mm amsteel on my saddle. That means I have no carabiners on my bridge and I have a bridge than I can easily adjust from 20 to 36 inches and it made my Kestrel lighter. It now weighs 2.48 pounds minus a tether and linemans belt. Before the change it weighed almost
4. The bridge rope assembly according to claim 3, wherein the main body includes a stop knot in the second portion adjacent to the second end.	YouTube - Hunting Saddle Modifications – DIY (Ex. 1129)



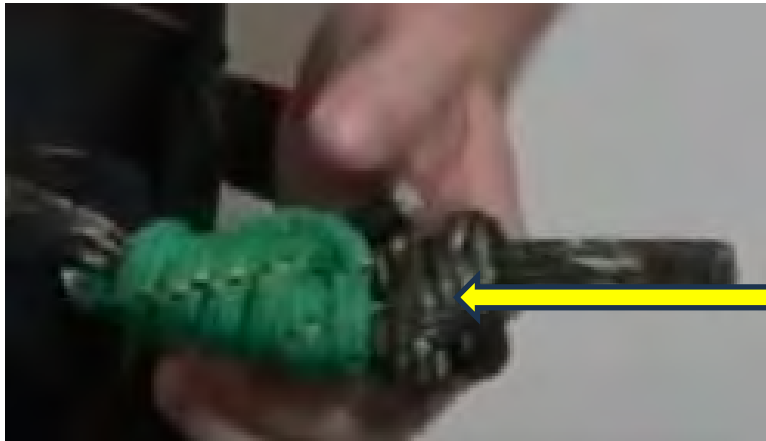
Hunting Saddle Modifications - DIY

DIY Sportsman
74.3K subscribers

Subscribe

447 48 Share Download Clip Save

43,588 views Jun 3, 2018



(e.g., Ex. 1129 at 1:52)

—OR—

SaddleHunter - Diy shorter mantis bridge (p2) (Ex. 1072 at 7)

	SemperFlightMedic Well-Known Member
	Dec 27, 2019 #37 I agree. I think the purpose of it is to prevent one from inadvertently pulling the tag end back through the hollow core. And as you mentioned, it does make it tidy. Without it, I think the amsteel would unravel. Although, you could tie an overhand knot in the end and put some heat shrink or tape over the end. Probably wouldn't look as neat and tidy as the "finished end" though.
5. The bridge rope assembly according to claim 4, further including a securing member being positioned on the main body at a juncture of the first and second ends to retain the first and second ends at a static position relative to each other.	YouTube - Hunting Saddle Modifications – DIY (Ex. 1129) Hunting Saddle Modifications - DIY  DIY Sportsman 74.3K subscribers Subscribe 43,547 views Jun 3, 2018

	 (e.g., Ex. 1129 at 3:35) —OR— SaddleHunter - Diy shorter mantis bridge (p2) (Ex. 1072 at 7) 
	Dec 27, 2019 #37 I agree. I think the purpose of it is to prevent one from inadvertently pulling the tag end back through the hollow core. And as you mentioned, it does make it tidy. Without it, I think the amsteel would unravel. Although, you could tie an overhand knot in the end and put some heat shrink or tape over the end. Probably wouldn't look as neat and tidy as the "finished end" though.
6. The bridge rope assembly according to claim 4, wherein the closed loop comprises a single rope being formed into the closed loop.	Saddle Hunter - Smallest diameter on tether rope (p1) (Ex. 1107 at 3)

	 Carolina_trad_hntr Member
	Jun 18, 2018  #7 1/4" amsteel in a continuous loop worked extremely well for me for several hours yesterday on the Predator rope that came with the Kestrel. No slippage on my bridge or tether. I put it through several "tests" and it worked great.

7. The bridge rope assembly according to claim 6, wherein the single rope of the closed loop has a length between 40.0 inches and 60.0 inches.

HammockForums - Smallest continuous loop of amsteel blue possible (p1) (Ex. 1038 at 3)

04-16-2015, 21:47

SilvrSurfr

Donating Member



#6

I basically took Opie's continuous loop pictoral and decided to cut down all lengths by 30 percent.

<https://www.hammockforums.net/forum/...+loop+pictoral>

Opie recommends starting with 40 inches of Amsteel Blue, and six inch buries to make a 12" diameter loop. So I just used 70% of those measurements. I start with 28 inches of Amsteel Blue, 4.2 inch buries, and it makes about an 8.4" diameter loop.

—OR—

HammockForums - Continuous Loop pictoral (p20) (Ex. 1032 at 4)

02-09-2013, 14:09

UncleClark

Senior Member



#198

Using the excellent pictures I made up a couple 12" continuous loops today using 7/64 Amsteel. I know that shorter buries are suggested in this thread, but after watching the videos on Sampson Rope, I decided to use 8" buries.

Using 8" buries I found that I needed 20" of Amsteel just for 2 x 8" buries plus about 4" shrinkage allowance in the main loop due to the buries.

So to make a 12" loop I ended needing about 44" total

12" loop requires 24"

Left bury requires 8" + 2" shrinkage = 10"

Right bury requires 8" + 2" shrinkage = 10"

—OR—

HammockForums - Stuck on Hennessy continuous loops... (p1) (Ex. 1041 at 1)

10-25-2013, 11:03

gmcttr

Senior Member

#2

Here's a video that lays out the process very nicely. You can vary the length and length of the buries to suit your own taste. 6" of bury will do nicely. The length of the bury does not need to increase for longer loops.

You will need to start with ~ 44" (30" for the loop, 2" for shrinkage, 12" for two 6" buries) of rope for each 15" loop. This will change if you change the length of the buries.

8. The bridge rope assembly according to claim 7, wherein the closed loop has a total circumference of between 20.0 inches and 30.0 inches.

HammockForums - Smallest continuous loop of amsteel blue possible (p1) (Ex. 1038 at 3)

04-16-2015, 21:47

SilvrSurfr

Donating Member



#6

I basically took Opie's continuous loop pictoral and decided to cut down all lengths by 30 percent.

<https://www.hammockforums.net/forum/...+loop+pictoral>

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—OR—

HammockForums - Continuous Loop pictoral (p20) (Ex. 1032 at 4)

02-09-2013, 14:09

UncleClark

Senior Member



	#198 Using the excellent pictures I made up a couple 12" continuous loops today using 7/64 Amsteel. I know that shorter buries are suggested in this thread, but after watching the videos on Sampson Rope, I decided to use 8" buries. —OR— SaddleHunter - H2 Triad Bridge (p2) (Ex. 1078 at 3)  Gator Well-Known Member
	Mar 2, 2020 #30 How big are the continuous loops? And what size amsteel on the loops? Mine are 13.5"
	—OR— SaddleHunter - Amsteel and the bury's (p1) (Ex. 1057 at 7)  deleted_user02 New Member

	Dec 13, 2018 #15 Man I appreciate all the responses. It has helped a ton. I am going with a 8 inch bury on the 12" continuous loop. I am using it as a modified sheets bend to capture the gathered end of a fleece saddle them I am attaching my bridge to it with a locked brumel on on side and a lock stich on the other.
9. The bridge rope assembly according to claim 1, wherein the closed loop has a total circumference of between 20.0 inches and 30.0 inches	[SAME AS CLAIM 8]
10. The bridge rope assembly according to claim 9, wherein the main body and the friction hitch each are comprised of U[H]MWPE.	SaddleHunter - Adjustable bridge ideas? (p1) (Ex. 1054 at 1)  Skrause5 Active Member
	Nov 25, 2019 #1 So I bought the tethrd mantis feel like I am going to be happy with it. Even though I wanted the flex but because of the 10 week period decided to go with the mantis. The one reason why I wanted the flex is because of the adjustable bridge. How do I get one so I can put one on my mantis so if it's pinching me I can fix it.
	SaddleHunter - Adjustable bridge ideas? (p1) (Ex. 1054 at 2)

	 ffastfzr Member
	Nov 26, 2019 #6 If you make about a 6 or 8 inch loop out of paracord or amsteel, and run that through one of the molle loops on the saddle towards the back, then clip a carabiner to the bridge and pull that over until it's tight enough and attach the biner to the loop you ran through your molle. Ether that or make a small prusik that you put on your bridge, attach the tail to the loop the bridge is attached to and then just pull until you've got it short enough to hike. I don't suggest using the prusik to shorten your bridge while you are at height.
	—OR— SaddleHunter - Amsteel Prussic (p1) (Ex. 1064 at 2)  Carolina_trad_hn tr Member
	Jun 17, 2018 #3 Worked like a charm. Replaced the prussic on my adjustable bridge and tether. That's a pretty good weight savings for effort and cost involved. Amsteel is the wonder rope, I love it. Wonder how amsteel prussic on amsteel bridge would work, as long as the diameter rule is followed...may be too slick.
	SaddleHunter - How I tie a stronger Prussik knot. (p1) (Ex. 1081 at 1)

	 Ex Umbra Member
	Oct 6, 2016 #1 However my personal goal is to keep my saddle gear as light as possible and in doing so I'm using far lighter lines, at my own risk and thusly I look to save or replace ALL the tensile strength of my lines I can. I make this post in case someone now or in the future wishes to do the same. So in the light of working with sufficient rope rather than overkill:) Yey! My BlueWater 4mm Titan (Dyneema) prusik cord came in the mail today. It's 1000 lb. Test.
	SaddleHunter - How I tie a stronger Prussik knot. (p1) (Ex. 1081 at 6)  ImThere Well-Known Member
	Oct 7, 2016 #12 I have two prussik knots yes... Not because of the smaller rope im using but rather its always good to have at least one back up to your primary. But yes as a by product it does bring more tensile strength on board. So in my case we are talking 1 on my sitdrag and one on my lineman? Or do you have 2 on your tether?
	SaddleHunter - How I tie a stronger Prussik knot. (p1) (Ex. 1081 at 7)

	 Ex Umbra Member
	Oct 7, 2016 #17 Yes my 14' (total rope length before knots) 5.5mm dyneema tether line and the 2' worth of 4mm dyneema for the 2 prussiks are wonderfully light.
	SaddleHunter - How I tie a stronger Prussik knot. (p1) (Ex. 1081 at 7-8)  Ex Umbra Member
	Oct 7, 2016 #19 I found 5.5mm dyneema, but not sure which line your using. However the brand I found comes in at 1.24 lbs per 100ft. Wow that is light!!!! I'm on BlueWater Titan 5.5mm in the color of black, 14' worth before knots for the tether... And BlueWater Titan 4mm in camo...2 maybe 2.5 ft for my two prussiks. Yes it's wonderfully light and plenty strong in my opinion. Dyneema is just another company's trademarked name for UHMWPE which is what AmSteel is. If I'm doing my math right and the manufacturer's claims are accurate about what this stuff weighs.... My whole tether rope with the two prussiks on it weighs in at 3.21 ounces.

—OR— SaddleHunter - Paracord (p2) (Ex. 1098 at 1)  Jason Wandling Well-Known Member	
	Dec 5, 2018   #21 Why can't Amsteel be used for a Prusik? If it's a continuous loop will that make a difference?
SaddleHunter - Paracord (p2) (Ex. 1098 at 2)  EricS Well-Known Member	
	Dec 5, 2018   #23 Be safe and if you want to test an amsteel prussik do it but have your muddy prussik backing it up.
11. The bridge rope assembly according to claim 1, wherein the main body is comprised of UHMWPE.	[SAME AS CLAIM 10]
12. The bridge rope assembly according to claim 9, wherein a	[SAME AS CLAIM 3]

distance of the eye loop to the second end is between 24.0 inches and 40.0 inches.	
13. The bridge rope assembly according to claim 12, wherein the closed loop has a total circumference of between 20.0 inches and 30.0 inches.	[SAME AS CLAIM 8]
14. The bridge rope assembly according to claim 12, wherein a distance between the first and second ends is less than 2.0 inches.	[SAME AS CLAIM 1] SaddleHunter - Prusik Knots (p1) (Ex. 1099 at 4) 
	Aug 20, 2019 #9 I don't know if it makes a difference, but I made my bridge with a full bury (meaning the entire length of the bridge has Amsteel in the core) so the Amsteel is more dense...it doesn't have the "give" that a single strand of Amsteel has. Does that double Amsteel allow a Prusik to grip better? I don't know.

2. Ground 2 – Reasons to Combine

121. A POSITA would have been readily motivated to combine the prior art of Ground 2. As reflected in the discussions in the prior art above, POSITAs frequently recognized the following problems with fixed-length bridges and

bridges that were not fully buried:

- 1) A fixed-length bridge (a) can be too long or too short, causing discomfort when sitting; and (b) can be cumbersome when walking wearing the saddle because of the bridge's excessive dangle.
- 2) In a non-fully buried bridge, bumps or humps at spliced joints (a) can be areas of potential weakness/failure; and (b) can prevent the bridge from sliding smoothly through the carabiner when the saddle wearer is pivoting during active hunting.



Homebrew454
Well-Known Member

Oct 10, 2018 #11

I had a 30 inch bridge on my sit drag as well and it was super comfy with no hip pinch. I assumed the new Mantis I got would be just as comfy with the 30 inch bridge but I get hip pinch when sitting and leaning in the Mantis. If I move the tether height down to chin to Adams Apple height it is manageable, for a period of time. If I move the bridge out (I'm guessing as I never measured) to around 40 inches it was almost as comfy as my sit drag with forehead tether.

Ex. 1114 at 4.



Dragsmack
Well-Known Member
Joined: Dec 10, 2017
Messages: 224

Oct 19, 2018 #1

Maybe Im crazy, I know Im weird....but I was pretty comfy in my Kestral with a tubular webbing bridge. I bought the Mantis and hunted last week and had the infamous hip pinch.

This morning I measured my Kestral bridge at 36 inches. I used my linesman belt to find a comfortable length in the Mantis which was about 36 plus inches. I am putting the tether about head high and I lean 75% of the time. My bridge length preference seems at odds with most everyone else is finding. I am 5'9" and 215lbs with a gut and not much of a butt.

Im going to REI to buy some more webbing but I hate to cut that Amsteel bridge if Im making a mistake. What do you guys think?

Ex. 1066 at 1.

04-17-2018, 02:55

#10

jadekayak

Senior Member



Join Date: Apr 2016

Location: new zealand

Hammock: DIY gathered end

Originally Posted by greenbigfrog

Hi!

I've been trying to find a proper answer to this question for hours now. A lot of people mention in their tutorials on splicing one should taper the ends that are buried for not only aesthetic reasons, but also reducing the breaking strength by only 10% instead of often a lot more when not tapering.

What's the reason though, that tapering affects the change of breaking strength?

Go to sampson ropes site and they explain this perfectly.

Basically ,an abrupt termination on the bury profuces a lump that causes excessive strain on the li e and promotes failure at this point.

The longer the taper the less strain on the line and less chance if failure.

A side effect of this is that it is also easier to pull the bury through the line

Ex. 1044 at 5-6.



Nutterbuster

Well-Known Member

SH Member

Joined: Oct 12, 2017

Messages: 10,354

Location:

Aug 22, 2018

#5

Country: Canada

Was there any reason you wanted to switch to a bridge made out of webbing other than just to try it out? Were there any negatives to the amsteel bridge?

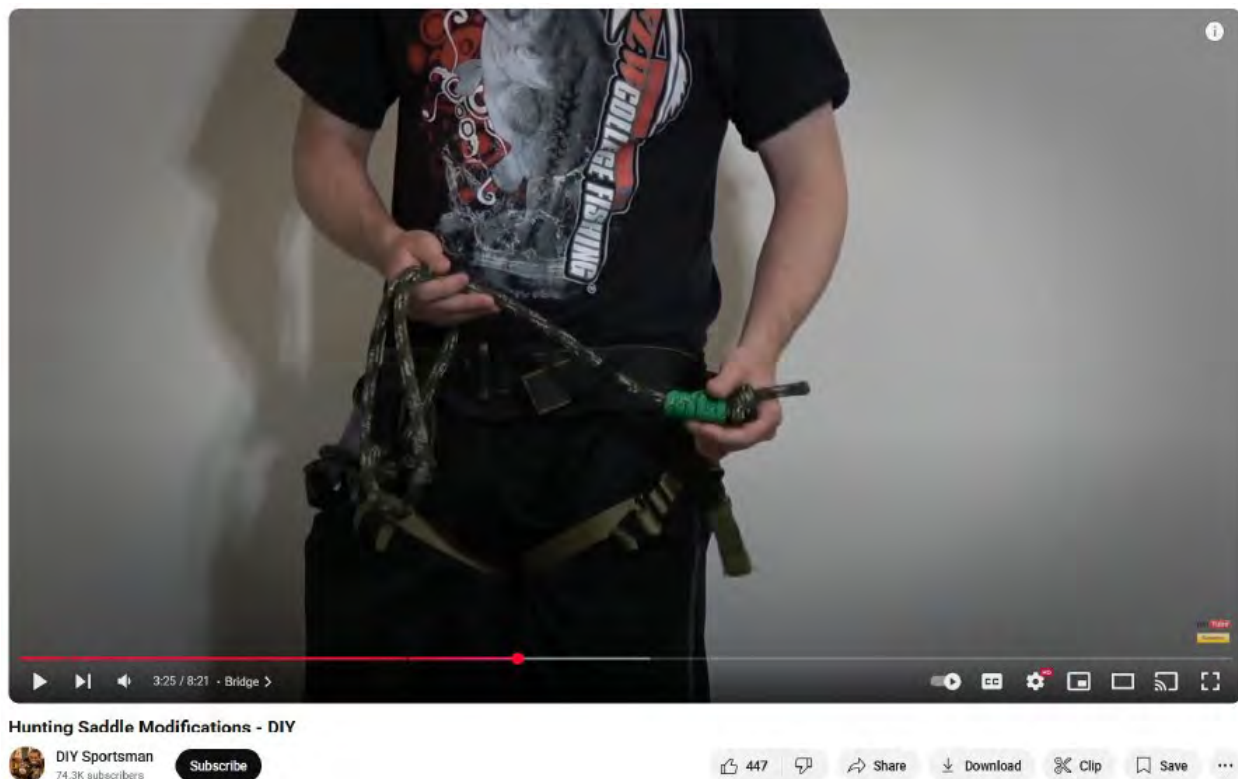
Yes, actually. With the amsteel bridge there was a "hump" that was catching when the bridge slid through the carabiner. (Edit: this was due to the buried ends of the splice) Nothing major, but it irked me. Webbing comes in more colors , and I had to order some for some other projects. Also, I didn't like the lock-stitching that was necessary.

Ex. 1106 at 2.

-121-

Ex. 1015
Crüzr v. Tethrd

122. As further reflected in the discussions in the prior art, saddle hunters in the prior art solved these problems using adjustable bridges (as opposed to fixed bridges) and fully buried bridges (as opposed to non-fully buried bridges). In particular, saddle hunters in the prior art openly taught the community that removal of the spliced eye on one end of a fixed-length bridge and replacing it with a friction hitch would allow the bridge to have an adjustable length; and that a full-length internal bury of a fixed eye tail (or tag end) would eliminate humps and bumps in the bridge.



3:10
one downside with a bridge it's a little
3:12
bit too short is that you need to
3:15
basically tuck it into the waist loop to
3:19
be able to walk and kind of keep it from
3:20
flopping around so what I've done is
3:23
I've tied a friction hitch this was just
3:25
a prusik onto the other side of my
3:28
saddle so I got the free end tight end
3:32
of the saddle and then the actual
3:33
sliding portion of it is on that bridge
3:35
rope and what this basically gives me is
3:38
it gives me an adjustable length for
3:41
that bridge so when I'm walking into the
3:43
woods I can loosen that thing up all the
3:45
way it's long enough to throw over my
3:47
shoulders so then when I'm walking I'll
3:51
not only have the bridge over my
3:53
shoulders but I can also have the
3:56
Lyman's belt draped over my shoulders so
4:00
I can walk in like this

Ex. 1129 at 6-7.



Carcher87
Well-Known Member
Joined: Jun 19, 2017
Messages: 605

Sep 26, 2018 #9

Tie a prussik onto some samson rope, then attach the open end to your bridge. You can then adjust it on the fly. Im 5'10" 175lbs. I like a forehead tether with a 28" bridge. E2E. But if i want to shoot weak side i stand up, tightened the bridge and turn on the platform.

Report

Like Reply

Ex. 1067 at 4.



Ontariofarmer
Well-Known Member
SH Member
Joined: Dec 25, 2015
Messages: 5,261

Mar 16, 2018 #16

There's really no disadvantage to having an adjustable/whoopie sling bridge other than a very small weight penalty (1/2 oz?), and a tail end that you have to deal with. Neither of those are deal breakers IMO.

An adjustable bridge has some advantages too.

1. Comfort can vary ... from sit to sit and varying the length changes the comfort level
2. A short bridge for repelling.
3. Very little movement compared to adjusting the tether if you need more slack or less for a shot. If you lean back against your backstrap it takes the pressure off the bridge so you can adjust it.
4. I think I am one of the few that likes it adjustable and now I have a whoopie sling and amsteel it is even better. . There are no carabiners on my bridge either.

denots, okie_edward and BassBoysLLP



g2outdoors
Well-Known Member
Vendor Rep

Mar 16, 2018 #17

You make a good case for an adjustable bridge. I may consider switching.

Sent from my Galaxy S8.

Ex. 1063 at 5-6.



Ontariofarmer
Well-Known Member
SH Member
Joined: Dec 25, 2015
Messages: 5,261

Sep 22, 2017 #5

Excellent tactic. You might eventually find that you don't adjust your bridge all that often. I got mine dialed in and never changed it. That's when I transitioned to a fixed bridge. Maybe that will work for you, maybe not. However, I really like that you've eliminated the carabiners. I HATE that added weight and potential for noise.

Yup I had a fixed bridge last year but I want to try an adjustable bridge. I sit and lean and move around the tree and I wonder if an adjustable bridge may be an advantage. A prussic under load lengthens easily with one hand and no noise and no movement. It will take two hands to shorten

Ex. 1051 at 2-3.



Scott F
Well-Known Member

Sep 22, 2017 #5

Pretty cool.

I am using an adjustable bridge this year too, but I am using amsteel. To be honest, it is just a fun factor for me, a novelty of sorts because I have never played with amsteel...

I don't see any real negatives of using a bridge that can be adjusted.



justsomedude
Well-Known Member
Joined: Sep 10, 2014
Messages: 2,514

Sep 22, 2017 #7

It takes more rope to attach the free end to the saddle
I assume you mean I should shorten my prussic
Sent from my iPhone using Tapatalk

Actually both.
When I did that, I had a short prusik and I also backup attached the free end of the bridge.



g2outdoors
Well-Known Member
Vendor Rep
Joined: Oct 3, 2014
Messages: 7,448
Location: Savannah, GA

Sep 23, 2017 #8

Pretty cool.

I am using an adjustable bridge this year too, but I am using amsteel. To be honest, it is just a fun factor for me, a novelty of sorts because I have never played with amsteel...

I don't see any real negatives of using a bridge that can be adjusted.

Sent from my SM-S820L using Tapatalk

There are no negatives with amsteel. An extra few feet of rope weighs less than an ounce. With traditional climbing rope bridges and carabiners, they're definitely some weight and bulk gain.

Ex. 1051 at 3.



swampsnyper
Well-Known Member
Joined: Mar 10, 2015
Messages: 4,463
Location: Warrior, AL

Aug 23, 2018 #34

Yes, actually. With the amsteel bridge there was a "hump" that was catching when the bridge slid through the carabiner. (Edit: this was due to the buried ends of the splice) Nothing major, but it irked me.

If you make a good taper on the ends of the amsteel bury, you won't feel that hump. You can even make the tapered ends from each side over lap each other in the center of the bridge for best results but it's hard to do. Trying to over lap them, I seem to always get a few straggler strands of the bury sticking out of the outer amsteel, but it's just cosmetic.

Ex. 1106 at 5.



Blacksmith
Well-Known Member
SH Member
Joined: Dec 10, 2018
Messages: 2,728
Location: Bucyrus OH

Jan 6, 2019 #29

I just made my first amsteel 24" bridge. To get enough bury They meet in the middle of the 24" Don't like that bump|in the middle when rotating. How little of bury can we get by with if stitched

Ex. 1056 at 3.



ICU outdoors
New Member
Joined: Sep 12, 2018
Messages: 19
Location: NE Texas

Sep 13, 2018 #8

I made a 28" bridge and made my locked in bury 8-10" the other end I pulled through all the way to the locked in bury and pulled it out past the locked bury about 3/4" then cut it with about 3/4" sticking out. I milked the rope back over it the best I could and stitch locked it in with the orange cord. After working the rope with my weight on the caribiner it pulled the last 3/4" that was sticking out mostly inside. This way it's a solid line without the need to taper the ends so there's no bump|when sliding from hip to hip. Also if for some reason later on I want to make my bridge longer I can cut the stitches and pull the loop out to my desired length and re-stitch. The issue with that would be a blunt end that's not tapered which would make shifting your hips a little bumpier.

Ex. 1108 at 3.



Peterk1234
Well-Known Member
Joined: Oct 23, 2017
Messages: 805
Location: Massachusetts

Oct 14, 2018 #1

I think most of us are using fixed amsteel bridges these days. I have read a number of threads regarding the adjustable amsteel bridge and the suggestion of using it until you have your length figured out. I have been using the fixed bridge since the Spring and it works well. The bury in the bridge does get pushed through. Other than looking ugly, it does not appear to impede performance much. My buries are tapered, so I do not have too much of a hump as my bridge slides through the carabiner, but it is not totally smooth. I have read about some folks complaining about the hump, more so with the tethrd bridge. It sounds like the bury may not be tapered.

So it got me thinking that the whoopie bridge would actually be a better solution. Not only is it adjustable, but the bury is full length. Even where the line exits the line is doubled up, so no hump. It should run much smoother than the fixed bridge through the carabiner. I have not tried it yet. Just throwing it out there as an idea.

Ex. 1077 at 1.

123. Accordingly, a POSITA familiar with the prior art would have been readily motivated to combine the references of Ground 2 to make a bridge that is both adjustable in length and fully buried.

124. In addition, as further reflected in the discussions in the prior art, POSITAs also recognized the benefits of using Amsteel (or other UHMWPE materials) for the ropes used in saddle hunting, including saddle bridges and Prusik hitches. These synthetic rope materials have the benefits of having very high strength and very low weight, and excellent abrasion resistance.



Ex Umbra
Member
Joined: Oct 1, 2016
Messages: 89

Oct 6, 2016 #1

(Before I say anything let me preface it with this. Seems like everyone here is using overkill rope dia. and have no want or feel the need to preserve lost tensile strength of their lines. That's great and Im totally happy because you are.

However my personal goal is to keep my saddle gear as light as possible and in doing so I'm using far lighter lines, at my own risk and thusly I look to save or replace ALL the tensile strength of my lines I can. I make this post in case someone now or in the future wishes to do the same. So in the light of working with sufficient rope rather than overkill:)

Yey! My BlueWater 4mm Titan (Dyneema) prusik cord came in the mail today. It's 1000 lb. Test.

