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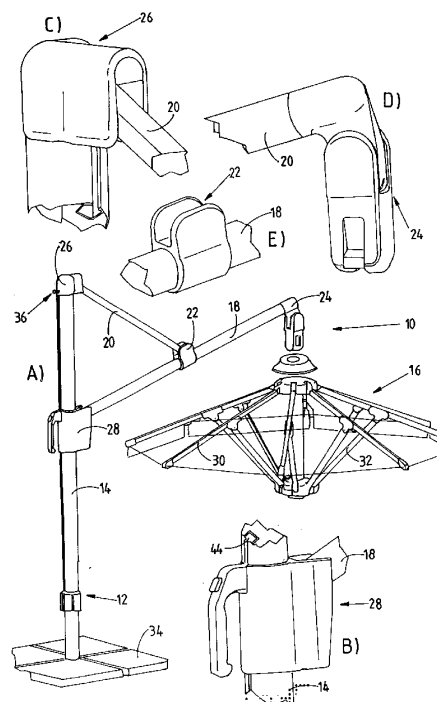
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⑤④ **Großschirm mit Teleskopvorrichtung**

⑤⑦ Großschirm (10) mit einem Mast (14), an dem ein Ausleger (18) höhenverstellbar angelenkt und an dessen freien Ende ein Schirm (16) befestigt ist, wobei der Ausleger (18) über eine Strebe (20) am oberen Ende des Mastes (14) gehalten ist, dadurch gekennzeichnet, daß der Mast (14) im Bereich des oberen Endes eine Teleskopvorrichtung (36) aufweist und mit der Teleskopvorrichtung (36) die mastseitige Anlenkung der Strebe (20) höhen-einstellbar beziehungsweise -feststellbar ist.



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Bezeichnung: Großschirm mit Teleskopvorrichtung

Beschreibung

Die vorliegende Erfindung betrifft einen Großschirm mit einem Mast, an dem ein Ausleger höhenverstellbar angelenkt und an dessen freien Ende ein Schirm befestigt ist, wobei der Ausleger über eine Strebe am oberen Ende des Mastes gehalten ist.

Ein Großschirm mit diesen Merkmalen ist beispielsweise aus der DE 33 39 163 C2 bekannt. Dieser bekannte Großschirm ist relativ umständlich zu handhaben, da der Mast recht ausladend ist und somit gerade zum Zwecke des Transportes, der Anlieferung oder auch der Verstauung, beispielsweise während der Winterzeit, recht unhandlich zu handhaben ist.

Ein weiterer Nachteil des bekannten Schirms besteht auch darin, daß der höhenverstellbare Ausleger über eine Gabel sowie einen Arretierbolzen, der in eine Bohrung am Mast eingreift, recht umständlich verstellbar ist.

Aus der WO 97/04682 ist weiterhin ein Freiarmschirm bekannt, an dessen Mast ein Ausleger aus- und einfahrbar geführt und mittels parallel zueinander angeordneter Verbindungsstreben abgestützt ist. Die Verbindungsstreben sind jeweils gelenkig mit dem Mast und dem Ausleger verbunden, wobei der Ausleger in ausgefahrener Stellung mittels einer ersten Arretiervorrichtung arretierbar ist und an seinem dem Mast abgewandten Ende einen ausklappbaren Schirm trägt. Der Ausleger ist um seine Achse verdrehbar am Mast und an den Verbindungsstreben geführt und mittels einer Fixiervorrichtung in der Drehstellung fixierbar.

Schließlich offenbart die DE 199 08 192 A1 einen mehrfach faltbaren Schirm, der zentrisch am Kopfende eines Schafts

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befestigt ist. Der Schaft besteht aus einer Vielzahl von Rohren, welche teleskopartig miteinander in Eingriff bringbar sind.

Demgegenüber liegt der vorliegenden Erfindung die Aufgabe zugrunde, einen Großschirm mit den eingangs genannten Merkmalen dahingehend weiterzubilden, daß dieser einfach zu transportieren und zu verstauen ist, im Gebrauch aber die Vorteile herkömmlicher Großschirme aufweist. Gemäß einem Nebenaspekt der Erfindung soll der Ausleger des Großschirms einfach höheneinstellbar beziehungsweise -feststellbar sein.