Ex. 1081 at 1.



g2outdoors
Well-Known Member
Vendor Rep

Mar 14, 2018 #9

Here is a **great article about Dyneema** (Amsteel Blue).

One line I really liked: "Dyneema is a very impressive fiber when it comes to technical specifications. **It's the strongest fiber in the world by weight**, has virtually no stretch, has incredible chemical resistance, excellent UV resistance, and extremely good abrasion resistance"

Ex. 1063 at 3.



BassBoysLLP
Well-Known Member
Vendor Rep
Joined: Sep 28, 2014
Messages: 3,096

Mar 14, 2018 #10

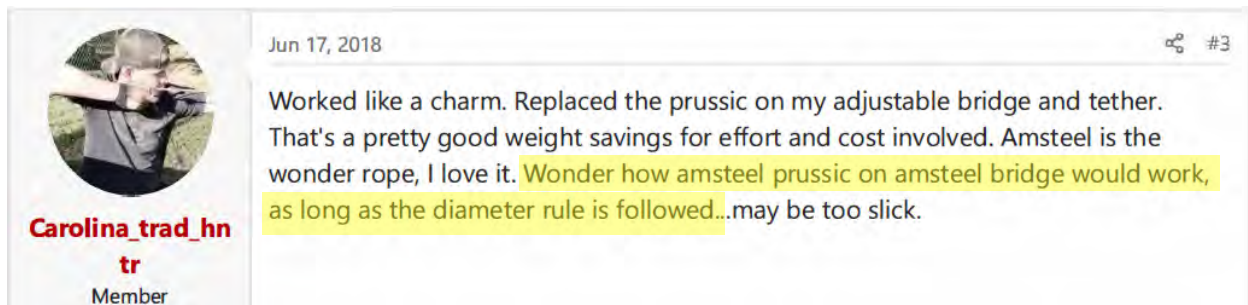
It's very difficult to develop a negative argument for amsteel. I'm likely gonna cave this year and switch to a woopie as I prefer an adjustable bridge.

Sent from my SM-G900V using Tapatalk

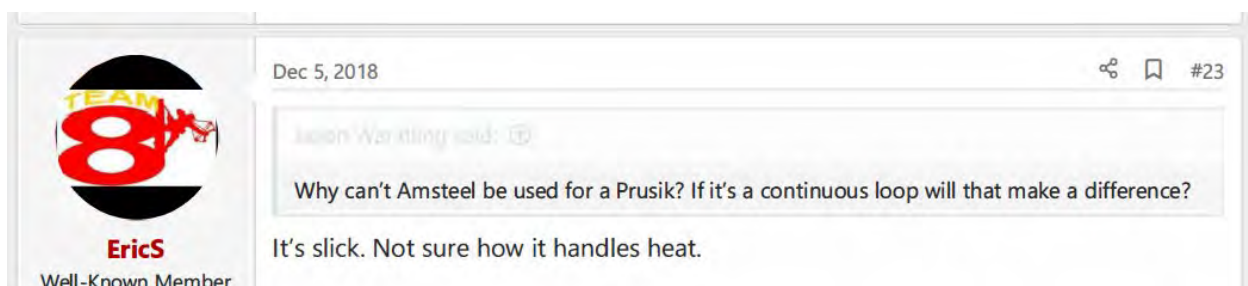
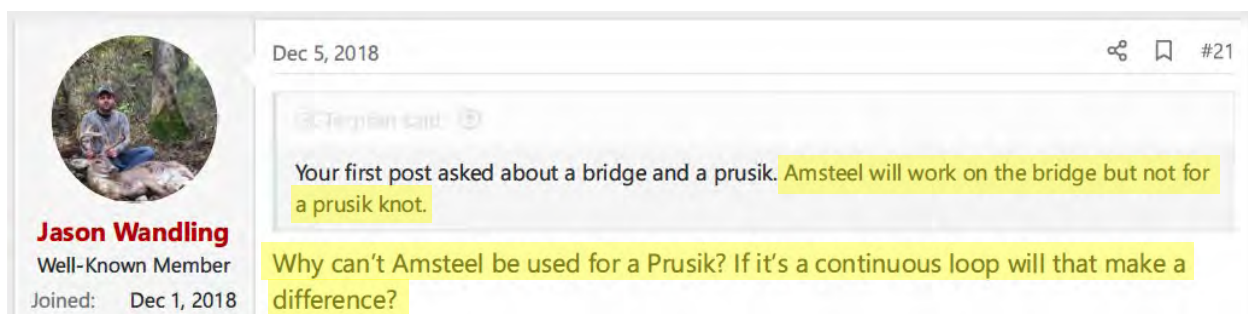
 **Ontariofarmer**

Ex. 1063 at 4.

125. While some uniformed commentators in the saddle hunting community may have questioned the use of Amsteel-on-Amsteel, they were apparently unaware that the use of Amsteel-on-Amsteel was taught in the prior art, information that a POSITA would have known. *See, e.g.*, Section IV.D.4. And with respect to saddle hunting in particular, the use of an Amsteel Prusik hitch on an Amsteel bridge had certainly been proposed in discussions on the SaddleHunter message board:



Ex. 1064 at 2.



Be safe and if you want to test an amsteel prussik do it but have your muddy prussik backing it up.

Tethrd pro staff

Ex. 1098 at 1-2.

126. Accordingly, as the above pubic discussions reveal, a POSITA would have at least found it obvious to try using an Amsteel Prusik hitch on an Amsteel bridge. In that time frame, there were only a limited number of identified, predictable options for adding a friction hitch to an Amsteel bridge, and there would have been a reasonable expectation that an Amsteel Prusik hitch would be successful.

127. The remaining claims with entirely expected and wholly unsurprising quantitative limitations (*viz.*, Claims 2-3, 7-9, and 12-13) are disclosed in the secondary references, rendering those claims obvious in combination with the primary references.

C. Ground 3: Claims 1-14 Would Have Been Obvious Over The Tethrd Mantis Saddle YouTube Video in View of the Hunting Saddle Modifications DIY YouTube Video, the ArboristSite Amsteel Blue Splicing Experiments Forum Posts, the SaddleHunter Forum Posts, the HammockForums Forum Posts, the Samson Splicing Instructions, and the L-36 Splicing Directions Describing Modifications to the Components Thereof

128. **Ground 3** assumes *arguendo* that the priority date for the '175 Patent is (incorrectly) **January 7, 2020**. **Ground 3** relies *only* on printed publications that published on or before January 6, 2019, that is, before the one-year grace

period from January 7, 2019 – January 6, 2020.

1. Ground 3 – Claim Chart

129. The following claim chart sets forth the details of **Ground 3** for the unpatentability of Claims 1-14 of the '175 Patent in view of the YouTube video (**Ex. 1131**) describing the Tethrd Mantis Saddle, and the YouTube video (**Ex. 1129**), the ArboristSite forum post (**Ex. 1024**), the SaddleHunter forum posts (**Exs. 1064, 1091, 1107**) (alt. Exs. 1055, 1066, 1090, 1115), and the Samson splicing instructions (**Ex. 1018**) describing various modifications to the Samson Amsteel rope bridge used with that saddle, as well as the HammockForums forum posts (**Ex. 1032**) (alt. Ex. 1034) and the and L-36.com splicing directions (alt. Ex. 1046) providing basic parameters and techniques for splicing a continuous loop friction hitch (*e.g.*, Prusik hitch):

1. A bridge rope assembly configured to couple together a tree rope to a first bridge loop and a second bridge loop on a harness, the bridge rope assembly including:	YouTube – Mantis Saddle - Setup and Directions (Ex. 1131) 
--	--

	Mantis Saddle - Setup and Directions  Tethrd Nation 48.6K subscribers Subscribe 83,192 views Dec 30, 2018  (e.g., Ex. 1130 @ 5:28)
a main body comprising a rope having a first end and a second end, the main body having a splice therein to form an eye loop in the main body, the eye loop being configured to engage the first bridge loop, the main body comprising a first	YouTube – Mantis Saddle - Setup and Directions (Ex. 1131) 

portion including the first end and a second portion including the second end, the first portion extending through the second portion of the main body such that the first end is positioned within the second portion adjacent to the second end; and

Mantis Saddle - Setup and Directions



Tethrd Nation
48.6K subscribers

Subscribe

83,192 views Dec 30, 2018

ArboristSite - Amsteel Blue Splicing Experiments (p1) (Ex. 1024 at 4-6)

Apr 19, 2008

#6



moray
ArboristSite Guru

Side-by-Side Splice

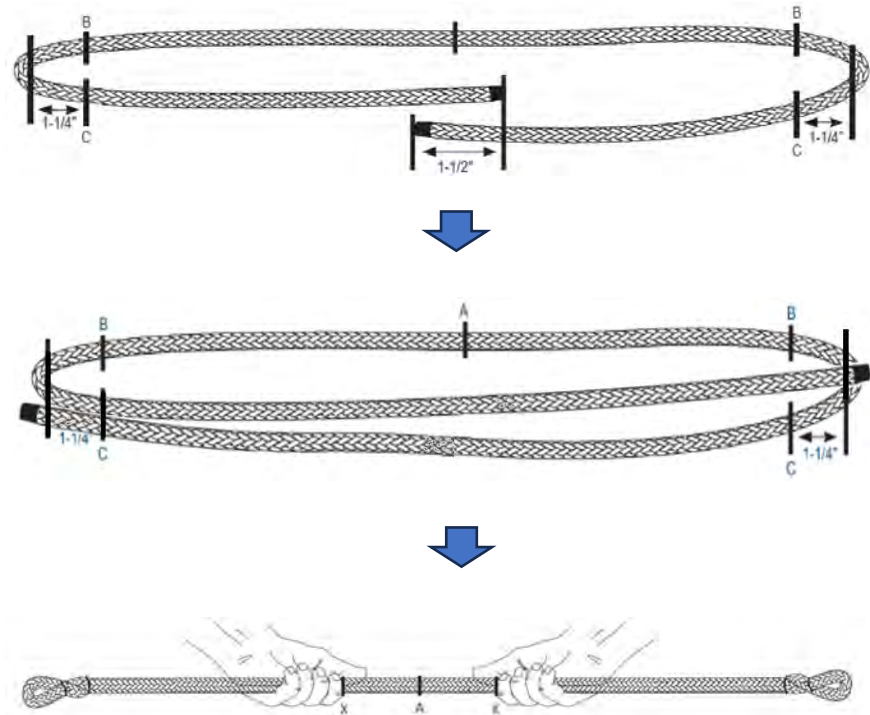
In splicing short Eye and Eye slings, it is often necessary to overlap the tapered tail from one eye with the tapered tail from the other. When well done, the result is a nearly uniform rope diameter from one eye to the other. Even though I knew the 9 inches of my saddle bridge was way too short to accomodate 2 legal spliced eyes in 3/16 AmB, I thought I would go through the motions anyway. I soon discovered that AmB is roomy enough inside to hold 2 full-diameter ropes side by side! This is practically impossible with Tenex, and it offered up a new possibility for the short sling.

I made up a double-eye sling in which each buried tail extended the full length of the rope and emerged at the throat of the other eye. The distance between the eyes was about 5.5 inches, much shorter than the prescribed minimum of 8 inches. I went directly to the pull test without bothering to taper and bury the tails. My friend Jack and I hooked it up between two of his trucks and he started pulling while I took photos.

	Apr 19, 2008 #7 M moray ArboristSite Guru Bury-in-Bury Splice If the previous splice was a deviation from accepted practice, this one was even more so. Instead of burying 2 cores side by side, in this experiment one core is buried inside of the other. As always, to make the tests really conservative, the splices are much shorter than manufacturer's spec. First I made an ordinary eye and left a long tail hanging out of the rope. By inserting the wire fid at the throat of the eye just formed, and running it right down the center of stuffed core, I could bring it out of the tail half an inch beyond where the tail emerged from the cover. Then the rope was pulled through to form the second eye. The pictures should make this clearer. The end result is that for the full distance between the eyes you have a rope in a rope in a rope--3 concentric layers of rope. All the strange asymmetries of the previous experiment are gone! Apr 19, 2008 #8 M moray ArboristSite Guru Bridge Test A new example of a bury-in-bury sling was made up, this time for testing in a saddle bridge configuration. The first photo shows the sling being pulled by the tree truck. The sharp bend in the middle of the sling (upper part of photo) is very close to what a saddle bridge would experience. I was sure it would not pull apart, but I wondered if some of the fibers at the outside of the bend might break. None did, but I would expect that to be the most highly stressed part of the rope. This same sling was then used in the next test.
	—AND— Samson - 12-Strand Eye-and-Eye Tail Splice (Ex. 1018 at 1-2)

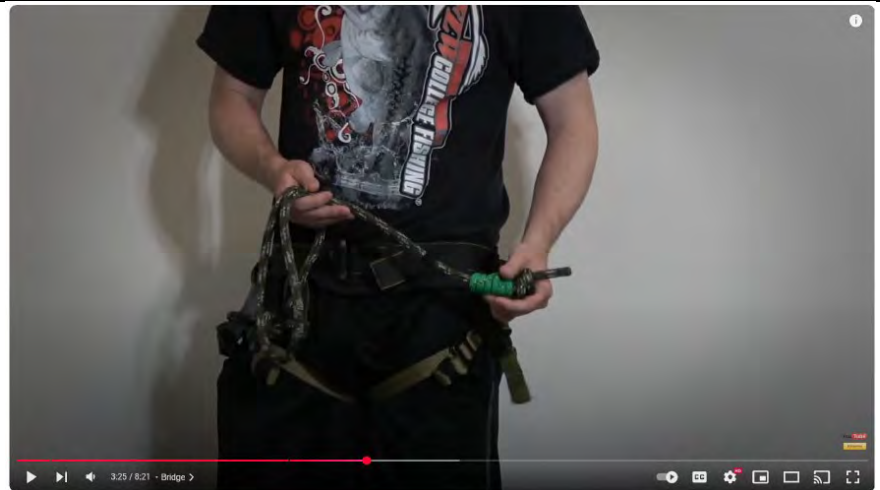
SAMSON SPLICING INSTRUCTIONS

12-Strand Eye-and-Eye Tail Splice



—AND—

YouTube – Hunting Saddle Modifications – DIY (Ex. 1129 at 6)



Hunting Saddle Modifications - DIY



DIY Sportsman
74.3K subscribers

Subscribe

43,547 views Jun 3, 2018

3:20

... so what I've done is

3:23

I've tied a friction hitch this was just

3:25

a prusik onto the other side of my

3:28

saddle so I got the free end tight end

3:32

of the saddle and then the actual

3:33

sliding portion of it is on that bridge

3:35

rope and what this basically gives me is

3:38

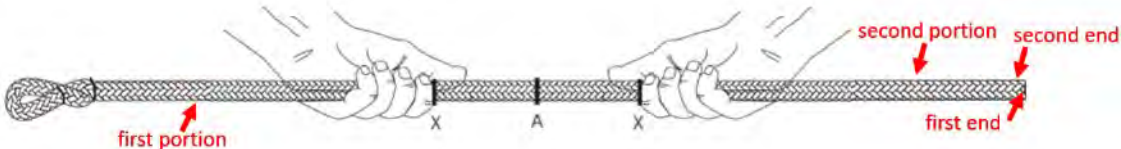
it gives me an adjustable length for

3:41

that bridge

—AND—

	SaddleHunter - Mantis Bridge Mods (p1) (Ex. 1091 at 2)  d_rek Well-Known Member
	Oct 8, 2018 🔗 🔖 #3 I will probably shorten my stock mantis bridge by 4-6" by undoing one of the splices and cutting a length of the amsteel off.
	SaddleHunter - Mantis Bridge Mods (p1) (Ex. 1091 at 3)  Mag1 Well-Known Member
	Oct 12, 2018 🔗 🔖 #6 I believe the mantis bridge was made before they sewed the eye/loop material on. I took mine off and you cannot undo it without cutting one side. (maybe I missed
	-OR- SaddleHunter - Before I become a cutter.... (p1) (Ex. 1066 at 1-2)  IkemanTX Well-Known Member

	Oct 19, 2018 #2 I would tuck the amsteel bridge into the belt for several dots before cutting it. If you decide you really do like the 36" length, then cut after several sits of proof.
	SaddleHunter - Before I become a cutter.... (p1) (Ex. 1066 at 4)  Wirrex Moderator
	Oct 19, 2018 #11 Thanks, I drew it out just to make sure. There isn't any way to do it without cutting. Both sides are locked Brummells.
	SaddleHunter - Before I become a cutter.... (p1) (Ex. 1066 at 5)  swampsnyper Well-Known Member
	Oct 19, 2018 #16 Cut it! Put the longer bridge. Helped me get comfortable.
	
a friction hitch being positioned on the	SaddleHunter - Smallest diameter on tether rope (p1) (Ex. 1107 at 3)

main body between the second end and the eye loop, the friction hitch being configured to engage the second bridge loop, the friction hitch comprising a closed loop.



Jun 18, 2018

#7

1/4" amsteel in a continuous loop worked extremely well for me for several hours yesterday on the Predator rope that came with the Kestrel. No slippage on my bridge or tether. I put it through several "tests" and it worked great.



2. The bridge rope assembly according to claim 1, wherein the rope has a length from the first end to the second end between 72.0 inches and 126.0 inches.

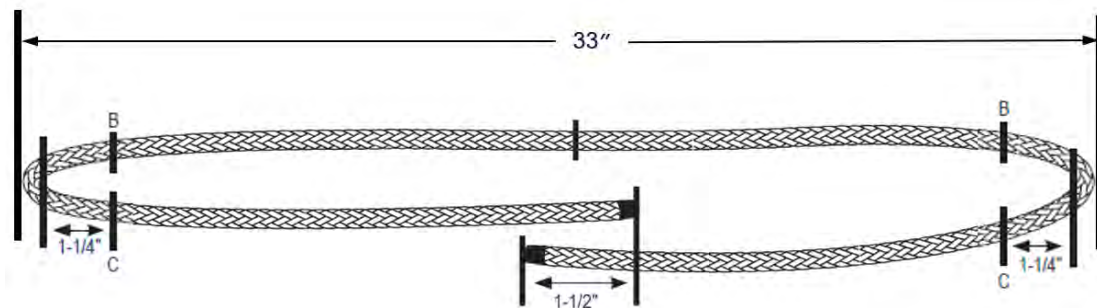
Samson - 12-Strand Eye-and-Eye Tail Splice (Ex. 1018 at 1-2)

SAMSON SPLICING INSTRUCTIONS

12-Strand Eye-and-Eye Tail Splice

The desired tail length will dictate the starting length of cordage required. For a 33" finished eye-and-eye tail, an 80" length of 3/8" rope is required.

Samson Ice Tail 33" bridge (traditional Full-Bury splice):

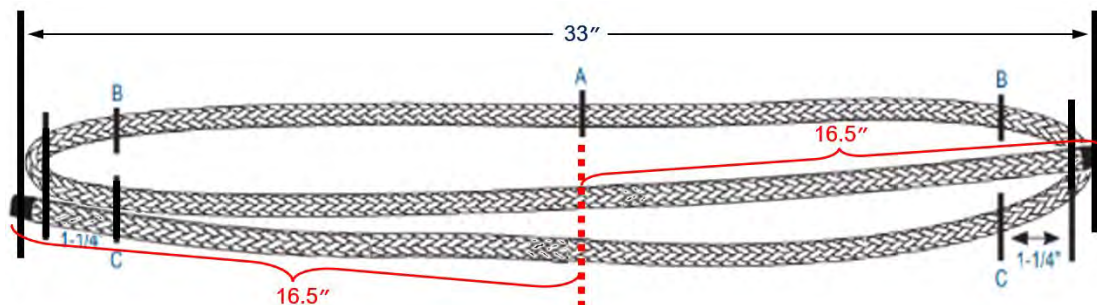


$$SL = 80''$$

$$EL = 33'' + 33'' + 1.5'' \text{ (overlap)} = 67.5''$$

$$\text{Est. Shrinkage} \approx 1 - (67.5''/80'') = 15.6\%$$

Samson Ice Tail 33" bridge (modified Side-by-Side or Bury-in-Bury splice):



	Estimate shrinkage from traditional full-bury splice is increased by 50% to 23.4% for the two additional 16.5" lengths used in a Side-by-Side or Bury-in-Bury splice. $SL = (80" - 1.5") + ((16.5" + 16.5") \times 1.234) = 119.2"$ Estimate shrinkage from traditional full-bury splice is increased by 100% to 31.2% for the two additional 16.5" lengths used in a Side-by-Side or Bury-in-Bury splice. $SL = (80" - 1.5") + ((16.5" + 16.5") \times 1.312) = 121.8"$
	–OR– HammockForums – Everything you always wanted to know about Amsteel but were afraid to ask (p3) (Ex. 1034 at 2)  The screenshot shows a forum post header for 'FJRpilot', a 'Senior Member'. Below the name is a profile picture of a brown longhorn with large curved horns. At the bottom of the post header, there is a timestamp '01-29-2017, 11:39' and a post number '#24'.

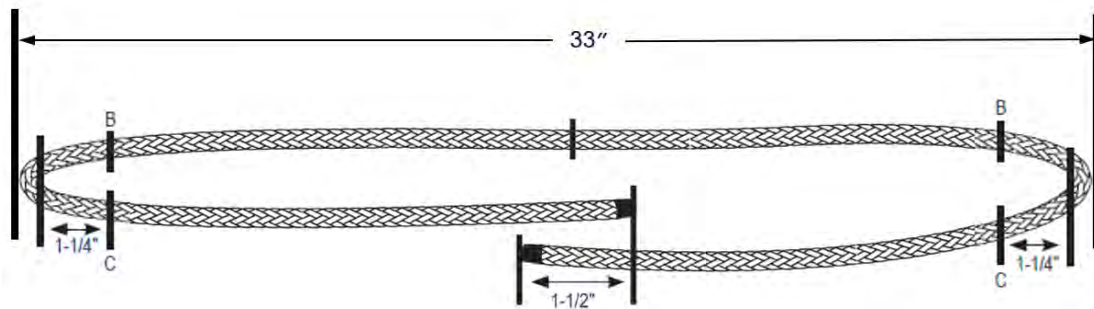
	So wanted to mention some information that I've been researching about shrinkage when splicing Amsteel. We all know that when you splice Amsteel, you experience shrinkage due to the length of the bury, there is not a lot of information that I could find about exactly how to determine the amount of shrinkage. The articles I have read seem to indicate that you should factor in about 20% of the length of the bury. So if your using 7\64, which needs an 8" bury, the piece of Amsteel you bury this into will shrink by 1.6". If your doing precision splicing (like with Grizz's Ariel), you will need to factor this into the lengths of Amsteel you are making for the suspension. So far 20% seems to be working..
	-OR- SaddleHunter - Mantis Bridge Length (p1) (Ex. 1090 at 3)  GCTerpfan Moderator Staff member
	Aug 10, 2018 #4 Most people that are talking about shortening their bridge are referring to the Kestrel. The bridge on the Kestrel came extremely long so many people, including myself shorten it to somewhere between 24"-30". The Mantis already comes set up at 30", So, i t's less likely you will have to adjust the Mantis bridge length.
	-AND- Samson - 12-Strand Eye-and-Eye Tail Splice (Ex. 1018 at 1)

SAMSON SPLICING INSTRUCTIONS

12-Strand Eye-and-Eye Tail Splice

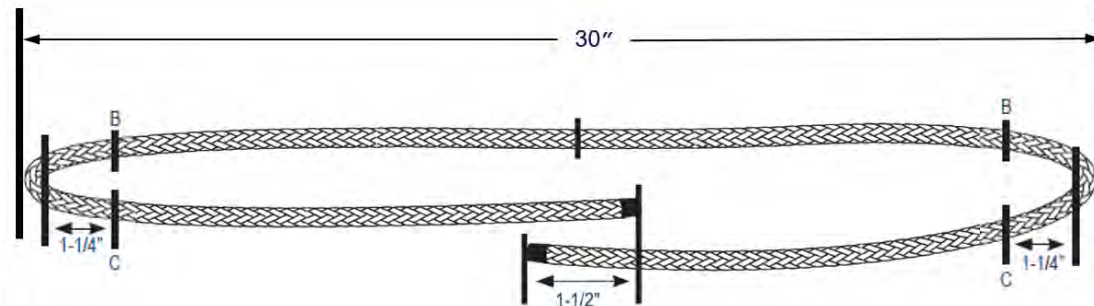
The desired tail length will dictate the starting length of cordage required.
For a 33" finished eye-and-eye tail, an 80" length of 3/8" rope is required.

Samson Ice Tail 33" bridge (traditional Full-Bury splice):



$$SL = 80"$$

Mantis 30" bridge (3" shorter than Ice Tail 33" bridge) (traditional Full-Bury splice):

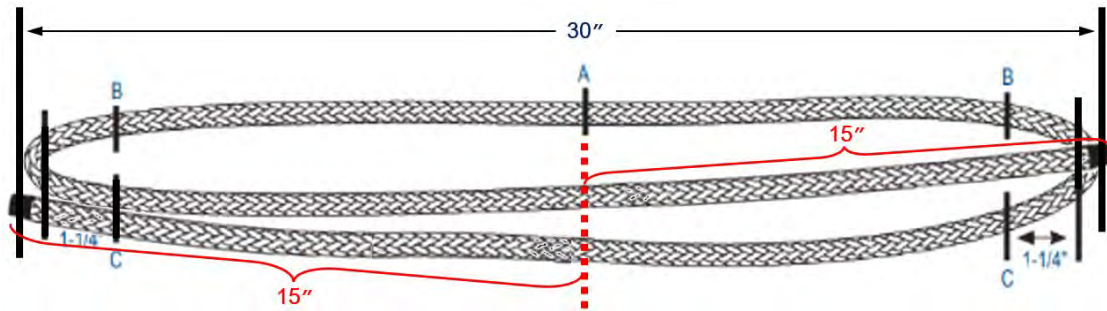


$$EL = 30" + 30" + 1.5" \text{ (overlap)} = 61.5"$$

Est. Shrinkage $\approx 20\%$ (per prior art forums)

$$SL = 61.5" \div (1 - 0.20) = 76.9"$$

Mantis 30" bridge (modified Side-by-Side or Bury-in-Bury splice):



Estimate shrinkage from traditional full-bury splice is increased by 50% to 30% for the two additional 15" lengths used in a Side-by-Side or Bury-in-Bury splice.

$$SL = (76.9" - 1.5") + ((15" + 15") \times 1.30) = 114.4"$$

Estimate shrinkage from traditional full-bury splice is increased by 100% to 40% for the two additional 15" lengths used in a Side-by-Side or Bury-in-Bury splice.

$$SL = (76.9" - 1.5") + ((15" + 15") \times 1.40) = 117.4"$$

3. The bridge rope assembly according to claim 1, wherein a distance of the eye loop to the second end is between 24.0 inches and 40.0 inches.

Samson - 12-Strand Eye-and-Eye Tail Splice (Ex. 1018 at 1)

SAMSON SPLICING INSTRUCTIONS

12-Strand Eye-and-Eye Tail Splice

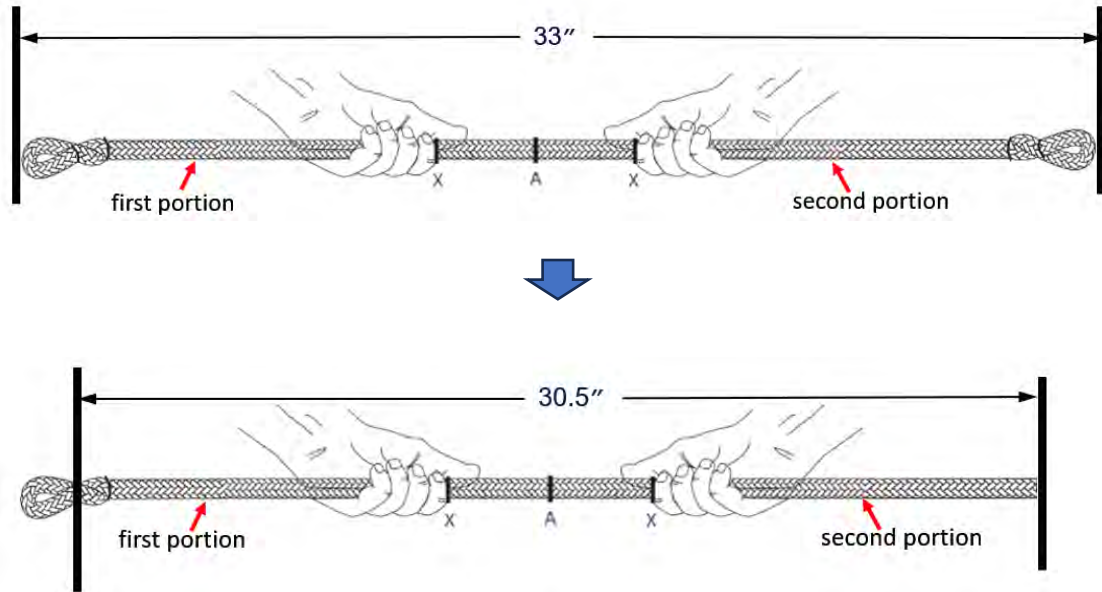
STEP 2 MARKING EYE SIZE

Mark the size of the eye on each tail. From the inside of the eye, mark both legs of the eye at 1-1/4". These are Marks B and C, as shown.



The desired tail length will dictate the starting length of cordage required. For a 33" finished eye-and-eye tail, an 80" length of 3/8" rope is required.

Samson Ice Tail 33" bridge (modified Side-by-Side or Bury-in-Bury splice):



$$\text{Dist.} = 33'' - 1.25'' - 1.25'' = 30.5''$$

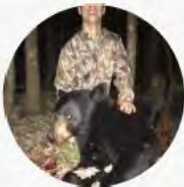
-OR-

SaddleHunter - Mantis Bridge Length (p1) (Ex. 1090 at 3)



Aug 10, 2018

Aug 10, 2018

	Most people that are talking about shortening their bridge are referring to the Kestrel. The bridge on the Kestrel came extremely long so many people, including myself shorten it to somewhere between 24"-30". The Mantis already comes set up at 30", So, it's less likely you will have to adjust the Mantis bridge length.
	-OR- SaddleHunter - Tethrd Mantis dimensions (p1) (Ex. 1115 at 10)  valerio024 Well-Known Member
	Oct 1, 2018 #13 Here are some unofficial measurements of a large Tethrd Mantis. Weight: 17.2 ounces Weight with Tethrd ropes and carabiners: 2lbs 15.4 ounces Bridge loop to Bridge loop. 32.25in Seat Width: 23 inches Seat Height: 14 inches

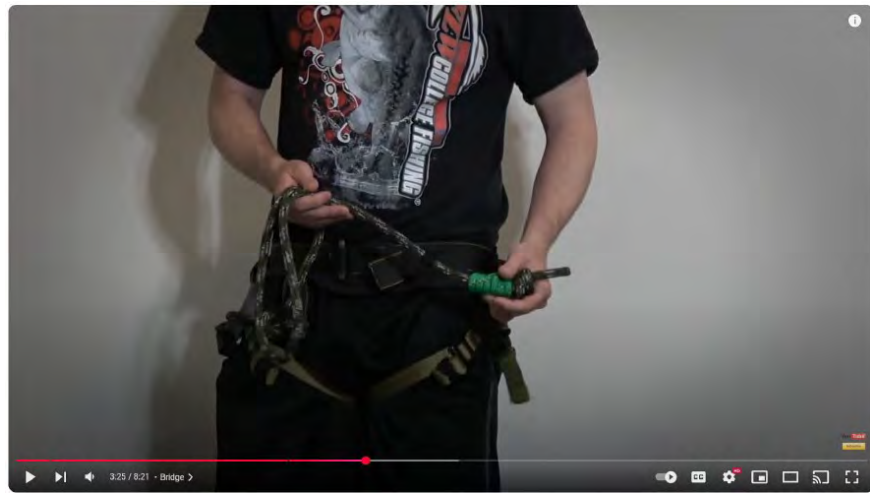


Mantis bridge: 30" bridge, ~2.5" eyes

Dist. $\approx 30" - 2.5" - 2.5" = 25"$

4. The bridge rope assembly according to claim 3, wherein the main body includes a stop knot in the second portion adjacent to the second end.

YouTube - Hunting Saddle Modifications – DIY (Ex. 1129)

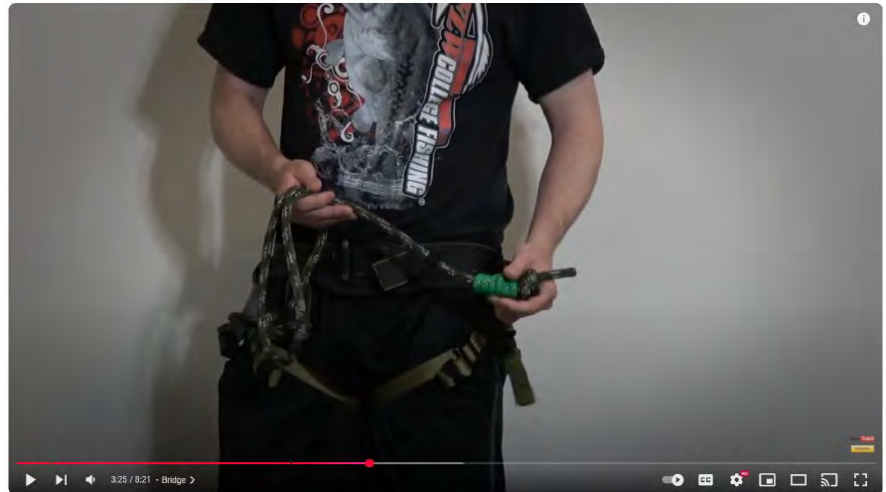


(e.g., Ex. 1129 at 1:52)

5. The bridge rope assembly according to claim 4, further including a securing member being positioned on the main body at a juncture of the first and second ends to

YouTube - Hunting Saddle Modifications - DIY (Ex. 1129)

retain the first and second ends at a static position relative to each other.



Hunting Saddle Modifications - DIY



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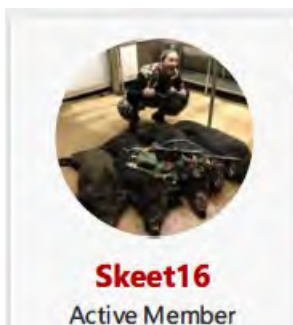
43,547 views Jun 3, 2018



(e.g., Ex. 1129 at 3:35)

—OR—

SaddleHunter - Amsteel (p1) (Ex. 1055 at 5)



Skeet16

Active Member

	Dec 30, 2018 #16 Mark H. Hunter posted Ok guys, got my Amsteel and my DIY fid, ready to splice. What's the best way to cut and then secure the ends? Burning seems to leave a huge blob that's not gonna fit in the fid. Thanks I use a surgical scalpel. Needs to be sharp whatever you use. I then put heat shrink over the ends.
6. The bridge rope assembly according to claim 4, wherein the closed loop comprises a single rope being formed into the closed loop.	SaddleHunter - Smallest diameter on tether rope (p1) (Ex. 1107 at 3)  Carolina_trad_hntr Member

Jun 18, 2018

#7

1/4" amsteel in a continuous loop worked extremely well for me for several hours yesterday on the Predator rope that came with the Kestrel. No slippage on my bridge or tether. I put it through several "tests" and it worked great.



7. The bridge rope assembly according to claim 6, wherein the single rope of the closed loop has a length between 40.0 inches and 60.0 inches.

HammockForums - Continuous loop pictoral (p20) (Ex. 1032 at 4)

02-09-2013, 14:09

UncleClark 

Senior Member



Using the excellent pictures I made up a couple **12" continuous loops** today using 7/64 Amsteel. I know that shorter buries are suggested in this thread, but after watching the videos on Sampson Rope, I decided to use 8" buries.

Using 8" buries I found that I needed 20" of Amsteel just for 2 x 8" buries plus about 4" shrinkage allowance in the main loop due to the buries.

So to make a **12" loop** I ended needing about **44" total**
12" loop requires 24"
Left bury requires 8" + 2" shrinkage = 10"
Right bury requires 8" + 2" shrinkage = 10"

I tapered the ends using a razor blade cutting a shallow angle across the rope. I hope this is OK


—OR—

L-36.com - Loops, Loups, and Loupes (2012-10-01) (Ex. 1046 at 2)

For 12" loop:

Instructions

Loop Diameter	7.64	Inches
Line Size	7/64 ▾	Diameter of Amsteel
Calculate		
Loop size	0.25	OD of loop double braid
Line Length	55.375	Total rope needed
Mark	14.25	From center mark
Extended Length	12	Tip to tip

Instructions

Loop Diameter	7.64	Inches
Line Size	3/16 ▾	Diameter of Amsteel
Calculate		
Loop size	0.375	OD of loop double braid
Line Length	57.625	Total rope needed
Mark	14.375	From center mark
Extended Length	12	Tip to tip



Estimate ~12" loop

1/4" Amsteel

$C = 24"$

$D = C/\pi = 24/3.14 = 7.64"$

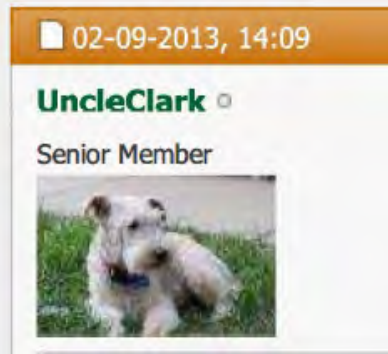
Instructions

Loop Diameter	7.64	Inches
Line Size	1/4 v	Diameter of Amsteel
Calculate		
Loop size	0.5	OD of loop double braid
Line Length	59.25	Total rope needed
Mark	14.375	From center mark
Extended Length	12	Tip to tip

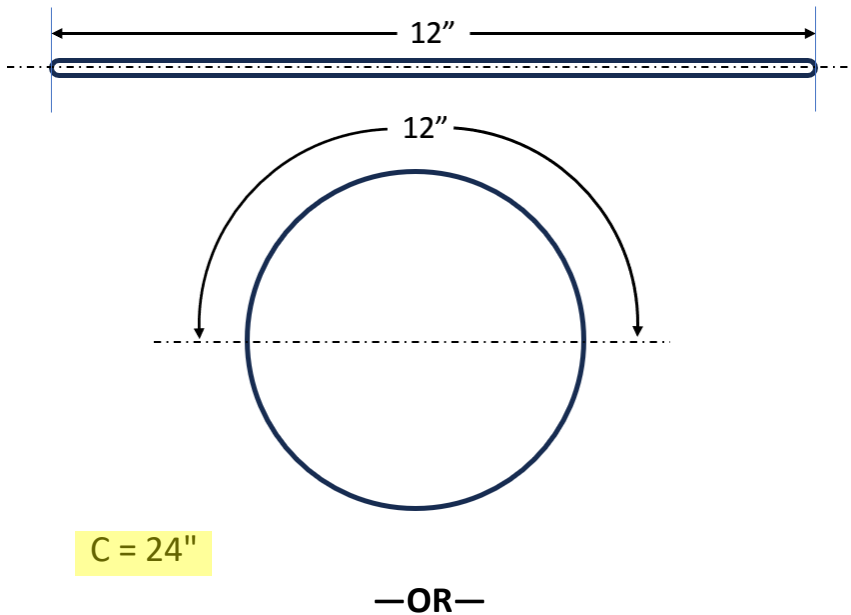
8. The bridge rope assembly according to claim 7, wherein the closed loop has a total circumference of

HammockForums – Continuous loop pictoral (p20) (Ex. 1032 at 4)

between 20.0 inches and 30.0 inches.



Using the excellent pictures I made up a couple 12" continuous loops today using 7/64 Amsteel.



L-36.com - Loops, Loups, and Loupes (2012-10-01) (Ex. 1046 at 2)

For 12" loop:

C = 24"

9. The bridge rope assembly according to claim 1, wherein the closed loop has a total

[SAME AS CLAIM 8]

circumference of between 20.0 inches and 30.0 inches	
10. The bridge rope assembly according to claim 9, wherein the main body and the friction hitch each are comprised of U[H]MWPE.	SaddleHunter - Amsteel Prussic (p1) (Ex. 1064 at 1) 
	Jun 17, 2018 #3 Worked like a charm. Replaced the prussic on my adjustable bridge and tether. That's a pretty good weight savings for effort and cost involved. Amsteel is the wonder rope, I love it. Wonder how amsteel prussic on amsteel bridge would work, as long as the diameter rule is followed...may be too slick.
	—OR— YouTube – Mantis Saddle - Setup and Directions (Ex. 1131) 

Mantis Saddle - Setup and Directions



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83,192 views Dec 30, 2018

1:26

bridge loops is where your bridge

1:28

connects your bridge is made of AM steel

1:30

blue 1/4 inch it's very strong almost

1:34

8,000 pound breaking strength it also

1:36

has a benefit of being ultra light

1:38

weather resistant and it slides very

—AND—

**SaddleHunter - Smallest diameter on tether rope (p1)
(Ex. 1107 at 3)**



Carolina_trad_hn
tr

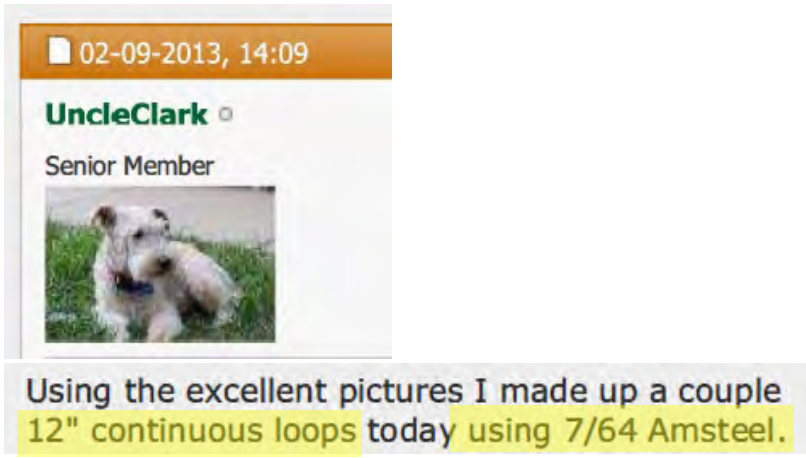
Member

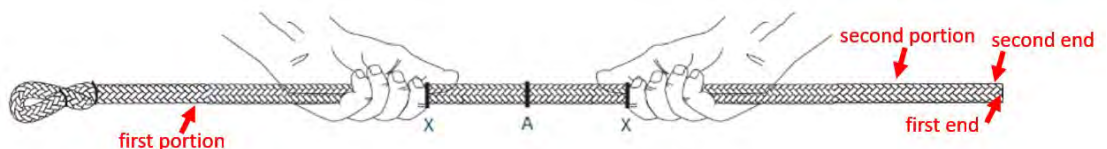
Jun 18, 2018

#7

1/4" amsteel in a continuous loop worked extremely well for me for several hours yesterday on the Predator rope that came with the Kestrel. No slippage on my bridge or tether. I put it through several "tests" and it worked great.



	—OR— HammockForums – Continuous loop pictoral (p20) (Ex. 1032 at 4) 
11. The bridge rope assembly according to claim 1, wherein the main body is comprised of UHMWPE.	[SAME AS CLAIM 10]
12. The bridge rope assembly according to claim 9, wherein a distance of the eye loop to the second end is between 24.0 inches and 40.0 inches.	[SAME AS CLAIM 3]
13. The bridge rope assembly according to claim 12, wherein the closed loop has a total circumference of	[SAME AS CLAIM 8]

between 20.0 inches and 30.0 inches.	
14. The bridge rope assembly according to claim 12, wherein a distance between the first and second ends is less than 2.0 inches.	[SAME AS CLAIM 1]
	

2. Ground 3 – Reasons to Combine

130. A POSITA would have been readily motivated to combine the prior art of Ground 3 for the same reasons as set forth in the reasons to combine for Ground 2. See Section VI.B.2.

I declare under penalty of perjury under the law of the United States that all statements made herein of my own knowledge are true and that all statements made on information and believe are believed to be true, and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated: 8/11/2025, 2025

DocuSigned by:



SF66A5F108794FE

Tobe Sherrill

EXHIBIT A



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ON THE COVER:

The 2016 cover comes from Trevor Ahern, FL. He mounted his GoPro in the tree and shot a time-lapse video of a crane job. We merged several frames of the video to show how he moved through the canopy in a single photo.

HAND
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SWAGING

CUSTOM
PRODUCTION



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ARBORIST ROPE CONSTRUCTION TYPES

Kernmantle - The mantle (cover) of this rope is woven tight to provide protection for the load-bearing core (up to 70%) strands, which are not woven (parallel). Core strands can also be twisted like a slinky to add elasticity, providing manufacturers a lot of flexibility to manipulate the finished product based on intended use. **Good for a wide range of duties.** Arborist ascent lines of this construction are considered "cover-dependent kernmantles."

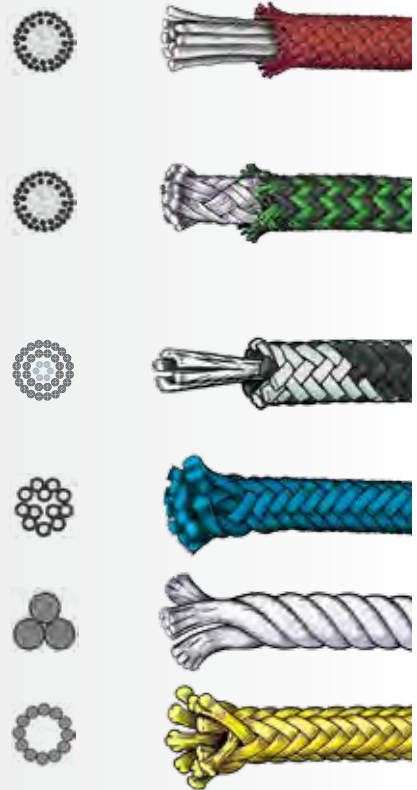
Double Braid - This braid inside a braid remains round under tension and provides a high strength-to-diameter ratio. Generally, core and cover share loading equally, making for significantly strong ropes even in smaller diameters **best suited for climbing**. Double braids are useful for low-elongation climbing and rigging. SHERRILLtree offers a tight rigging version (Super Braid) for greater dirt resistance when natural crotch rigging, and a loose rigging version (Stable Braid) that is spliceable and best for block and tackle use. More and more climbing lines these days are double-braid construction. The properties are much the same. All have a urethane coating and wear equally well. Because of how they are constructed, double braids are likely to milk.

16-Strand - This abrasion resistant rope construction presents a thick mantle (cover) around a small interior core bundle that helps keep the rope round under tension and makes it easy to tie. The thick mantle provides most of this **popular climbing line's** strength while the core keeps it round. Because the cover bears the bulk of the load, inspecting these lines is easier and more consistent than with other lines.

Solid Braid - Made up of 12 large strands, arborist-grade solid braid lines are woven tight to keep a round shape under tension, a process that's made eye-splicing nearly impossible ... that is, until Grizzly Splicing® came along. Solid braids tend to be bulky for their strength but have less tendency to twist than other braided lines. **Generally used for rigging or pull lines.**

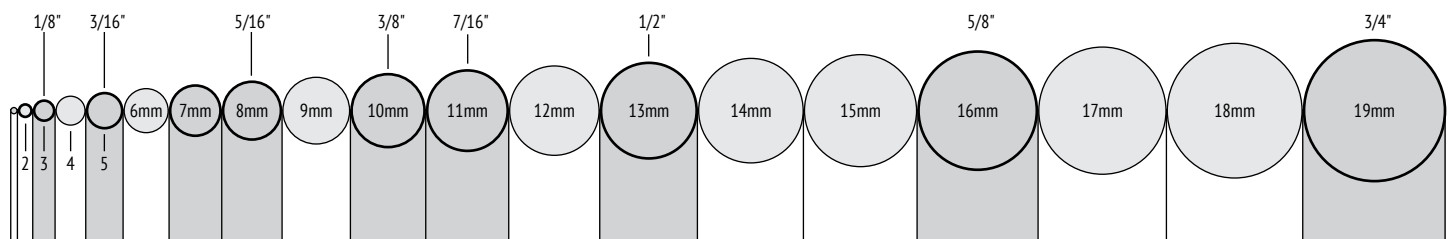
3-Strand - Twisted constructions are abrasion resistant but a poor choice for climbing due to their bumpy surface and tendency to rotate (ravel) under tension. Relatively less expensive than other lines, they can serve as **natural crotch rigging lines with moderate loads where high elongation is not a worry.**

Hollow Braid - Another 12-strand construction but woven with considerably less tension, leaving the center loose. These lines can easily accommodate a hand splice. Their loose weave allows these ropes to "flatten" under load. **Good for slings and fixed lines but not for climbing or rigging** because they tend to snag or pick when run over a rough surface.



ROPE DIAMETER SIZE CONVERSION

The circles below represent diameters in 1-millimeter increments in the range of ropes that we stock, from throwline up to rigging line. For those still struggling with metric relationships, we thought the visual might help.



ROPE MATERIALS

Polyester—A synthetic polymer with lower elongation and higher tenacity and abrasion resistance than its close cousin, nylon. Melting point 480°F.

Nylon—A synthetic polymer with more elongation and with less abrasion resistance than polyester. Rarely used in arborist grade lines. Melting point 460°F.

Polyolefin—A monofilament sometimes used to bring a rope's weight down. Melting point 260°F.

Aramid—A family of fibers including Technora, Kevlar, and Nomex that pound for pound are five times stronger than steel and have high abrasion and heat resistance. Poor ultraviolet (UV) radiation resistance, and can be self-abrasive. Charring point 900°F.

Ultra-High Molecular Weight Polyethylene (HMPE)—Includes Spectra and Dyneema. This lightweight fiber has super-high strength and abrasion resistance but at a very low melting point. Good for use where heat friction is not involved. Melting point 297°F.