Diese Aufgabe wird nach der Erfindung bei dem Großschirm mit den eingangs genannten Merkmalen im wesentlichen dadurch gelöst, daß der Mast im Bereich des oberen Endes eine Teleskopvorrichtung aufweist und mit der Teleskopvorrichtung die mastseitige Anlenkung der Strebe höheneinstellbar und -feststellbar ist.

Durch diese Maßnahmen wird ein Großschirm geschaffen, der im Gebrauch die Eigenschaften herkömmlicher Großschirme aufweist, sich aufgrund des Vorhandenseins der Teleskopvorrichtung für die mastseitige Anlenkung der Strebe jedoch zu Transportzwecken beziehungsweise Lagerungs- oder Anlieferungszwecken auf kleinere Abmessungen als die herkömmlichen Großschirme zusammenschieben läßt. So kann der zusammengeschobene und -gefaltete Großschirm beispielsweise eine Höhe von 2 m oder auch weniger annehmen und von üblichen Transportunternehmen ohne weiteres beispielsweise dem Kunden angeliefert werden. Auch läßt sich ein auf diese Höhe zusammengeschobener Großschirm leicht verstauen, wobei auch eine gegebenenfalls vorhandene Schutzkappe einfach über den zusammengeschobenen und -gefalteten Großschirm durch die Bedienperson übergestülpt werden kann.

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Nach einer vorteilhaften Weiterbildung der Erfindung weist der Mast ein Außenrohr und ein im Außenrohr wenigstens teilweise aufgenommenes Innenrohr auf, wobei Außenrohr und Innenrohr relativ zueinander mittels Feststellmitteln der Teleskopvorrichtung feststellbar sind. Durch diese Maßnahme läßt sich der Großschirm in der Gebrauchsstellung auf einfache Art und Weise in der gewünschten Höhe einstellen, während zum Zweck des Transports oder des Verstauens der Großschirm auf ein Maß von beispielsweise 2 m oder weniger zusammengeschoben werden kann.

Weiterhin hat es sich als vorteilhaft erwiesen, daß die Strebe mittels eines Strebenhalters mit dem oberen Ende eines Innenrohrs des Masts gelenkig verbunden ist. Durch diese Maßnahme kann die Länge des Mastes auch bei ausgeschwenktem Ausleger ohne weiteres auf den gewünschten Wert eingestellt werden, da die Strebe gelenkig am Mast wie auch am Ausleger angelenkt ist.

Es versteht sich, daß die Teleskopvorrichtung auch bei einem herkömmlichen Großschirm, bei dem der Schirm an einem freien Ende des Mastes befestigt ist zur Anwendung gelangen kann. Der Mast besteht dabei bevorzugt aus einem Außenrohr und einem in dem Außenrohr wenigstens teilweise aufgenommenen Innenrohr, wie dies beispielsweise für einen herkömmlichen in der Hand zu haltenden Schirm aus der DE 199 08 192 A1 bekannt ist. Zum Zwecke der Verstellung der Höhe des Großschirms weist die Teleskopvorrichtung zur Höheneinstellung beziehungsweise -feststellung des Mastes eine Teleskopvorrichtung mit einem Riegelgesperre auf, wobei ein am Außenrohr geführter Riegel in eine Durchbrechung des Innenrohrs eintaucht. Insoweit ist zum Ändern der Höheneinstellung der Riegel aus der Durchbrechung des Innenrohrs zu entfernen, das Innenrohr aus dem Außenrohr weiter herauszuziehen beziehungsweise weiter hineinzuschieben, wobei dann der Bügel zum Feststellen in eine weitere Durchbrechung des Innenrohrs eingebracht wird. Die

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Teleskopvorrichtung kann selbstverständlich nicht nur in Bereiche des freien Ende des Mastes, sondern auch in tieferliegenden Bereichen angebracht sein. Grundsätzlich kann die Teleskopvorrichtung der vorliegenden Erfindung bei einem Großschirm, der am freien Ende des Mastes direkt oder auch an einem freien Ende eines am Mast angelenkten Auslegers befestigt ist, zur Anwendung gelangen.