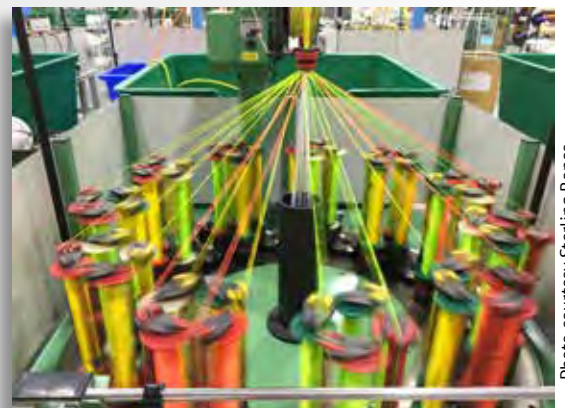
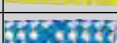
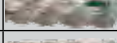
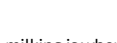


Photo courtesy Sterling Ropes

CLIMBING ROPE CHART

PG #	CLIMBING ROPE	MANUFACTURER LABELED DIAMETER				MILKS	AVERAGE TENSILE STRENGTH	MATERIAL	CONSTRUCTION	KNOTABILITY (10 = excellent)	SPLICEABLE	ELASTIC ELONGATION @ 540 lbs.				ROUNDNESS UNDER LOAD (10 = round)	SURFACE TEXTURE (10 = smooth)	WAX CONTENT (10 = high)	MOVING ROPE CLIMBING	STATIONARY ROPE CLIMBING	STATIONARY ROPE ASCENT ONLY	ROPE USE
7	 Kernmaster Kermeleon	11 mm	Yale	5.5	No	7,100 (31.6 kN)	Poly/Nylon	Kernmantle	10	Grizzly	2%	10	10	0								
7	 Snakebite 11	11 mm	Sterling	6.5	Yes	7,560 (33.6 kN)	Polyester	Kernmantle	8	Grizzly	2.7%	8	8	0								
7	 Snakebite™ Green	10 mm	Sterling	5.3	Yes	5,979 (26.6 kN)	Polyester	Kernmantle	6	Grizzly	2%	10	10	0								
7	 HTP Red	10 mm	Sterling	5.3	Yes	5,979 (26.6 kN)	Polyester	Kernmantle	6	Grizzly	2%	10	10	0								
9	 Poison Ivy®	11.7 mm	Yale	6.5	Yes	6,500 (29 kN)	Polyester	Double Braid	10	Hand	1.80%	10	10	0								
9	 Poison Hi-vy®	11.7 mm	Yale	6.5	Yes	6,500 (29 kN)	Polyester	Double Braid	10	Hand	1.80%	10	10	0								
9	 Poison Ivy® Calamine	11.7 mm	Yale	6.5	Yes	6,500 (29 kN)	Polyester	Double Braid	10	Hand	1.80%	10	10	0								
9	 Tropical Ivy™	11.7 mm	Yale	6.5	Yes	6,500 (29 kN)	Polyester	Double Braid	10	Hand	1.80%	10	10	0								
9	 Lava® Orange	11.5 mm	Teufelberger	6.3	Yes	7,100 (31.6 kN)	Poly/Nylon	Double Braid	10	Hand	3%	10	10	4								
9	 Lava® Green	11.5 mm	Teufelberger	6.3	Yes	7,100 (31.6 kN)	Poly/Nylon	Double Braid	10	Hand	3%	10	10	4								
9	 Lava® RopeBoss®	11.5 mm	Teufelberger	6.3	Yes	7,100 (31.6 kN)	Poly/Nylon	Double Braid	10	Hand	3%	10	10	4								
9	 Lava® Surge	11.5 mm	Teufelberger	6.3	Yes	7,100 (31.6 kN)	Poly/Nylon	Double Braid	10	Hand	3%	10	10	4								
10	 Vortex Hot	12.7 mm	Samson	7.6	Yes	7,900 (35 kN)	Polyester	Double Braid	10	Hand	1.40%	8	10	0								
10	 Vortex Cool	12.7 mm	Samson	7.6	Yes	7,900 (35 kN)	Polyester	Double Braid	10	Hand	1.40%	8	10	0								
10	 Vortex Clover	12.7 mm	Samson	7.6	Yes	7,900 (35 kN)	Polyester	Double Braid	10	Hand	1.40%	8	10	0								
10	 Velocity Hot	11 mm	Samson	5.6	Yes	6,000 (26.7 kN)	Polyester	Double Braid	10	Hand	2.52%	10	10	5								
10	 Velocity Cool	11 mm	Samson	5.6	Yes	6,000 (26.7 kN)	Polyester	Double Braid	10	Hand	2.52%	10	10	5								
12	 Blaze	11 mm	Yale	6	Yes	5,600 (25 kN)	Polyester	Double Braid	10	Hand	2.20%	10	10	0								
13	 Scion Blue	11.5 mm	Sterling	6.1	Yes	6,115 (27.2 kN)	Poly/Nylon	Double Braid	10	Hand	6.8%	10	10	0								
13	 Scion Orange	11.5 mm	Sterling	6.1	Yes	6,115 (27.2 kN)	Poly/Nylon	Double Braid	10	Hand	6.8%	10	10	0								
14	 Blue Streak	1/2 in	Samson	7.7	No	8,100 (36 kN)	Poly/Nylon	16-Strand	10	Hand	2.20%	8	9	6								
14	 Hawkeye	1/2 in	Samson	7.7	No	8,100 (36 kN)	Poly/Nylon	16-Strand	10	Hand	2.20%	8	9	6								
14	 BRW	1/2 in	Samson	7.7	No	8,100 (36 kN)	Poly/Nylon	16-Strand	10	Hand	2.20%	8	9	6								
14	 Mean Streak	1/2 in	Samson	7.7	No	8,100 (36 kN)	Poly/Nylon	16-Strand	10	Hand	2.20%	8	9	6								
14	 Yellow Jacket™	1/2 in	Samson	7.7	No	8,100 (36 kN)	Poly/Nylon	16-Strand	10	Hand	2.52%	8	9	6								
15	 Safety Blue	1/2 in	Teufelberger	7.1	No	7,000 (31 kN)	Poly/Blend	16-Strand	10	Hand	4%	8	9	6								
15	 Hi-Vee	1/2 in	Teufelberger	7.1	No	7,000 (31 kN)	Poly/Blend	16-Strand	10	Hand	4%	8	9	6								
15	 Ultra-Vee	1/2 in	Teufelberger	7.1	No	7,000 (31 kN)	Poly/Blend	16-Strand	10	Hand	4%	8	9	6								
15	 Phoenix™ (XTC)	1/2 in	Yale	7.5	No	6,200 (27.5 kN)	Polyester	16-Strand	10	Hand	3.15%	8	9	6								
15	 Spark™ (XTC)	1/2 in	Yale	7.5	No	6,200 (27.5 kN)	Polyester	16-Strand	10	Hand	2.83%	8	9	6								
15	 Fire (XTC)	1/2 in	Yale	7.5	No	6,200 (27.5 kN)	Polyester	16-Strand	10	Hand	3.46%	8	9	6								
15	 Spearmint (XTC)	1/2 in	Yale	7.5	No	6,200 (27.5 kN)	Polyester	16-Strand	10	Hand	3.15%	8	9	6								
15	 Pro Stripe™	1/2 in	Yale	7.5	No	6,200 (27.5 kN)	Polyester	16-Strand	10	Hand	2.20%	8	9	6								
16	 True Blue	1/2 in	Samson	8.8	No	7,300 (32.5 kN)	Polyester	12-Strand	10	Grizzly	3.46%	7	8	6								
16	 Tree Pro Red	1/2 in	Samson	8.8	No	7,300 (32.5 kN)	Polyester	12-Strand	10	Grizzly	3.15%	8	8	6								
16	 Arbor Plex	1/2 in	Samson	6.8	No	6,000 (26.7 kN)	Poly/Blend	12-Strand	8	Grizzly	3.15%	7	8	4								
16	 Bzzzz Line	1/2 in	Yale	6.7	No	6,000 (26.7 kN)	Polyester	12-Strand	10	Grizzly	2%	9	10	0								

RIGGING ROPE CHART

PG #	RIGGING ROPE		MANUFACTURER LABELED DIAMETER	WEIGHT PER 100 FT.	TENSILE STRENGTH	MATERIAL	CONSTRUCTION	KNOTABILITY (10 = excellent)	SPLICEABLE by HAND OR GRIZZLY	ELASTIC ELONGATION	ROUNDNESS UNDER LOAD (10 = round)	SURFACE TEXTURE @ 10%WLL	WAX CONTENT (10 = smooth)	USE WITH FALSE CROTCHES ONLY
18		Dynosorb	1/2 in.	7.6	10,500	Polyester/Nylon	Double Braid	9	Hand	2.8%	10	9	0	•
18		Dynosorb	9/16 in.	9.7	15,000	Polyester/Nylon	Double Braid	9	Hand	2.8%	10	9	0	•
18		Dynosorb	5/8 in.	13.3	18,000	Polyester/Nylon	Double Braid	9	Hand	2.8%	10	9	0	•
18		Dynosorb	3/4 in.	16.8	23,000	Polyester/Nylon	Double Braid	9	Hand	2.8%	10	9	0	•
19		Stable Braid	1/2 in.	8.2	10,400	Polyester	Double Braid	8	Hand	1.1%	10	10	0	•
19		Stable Braid	9/16 in.	11	13,300	Polyester	Double Braid	8	Hand	1.1%	10	10	0	•
19		Stable Braid	5/8 in.	14	16,300	Polyester	Double Braid	8	Hand	1.1%	10	10	0	•
19		Stable Braid	3/4 in.	18	20,400	Polyester	Double Braid	8	Hand	1.1%	10	10	0	•
19		Sirius	5/8 in.	12	14,200	Polyester	Double Braid	9	Hand	1.8%	9	10	0	•
19		Sirius	3/4 in.	20	19,800	Polyester	Double Braid	9	Hand	1.8%	9	10	0	•
20		Super-Braid	1/2 in.	8.2	8,700	Polyester	Double Braid	6	N/A	0.8%	10	10	0	•
20		Super-Braid	5/8 in.	14.8	14,750	Polyester	Double Braid	6	N/A	1.8%	10	10	0	•
20		Super-Braid	3/4 in.	18.2	19,250	Polyester	Double Braid	6	N/A	1.5%	10	10	0	•
20		Bull Rigger	5/8 in.	10.1	9,800	Poly/Blend	Solid Braid	9	N/A	1.6%	7	6	7	
20		Bull Rigger	3/4 in.	13.3	12,750	Poly/Blend	Solid Braid	9	N/A	1.6%	7	6	7	
20		Black Widow	1/4 in.	1.6	7,400	Dyneema	Hollow Braid	6	Hand	0.46%	8	10	-	
21		Pro-Master	5/8 in.	9.6	7,700	Poly/Blend	3-strand	5	Hand	2%	5	4	0	
21		Pro-Master	3/4 in.	13.9	10,000	Poly/Blend	3-strand	5	Hand	2%	5	4	0	
21		Tree-Master	1/2 in.	8	7,000	Polyester	3-strand	5	Hand	2.9%	5	4	6	

MILKS - milking is when a rope's mantle (outer cover) elongates over its core, most often when new and due to friction hitch use that forces strands into maximum alignment. Milking usually shows up as a bubble of material that can be drawn to one end and trimmed with scissors.

MATERIAL - see page 3 for descriptions of rope materials.

KNOTABILITY (10 being excellent) - Ropes for rigging and SRT generally are not "knot-friendly." Their stiff construction makes them more resistant to abrasion, but tougher to dress into a tight knot.

SPLICEABLE - If you like to climb with a split tail (see page 33) then we recommend hand splicing the climbing rope's end, except for those ropes that are not hand-spliceable. A Grizzly splice can get lodged in a tight crotch when retrieved from the ground.

ELASTIC ELONGATION - Measurement of a rope's elasticity is done differently depending on if the rope is a climbing or rigging line.

Climbing lines: Measurement is based on a 540 lbs weight being applied.

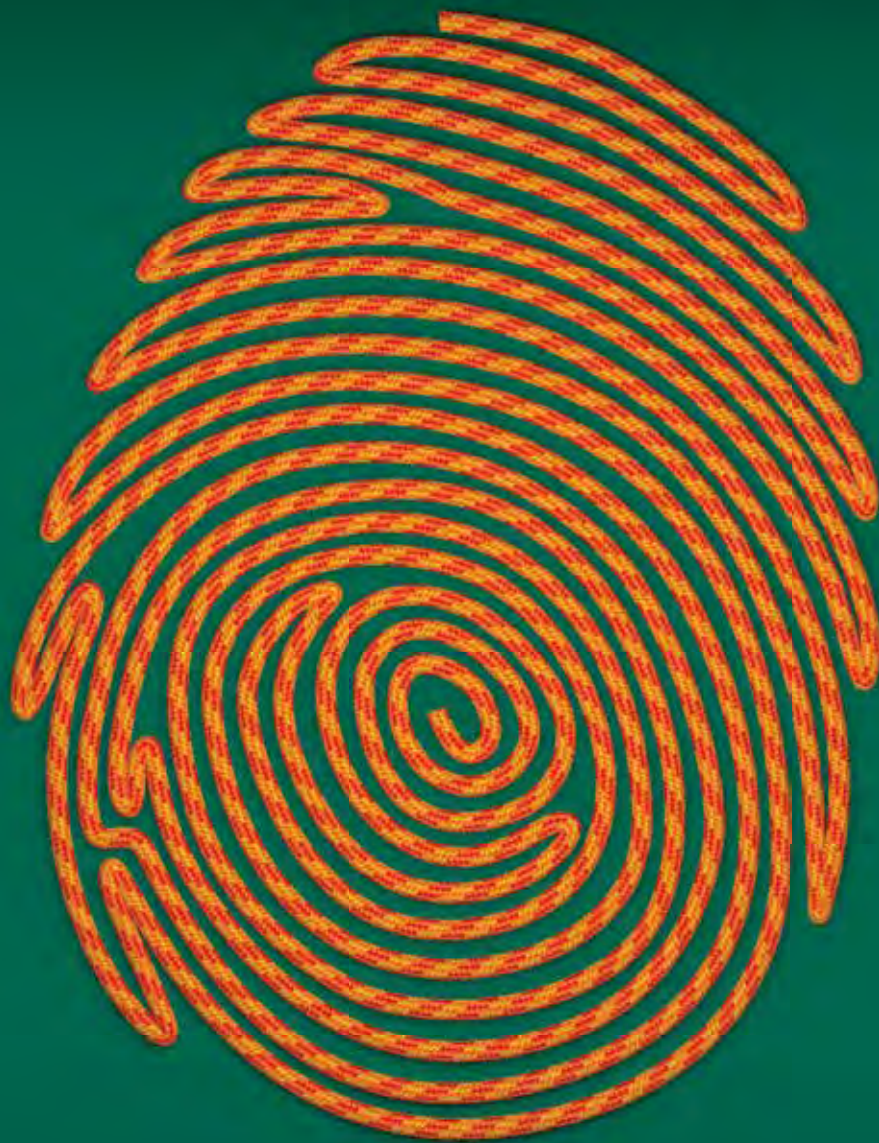
Rigging lines: Measurement is based on a weight equal to 10% working load of the rope's tensile strength. For example, 1/2" Dynasorb's has a tensile strength of 10,500 lbs, so 10% of that would be 1,050 lbs, which is what would be used to measure its elasticity.

ROUNDNESS UNDER LOAD (10 being round) - It's a fact that 12-strand ropes square off under load while doublebraid stays round under high tension even when trailing through blocks and tackle.

SURFACE TEXTURE (10 being smooth) - This spec can be critical to prusik or friction hitch performance.

WAX CONTENT (10 being high) - Sand, grit and dirt particles are the enemy of ropes because such particles become trapped inside the fabric and, like rocks in your shoe, slowly work their irritating destruction. Wax liquid, among other proprietary formulas, are added during the manufacturing process to help protect inner fibers while offering lubrication that enhances tensile strength.

CE - Mandatory conformance mark for European products. Does not apply to splices.



Thanks to 60 years of experience and innovation,
Yale ropes aren't just different, they're one-of-a-kind.



XTC Spearmint



Poison Ivy



Dynasorb



Calamine



Bee-Line 8mm

Each rope we make delivers quality and performance that are unique to Yale Cordage. For over 60 years, our engineers have worked with arborists and climbing experts to develop a line of strong and lightweight task-specific climbing, lowering and accessory ropes. Made with superior fibers using the world's most advanced construction methods, every line is manufactured to the highest industry standards. It's how we've earned your trust and left our fingerprint.

**For more information on the world's best lines
visit us at www.yalecordage.com.**





Kernmaster [11 mm]

Kermeleon

Yale Kernmaster is a climbing line evolved. Taking the best properties of a kernmantle rope and crossing them with the toughness and unique properties of a tree climbing rope, Yale Cordage has created a tough, dependable, performance-enhanced line that tree climbers will love. Kermeleon is the SHERRILLtree exclusive color of Kernmaster, combining hi-vis orange and blue, with hi-vis green peeking through, giving this rope a color-changing illusion.

When it comes to rope elongation, "How much?" is only half the equation. "When?" is the other half. Many climbers look at the first number without understanding its relationship to the second.

Think about climbing on a really strong rubber band that has 50% stretch. Most climbers would say no way! But what if that 50% stretch did not happen until the rubber band was loaded to, say, 1,000 lbs? What if it had almost no stretch until it was heavily loaded, like when you slip or fall?

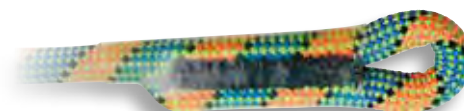
That's an oversimplification of how Kernmaster works. Relatively static under low loads, it allows the climber to ascend, descend, and work-position without excessive stretch. Now load Kernmaster more than 700 lbs or so—and the core begins to ravel and absorb energy, right when you need it! Voilà! Wait! It gets better! Back to low loads, back to static properties.

Kernmaster combines the performance of a tight woven cover with good hand and roundness, but it protects and absorbs in the event of a fall. Not too bad!



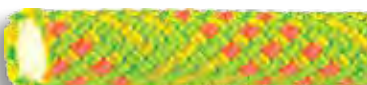
Kernmaster Kermeleon

KERN-150	\$144⁹⁵	150'
KERN-200	\$189⁹⁵	200'
KERN-600	\$549⁹⁵	600'



ADD A GRIZZLY SPLICE® to your Kernmaster rope, by adding a "GS" to the end of the rope's part code (ex: KERN-200-GS) **and \$15 to the price.**

ADD A GRIZZLY SPLICE® eye to both ends. Just add a "GSS" to the end of the rope's part code **and \$30 to the price. Not available on 600'.**



Snakebite 11mm

SNKB11-120	\$119⁹⁵	120'
SNKB11-150	\$158⁹⁵	150'
SNKB11-200	\$210⁹⁵	200'
SNKB11-600	\$620⁹⁵	600'



HTP Snakebite Green 10 mm

GBITE-200	\$201⁹⁵	200'
GBITE-600	\$590⁹⁵	600'



HTP Red 10 mm

HTPR-200	\$201⁰⁵	200'
HTPR-600	\$591¹⁰	600'

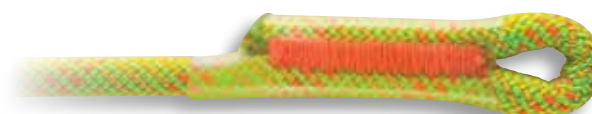
Snakebite 11 mm

HTP (High Tenacity Polyester by Sterling)

As more and more people utilize SRS (stationary rope systems, aka SRT), the more feedback we receive on what's working and what needs to change. This feedback fueled discussions with Sterling rope regarding a thicker diameter Snakebite.

Keeping the low-stretch, and tough jacket, that makes Snakebite so favorable, the new 11 mm Snakebite has a better feel in-hand and fits a wider range of devices. Snakebite 11mm also features a hi-vis color palette for optimal rope visibility.

Snakebite 11mm gives arborists a great new option for an SRS climbing line, but we are keeping the smaller diameter Snakebite Green 10mm and HTP Red available for a limited time, for those who are accustomed to the 10mm diameter.



ADD A GRIZZLY SPLICE® to your Snakebite rope, by adding a "GS" to the end of the rope's part code (ex: SBITE-200-GS) **and \$15 to the price.**

ADD A GRIZZLY SPLICE® eye to both ends. Just add a "GSS" to the end of the rope's part code **and \$30 to the price. Not available on 600'.**

“Currently my favorite rope. Easy to work with for both MRS and SRS.”

TRAVIS COLE

Read more reviews online.



Poison Ivy

For tree climbers, rope is one leg of four on the table of efficiency and comfort—along with the harness, work-positioning lanyard, and handsaw. Without good interaction among these tools and your hands, movement within the tree's crown can be something less than elegant.

Here comes Poison Ivy. Not only versatile for all climbing styles, with multiple color choices from high visibility to pedestrian, it's affordable for all climbing budgets, too.

Poison Ivy, with its unique double-braid construction, stays round when in use. This highly coveted ability allows smooth operation with a variety of climbing systems. Poison Ivy also has the ability to remain flexible and knot friendly for those times when nothing but cordage on cordage will do. Durable and strong, the double-braid construction delivers a lower elongation climbing line in a spliceable arborist rope.

Ideal for climbers looking for limited "bounce" and especially attractive to stationary rope system climbers longing to abandon the need for two lines when moving rope tasks are on the day's agenda. Beefier to the grip than other 24-strand lines. Unlike other arborist climbing lines, Poison Ivy has no noticeable coating or fabric treatment to make the line feel tacky or slippery when new, which limits break-in time and enhances performance right out of the bag.

While the Poison Ivy's are great rope, they're not EN1891 type A rope.



ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.



standard eye



tight eye

STANDARD EYE: Add "S" - \$25

TIGHT EYE: Add "TS" - \$25

STANDARD EYE AT BOTH ENDS: Add "SS" - \$50

TIGHT EYE AT BOTH ENDS: Add "TSS" - \$50

(600' Poison Ivy cannot be spliced at both ends)



Poison Ivy® (11.7 mm)

PIVY-120	\$119⁹⁵	120'
PIVY-150	\$146⁹⁵	150'
PIVY-200	\$198⁹⁵	200'
PIVY-600	\$514⁹⁵	600'



Tropical Ivy® (11.7 mm)

TROP-120	\$119⁹⁵	120'
TROP-150	\$146⁹⁵	150'
TROP-200	\$198⁹⁵	200'
TROP-600	\$514⁹⁵	600'



Calamine (11.7 mm)

PCAL-120	\$119⁹⁵	120'
PCAL-150	\$146⁹⁵	150'
PCAL-200	\$198⁹⁵	200'
PCAL-600	\$514⁹⁵	600'



Poison Hi-vy® (11.7 mm)

PHI-120	\$119⁹⁵	120'
PHI-150	\$146⁹⁵	150'
PHI-200	\$198⁹⁵	200'
PHI-600	\$514⁹⁵	600'



Lava

This molten-hot part of the SHERRILLtree lineup is built by Teufelberger and uses the Flexifirm Core Technology (trade name Tachyon) to deliver climbers a unique, low-stretch, tough-skinned, double-braid that stays round and firm under load.

Unlike lava, the substance for which it was named, SHERRILLtree's Lava Rope remains a pliable, versatile climbing line with excellent "hand" and the ability to help you work the most challenging trees. It won't turn into "rock" and will age with grace and performance.

Like lava, much lies beneath the hardened exterior of this rope. The Lava Rope contains a unique third "magma strand" that gives the line spectacular support and density to both core and mantle. The Lava provides excellent traction to both split-tails and ascenders, resulting in enhanced performance of moving rope and stationary rope climbing techniques.

Spliceable and strong from its core to sheath, this double-braid line is built for the rigors of tree climbing. The Lava flows smoothly through a wide array of modern mechanical devices, thanks to its small size and sleek jacket. With four distinctive and unique looks that can be spotted from great distance, the Lava rope will be noticed for its looks and performance on the job. Color options give crews and climbers the option of color-coding their ropes by use and/or climber.

If a new climbing line is in your budget and breaking ground doesn't shake you, visit your nearest Vermeer dealer or pick up the phone to get a fist full of the hottest rope around!

Lava is an EN1891 type A rope, which is required by most mechanical ascenders nowadays.



ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.



standard eye



tight eye

STANDARD EYE: Add "S" - \$25

TIGHT EYE: Add "TS" - \$25

STANDARD EYE AT BOTH ENDS: Add "SS" - \$50

TIGHT EYE AT BOTH ENDS: Add "TSS" - \$50

(600' Lava cannot be spliced at both ends)



Lava® Orange (11.5 mm)

LAVAO-120	\$113⁹⁵	120'
LAVAO-150	\$140⁹⁵	150'
LAVAO-200	\$188⁹⁵	200'
LAVAO-600	\$494⁹⁵	600'



Lava® Surge (11.5 mm)

LAVASR-120	\$113⁹⁵	120'
LAVASR-150	\$140⁹⁵	150'
LAVASR-200	\$188⁹⁵	200'
LAVASR-600	\$494⁹⁵	600'



Lava® Green (11.5 mm)

LAVAG-120	\$113⁹⁵	120'
LAVAG-150	\$140⁹⁵	150'
LAVAG-200	\$188⁹⁵	200'
LAVAG-600	\$494⁹⁵	600'



Lava® RopeBoss® (11.5 mm)

LAVARB-120	\$113⁹⁵	120'
LAVARB-150	\$140⁹⁵	150'
LAVARB-200	\$188⁹⁵	200'
LAVARB-600	\$494⁹⁵	600'

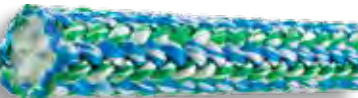
Vortex [12.7 mm]

If you liked Samson's 11mm Velocity, but perhaps not so much the small diameter, then you'll really like Samson's new and fatter Vortex. The smooth jacket of this 24-strand, low stretch climbing line makes for superb gripping by hand or boots when footlocking. The durable jacket stands up well to abuse and, like the latest version of Velocity, does not have Samson's once used SureGrip coating. Unfortunately, the SureGrip coating presented a tacky feel that never found great acceptance among climbers who were looking for the best interaction between rope and friction (climbing) hitch. The removal of this SureGrip coating makes all the difference!



Hot

VORTHT-120	\$115 ⁹⁵	120'
VORTHT-150	\$144 ⁹⁵	150'
VORTHT-200	\$194 ⁹⁵	200'
VORTHT-600	\$549 ⁹⁵	600'



Cool

VORTC-120	\$115 ⁹⁵	120'
VORTC-150	\$144 ⁹⁵	150'
VORTC-200	\$194 ⁹⁵	200'
VORTC-600	\$549 ⁹⁵	600'



Clover

VORTCV-120	\$115 ⁹⁵	120'
VORTCV-150	\$144 ⁹⁵	150'
VORTCV-200	\$194 ⁹⁵	200'
VORTCV-600	\$549 ⁹⁵	600'

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - \$25

TIGHT EYE: Add "TS" - \$25



Velocity [11 mm]



Designed for peak response from mechanical ascenders and small diameter split tails (Lockjack & 8mm eye cords- page 35), Velocity delivers high performance to climbers both during ascent and during canopy exploration. Samson's proprietary Sure Grip technology gives Velocity a fully broken-in feel right out of the bag, making its moderately tacky grip one of the primary differences between it and the Fly.



Velocity Hot



VELHT-120	\$104 ⁹⁵	120'
VELHT-150	\$131 ⁹⁵	150'
VELHT-200	\$174 ⁹⁵	200'
VELHT-600	\$499 ⁹⁵	600'



Velocity Cool



VELC-120	\$104 ⁹⁵	120'
VELC-150	\$131 ⁹⁵	150'
VELC-200	\$174 ⁹⁵	200'
VELC-600	\$499 ⁹⁵	600'

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - \$25

TIGHT EYE: Add "TS" - \$25



WHEN THIS IS THE VIEW FROM YOUR OFFICE You shouldn't have to question the reliability of your rope

Demanding jobs call for the reliability and security of Samson's line of climbing and rigging ropes. We know what you're up against; we design, build and thoroughly test our ropes to perform where you need it—

50 FEET UP THE NEAREST TREE.



samson

THE STRONGEST NAME IN ROPE

**SAMSON CLIMBING LINES, RIGGING LINES, AND
SPECIALIZED ROPE TOOLS FOR THE PROFESSIONAL ARBORIST**

Photo courtesy of Tyler P. Holladay

**SAMSON PREMIUM
ARBORIST LINES**



Blaze [11 mm]

Blaze is designed especially for tree climbing and aimed at a need for lightweight, ascender-friendly, yet premium rope product that performs well when climbed with a friction hitch. As it turned out, Blaze caught fire among climbers for all those reasons plus its ideal knot-tying characteristics. Over time, Blaze became the starting point for SHERRILLtree's exclusive off-spring—a slightly larger version in a camouflage color that's now known as Poison Ivy®. Blaze's biggest fans are sure to be those who make regular use of mechanical devices like rope grabs (ascenders) or friction controllers (descenders) because so many of these devices are designed for ropes 9 to 11 mm in diameter. However you climb, you're sure to love the flashy look and feel of this modern climbing favorite.



**NEW
LOW PRICE!**

Blaze

BLZ-120	\$89⁹⁵	120'
BLZ-150	\$109⁹⁵	150'
BLZ-200	\$149⁹⁵	200'
BLZ-600	\$424⁹⁵	600'

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - **\$25**

TIGHT EYE: Add "TS" - **\$25**



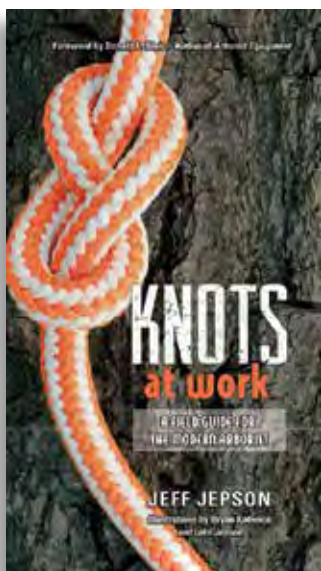
Yale Professional Splicing Kit

Splicing is a difficult skill to master, that requires discipline, patience, and tons of practice. It's not something you're going to pick up on over-night, but if you're willing to give it a try, we've got the tools you'll need.

Yale's splicing kit is an essential for anyone splicing a wide variety of ropes on a regular basis. Included in the kit are ten different size fids, two fid pushers, a pair of scissors, some needles and a storage pouch with helpful information printed on it.

Your safety is crucial, so please don't use anything you splice without first testing it on the ground.

34150 \$239⁹⁵ Professional Splicing Kit



Knots at Work: A Field Guide for the Modern Arborist

By Jeff Jepson

This is basically THE knot book people have been waiting for ever since Jeff's original Tree Climber's Companion came out in 1997. Both Jeff and the illustrator, Bryan Kotwica, are working arborists, so the text and drawings have a level of first-hand knowledge that is easy to follow.

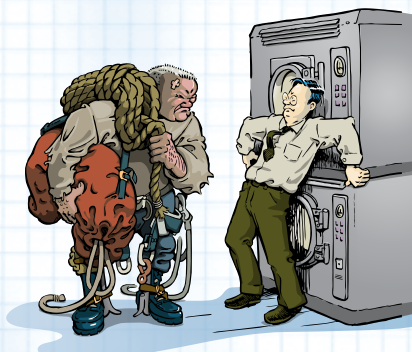
Knots at Work shows how to tie, and use, over 50 different knots, with detailed explanations and drawings. The book is 8" by 4.5" and 184 pages, so it's easy to take with you. Stick it in your gear bag, your back pocket, or anywhere that's easily accessible. This book is a great refresher for veterans, and an invaluable learning aid for greens.

35885 \$16⁹⁵

Rope Care

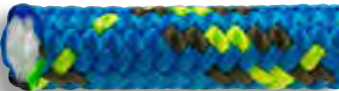
Of all users of life safety rope for industrial application, none are more abusive than tree workers. Bark dust, soil and grit pounded into climbing ropes are quite destructive to internal fibers as the rope is stretched and relaxed in use. Manufacturers suggest washing life safety lines with non detergent soap and according to generally accepted guidelines detailed in the helpful tips section of our new web site.

For a complete Rope Care Guide, visit the Learning Center at SHERRILLtree.com



Scion™ [11.5 mm]

The newest addition to the Sterling family of climbing lines, the Scion climbing line's robust construction makes the ability to absorb dynamic forces a given ideal for moving rope systems (MRS) and stationary rope systems (SRS). Based on the construction of Tendril, the 11.5-mm Scion has a polyester 24-strand cover and double-braided construction. It's engineered for decreased elongation, a good feel in the hand, and cordage on cordage use. With a tight, durable sheath, it can handle mechanical devices and hardware. The Scion is hand spliceable, and a Grizzly® splice is always possible. Scion is an EN1891 type A rope, which is required by most mechanical ascenders nowadays.



Blue

SCION-BL-120	\$112⁹⁰	120'
SCION-BL-150	\$140³⁰	150'
SCION-BL-200	\$186⁰⁵	200'
SCION-BL-600	\$546⁹⁵	600'

Orange

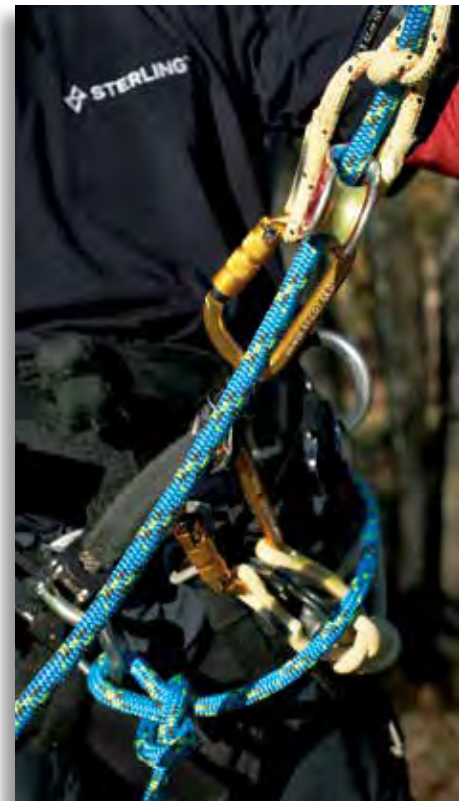
SCION-OR-120	\$112⁹⁰	120'
SCION-OR-150	\$140³⁰	150'
SCION-OR-200	\$186⁰⁵	200'
SCION-OR-600	\$546⁹⁵	600'

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE:
Add "S" - \$25

TIGHT EYE:
Add "TS" - \$25



Scion™ Climbing Line

The newest, purpose-built climbing line from Sterling.

Designed in conjunction with professional arborists and built to Sterling's exacting standards, the all-new Scion is characterized by durability, low elongation and superior gear compatibility for use in climbing or positioning systems. The Scion is available with sewn eye terminations and is hand-spliceable.

sterlingrope.com

Made in U.S.A.



with U.S. and Globally Sourced Material.

Scion 11.5 mm Specs

Certifications
EN 1891 Type A
& ANSI Z133

Sheath Material
Polyester

Core Material
Braided Nylon

MBS (lbs/kN)
5,417/24.1

Weight (lbs/100')
6.1

SWL (10:1 lbs)
541

Shown: Scion in Blue;
also available in Orange.



ArborMaster® Series [13mm]

Samson Rope Company utilizes a proprietary process that stabilizes this rope's core strands to perfectly match its jacket resulting in a 16-strand line that Samson can confidently promote as "non-milking." This means that you'll never have to trim the line's end due to cover elongation created from friction hitch use, common with other 2-part ropes. It is because of this process that the rope is **hand-spliceable on both ends!**



Courtesy Samson® 2005



Blue Streak

BSTK-120	\$109 ⁰⁰	120'
BSTK-150	\$135 ⁰⁰	150'
BSTK-200	\$175 ⁹⁵	200'
BSTK-600	\$499 ⁹⁵	600'



BRW

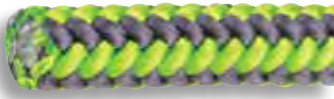
BRW-120	\$109 ⁰⁰	120'
BRW-150	\$135 ⁰⁰	150'
BRW-200	\$175 ⁹⁵	200'
BRW-600	\$499 ⁹⁵	600'

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - \$20
TIGHT EYE: Add "TS" - \$20

STANDARD EYE AT BOTH ENDS:
Add "SS" - \$40
TIGHT EYE AT BOTH ENDS:
Add "TSS" - \$40



Hawk Eye

HAWK-120	\$109 ⁰⁰	120'
HAWK-150	\$135 ⁰⁰	150'
HAWK-200	\$175 ⁹⁵	200'
HAWK-600	\$499 ⁹⁵	600'



SHERRILLtree® 16-Strand Climbing Lines [13mm]

Made by Samson

SHERRILLtree worked with Samson to develop a high-visibility 16-strand rope, with the same properties as their #1 selling Blue Streak. The result is this easy-to-see, bright green and yellow rope, called Mean Streak. Mean Streak's core strands are stabilized to perfectly match the jacket resulting in a "non-milking" rope. Hand-spliceable on both ends! Yellow Jacket is bright, but not considered "hi-vis". Another difference is that unlike Mean Streak, Yellow Jacket can NOT be spliced on both ends.



Mean Streak

MSTK-120	\$109 ⁰⁰	120'
MSTK-150	\$135 ⁰⁰	150'
MSTK-200	\$175 ⁹⁵	200'
MSTK-600	\$499 ⁹⁵	600'



Yellow Jacket® (cannot be spliced on both ends)

YJ-120	\$107 ⁹⁵	120'
YJ-150	\$131 ⁹⁵	150'
YJ-200	\$175 ⁹⁵	200'
YJ-600	\$493 ⁹⁵	600'

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - \$20
TIGHT EYE: Add "TS" - \$20

STANDARD EYE AT BOTH ENDS: Add "SS" - \$40
TIGHT EYE AT BOTH ENDS: Add "TSS" - \$40

(Yellow Jacket cannot be spliced on both ends, as well as any 600' rope)

Safety Blue & Hi-Vee [13mm]

One of the first "arborist-specific" climbing lines, Teufelberger's line of Safety Blue ropes is a long time favorite. Named for its blue core (developed to aid in inspection), Safety Blue, High-Vee, and Ultra-Vee consist of tightly plied polyester covers surrounding fibrillated polypropylene strands. This construction significantly reduces rope weight without compromising firmness or roundness. There are many options out there for climbing lines.—Safety Blue and its multicolored variants are among the first, most proven, and trusted of the lot.

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - \$20

TIGHT EYE: Add "TS" - \$20

STANDARD EYE AT BOTH ENDS:

Add "SS" - \$40

TIGHT EYE AT BOTH ENDS:

Add "TSS" - \$40

(600' cannot be spliced at both ends)



Safety Blue



SAFB-120	\$99⁹⁵	120'
SAFB-150	\$119⁹⁵	150'
SAFB-200	\$159⁹⁵	200'
SAFB-600	\$454⁹⁵	600'



Hi-Vee



HV-120	\$109⁹⁵	120'
HV-150	\$134⁹⁵	150'
HV-200	\$179⁹⁵	200'
HV-600	\$549⁹⁵	600'



Ultra-Vee



UV-120	\$109⁹⁵	120'
UV-150	\$134⁹⁵	150'
UV-200	\$179⁹⁵	200'
UV-600	\$549⁹⁵	600'

Pro Stripe [13mm]



In collaboration with a major rope supplier, SHERRILLtree designed this line to fulfill the needs of climbers in search of more choices in both color and high performance climbing lines. Unlike competitors' attempts to provide exclusive products, SHERRILLtree's Pro Stripe line isn't sourced from a no-name manufacturer, but the best in the industry! Made by Yale, Pro Stripe lines take advantage of the best manufacturing materials and processes to provide climbers the performance they've come to expect from SHERRILLtree. These lines are respected worldwide for their smooth hitch-gliding jacket, low elasticity and long-lasting polyester construction.



ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - \$20

TIGHT EYE: Add "TS" - \$20

STANDARD EYE AT BOTH ENDS:

Add "SS" - \$40

TIGHT EYE AT BOTH ENDS:

Add "TSS" - \$40

(600' cannot be spliced at both ends)



PSTR-120	\$110⁹⁵	120'
PSTR-150	\$135⁹⁵	150'
PSTR-200	\$183⁹⁵	200'
PSTR-600	\$515⁹⁵	600'

XTC-16 [13mm]

Arborists and tree climbers from around the world seek Yale's XTC-16 for two primary reasons: performance and tenacity. XTC-16's smooth jacket provides unique performance to friction hitches of all types while the 100% polyester construction puts up with even the worst bark bites. Choose from four easily identified and uniquely patterned ropes for a line that interacts superbly with virtually any of the current split tails (including Lockjack, page 37) or tail tie to itself with a traditional technique to experience the ultimate in climbing ecstasy!



Phoenix™



PHX-120	\$109⁹⁵	120'
PHX-150	\$129⁹⁵	150'
PHX-200	\$165⁹⁵	200'
PHX-600	\$471⁹⁵	600'



Spark™



SPRK-120	\$99⁹⁵	120'
SPRK-150	\$125⁰⁰	150'
SPRK-200	\$164⁹⁵	200'
SPRK-600	\$444⁹⁵	600'



XTC Spearmint

SPEAR-120	\$109⁹⁵	120'
SPEAR-150	\$129⁹⁵	150'
SPEAR-200	\$165⁹⁵	200'
SPEAR-600	\$418⁹⁵	600'



Fire



FIRE-120	\$99⁹⁵	120'
FIRE-150	\$125⁰⁰	150'
FIRE-200	\$164⁹⁵	200'
FIRE-600	\$444⁹⁵	600'

ADD A SPLICE!

To add an eye splice to your rope, affix one of the following to the end of your rope's item number.

STANDARD EYE: Add "S" - \$20

TIGHT EYE: Add "TS" - \$20

STANDARD EYE AT BOTH ENDS: Add "SS" - \$40

TIGHT EYE AT BOTH ENDS: Add "TSS" - \$40

(600' cannot be spliced at both ends)



Samson Solid-Braids [1/2 in]

This solid-braid family of ropes are a bit more elastic than their core/cover cousins (16-strand, double braids, etc.) solid braid ropes wear quite well in the face of natural crotch interaction. In fact some climbers prefer the way the rope "furs-up" with wear and tear. Although a bumpier ride than ropes with more strands, these lines are naturally twist-resistant due to design. Some of the differences you'll find in the ropes on this page are listed on the rope specifications chart (page 4).

All available with a Grizzly® Spliced eye. Just add a "GS" to the end of the rope's part code and \$15 to the price.



Add a Grizzly® Spliced eye to both ends. Just add a "GSS" to the end of the rope's part code and \$30 to the price. Not available on 600'.



Buzz Line [1/2 in]

This 12-strand product from Yale Cordage is made of 100% orange solution dyed polyester. The strand is laid, much like Yale's 16-strand ropes, to maximize abrasion resistance. The braid is tight to prevent snagging but supple enough to make handling and throwing a snap. All polyester maximizes the tensile strength, while offering an enhanced ability to absorb shock better than most other 12 strands. Buzz Line has a great feel for footlocking, but the trade-off is that it's heavier than other lines, and not as friendly with prusiks and ascenders.

All available with a Grizzly® Spliced eye. Just add a "GS" to the end of the rope's part code and \$15 to the price.

Add a Grizzly® Spliced eye to both ends. Just add a "GSS" to the end of the rope's part code and \$30 to the price. Not available on 600'.



TreePro Red

TPRED-120	\$116 ⁹⁵	120'
TPRED-150	\$145 ⁹⁵	150'
TPRED-200	\$193 ⁹⁵	200'
TPRED-600	\$531 ⁹⁵	600'



True Blue

TRBL-120	\$107 ⁹⁵	120'
TRBL-150	\$133 ⁹⁵	150'
TRBL-200	\$178 ⁹⁵	200'
TRBL-600	\$499 ⁹⁵	600'



Arbor-Plex

APLX12-120	\$69 ⁹⁵	120'
APLX12-150	\$87 ⁹⁵	150'
APLX12-200	\$116 ⁹⁵	200'
APLX12-600	\$339 ⁹⁵	600'

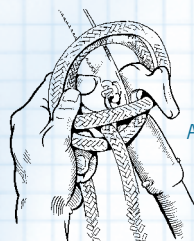


Buzz Line

BUZZLINE-120	\$89 ⁹⁵	120'
BUZZLINE-150	\$108 ⁹⁵	150'
BUZZLINE-200	\$146 ⁹⁵	200'
BUZZLINE-600	\$409 ⁹⁵	600'

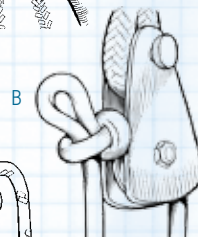


Arborist Knots & Uses



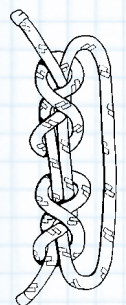
A. CLOVE HITCH

Quick hitch used to send tools aloft or to anchor rigging lines to non-rotating objects (add a half hitch or two if anchor point might rotate).



B. SLIP KNOT

Used commonly as a jam knot for holding line in position or as a pinch bump for throwline.



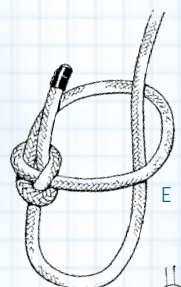
C. DOUBLE FISHERMAN'S KNOT (GRAPEVINE KNOT)

Used to connect line ends such as to create a prusik loop for the secured footlock technique. Difficult to nearly impossible to untie following a heavy load.



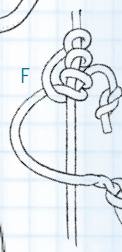
D. SCAFFOLD KNOT

For securing line to a rigid object like a safety snap or carabiner. Hitch cinches down firmly with load and can be difficult to untie after applying heavy loads.



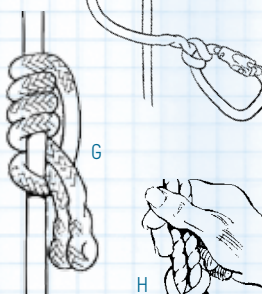
E. RUNNING BOWLINE

In rigging this is often used to connect the target wood to the terminal end of line. The cinching power of the hitch holds wood tight but is easy to tie and untie.



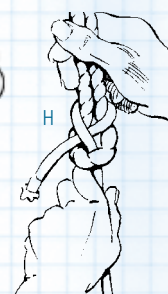
F. BLAKE'S HITCH

This is a friction hitch used to ascend and descend by climbers utilizing the doubled rope technique (DdRT).



G. SCHWABISCH PRUSIK

Friction hitch tied with a line approximately 1/8" smaller in diameter than the climber's support line that is easy to tie and untie, has a firm grip when loaded and releases easily when not loaded.



H. SHEET BEND

For quickly attaching 2 lines (of different or similar diameter) to shuttle their position. Not very stable and not intended for carrying significant weight loads.

View our entire library of knots in the Learning Center at SHERRILLtree.com

Accessory Cords

Priced per foot



DESCRIPTION	DIAMETER	TENSILE STRENGTH	COVER MELT	HAND SPLICABLE	ITEM#	PRICE PER FT
Bee-Line Black	8 mm	6,480	HIGH	YES	34187	\$2 ³⁵
	10 mm	10,350	HIGH	YES	34186	\$3 ³⁵
Bee-Line	8 mm	6,480	HIGH	YES	30973	\$1 ⁷⁰
	10 mm	10,350	HIGH	YES	35030	\$2 ⁰⁰
	10 mm	10,350	HIGH	NO	30966	\$1 ⁴⁹
epiCord	8 mm	5,400	HIGH	YES	36343	\$2 ⁵⁹
	9.3 mm	7,740	HIGH	YES	36418	\$2 ⁹²
	10 mm	9,720	HIGH	YES	36344	\$3 ⁰⁹
HRC	8 mm	7,250	HIGH	YES	32012	\$1 ⁸⁰
Ocean Vectran	6 mm	4,950	HIGH	NO	34183	\$1 ³⁵
Ocean Polyester	8 mm	5,000	HIGH	NO	34182	\$1 ⁵²
	10 mm	7,400	HIGH	NO	31901	\$1 ⁷⁵
Ice	8 mm	8,800	HIGH	YES	31317	\$1 ¹⁵
Tech Cord	5 mm	5,150	LOW	NO	30788	\$1 ⁰⁰
Technora/Polyester	8 mm	5,670	HIGH	NO	28882	\$1 ²⁵
TriTech™	11 mm	8,317	HIGH	NO	35548	\$2 ⁸⁵
Single Carrier Tenex	10 mm	5,800	LOW	YES	20360	45¢
Sling-Grade Tenex	13 mm	13,100	LOW	YES	19895	65¢
	16 mm	18,800	LOW	YES	15550	97¢
	19 mm	24,800	LOW	YES	15549	\$1 ⁴²
Teufelberger tREX 12-strand Hollow Braid	3/8 in (9 mm)	5,845	LOW	YES	39487	59¢
	7/16 in (11 mm)	7,643	LOW	YES	39488	75¢
	1/2 in (13 mm)	9,891	LOW	YES	39489	89¢
	5/8 in (16 mm)	14,837	LOW	YES	39490	\$1 ¹⁵
	3/4 in (19 mm)	20,457	LOW	YES	39491	\$1 ⁶⁵
	7/8 in (22 mm)	28,774	LOW	YES	39492	\$1 ⁸⁵
Accessory Prusik Cord	8 mm (9 mm)	3,600	LOW	NO	30743	65¢

Aluminum and Steel Rings

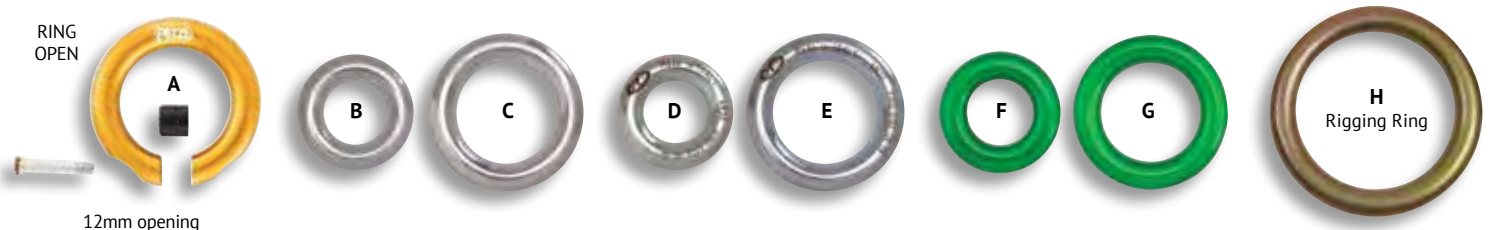
(A) These highly-sought after gated rings from Petzl feature a wide opening that allows for semi-permanent connection of equipment (lanyard on the harness, for example).

(B-E) Italian-made by Climbing Technology, these hot-forged rings are laser-etched with load rating and serial number. Meet CE and ANSI regs. Tested for quality assurance.

(F&G) DMM Anchor Rings: CNC machined from 7075 T6 aluminum for the highest strength-to-weight ratio and anodized for peak protection makes these the most trusted rings on the planet for life safety use.

(H) Our heavy-duty forged and plated steel ring is commonly sought for various rigging and cabling tasks.

LETTER	MATERIAL	TENSILE	WLL	INSIDE DIAMETER	ITEM #	PRICE
A	Aluminum	5,170 lbs	308 lbs	46mm	35819	\$19 ⁹⁵
B	Aluminum	5,620 lbs	562 lbs	31mm	33352	\$11 ⁵⁰
C	Aluminum	5,620 lbs	562 lbs	47mm	33353	\$12 ⁵⁰
D	Steel	6,744 lbs	674 lbs	28mm	33272	\$11 ⁵⁰
E	Steel	6,744 lbs	674 lbs	46mm	33273	\$12 ⁵⁰
F	Aluminum	6,744 lbs	674 lbs	28mm	33786	\$19 ⁹⁵
G	Aluminum	6,744 lbs	674 lbs	40mm	33787	\$19 ⁹⁵
H	Steel	30,000 lbs	3,000 lbs	3"	16004	\$14 ⁹⁵



“This stuff rocks! Especially when you have a short run, or greenhorn on the wrap.”

RPS, LLC, VA
Read more reviews online.

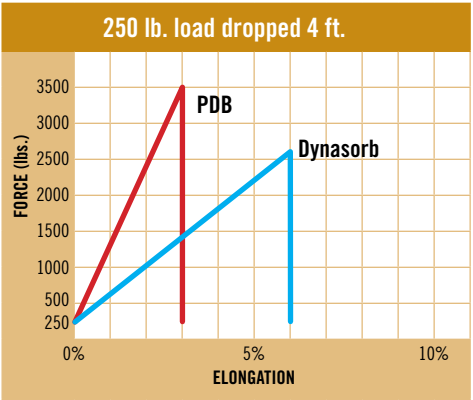
Dynasorb Energy-Absorbing Rigging Line

What have we learned about energy absorption when it comes to dynamic activities that test the limits of ropes and wood? For one, we've learned that tensile strength alone is not all it's cracked up to be. For example, no one needs to spell out the result of bungee jumping using high-strength cable instead of (significantly weaker) elastic rope. Although an extreme example, the physics are virtually identical when arresting other falling loads, including tree parts. No, not because the load shouldn't be injured, rather to lessen forces capable of cracking an anchor point or snapping high-strength ropes. Not only are such shattering forces the inspiration for modern tree cabling systems like Cobra® and TreeSave®, but they are also the reason many arborists are choosing Dynasorb for wood-dropping activities, too.

In another example, Jamie Goddard of Yale Cordage demonstrates on video a drop test using a 220-pound weight tethered first with dynamic (elastic) line and then with static (nonelastic) line. Tensile strength of the dynamic line was 3 tons, while the static line was 10 tons. The dynamic line arrested the weight six times without failure, while the static line snapped on the first drop (search YouTube for "yale+cordage+dynamic+test").

Dynasorb is not drastically different from other arborist-grade polyester double braid (PDB) rigging lines, only a smidge more elastic, about 3% within working-load range. The first to really tell the difference (especially when there's ample line in a system) will be the climber. If managed with a lowering device from below, the impact will be noticeably softer. The groundsman operating the lowering device will feel little difference as well if letting the load run properly, but in the event of yanking it to a stop, the difference can be dramatic.

Dynasorb's secret is in the core. Inside is a special blend of high-strength nylon built to come back to shape again and again for unbelievable rigging performance, while the outside feels much the same as other arborist-grade rigging lines. Dynasorb is jacketed in 100% high-tenacity polyester and is Maxijacket-coated for excellent abrasion resistance.



Orange 1/2"

DYNAS12-150	\$140 ⁹⁵	150'
DYNAS12-200	\$188 ⁹⁵	200'
DYNAS12-600	\$493 ⁹⁵	600'



Red 9/16"

DYNAS916-150	\$170 ⁹⁵	150'
DYNAS916-200	\$220 ⁹⁵	200'
DYNAS916-600	\$597 ⁹⁵	600'



Yellow 5/8"

OVER
SIZED

DYNAS58-150	\$198 ⁹⁵	150'
DYNAS58-200	\$267 ⁹⁵	200'
DYNAS58-600	\$734 ⁹⁵	600'



Green 3/4"

OVER
SIZED

DYNAS34-150	\$250 ⁹⁵	150'
DYNAS34-200	\$335 ⁹⁵	200'
DYNAS34-600	\$924 ⁹⁵	600'

ADD A SPLICE!

For a splice, add an "S" to the end of the rope's part number and \$25 to the price. For both ends, add "SS" to the item # and \$50 to the price. Not available on 600'.



Stable Braid

Double-braid rope is the most commonly used rope for rigging trees because of its high strength and low stretch. The name describes this rope's construction, 2 ropes in one. The inner core is protected by a tightly woven outer jacket, creating a very strong, flexible line with low stretch characteristics. In the final stage of manufacturing, Stable Braid ropes are dip-coated in a bath of liquid Samthane that dries into an abrasion-resistant shell. This coating does wear over time, but adds a great deal of life to the rope that it protects.

Unlike the Super-Braid (left), this line is spliceable. Stable Braid is designed to be used with false crotch blocks and other rigging hardware so you can take full advantage of its strength and durability.

- Good abrasion resistance
- Excellent flexibility
- Moderate break-in time required
- Low stretch
- High UV resistance
- Spliceable (both ends)



ADD A SPLICE!

For a splice, add an "S" to the end of the rope's item # and **\$25 to the price**.

For both ends, add "SS" to the item # (not available on 600') and **\$50 to the price**.



Orange 1/2"

STB12-150	\$139⁹⁵	150'
STB12-200	\$164⁹⁵	200'
STB12-600	\$439⁹⁵	600'



Red 9/16"

STB916-150	\$159⁹⁵	150'
STB916-200	\$209⁰⁰	200'
STB916-600	\$599⁹⁵	600'



Yellow 5/8"

OVER SIZED

STB58-150	\$192⁰⁰	150'
STB58-200	\$255⁰⁰	200'
STB58-600	\$679⁹⁵	600'



Green 3/4"

OVER SIZED

STB34-150	\$235⁰⁰	150'
STB34-200	\$307⁰⁰	200'
STB34-600	\$849⁹⁵	600'



Sirius Bull Rope

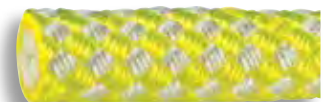
When arborists have tough jobs they need tough lines. For years the Bull line selection from Teufelberger has been an industry standard. The expanded and upgraded Bull Rope series now includes 16-mm and 20-mm models. The various diameter versions can now be distinguished easily via differently colored tracer threads. With a 32-strand polyester cover and a polyester core, the Sirius Bull Rope is a highly abrasion-resistant and easy-to-knot rope offering unmatched value for money. Sirius Bull Rope is also splicable on both ends (except for 600' lengths).