Die Teleskopvorrichtung weist von Vorteil ein Riegelgesperre als Feststellmittel auf, wobei ein am Außenrohr geführter Riegel in eine Durchbrechung des Innenrohrs eintaucht. Zum Ändern der Höheneinstellung wird der Riegel aus der Durchbrechung des Innenrohrs entfernt, das Innenrohr aus dem Außenrohr weiter herausgezogen beziehungsweise weiter hineingeschoben und der Bügel zum Feststellen in eine weitere Durchbrechung des Innenrohrs eingebracht.

Nach einer anderen vorteilhaften Ausgestaltung der Erfindung sind Außenrohr und Innenrohr als vom Kreisquerschnitt abweichendes Profilrohr ausgebildet, wobei das Profil der Profilrohre sich entlang der Längsachse erstreckende, radial einwärts weisende wulst- oder nutartige, miteinander korrespondierende Einziehungen aufweist. Durch diese Maßnahme ist das Innenrohr unverdrehbar im Außenrohr axial verschiebbar geführt.

Nach einer weiteren vorteilhaften Ausgestaltung ist es vorgesehen, daß die Teleskopvorrichtung im Bereich der Einziehung des Außenrohrs Rollen besitzt, die der Einziehung des Innenrohrs im wesentlichen bündig anliegen. Durch diese Maßnahme wird eine weitere Verbesserung der axialen Führung beziehungsweise Lagerung des Innenrohrs im Außenrohr gewährleistet.

Die Feststellmittel der Teleskopvorrichtung sind von Vorteil in einem Ringkörper angeordnet, der dem freien Ende des

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Außenrohrs beziehungsweise des Mastes aufsitzt und/oder mit diesem verbunden ist.

Nach einer weiteren Ausgestaltung der Erfindung ist es vorgesehen, daß der Ringkörper Käfige zur Aufnahme und Lagerung der Rollen aufweist.

Nach einer an sich eigenständigen Ausgestaltung der Erfindung ist es des weiteren vorgesehen, daß der Ausleger einem Schieber angelenkt ist, der den Mast nach Art einer Hülse umgreift, wobei der Schieber Feststellmittel zum höheneinstellbaren Feststellen am Mast aufweist. Hierdurch wird von Vorteil erreicht, daß der Ausleger äußerst einfach am Mast höhenverstellbar und feststellbar ist, wodurch der Neigungswinkel des Auslegers einfach und schnell variierbar ist.

Dadurch, daß der Schieber insbesondere mittels Rollen geführt am Mast, und hier insbesondere bevorzugt am Außenrohr, axial verschiebbar gelagert ist, wobei die Rollen bevorzugt in eine Einziehung des Außenrohrs eintauchen, ist eine gute axiale Führung des Schiebers am Mast und eine leichte Verstellbarkeit gegeben.

Die Rollen sind bevorzugt drehbar an einer oder mehreren Schienen gelagert, wobei die Schienen mit der Hülse insbesondere fest verbunden sind. Bevorzugt sind die Rollen von einem Steg des Mastes oder Außenrohrs, bevorzugt im Bereich der Einziehung, teilweise übergriffen, so daß sich auch eine gute radiale Fixierung des Schiebers am Mast ergibt.

Weiterhin ist vorgesehen, daß die Hülse eine Handhabe, zum Beispiel einen Griff, aufweist und ein Riegel oder dergleichen mittels einer bevorzugt am Griff angeordneten Taste betätigbar ist, wobei der Riegel in eine Bohrung des Mastes oder Außenrohrs zum Zwecke der axialen Festlegung des Schiebers am

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Mast eingreift. Zum Verstellen des Schiebers wird der Riegel mittels der Taste betätigt und aus der Bohrung entfernt, so daß die Höhe des Schiebers am Mast verstellt werden kann. Anschließend taucht der Riegel in eine weitere Bohrung des Masts oder Außenrohrs ein, um den Schieber festzustellen.