ADD A SPLICE!

For a splice, add an "S" to the end of the rope's part number and **\$25 to the price**. For both ends, add "SS" to the item # and **\$50 to the price**. Not available on 600'.

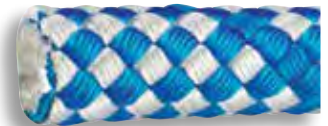
16 mm (5/8 in)

SIRI58-150	\$184⁹⁵	150'
SIRI58-200	\$249⁹⁵	200'
SIRI58-600	\$719⁹⁵	600'



20 mm (3/4 in)

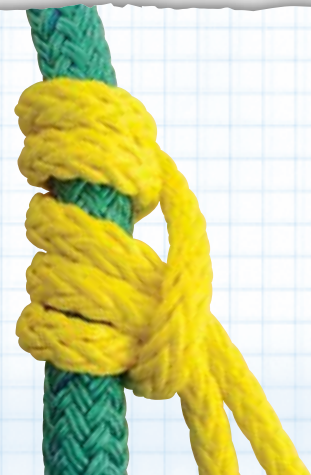
SIRI34-150	\$289⁹⁵	150'
SIRI34-200	\$387⁹⁵	200'
SIRI34-600	\$1,145⁹⁵	600'



Teufelberger
Together in Motion

5-Coil Prusik

Adding a fifth wrap to your prusik is an accepted and common use when the prusik is only being tensioned in one direction. In other words, this method is only viable for ascending or rigging tasks that produce or require pull in a single direction and NOT viable for bidirectional tasks like with a 2-in-1 or double-ended safety lanyard. The concept is simple; this prusik (or Schwabisch) produces the gripping results of a 6-coil prusik (at least in one direction) but without the bulk of 6 coils. This method also reduces friction produced when tending the hitch with a prusik minding pulley.



Super-Braid Plus

- Excellent abrasion resistance
- Fair flexibility
- Moderate break-in time required
- Low stretch
- Stays round under load
- High UV resistance

Orange 1/2"

SUB12-150	\$137⁹⁵	150'
SUB12-200	\$184⁹⁵	200'
SUB12-600	\$503⁹⁵	600'

Most often used as a bull line for heavy work, Super-Braid Plus is also good for speed line work, with its smooth surface, high strength, and firm body. This rope does not go flat when run over a brake or pulley. Super-Braid is woven tightly for increased durability, but friction between closer fibers reduces tensile strength. SHERRILLtree's Super-Braid Plus provides you the firmest, double-braid polyester bull rope on the market.

NOTE: With use, the cover of double-braid ropes will outstretch the core. When this occurs, tie off one end, milk the cover to the opposite end, tape, recut and melt.



NON-SPLICEABLE

Yellow 5/8"

SUB58-150	\$199⁹⁵	150'
SUB58-200	\$257⁹⁵	200'
SUB58-600	\$705⁹⁵	600' OVER SIZED



NON-SPLICEABLE

Green 3/4"

SUB34-150	\$276⁹⁵	150'
SUB34-600	\$1,009⁹⁵	600' OVER SIZED



NON-SPLICEABLE

Bull Rigger 12

- Moderate abrasion resistance
- Excellent flexibility
- Short break-in time required
- Moderate stretch
- Moderate UV resistance

5/8"

BR58-150	\$132⁹⁵	150'
BR58-600	\$499⁹⁵	600'

This is a 12-strand bull rope, with each yarn made of high tenacity polyester covering a polyolefin core. The rope is designed with a firm lay and special finish. Bull Rigger 12 is lightweight, yet strong, giving good resistance to abrasive wear from rubbing against bark while under load. Bull Rigger 12 maintains its shape, has good knot control, is flexible, non-hocking and non-rotational. Good for natural crotch rigging.

YALE CORDAGE



NON-SPLICEABLE

3/4"

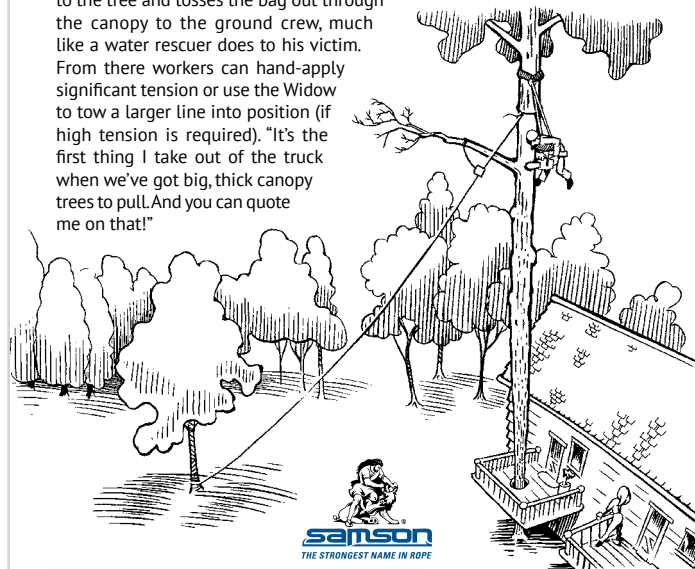
BR34-150	\$183⁹⁵	150'
BR34-600	\$675⁹⁵	600'

Black Widow™

Micro Bull line, 1/4", 7,400 lbs. tensile

Black Widow is 3.05 pounds of super strong line that can fit in a bag the size of a basketball and be virtually thrown into (or out of) most trees! Use Black Widow to inspire lean, as a slide line in a pinch, as a mini tagline, for straightening storm-bent trees, and much more!

SHERRILLtree customer Steve Costa of Groveland California tracked us down at a west coast tree care show to explain what an awesome product Black Widow has been for his small business. Steve explained in vivid detail how his rigger climbs some of the largest conifers in the world with Black Widow in a hip-side bag, attaches the end to the tree and tosses the bag out through the canopy to the ground crew, much like a water rescuer does to his victim. From there workers can hand-apply significant tension or use the Widow to tow a larger line into position (if high tension is required). "It's the first thing I take out of the truck when we've got big, thick canopy trees to pull. And you can quote me on that!"



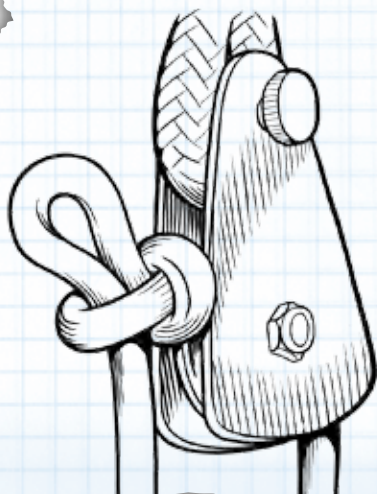
sanison
THE STRONGEST NAME IN ROPE



Only 3.05 lbs!

carabiner not included

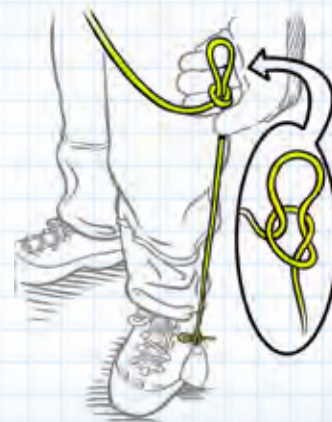
28656	\$184⁹⁵	180 ft.
28656S	\$209⁹⁵	180 ft. with eye splice
28777	\$31⁹⁵	Storage Bag



Slip Knot

It's amazing how some of the most simple little knots end up being the most useful. The slip knot is used commonly as a jam knot for holding your rigging line in position while you finish setting up your rigging. Simply feed your rigging line through your block, then tie the slip knot. Now your line hangs tight, waiting for when you're ready to secure it to the wood you're bringing down.

While the slip knot works great with thick rigging lines, it also works as a pinch bump for throwline. This gives you something to get a firm grip on for hand-throwing a throwline.



Pro-Master™

- Good abrasion resistance
- Good flexibility
- No break-in time required
- Low stretch
- Rotates under load
- Low UV resistance
- Spliceable (both ends)

Samson's Pro-Master™ 3-strand bull rope has tough polyester jacket fibers covering polyolefin core fibers to maximize abrasion resistance. Low elasticity offers unequalled load control, and special jacket fibers give excellent grip and rendering capabilities on winches.

Pro-Master™ is identified by a green ID strand and is of a tighter construction when compared with other 3-strand polyester/polyolefin ropes. The tight body helps guard against the intrusion of dirt and grit, while providing excellent handling and knot-tying characteristics. Good for natural crotch rigging.

5/8"

PM58-150 **\$104⁹⁵** 150'

PM58-600 **\$376⁹⁵** 600' **OVER SIZED**



3/4"

PM34-150 **\$132⁹⁵** 150'

PM34-600 **\$499⁹⁵** 600' **OVER SIZED**



ADD A SPLICE!

For a splice, add an "S" to the end of the rope's item # and **\$25 to the price.**

For both ends, add "SS" to the item # (not available on 600') and **\$50 to the price.**

Tree-Master

- Excellent abrasion resistance
- Moderate flexibility
- Long break-in time required
- Low stretch
- Rotates under load
- Moderate UV resistance
- Spliceable (both ends)

This premium 3-strand climbing or rigging line is made from top-quality polyester, coated with Pro-Gard to extend life, and provides smooth operation when working with knots. It remains firm under load, is low stretch, and has good knot-holding characteristics. Good for natural crotch rigging.

1/2"

TMR-120 **\$91⁹⁵** 120'

TMR-150 **\$108⁹⁵** 150'

TMR-600 **\$389⁹⁵** 600'



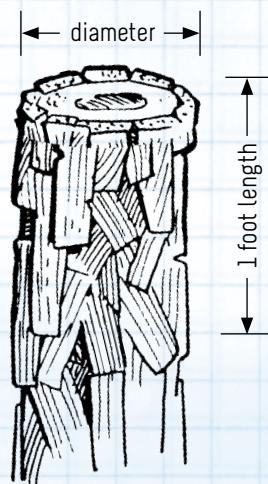
ADD A SPLICE!

For a splice, add an "S" to the end of the rope's item # and **\$25 to the price.**

For both ends, add "SS" to the item # (not available on 600') and **\$50 to the price.**

Log Weight Chart

Complete log chart goes up to 72", available at SHERRILLtree.com



WEIGHT OF A ONE-FOOT SECTION (BASED ON AVERAGE DIAMETER)

SPECIES	SPECIES WEIGHT IN LBS PER CUBIC FT.	10"	12"	14"	16"	18"	20"	22"	24"	26"	28"	30"	32"	34"	36"
Apple	55	30	43	59	77	97	120	145	173	203	235	270	307	347	368
Ash, White	48	26	38	51	67	85	104	126	150	177	205	235	267	302	338
Basswood	42	23	33	45	59	74	92	111	132	155	180	206	235	265	297
Beech	54	29	42	58	75	95	118	142	169	199	231	265	301	340	381
Birch, Paper	50	27	39	53	70	88	109	132	157	184	214	245	279	317	353
Birch, Yellow	57	31	45	61	80	101	124	151	179	210	244	280	319	360	403
Butternut	46	25	36	49	64	81	100	121	144	170	197	226	257	290	325
Cherry, Black	45	25	35	48	63	79	98	119	141	166	192	221	251	283	318
Chestnut	55	30	43	59	77	97	120	145	173	203	235	270	307	347	388
Cottonwood	49	27	38	52	68	86	107	129	154	180	209	240	273	310	346
Elm, American	54	29	42	58	75	95	118	142	169	199	231	265	301	340	381
Gum, Black	45	25	35	48	63	79	98	119	141	166	192	221	251	283	318
Gum, Red	50	27	39	53	70	88	109	132	157	184	214	245	279	317	353
Hackberry	50	27	39	53	70	88	109	132	157	184	214	245	279	317	353
Hickory, Shagbark	64	35	50	68	89	113	140	169	201	236	273	314	357	403	452
Honey Locust	61	33	48	65	85	108	133	161	192	225	261	299	341	385	431
Magnolia, Ev	59	32	46	63	82	104	129	156	185	217	252	289	329	372	417
Maple, Red	50	27	39	53	70	88	109	132	157	184	214	245	279	317	353
Maple, Silver	45	25	35	48	63	79	98	119	141	166	192	221	251	283	318
Maple, Sugar	56	31	44	60	78	99	122	148	176	206	239	275	313	353	396
Oak, California Black	66	36	51	70	92	116	144	174	207	243	282	323	368	416	466
Oak, Live	76	41	60	81	106	134	166	200	238	280	324	372	424	478	536
Oak, Red	63	34	49	67	88	111	137	166	198	232	269	309	351	397	445
Oak, White	62	34	48	66	86	109	135	163	194	228	265	304	346	390	437
Pecan	61	33	48	65	85	108	133	161	192	225	261	299	341	385	431
Persimmon	63	34	49	67	88	111	137	166	198	232	269	309	351	397	445
Poplar, Yellow	38	21	30	40	53	67	83	99	119	140	162	186	211	239	268
Sassafras	44	24	34	47	61	78	96	116	138	162	188	215	245	277	310
Sycamore	52	28	41	55	72	92	113	137	163	191	222	254	290	327	366
Walnut, Black	58	32	45	62	81	102	126	153	182	213	248	284	323	364	409
Pine, White	36	20	28	38	50	64	78	95	113	128	154	176	201	227	254
Spruce, Red	34	19	27	36	47	60	74	90	106	125	145	166	189	214	239

ANSI Z133/5.7.9
states that-
"A green log weight
chart shall be
available to the crew."

Information from the U.S. Department of the
Interior, National Park Service sheet "Rope,
Knots and Climbing".





SHERRILLtree Big Launcher

This Big Launcher is the next generation in line setting tools, and is the most versatile and compact line launcher in the world. The Big Launcher uses a blank cartridge to launch specifically designed line launcher projectiles into the canopy to desired distances. With the combination of a pistol grip, full length shoulder stock and aerodynamic projectile, the Big Launcher allows for a very precise placement of the line every time.

The stock on the Big Launcher has been engineered to separate into two pieces for ideal storage and portability. The Big Launcher has been proven to save time and money on the job sites when trying to set those tricky lines.

Uses .22 caliber blank power charges. Choose your power charge based on the distance you wish to launch the projectile. Use only those charges intended for the Big Launcher: Light Green Load - Distance of approximately 50'+, or Heavy Red Load - Distance of approximately 125'+.



Big Launcher Kit



Big Launcher Deluxe Kit

DESCRIPTION	ITEM #	PRICE
Big Launcher (gun, stock, and projectile; <i>charges NOT included</i>)	36476	\$225⁹⁵
Big Launcher Kit (includes gun, stock, projectile, reel, line, and red load charges)	36480	\$399⁹⁵
Big Launcher Deluxe Kit (shown) (includes gun, stock, projectile, reel, two lines, red load charges, cleaning kit, and carrying case)	36484	\$499⁹⁵

SHERRILLtree Big Launcher Accessories

DESCRIPTION	ITEM #	PRICE
.22 Caliber Loads, 100 ct.		
A Light-Green Loads - Distance of approximately 50 ft	36487	\$11⁹⁵
B Heavy-Red Loads - Distance of approximately 125 ft	36479	\$11⁹⁵

Projectiles and Throwline

C PE Soft Foam Covered Projectile - Only 5.2 oz, foam projectile alternative to the aluminum one that comes with the Big Launcher.	36647	\$31⁹⁵
D Coated Aluminum Projectile - Achieve maximum distance	36477	\$29⁹⁵
E Replacement Projectile Sleeve - Replacement rubber sleeve for Aluminum Projectile	36481	\$3⁹⁵
F Big Launcher Throwline - 250 ft of 2mm throwline at 150 lbs tensile	36482	\$28⁹⁵

Storage and Maintenance

G Big Launcher Storage Case - Features contoured, recessed latches and padlock tabs for added security. Strong rigid ribbed construction with steel hinge pins for added durability. Exterior: 17.1" x 5.75" x 14.86" Interior: 16.5" x 14.25" x 5.25"	36483	\$37⁹⁵
H Big Launcher Throwline Bottle	36485	\$20⁹⁵
I Cleaning Kit - Includes cleaner/lubricant, wire brush, (2) O rings, and (12) cotton swabs	36486	\$28⁹⁵
J O-Ring	36478	95¢



SHERRILLtree BIG SHOT®

Throw Weight Launching System



The advent of throwlines has changed the way arborists climb trees. The BIG SHOT® changed the way we use throwlines by giving you a simple, accurate, effective means to hurl your throw weight to new heights.

The BIG SHOT accepts a wide range of projectiles and provides fully variable thrust force to limit over-shooting of low to mid-range targets. It's simple ... if you have a lower target, just don't pull back as far!

The BIG SHOT also solves one of the most significant difficulties of hand tossing throw weights—vertical targets with narrow approaches. With minimal practice, you'll be able to hit high targets through a small frame of branches and twigs.

The BIG SHOT is an accurate and lightweight launching system! The launch pouch cuts in-air projectile rotation by 50% over the original BIG SHOT pouch! (This advance is also available as a sling replacement for older models.) If you're looking to thread the needle through the thickest of canopies or launch throw weights up to 150 vertical feet, reach for the tool arborists around the world call for by name.



SHERRILLtree BIG SHOT® with Telescoping Pole

The long awaited and highly sought after telescoping BIG SHOT is now here and we couldn't be any more impressed! It was at a European trade event that we saw a BIG SHOT mounted on a Berger telescoping pole, and approached it with our given skepticism. After years of testing other telescoping poles, we had yet to find one that was a fit for the BIG SHOT. They were always too heavy, too bulky, or simply couldn't handle the force.

So, when we picked up this 46 oz Berger pole, we really liked the weight. And then we extended it and gave the BIG SHOT a pull. The pole held its extension. Woah. After the show, we began testing out the Berger poles in our facility and confirmed that we had found the winner.

Finally, a telescoping pole for the BIG SHOT. Now, users have a greater max height pole, that can be fully adjusted to any height between 6 and 10.5 feet. When using this at max height, it can add up to 15 lbs to your pulling power. The collapsed height of the pole is 6 ft, which makes for easy storage and transportation.

This BIG SHOT with telescoping Berger pole takes your line launching to a whole new level.

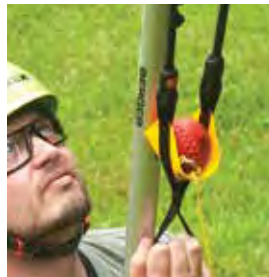
SET1028

\$159⁹⁵

BIG SHOT with Telescoping Pole



Easily adjustable to any height up to its maximum of 10.5 ft with clamping locks that refuse to slip.



Pole is made from high-grade aluminum, able to withstand the force generated when launching the BIG SHOT.



NEW



SHERRILLtree BIG SHOT®

SET1027

\$118⁹⁵

With two connectable 4' poles

SET1026

\$109⁹⁵

With 8' pole

**OVER
SIZED**



SHERRILLtree BIG SHOT® Deluxe Kit

BIG SHOT with two 4' poles, Line Reel with 300' of monofilament, 200' of Neon3, 8 and 10 oz. throwbags, Canvas Line Bag, Plastic Carrying Case (50" x 7" x 9"), replacement tubing, and a reel mount.

SET1025

\$319⁹⁵

Deluxe Kit

**OVER
SIZED**

THROWLINES

TOP RATED ★★★★★

ZING-IT [100% Dyneema, in yellow or red]

Samson's trusty brand of woven Dyneema throwline is Samthane-coated for improved visibility throughout the branch isolating process. Zing-it's 100% Dyneema construction is not only strong but does not hold memory and therefore flakes into a cube or bag the same trusty way every time.



DYNAGLIDE [100% Dyneema]

Teufelberger's high-strength, urethane-coated Dyneema throwline utilizes a hollow-braid construction that can be spliced by those so inclined but presents a square body when pulled under tension. Like other Dyneema alternatives, this very thin, low-stretch thread glides easily over branches, allowing users to select lighter throw weights.



Bullseye 50/50 [50% Dyneema, 50% Polyethylene]

This 50/50 Dyneema and Polyethylene blend is lightweight, strong and relatively stiff compared to 100% Dyneema lines like Zing-it or Dynaglide. It is also stiff enough to flake pleasantly in the line cube or bag of choice.



Neon 3 [Polypropylene]

From the late '80s up until the late '90s, polypropylene throwline was about the only cordage arborists would use because its springy body kept it from entangling as bad as the only other available product, nylon parachute cord. Today, this lightweight but stout thread is still a favorite of many throwline practitioners and, with its bright color pattern, is easy to view even in thick canopies.



	LENGTH (ft)	IDEAL BAG WT (OZ)	LINE DIAMETER (MM)	TENSILE STRENGTH (LBS)	ITEM #	PRICE
	180	10-12	1.75	500	Z175Y-180	\$24 ⁹⁵
	1,000	10-12	1.75	500	Z175Y-1000	\$125 ⁹⁵
	180	10-12	1.75	500	Z175R-180	\$24 ⁹⁵
	1,000	10-12	1.75	500	Z175R-1000	\$125 ⁹⁵
	180	12-14	2.2	650	Z22Y-180	\$26 ⁹⁵
	1,000	12-14	2.2	650	Z22Y-1000	\$139 ⁹⁵

	150	12-14	1.8	1,000	DYNA-150	\$30 ⁹⁵
	200	12-14	1.8	1,000	DYNA-200	\$34 ⁹⁵
	1,000	12-14	1.8	1,000	DYNA-1000	\$169 ⁹⁵

	180	12-14	2.5	450	BUL-180	\$24 ⁹⁵
	1,000	12-14	2.5	450	BUL-1000	\$106 ⁹⁵

	200	12-14	3	250	NEON-200	\$17 ⁹⁵
	1,000	12-14	3	250	NEON-1000	\$56 ⁹⁵



NEO Throw Weights

NEO-16	\$14 ⁹⁵	16 oz.
NEO-14	\$14 ⁹⁵	14 oz.
NEO-12	\$14 ⁹⁵	12 oz.
NEO-10	\$14 ⁹⁵	10 oz.
NEO-8	\$14 ⁹⁵	8 oz.
NEO-6	\$14 ⁹⁵	6 oz.



Popular Combos

27532	\$40 ⁹⁵	180 ft Zing-It (1.75 mm) and 10 oz Neo throw weight
SET91	\$31 ⁹⁵	200 ft Neon 3 and a 14 oz Neo throw weight

Throwline Intermediate Kit

2 Neon 3mm x 200' Throwline (NEON-200)
1 Fold & Hold Deluxe Cube (32443)
1 Neo Throwbag, 10 oz. (NEO-10)
1 Neo Throwbag, 12 oz. (NEO-12)
1 Neo Throwbag, 14 oz. (NEO-14)

32396 \$118⁹⁵ Intermediate Kit

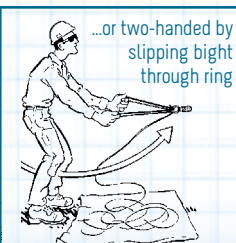


Throwing a Line

Tie the throwline to your weight's ring using a slipped clove hitch, then, drop the weight to the ground and tie a slipknot about thigh high and use this bump in the line as your pinch point for precision release. Once your target limb is isolated, install the climbing line (with friction saver). Rip Tompkins suggests a pile hitch, but a host of other knots serve this purpose just as well.



use one-hand...

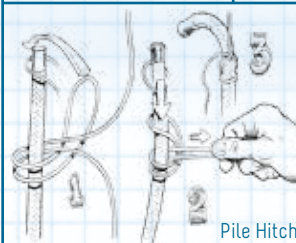


...or two-handed by slipping bight through ring

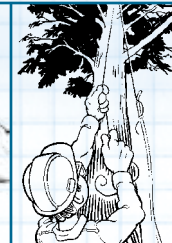


Tie line to weight's ring...

then a slip knot thigh-high as a pinch handle for one-hand throws



Pile Hitch



Ring and Ring Friction Management

If maintaining climbing lines is important to you, then you need to be managing the friction your rope experiences. One of easiest ways to do so is with a ring and ring device.

Buckingham's tried and true Friction Savers are "load rated", with hardened rings, fat enough to significantly limit rope's bend radius. Buckingham's anodized aluminum rings are lightweight and dissipate heat better than the steel rings, but don't withstand abrasive friction quite as long. The big end is color coded RED and small end green for easy identification during ground removals and installation. Buckingham's Friction Saver can be both installed, and removed from the ground in just minutes. Detailed instructions provided with each Friction Saver. 5,000 lb. load rating.

Entering the ring and ring market last year was Edelrid's Cambiumsavers, with their different-colored rings and dual-colored sling construction, protecting us from "screwing up" the retrieval. An easy visual check is all that's needed from the ground or any remote position in the tree to figure out if your brain was engaged when tying in.



Buckingham Friction Savers

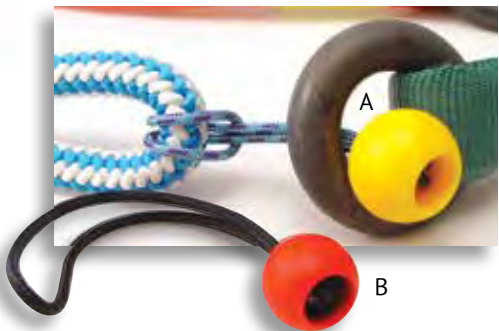
ARFS-24	\$56 ⁹⁵	Aluminum rings, 24 inch sling
ARFS-36	\$59 ⁹⁵	Aluminum rings, 36 inch sling
ARFS-48	\$62 ⁹⁵	Aluminum rings, 48 inch sling
ARFS-72	\$71 ⁹⁵	Aluminum rings, 72 inch sling

SRFS-24	\$56 ⁷⁰	Steel rings, 24 inch sling
SRFS-36	\$59 ³⁰	Steel rings, 36 inch sling
SRFS-48	\$62 ²⁰	Steel rings, 48 inch sling
SRFS-72	\$67 ⁶⁰	Steel rings, 72 inch sling



Edelrid Cambiumsavers

36329	\$54 ⁹⁵	Aluminum rings, 90 cm (35.4 inches) sling
36330	\$59 ⁹⁵	Aluminum rings, 120 cm (47.2 inches) sling
36331	\$64 ⁹⁵	Aluminum rings, 150 cm (59 inches) sling



Retrieval Balls

A	31732	\$4 ⁹⁵	For Ring Style Friction Savers
B	30166	\$4 ⁹⁵	For Rope Guide



TOP RATED ★★★★★

Mini Carabiner

See more mini-carabiners on pg. 62

28733 \$3⁵⁰

Rope and Cambium Protector

The rope and cambium protector is a product from medieval times for sure, but effective just the same. Still a leading means of chafe protection in a variety of rope uses, leather is tough, lightweight and, in this practice, quick to employ. The thread-and-haul technique (displayed below) is simple and minimizes the many headaches associated with ground placement of other friction saving devices. The Rope and Cambium Protector is not only easy to install but nearly indestructible come removal time, brought down with an easy yank on the rope's end. Most users keep the rope and cambium protector installed and ready for use every time the rope is utilized. After heavy use it may be helpful to introduce talcum powder inside the channel to reduce friction.

30535

\$26⁹⁵

For lines under 9/16"



4 solid reasons to use a friction saving device:

- Saves tree and rope from the cambium scalding friction abrasion.
- Reduces the amount of surface wear and grit forced into critical lines.
- Reduces energy required to ascend rope when body thrusting.
- Greatly enhances friction hitch response during movement and especially descent.

Telescoping Reach Tool

From 19 inches to 10 FEET!

Designed primarily for maximizing reach to rope ends for horizontal canopy movement, this 10-foot stainless steel telescoping handle uses a flexible tip that you can bend into whatever shape the task requires.

30762 **\$46⁹⁵** 14 oz.

WARNING: CONDUCTIVE!
DO NOT USE NEAR
POWER LINES

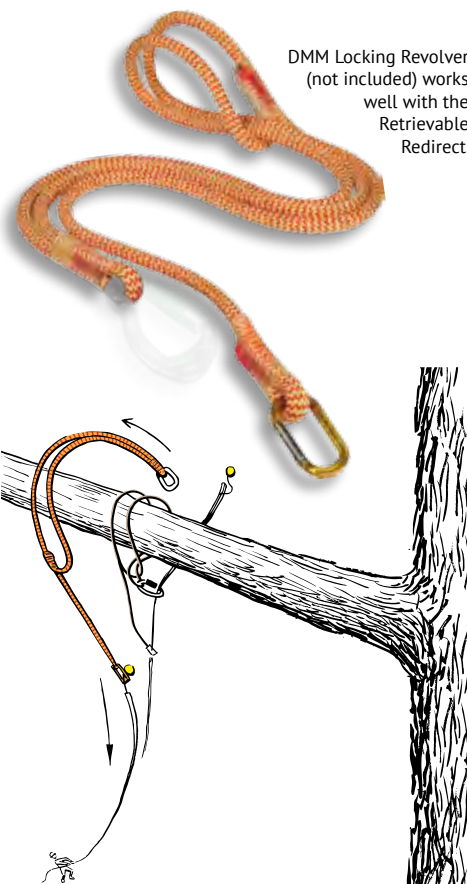
Retrievable Redirect

Ahh! The Holy Grail of tree climbers, the retrievable redirect! The ability to obtain optimal rope angles with low friction then bringing it all home without climbing back up. Just think of the wonder!

Well, the retrievable redirect gives you that amazing power to contort gravity. Stationary rope work-positioning climbers will immediately see the benefits. Simply girth-hitch the sling to the desired location and run the tail of the climbing line through a carabiner then the retrieval snap. To bring it all back home, use a key or knot that will pass through the carabiner but not the retrieval snap. Done deal!

If you are a moving rope climber, simply add a small life-support-rated prusik and carabiner to the tail and away you go.

Redirects allow climbers comfort, safety, and efficiency. The ability to control the angle of the climbing line relative to the climber is a major advantage—and often the difference between running with the big dogs or staying on the porch. Spliced from 10 mm Ocean, SHERRILLtree's Retrievable Redirect comes with a non-locking DMM XSRE accessory carabiner that acts as the catch for the retrieval.

36218 **\$50⁹⁵** Retrievable Redirect32044 **\$49⁵⁰** DMM Locking Revolver

DMM Locking Revolver
(not included) works
well with the
Retrievable
Redirect.



A.R.T. Rope Guide

Friction-Erasing Device with Life Safety Feature

Those who own a Rope Guide say there's no smoother or friction-free interaction for climbing when using the doubled rope technique. The Rope Guide delivers total sensation to an incorporated Lockjack or rope-style split-tail, resulting in ascents and descents that glide as smoothly as butter. Ascents that previously required dragging rope under tension over a fixed position (be it branch or polished hardware) are replaced by the Rope Guide's ultra-smooth Cocoon pulley that diverts 99% of climbing energy to strictly hoisting the climber's body weight. As for descents, friction at the TIP (tie-in point) is completely erased and diverted entirely to the climber's friction-controlling device, a phenomenon that makes the combination of Rope Guide and Lockjack the ultimate climbing sensation.

With its long, adjustable lanyard (5- or 10-foot options), the Rope Guide can be used in one of two ways: draped over a branch or cinched to a vertical spar. Either way, the adjuster portion of the device allows quick positioning of the Cocoon pulley (from 6 inches to 10 feet long) for wide-ranging movement throughout the crown.

And as for safety, the ultimate fear for those climbing trees regularly is the danger of an unintended yank or fall on slack line that in turn causes the TIP to fail and/or results in physical injury that otherwise might have been avoided. An added and critical feature that draws many professional climbers to the Rope Guide is its brilliant and potentially life-saving "airbag" component. The Rope Guide incorporates an impact-activated (at 4 kilonewtons, or about 900 pounds of force) rip-stop lanyard that minimizes high shock force, therefore providing a layer of protection—a feature that several countries are currently considering mandatory for tree climbing.

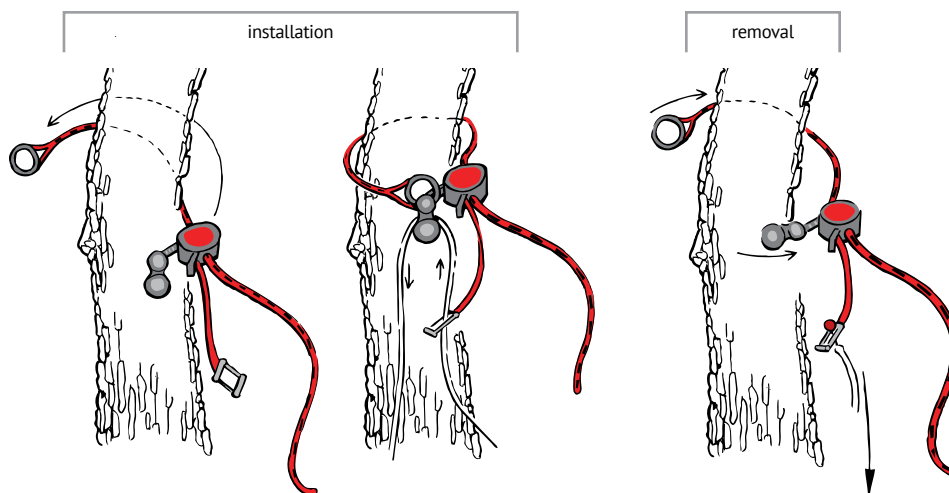
The Rope Guide can be removed remotely (using Double Snapper) but requires climbing to install. For lines up to 13 mm (1/2 inch).

- Eliminates friction abrasion to rope and tree
- Greatly reduces energy required to climb
- Delivers ultimate response to climbing hitch
- Rope-friendly pulley instead of fixed metal surface
- Adaptable to limbs, incredibly uneven crotches, or even vertical spars
- Proprietary shock-absorbing, potentially life-saving feature
- Cinches snug against host position to eliminate sliding risk



**NEW
LOW PRICE!**

33839	\$251⁹⁵	Rope Guide with 5 ft Lanyard
33840	\$264⁹⁵	Rope Guide with 10 ft Lanyard





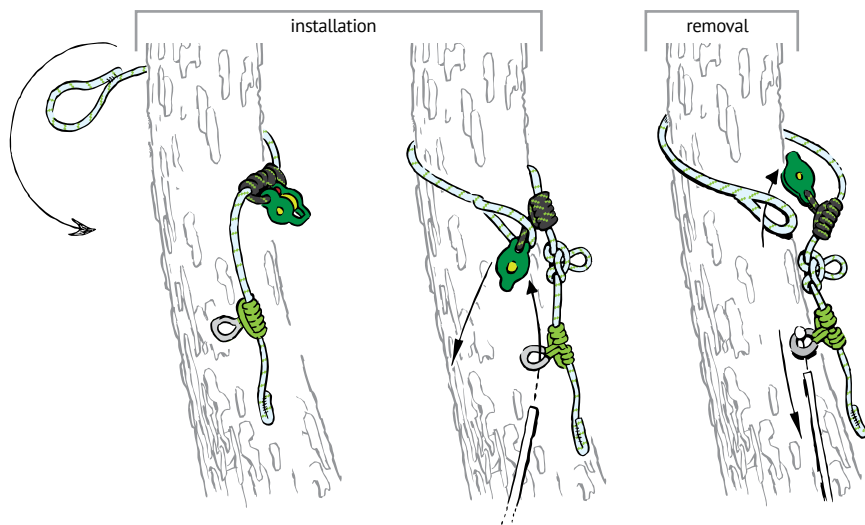
pulleySAVER II

The pulleySAVER II is the logical evolution of friction savers. The climbing rope moves easily on the Pinto pulley. The resilient eye for easier retrieval of the pulleySAVER II returns it to its original position even after a thousand cycles.

Not just a simple loop and thread, the pulleySAVER gives you the option of four different attachments as an anchor point. You—the one hanging from the rope—can choose what best suits you and your situation. Set it as a swinging element in a double-leg configuration, as choke hitch, wrapped around in a double-leg configuration, or narrowed in a double-leg configuration. Your climb, your choice.

PSAVII-1.25m	\$199⁹⁵	1.25 m (4.1 ft)
PSAVII-2.5m	\$201⁹⁵	2.5 m (8.2 ft)
PSAVII-4m	\$203⁹⁵	4 m (13.12 ft)

Each of the four configurations takes advantage of the smooth Pinto pulley and retrievable options. Not all climbs are the same. Don't limit your tie-in point options either!



EqualIZA

One of many pulleySAVER accessories. The EqualIZA is an addable link for the pulleySAVER when used on two anchorage points. Expand the versatility of an already great tool with the simple addition of this link. Simple in design does not mean simple in action. The EqualIZA expands tie-in point options and, when used properly, can add redundancy and security to any climbing system.

37000 **\$34⁹⁵** EqualIZA for pulleySAVER II



NEW



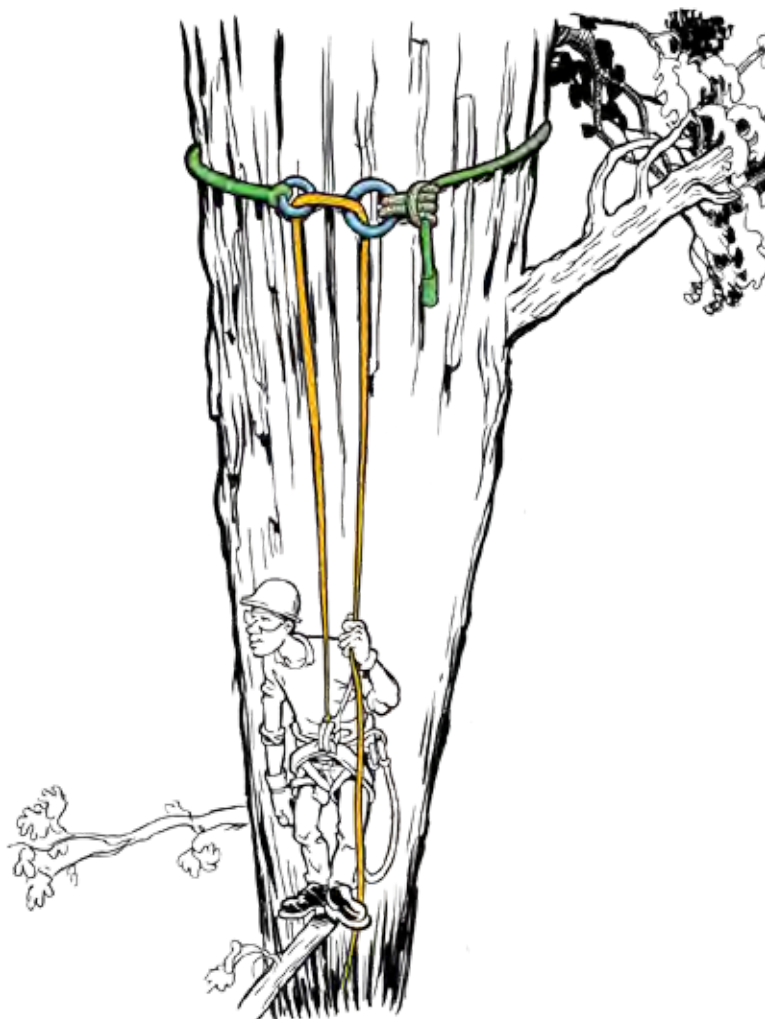
Adjustable Friction Saver

11.7 mm Poison Hi-vy 24-strand

A much needed improvement over the tried-and-true version, the Poison Hi-vy Adjustable Friction Saver operates with the exact same premise in mind, but with much better materials. While the 3-strand version still has its place, most users prefer the more flexible Poison Hi-vy as it allows them to adapt to their climbing scenarios.

We've also gone with epiCORD 9.3mm for the prusik, for its durability, and because of how well it bights Poison Hi-Vy. We're only offering this adjustable friction saver in a 7 ft length, and only with aluminum rings. You'll also notice that this version comes with only 2 rings. We were finding it rare to see that third ring in use, so we decided to save a little weight and just eliminate the third ring altogether.

38135 **\$75⁰⁰** Aluminum rings, 7 ft.





Adjustable Friction Saver

3-strand with Cordura Sleeve

Thanks to encouragement from Atlanta-based arborist Mark Adams, SHERRILLtree makes this popular variation to friction management that most simply refer to by its acronym, AFS. This one-size-fits-all, rope-friendly device can be set from the ground or within the crown. It'll go around branches as small as your wrist up to tree trunks as large as the circumference of the entire device to be used as an anchor position for any type of climbing line. Once the climb is complete, simply tie an overhand knot in the end of your rope and reel in the entire system! Note: Connecting throwline to overhand knot will retrieve the AFS in a controlled manner.

Rope runs smoother, stays cleaner, and doesn't abrade when threaded through an adjustable friction saver. Hand-spliced by the best in the business. SHERRILLtree utilizes high-tenacity polyester cordage and Italian-made aluminum and steel rings to provide maximum strength and safety for thousands of moves to come.

33002	\$84 ⁹⁵	Aluminum rings, 6 ft.
32152	\$89 ⁹⁵	Aluminum rings, 10 ft.
33002S	\$84 ⁹⁵	Steel rings, 6 ft.
32152S	\$89 ⁹⁵	Steel rings, 10 ft.



fimbSAVER Family

(fimbSAVER and fimbCLIMB)

A new take on a proven idea, the fimbSAVERS combines new technology with tried and true performance. Installable from the ground, unlike the pulleySaver or other Teufelberger friction management configurations. However, the thimbles of the fimbSAVERS add only slightly more friction than a comparable pulley. A wide surface contact area helps protect the tree, and a long taper on the fixed thimble side aids in controlled reliable, retrieval. The fimbSAVER is big enough to be used for either climbing, or light rigging.

FimbCLIMB is new, and is a smaller version of the fimbSAVER. With a lower profile, the fimbCLIMB is less likely to snag on retrieval and is compact enough to store on your saddle for installation in the canopy as a cambium saver or a redirect.



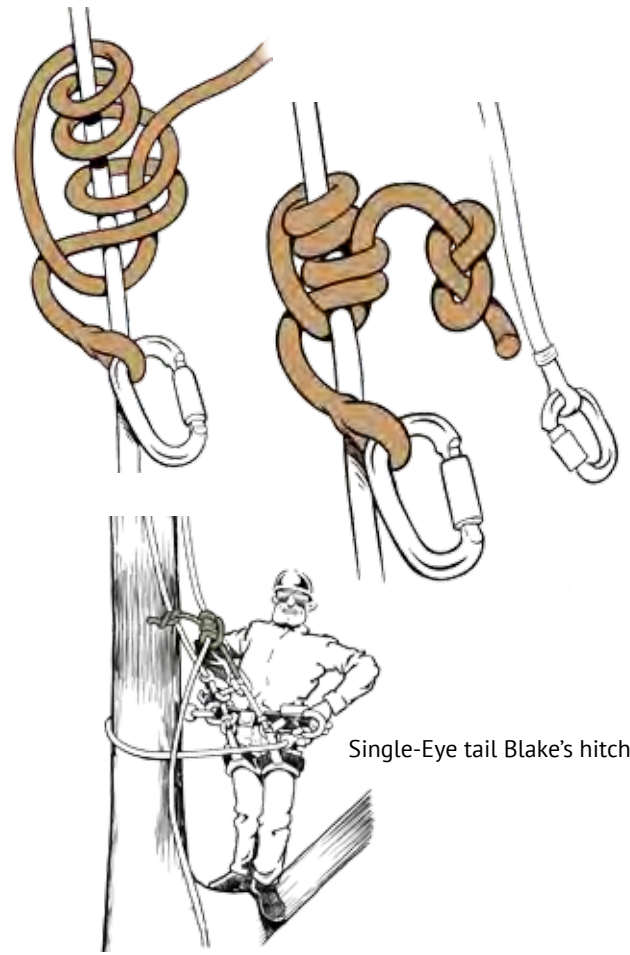
FIMB-4	\$100 ⁹⁵	fimbSAVER - 4 ft
FIMB-6	\$104 ⁹⁵	fimbSAVER - 6.5 ft
36332	\$94 ⁹⁵	fimbCLIMB - 4 ft
36345	\$104 ⁹⁵	fimbCLIMB - 7.4 ft



ELITE PRODUCTS FOR PRECISION WORK AND SAFETY

TEUFELBERGER ensures the highest quality by certifying our products globally. No matter the climber's location, TEUFELBERGER's products work together as certified systems providing precision positioning for optimal performance and safety.

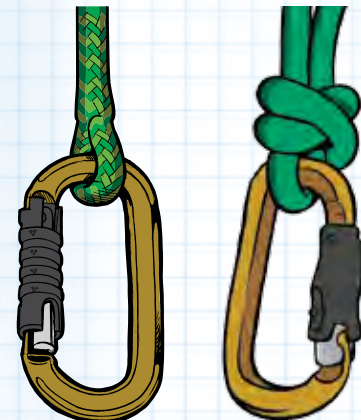
TEUFELBERGER Fiber Rope Corporation, 848 Airport Road, Fall River, MA 02720
800-333-6679, 800-647-6731, fiberrope.us@teufelberger.com, www.teufelberger.com



Single-Eye tail Blake's hitch

Splices versus Knots

A spliced rope termination generally retains around 90% of a rope's strength while knots cut strength to about 60%. Although a skilled knot-tyer can make a quick connection to about any snap, a splice presents a considerably smoother transition and without a loose end to potentially unravel. Carabiners and other connecting hardware can be quickly detached from a splice while knots can present a challenge to untie if loaded heavily. Knots and splices each have an important role in most industrial applications.





Single-Eye Tails

The single-eye split-tail is most similar to the traditional method of snap-tying a rope but with two twists: The system can be redirected around branches without untying the hitch throughout a climb, and friction wear is isolated to the disposable tail. There's nothing for old-schoolers to get used to. If you are one of those old-school climbers, watch just one demonstration of the single-eye split-tail and you'll recognize the value of being able to quickly and safely unclip the climbing line's end (for redirecting to another crotch) while the split-tail hitch remains tied to the host line—greatly reducing the risk of ever dropping your lifeline to the ground. You can go through an entire day without tying a friction hitch twice. The second big plus has to do with line preservation. A split-tail eliminates the need to cut off the end of your favorite climbing line every few weeks due to friction wear. Simply replace the split-tail and life is good! If you're not using a split-tail in your climbing system, consider changing to one of SHERRILLtree's top picks for increasing production and climbing efficiency.

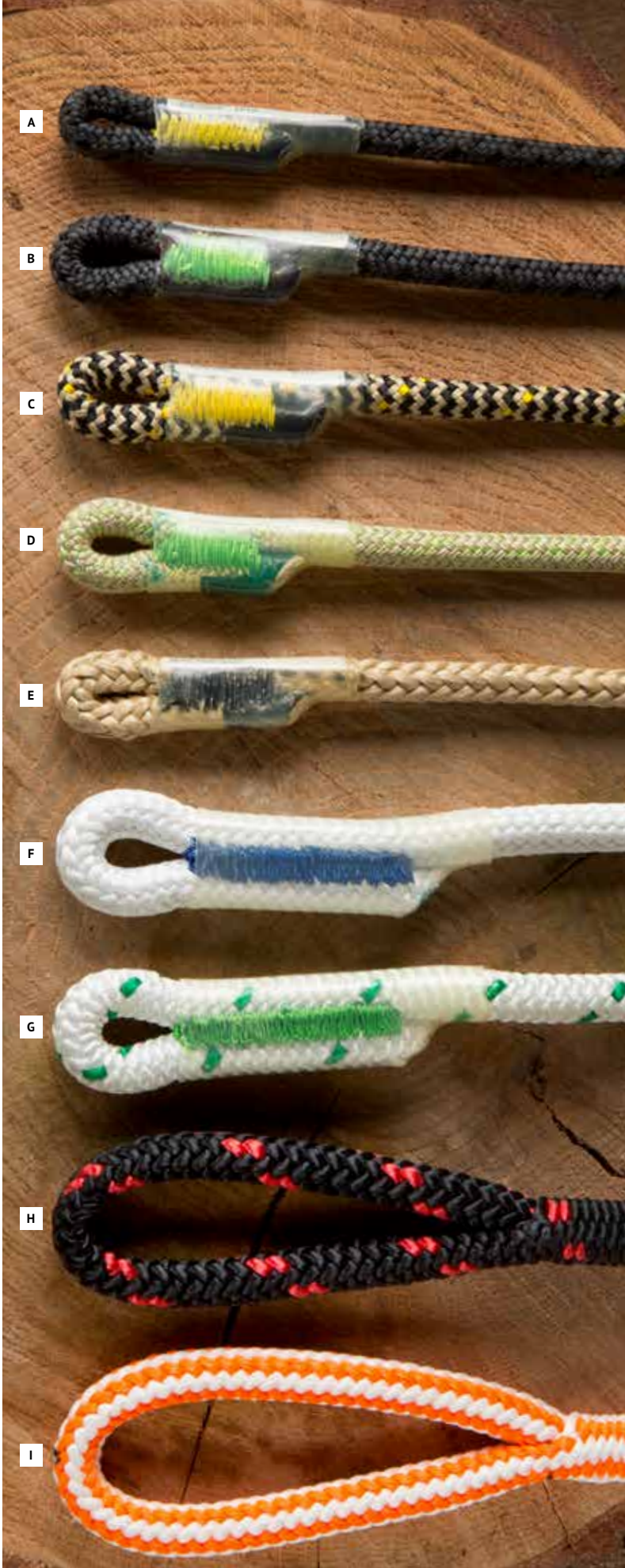
Grizzly-Spliced®

letter	description	diameter	melting point	cordage strength	item #	price
A	Bee-Line Black	8mm	HIGH	6,480	34200	\$23 ⁹⁵
B	Bee-Line Black	10mm	HIGH	10,350	35032	\$24 ⁹⁵
C	Bee-Line	10mm	HIGH	10,350	31687	\$23 ⁹⁵
D	epiCord	10mm	HIGH	9,720	35282	\$24 ⁹⁵
E	Ice	8mm	HIGH	8,800	31688	\$24 ⁹⁵
F	Safety Blue	13mm	LOW	7,000	31346	\$23 ⁹⁵
G	Pro-Spec	13mm	LOW	6,200	35674	\$23 ⁹⁵

Hand-Spliced

letter	description	diameter	melting point	cordage strength	item #	price
H	Magic	13mm	LOW	6,000	27720	\$26 ⁹⁵
I	Hi-Vee	13mm	LOW	7,000	15310	\$26 ⁹⁵

SHERRILLTREE SPLICING
STRONG.SAFE.REFINED.





Eye-to-Eye Tail Hitches



Schwäbisch



Distel



Valdôtain
tresse (VT)



Michoacán

It's important to choose the correct length eye-to-eye tail for the hitch you'll be tying. Hitches like the Distel and Schwäbisch are better with a shorter tail like 26-28 inches. Hitches like the VT and Michoacán however, need a longer tail around 30-32 inches. Too short of a tail won't let you get enough wraps; too long of tail and the hitch won't set properly.

Eye-to-Eye Tails

Eye-to-eye tails are used to create what tree climbing instructors call a "closed system," resulting in a finished friction hitch with both ends attached to the connector instead of one hanging loose, as with the traditional hitch or single-eye split-tail. The eye-to-eye tail also allows use of several hitches that are easily learned and extremely smooth performing. By utilizing both ends of this type of split-tail, friction is more evenly distributed, resulting in more consistent friction through a knot that is less binding, yet grabs quite firmly. The system is enhanced significantly when incorporating a micropulley that fair-leads the hitch for one-handed slack-tending. The only disadvantage I've heard is from seasoned climbers experienced only in body-thrusting (utilizing a long bridge between saddle and hitch) who now must adjust to reefing hand-over-hand on the incoming line above. Once learned, though, many climbers find this practice faster and more efficient. A small list of hitches is tested and proven to make line movement through the eye-to-eye hitch considerably more responsive to various climbing styles. Illustrated here are leading choices for safety and security. We strongly recommend you practice tying your chosen hitch until you can do it in the dark ... tying, that is.



Grizzly-Spliced®

letter	description	diameter	melting point	cordage strength	28"	30"	32"	price
A	Bee-Line Black	8mm	HIGH	6,480	34191	34192	34193	\$27⁹⁵
B	Bee-Line Black	10mm	HIGH	10,350	34154	34155	34156	\$32⁹⁵
C	Bee-Line	8mm	HIGH	6,480	33745	31689	33746	\$24⁹⁵
D	Bee-Line	10mm	HIGH	10,350	33748	31296	33749	\$24⁹⁵
E	ePiCord	8 mm	HIGH	5,400	35224	35225	35226	\$25⁹⁵
F	ePiCord	9.3 mm	HIGH	7,740	36445	36446	36447	\$26⁵⁰
G	ePiCord	10 mm	HIGH	9,720	35279	35280	35281	\$26⁹⁵
H	Ocean	8mm	HIGH	5,000*	35062	35063	35064	\$23⁹⁵
I	Ocean	10mm	HIGH	7,400	-	31945	-	\$24⁹⁵
J	HRC	8mm	HIGH	7,250	32402	33161	32403	\$24⁹⁵
K	Ice	8mm	HIGH	8,800	32189	31690	32072	\$24⁹⁵
L	Ultra-Tech	8mm	LOW	7,800	-	33220	-	\$24⁹⁵
M	Tenex	10mm	LOW	5,800	-	31711	-	\$22⁹⁵

*Split-tails must have a strength of at least 5,400 lbs to adhere to ANSI Z133 8.1.8.

Hand-Spliced

letter	description	diameter	melting point	cordage strength	28"	30"	32"	price
N	Bee-Line Black	8mm	HIGH	6,480	-	34199	-	\$36⁹⁵
O	Bee-Line Black	10mm	HIGH	10,350	-	34198	-	\$39⁹⁵
P	Tenex	10mm	LOW	5,800	-	21547	-	\$24⁹⁵
Q	Bee-Line	8mm	HIGH	6,480	-	30967	-	\$29⁹⁵

ADDITIONAL LENGTHS AVAILABLE AT SHERRILLTREE.COM



NEW

A.R.T. Spiderjack 3

Mechanical Split-Tail Ascender/Descender

Not just redesigned, but recreated! ART has done it again, forging in directions we did not even know we wanted to go in. The all new Spiderjack 3 takes all the advantages of the older models and incorporates them into a whole new era of mechanical hitches.

The body/housing of the SJ3 is made of stainless steel—more flexible than aluminum, which means less wear with higher residual strength, even under high working loads. A pulley located under the body of device fair leads deflected ropes smoothly. The fall of the climbing line is directly in front of the climber so it is possible to pull and feed the rope very comfortably with one hand or hand over hand into the device, which makes it ambidextrous. Combine this with an inherent swivel and climbers can always use the device in the optimum direction. All the wear items on the SJ3 are replaceable. This allows working with the device for many years.

The SJ3 has a secured locking position function that makes it possible to give out a bit rope if needed and to temporarily avoid the self-tailing effect. Great for position changes, ponytail redirects, or working near your tie-in point.

The device has two different cams (for ropes between 11–12 mm and 12–14 mm). As an added safety feature on the SJ3, it is not possible to place the cam in the wrong direction.

The Spiderjack 3 is approved for most of your favorite SHERRILLtree ropes, such as the Poison Ivy family and the Lava family, in addition to a wide list of ropes from a variety of manufacturers, ranging between 11 and 13 mm. See SHERRILLtree.com for full list of approved/recommended ropes.



39546 **\$349⁹⁵** Spiderjack 3





A.R.T. Spiderjack 2.1 Mechanical Split-Tail Ascender/Descender

In a growing array of mechanical climbing hitches, the Spiderjack stands out as the smoothest-operating, most touchy-feely, friction-only-when-and-where-you-need-it device. Install this little wonder from the end of your line, following the manufacturer's precise instructions—and then prepare to move! Nothing is slow about Spiderjack climbing, from the effortless slack-tending to the precise swings and landings. The Spiderjack 2.1 is a world-class device! For 11-13 mm lines.

- Same features as Lockjack Sport
- More responsive than Lockjack Sport for both ascending and descending
- Accepts wider range of rope diameters (without clutch change) than Lockjack Sport (11-13mm)



Spiderjack 2.1

This version of ART's Spiderjack features long lever, giving the climber better control for smoother releasing.

31509 **\$269⁹⁵** Spiderjack 2.1

**NEW
LOW PRICE!**



Spiderjack 2.1 with Dyneema Strap

Also available, is an alternate version of the Spiderjack that has a Dyneema Strap that allows for a second carabiner to be added to the climbing setup.

35128 **\$274⁹⁵** Spiderjack 2.1 with Dyneema Strap

**NEW
LOW PRICE!**



A.R.T. Lockjack Sport Mechanical Split-Tail Ascender/Descender

One of the first and still one of the best, the LockJack from ART is the standard for mechanical tree climbing devices. Midline attachable, it replaces the cordage hitch by seizing the rope through the unique rotation of the device against a replaceable clutch. Stout and well thought out, as is the case with all ART devices, its major wear components are replaceable but built to withstand the rigors of production tree care. Are you ready to reboot your climbing system? Take the step beyond cordage. Throw a LockJack on your line!

- Compact and lightweight
- Eliminates need to manually advance hitch
- Eliminates rope-on-rope friction
- No knot tying or untying
- Easy to learn and master ascending and descending
- More responsive than other doubled rope connections
- Greatly reduces energy required to climb
- No melting of knots when descending swiftly
- Shipped with clutches for both 11 and 13 mm ropes

26255 **\$261⁹⁵** Lockjack Sport

33535 **\$289⁹⁵** Lockjack Sport with Swivel

**NEW
LOW PRICE!**



Lockjack Sport
with Swivel



CE



Unicender by Rock Exotica

Works with SRS and MRS

The Unicender by Rock Exotica—the original all-in-one ascender/descender. One of the few mechanical devices available to arborists who use both stationary and moving rope techniques.

Invented in 2005 by arborist Morgan Thompson and now produced by world-renowned machining phenom Rock Thompson of Rock Exotica, the Unicender replaces the friction hitch in tree climbing systems with a T6 alloy “rack.” Attachable mid-line, friction is created by applying weight and “spreading” the “rack.” Then it is easily managed by the climber squeezing the rack together, much like the hitch it replaced!

A true crossover device, the Unicender functions cleanly for ascent or descent without the complication or hazard of switching gear at the top of the climb. Goodbye excess equipment and changeovers. Hello seamless transitions from ground to crown and ground again.

With the line properly installed in the Unicender in a moving rope configuration, ascent is identical to the traditional technique except there's no need to advance the Unicender. It advances with near frictionless motion, towed by the (upper) attached line.

Ascending 1:1 is equally simple by advancing the device by hand or a chest harness or other tether system. With two ways to manage the speed and friction of descent, the Unicender is easily mastered with good technique and practice.

The Unicender typically lasts 18 months or more before factory rebuilding or retirement all together. These parts naturally erode from rope abrasion. With practice and proper technique, the Unicender offers climbers very simple, very smooth, reliable friction management.

33488 **\$350⁰⁰** Unicender with Tether & Prusik

33397 **\$309⁰⁰** Unicender without Tether



Singing Tree Rope Wrench v.2

For stationary rope systems (SRS) only

This newest version of the Rope Wrench comes from ISC and is refined with rounded edges, smooth bolts and pins, and the high-end construction you'd expect from ISC. The Singing Tree Rope Wrench is a unique tool for unique climbing arborists. Installed with a stiff tether above a traditional hitch of your choice, the two 90-degree "bends" add just enough friction to the system for a stationary line system to act like a moving or doubled line system.

This imparted drag above a cordage friction hitch opens new and exciting possibilities for climbers. Adding the Rope Wrench gives climbers all the advantages of stationary rope work positioning with the safety and feel of more traditional systems.

The Rope Wrench accommodates only arborist-grade climbing lines (11–13 mm) interacting with spliced, heat-resistant, eye-to-eye Prusik cord (8–10 mm). It requires a micropulley/carabiner attachment to the saddle. A 1:1 climbing system in your future? The Rope Wrench is an excellent choice for safe, efficient stationary rope climbing.

WARNING: This product requires experience and possibly training in rope-assisted climbing techniques (specifically SRS as described above) and tree-related hazard assessment prior to use.

34030 \$129⁹⁵ Rope Wrench with Tether

35847 \$30⁰⁰ Rope Wrench Pulley



Rope Wrench Pulley
sold separately

Hitch Hiker 2

The logical follow-up to the original design ... the compact and lighter HH2 is here. The nickel-coated side plates give it an industrial, galvanized finish. The spine of 7075 aluminum, combined with the pre-hardened steel dog bone, offers a sleek, responsive stationary or moving rope climbing system. Refine your cordage, perfect your hitch, and move with ease in any tree.

36516 \$160⁰⁰ Hitch Hiker 2



ZIGZAG

Mechanical Prusik

The ZIGZAG mechanical Prusik works like a "mechanical knot," allowing the user to move around efficiently in a tree using a double rope system. With the ZIGZAG, climbers can use a technique identical to the classic prusik pulley system—a unique friction chain applies pressure when loaded, but it releases smoothly and consistently when slacked. The integrated slack tending/fair lead pulley is mounted on sealed ball bearings, so slack can be taken up easily.

The release lever, spring loaded at the top of the friction chain, allows precision when jamming/releasing the device. Varying the pressure on this lever controls the speed of the descent.

A built-in swivel at the harness connection keeps the ZIGZAG in position for better rope angles through the device. The upper connection point serves to easily connect the anchor end of the double rope system. Strong steel construction with a beefed-up connection point and a newly developed flexible ring help maintain the connector in the major axis position. This modified configuration also helps solve some of the issues with the original design.

Redesigned attachment holes to help keep the carabiners loaded correctly on the major axis, by adding a flexible elastomer ring that helps keep the carabiner in its optimal working position, thus reducing the risk of poor positioning (cantilever and/or reversal). Harness attachment hole (swivel) was enlarged last year to reduce the risk of poor carabiner positioning. This change also helps prevent carabiner sleeves from snagging. Petzl recommends using the OK (TRI-LOCK) or Am'D (TRI-LOCK/BALL-LOCK) carabiners. Other carabiner models of similar shape may be used, but their compatibility must absolutely be verified by the user.

- Technique very similar to classic Prusik pulley system
- Release lever mounted on spring for great precision when jamming/releasing the device; varying the pressure on this lever controls the speed of the descent
- Friction links provide progressive braking action for fluidity when moving around the tree

- Pulley mounted on sealed ball bearings to allow slack to be taken up easily
- Swivel helps keep the device in position for better rope glide through the device
- Steel construction for improved durability
- For use only on double ropes
- Rope diameter: 11.5-13mm

35814 \$274⁹⁵ Petzl Zig-Zag



"Fastest, easiest, way to the top."

Scott

Read more reviews online.

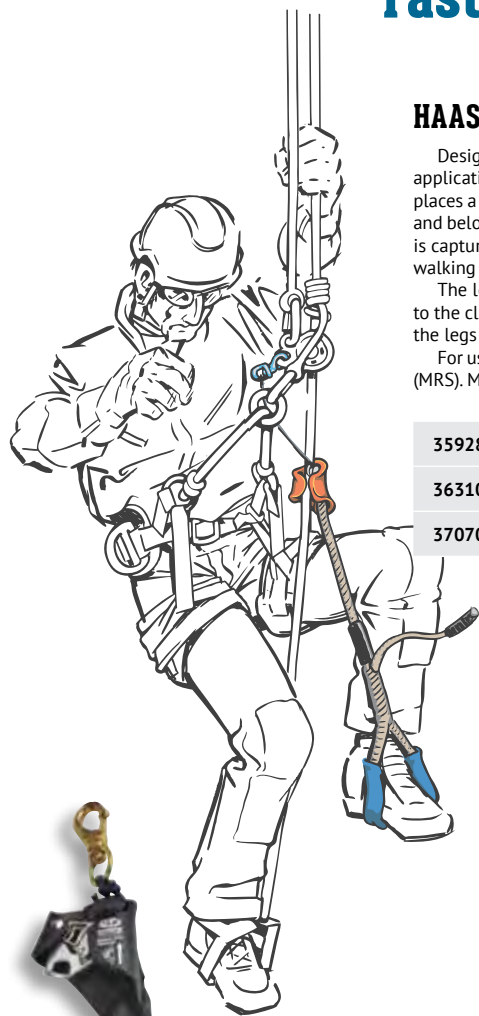
HAAS

Designed by Michael Frankhauser of Ohio, the HAAS offers a distinctive design and application that is simple yet flexible. Harking back to the early days of caving, the HAAS places a knee ascender low and to one side. The system combines a foot ascender opposite and below a secure life-support-rated attachment to the climbing line, so upward progress is captured smoothly and efficiently as both feet "cycle" up and down. Much less like rope walking and more like rope bicycling!

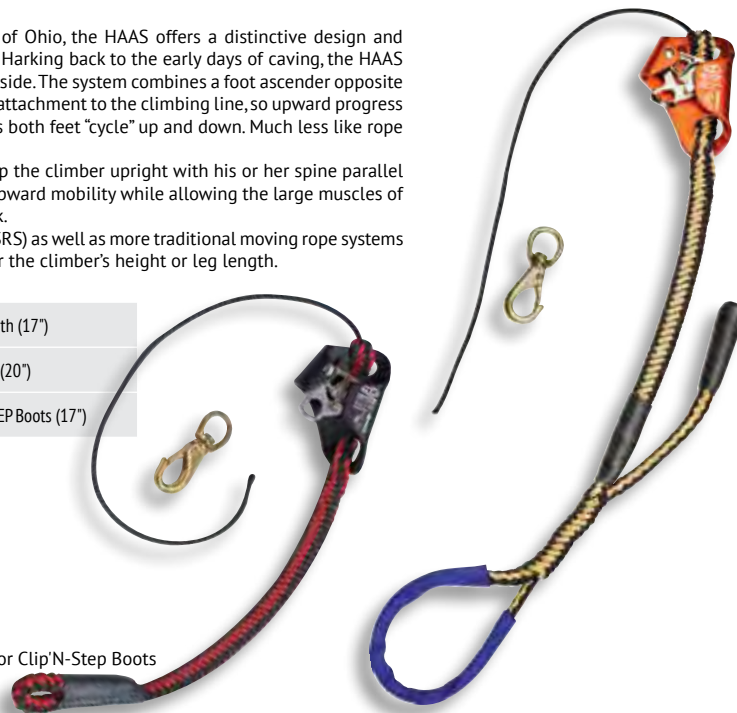
The low ascender mount helps keep the climber upright with his or her spine parallel to the climbing line. This maximizes upward mobility while allowing the large muscles of the legs to do the majority of the work.

For use in stationary rope systems (SRS) as well as more traditional moving rope systems (MRS). Maximum efficiency—no matter the climber's height or leg length.

35928	\$149 ⁹⁵	HAAS Regular Length (17")
36310	\$149 ⁹⁵	HAAS Long Length (20")
37070	\$149 ⁹⁵	HAAS for CLIP-N-STEP Boots (17")



HAAS for Clip-N-Step Boots



CLIP'N-STEP Integration

They seem designed for each other (in fact, they were). The renowned HAAS ascent systems—with a direct connect for Arbpro CLIP N STEP climbing boots—moves your vertical challenges a "step" easier. Forgo the footloop and link your HAAS or Velox directly to the webbing sling engineered right in the upper of each boot. Boots found on page 138.



VELOX

by HAAS Tree Gear

The Velox improves upon the already ingenious HAAS system, adding an additional 18 inches of bungee to the system, giving you a total of 30 inches. The Velox has a double tube system that allows that 30 inches of in-line bungee to be contained within the unit, allowing over 30 inches of elongation. The result is a smooth, unlimited ascent system that has zero set up, is one size fits all, and can be used by multiple users without any adjusting.

The snap is now tied just above the ascender and will extract out 30 inches, which eliminates any set up, as well as any "dead spots" in the return action. The bungee is terminated at the top of the Velox, travels down through a channel to the bottom where it is wrapped around a shiv with stainless steel sealed bearings inside a machined aluminum block for maximum friction reduction. It then returns back up a second channel where it is tied to the snap. Bungee is replaceable in under 5 minutes with no tools. Made by the guys at HAAS Tree Gear in Ohio.



39543	\$179 ⁹⁵	Velox 1-Size Fits All (blue)
39544	\$179 ⁹⁵	Velox for CLIP-N-STEP Boots (red)

NEW



Velox for Clip-N-Step Boots (page 138)

EXHIBIT B



2012 Awards of Distinction Recipients

ISA has been honoring members and industry professionals with the Awards of Distinction since 1963. Honorees are recognized in such categories as research, publishing, education, and advancing the cause of the organization. The winners are selected by a diverse group of experts in arboriculture. Look for feature articles on each of these winners in upcoming issues of the *Arborist News*.



Helping Arboriculture Become a Safer Profession

Dr. H. Dennis Ryan

—Award of Merit

Professor and Author
University of Massachusetts
— Amherst
Amherst, Mass

"Many people like to think they reach success on their own, but someone is always helping you along the way," says Dr. Dennis Ryan. "I always knew I would end up in this business and I believe a lot of people are responsible for making me who I am today."

This year, Dr. Dennis Ryan was chosen to receive ISA's highest honor, the Award of Merit. It is awarded in recognition of outstanding service in advancing the principles, ideas and practices of arboriculture.

As a young man, Ryan wanted to become a forest ranger, but with no jobs in the field, he planned to quit school and join the Navy. His parents intervened and sent him to Bristol County Agricultural High School.

He remained focused on jobs in commercial arboriculture while he was in school and eventually went on to receive advanced degrees from the University of Massachusetts at Amherst, where he has been a professor for more than three decades.

Dr. Ryan considers ISA the premiere organization for arboriculture worldwide. He's been involved with ISA for nearly 40 years, serving on various committees, including the ANSI Z133 committee, which has been challenged to find safer ways to work in the industry. The author of more than 200 articles and numerous presentations, Dr. Ryan continues to guide colleagues and future arborists in the profession.



Lifelong Passion for Arboriculture

Susan Murray

—Alex L. Shigo Award for Excellence in Arboriculture Education

ISA Board Certified Master Arborist, Professor, Author
Kwantlen Polytechnic University
Langley, British Columbia

Much of what Susan Murray was learning about arboriculture while a university student in the 1970s she had to discover on her own. After earning her degree in Agricultural Sciences from the University of British Columbia, Murray joined ISA's Pacific Northwest Chapter (PNW). It became a main source of information about the industry.

"I would go to (ISA) meetings and be one of the few women there," remembers Murray. "It was a male-dominated profession, but everyone was a community of learners who loved to share their passion and knowledge of trees, so it was inclusive. I never felt like an outsider."

In the mid-1980s while completing her master's degree at the University of British Columbia, Murray was unsure of what to write for her thesis. A fellow ISA member, Jim Clark, suggested she research and write about development of an arborist certification program for the local chapter.

The PNW Chapter implemented a certification program for arborists based on Murray's research. In 1992, aspects of her work were incorporated into what is now ISA's Certified Arborist Program.

Murray has co-authored books, served as a speaker and Board member, and is motivated by what happens in her classroom. She helps bring arboriculture education into the digital world by blending her courses with online lectures.



Dedicated Educator and Volunteer

Dr. Tom Smiley

—Alex L. Shigo Award for Excellence in Arboriculture Education

Researcher, Author, ISA Volunteer
Bartlett Tree Research Laboratories
Charlotte, N.C.

Dr. Tom Smiley's research and expansive range of knowledge in the arboriculture field make him one of the most sought-after experts in the industry.

Smiley has been teaching arborists and urban foresters for the better part of his career. He was a graduate instructor as a student and now serves as an adjunct professor of arboriculture and urban forestry at Clemson University in Charlotte, N.C.

It's been almost 25 years since Dr. Smiley began his work as an arboriculture researcher at Bartlett Tree Research Laboratories. His experiments have been integral in teaching classes for arborists, Integrated Pest Management (IPM) Technicians and industry professionals who visit the Bartlett Lab. His expertise has also led to invitations for speaking engagements around the world.

"I have the opportunity to support arboricultural education both through ISA and directly with the arborists in my research work at the Bartlett Tree Expert Company," admits Dr. Smiley. "Both of these groups strive for the highest level of knowledge that can be put into the practice of arboriculture."

His commitment to ISA runs deep. As chair of the ISA Best Management Practices (BMP) Committee, Dr. Smiley served as the lead author on several of the BMP manuals, including one on tree risk assessment. He also volunteers his expertise as a technical reviewer of articles, book chapters, and educational materials. In addition, he records podcasts for ISA, which focus on the science of the industry to help arborists and urban foresters learn more about their profession.



International Society of **Arboriculture**
www.isa-arbor.com • p. 217.355.9411 • isa@isa-arbor.com



**Breaking Down the
Language Barrier**
Pedro Mendes Castro
—Award of Achievement

ISA Certified Arborist/Utility Specialist, Environmental Engineer
CEMIG
Belo Horizonte, Minas Gerais
(Brazil)

At first, Pedro Mendes Castro didn't like the specialist job he accepted at a large utility company. But he soon learned to appreciate the focus on arboriculture and recognized urban forestry as invaluable to the quality of life in Brazil.

Eventually, Castro volunteered for many large-scale projects to advance ISA's mission in his hometown of Belo Horizonte, Minas Gerais, Brazil. During his time working with ISA's Brazilian Society of Arboriculture (SBAU) and with the support of ISA staff, Castro focused on translating the arborist certification exam and study guide to Portuguese.

"Most of my co-workers here are arborists in a general way," says Castro. "They recognize ISA as an important organization for arboriculture and the world, but few are interested in becoming certified because the exams were only offered in English and Spanish."

Last year, 20 people took the newly translated exam, but Castro expects that number to double once he's finished translating the accompanying study guide.

Many credit Castro with the recent growth of certification in Brazil and the advancement of ISA's mission there. In an effort to improve safety standards among workers, he also helped bring about the first ever tree climbing championships to Brazil.

Castro tries to learn as much as possible about how trees grow on an urban landscape and hopes through science and education, he can help provide a better environment for generations to come.



The Tree Communicator
Tom Mugridge
—Honorary Life Membership

ISA Certified Arborist, General Manager
Forest City Tree Protection Co.
South Euclid, Ohio

"I began working at Forest City Tree Protection, Co., when I was in 7th grade, first pulling weeds and climbing trees with my childhood friend, Warren Lanphear," recalls Tom Mugridge. "By the time I reached college, I was on the job full-time."

Now General Manager with Forest City Tree in South Euclid, Ohio, Tom Mugridge grew up with the company and a history steeped in community involvement. This year's Honorary Life Membership Award winner is a former president of the Ohio ISA Chapter, active with the Tree Care Industry Association (TCIA), and the ANSI A300 Committee. He's also one of Ohio's first certified arborists to become an ISA Certified Arborist.

"ISA is a way to elevate the people who care about trees by teaching them the science of the industry," Mugridge explains. "ISA brings professionalism to this kind of career where our people are seen not as someone who just prunes trees."

Tom established strong ties to his community as the lead person in Arbor Day donations to the Cleveland Botanical Garden. He regularly attends symposiums about protecting trees from Dutch elm disease. In addition, Mugridge was a member of the Forest City Tree team awarded for their work in saving an English oak sapling given to former U.S. Olympic Star and Ohio native, Jesse Owens.

"Being involved with an organization like ISA makes me better as an arborist," says Mugridge. "We are professionals who care deeply about what we do."



Go Outside and Play
Dr. Michael Raupp
—R. W. Harris Author's Citation

Author, Professor
University of Maryland
College Park, Md.

Dr. Michael Raupp remembers his mother telling him to "go outside and play," as a child. He considers it the best advice anyone ever gave him.

Dr. Raupp applies this credo in his daily work. His goals include creating sustainable landscape systems and preserving biological diversity in the ecosystem with an emphasis on bugs that eat other bugs. His research as a professor in Entomology at the University of Maryland in College Park and his numerous books, articles, and professional papers are among the reasons Raupp is this year's winner of the R.W. Harris Author's Citation.

"One of the most satisfying things about my job is that I have a unique opportunity to couple theory with practice," admits Dr. Raupp. "I view my work with arborists through professional organizations like ISA to be one of the most important things I do. Writing books and publishing papers is a way for me to make a real contribution."

Dr. Raupp enjoys solving practical problems to develop environmentally sustainable ways of managing insects. His research led to the development of Integrated Pest Management (IPM) programs where arborists could control pests on plants in a more sustainable, greener way. His *Managing Insects and Mites on Woody Plants* is a book that provides arborists with the tools to successfully control pests.

Guiding people toward a better understanding of the natural world around them is another of Dr. Raupp's contributions to arboriculture. His award-winning website, **Bug of the Week**, reaches out to everyone, bringing entomology to life.



Preserve Soils and Protect Trees

Jason Grabosky

— L.C. Chadwick Award for Arboricultural Research

Professor, Researcher
Rutgers University
New Brunswick, N.J.

Dr. Jason Grabosky, a professor at Rutgers University in the Department of Ecology, Evolution, and Natural Resources, has paved his path in two concentrations that have impacted arboriculture.

Dr. Grabosky continued research on branch crown development based on the studies of Dr. Edward Gilman at the University of Florida-Gainesville, who had already examined the concept of how trees intercept wind. Grabosky's work has revealed how trees react to various pruning cuts involving wind resistance and the spread of decay.

Another significant contribution came as a graduate student at Cornell University in Ithaca, N.Y.—Dr. Grabosky's development of Cornell Structural Soil. It has become an industry standard for growing healthy, vibrant trees in compact soil with limited root space.

"My biggest contribution was doing the testing to show that Cornell Structural Soil met engineering standards," admits Dr. Grabosky. "The material at Cornell University became important because we had a series of reviewed, tested materials that were evaluated in a horticultural process."

Dr. Grabosky says the study on Cornell Structural Soil is ongoing with other universities—some internationally—doing their own research.

"Ten years from now, there will be another way to look at designed soils as people become more critical in their efforts to improve them," he says. "We could list a number of researchers who I learned from. This doesn't come out of a vacuum."



Supporting Arborists with a Textbook for Innovation
Tobe Sherrill

—Millard F. Blair Exceptional Contribution to Practical Arboriculture

CEO, Sherrill Inc.
Sherrill Tree Catalog
Greensboro, N.C.

Tobe Sherrill's dedication to trees started at an early age. His father, the late William Sherrill, a manufacturers' rep who in 1960 started Sherrill Tree in Greensboro, N.C., sold lawn and garden equipment. When the younger Sherrill graduated college, he found himself with the company selling lawnmowers and didn't care for it. He steered the family business in a new direction.

Sherrill approached his dad and suggested a new marketing approach. His father agreed and gave him \$10,000 to buy a Macintosh computer. It was 1989—the early age of desktop publishing—and it led to the creation of the first Sherrill Tree catalog.

"I locked myself in a closet for a year and that's where the catalog got its start," remembers Sherrill. "In spring of 1990, the first edition was released. It mostly featured machinery, but a line of arborist supplies like gear chippers and stump grinders were included."

Sherrill, this year's winner of the Millard F. Blair Exceptional Contribution to Practical Arboriculture, says the arborist gear was only a fraction of the initial catalog. Several years later it became half the number of items in the publication and today is considered a leading industry resource worldwide.

Devoted followers say one of the best functions of the publication is Sherrill's unique ability to reach tree climbers in rural areas who are not exposed to educational sources or events offering helpful tips and safety information.

"There are a lot of gear junkies in this business and highly efficient tools are what they spend their money. I think they want to read about it, not just see a picture and how much it costs," claims Sherrill. "People quite often are relying on our products with their lives."



Continuous Improvement and Discovery

Dr. Eric Wiseman

—Early Career Scientist Award

ISA Certified Arborist, Professor and Researcher
Virginia Tech
Blacksburg, Va.

An Associate Professor of Urban Forestry and Arboriculture in the Department of Forest Resources and Environmental Conservation at Virginia Tech in Blacksburg, Va., Dr. Eric Wiseman teaches arboriculture field skills, urban forestry, management and policy. He also advises students and their research, but it's his thinking and questioning in his study of the field that has earned him this year's Early Career Scientist Award.

"I have a lot of respect for scientists who work in arboriculture," maintains Dr. Wiseman. "It's a privilege to be considered on a trajectory to get to the level of past recipients."

Among his research interests, Dr. Wiseman consulted with the Virginia Department of Forestry on a street tree population project where he conducted municipal street tree assessments. His study included using the U.S. Forest Service's i-Tree software to count and measure ash trees across the state.

Another project involved working with one of his Ph.D. students to evaluate the number of variables that influence the growth and development of street trees. The project led to the development of the urban tree growth and longevity working group.

"Science doesn't get done unless someone values it," adds Dr. Wiseman. "We struggle with the significance of our work so we need a constituency who is for us. ISA has always been an advocate for science and research."