Weitere Merkmale, Vorteile, Anwendungsmöglichkeiten und Ausführungsformen der Erfindung ergeben sich aus der nachfolgenden Beschreibung von Ausführungsbeispielen. Dabei bilden alle beschriebenen oder bildlich dargestellten Merkmale für sich den Gegenstand vorliegender Erfindung, auch unabhängig von ihrer Zusammenfassung in den Ansprüchen oder deren Rückbeziehung.

Es zeigen:

Figur 1a ein Ausführungsbeispiel eines erfindungsgemäßen Großschirms in der Gebrauchsstellung,

Figur 1b in vergrößerter Darstellung den Schieber der Figur 1a,

Figur 1c in vergrößerter Darstellung den Strebenhalter der Figur 1a,

Figur 1d in vergrößerter Darstellung den Schirmhalter der Figur 1a,

Figur 1e in vergrößerter Darstellung den Halter der Figur 1a,

Figur 2 den Großschirm der Figur 1a im zusammengeklappten beziehungsweise zusammengeschobenen Zustand für den Transport beziehungsweise für ein Verstauen,

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- Figur 3 ein Ausführungsbeispiel des erfindungsgemäßen Schiebers in vergrößerter Darstellung und teilweise geschnitten,
- Figur 4 ein Detail des erfindungsgemäßen Schiebers der Figur 3 in vergrößerter Darstellung,
- Figur 5 ein Ausführungsbeispiel der erfindungsgemäßen Teleskopvorrichtung in Schnittdarstellung,
- Figur 6 die Teleskopvorrichtung der Figur 5 in perspektivischer Ansicht,
- Figur 7 die dem Außenrohr aufgesetzte Teleskopvorrichtung zusammen mit dem Innenrohr,
- Figur 8 ein weiteres Ausführungsbeispiel der Teleskopvorrichtung mit Außenrohr und Innenrohr in Explosionsdarstellung und
- Figur 9 den kopfseitigen Endbereich des Mastes des Großschirms mit Teleskopvorrichtung, Strebenhalter und Strebe in Teildarstellung.

Der in Figur 1 dargestellte Großschirm 10 besitzt einen Ständer 12, der einen Mast 14 aufweist. Am Mast 14 ist ein Ausleger 18 höhenverstellbar angelenkt, an dessen freien Ende der Schirm 16 mittels eines Schirmhalters 24 befestigt ist. Der Ausleger 18 wird mittels einer Strebe 20 am kopfseitigen Ende des Mastes 14 gehalten. Insbesondere ist die Strebe 20 einends über einen Halter 22 mit dem Ausleger 18 und anderenends mittels eines Strebenhalters 26 mit dem Mast 14 verbunden. Zur Höhenverstellbarkeit des Auslegers ist ein Schieber 28 vorgesehen, der axial am Mast 14 verschiebbar und festlegbar ist.

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Sämtliche Anlenkungen von Ausleger 18, Strebe 20 und Schirm 16 sind, wie insbesondere den Figuren 1b, c, d und e zu entnehmen ist, verschwenkbar ausgelegt, so daß der Schirm auch von der in Figur 1a dargestellten Gebrauchsstellung in die aus Figur 2 ersichtliche Transport- oder Aufbewahrungsstellung überführt werden kann.

Der Schirm selbst weist Spannstreben 30 sowie Stützstreben 32 auf, mit denen die in Figur 2 dargestellte Schirmbespannung großflächig ausgebreitet beziehungsweise auf engem Raum komprimiert werden kann. Am unteren Ende des Ständers 12 beziehungsweise Mastes 14 ist ein Fuß 34 vorgesehen, wobei der Mast 14, wie in Figur 1a und Figur 2 dargestellt, beispielsweise mittels einer Schraub- oder Klemmverbindung mit einem Rohrstück des Fußes 34 verbunden werden kann. Am kopfseitigen Ende des Mastes 14 ist eine Teleskopvorrichtung 36 vorgesehen, mit der der Mast 14 in der axialen Länge verstellbar ist, wobei mittels der Teleskopvorrichtung 36 der Strebenhalter 26 beziehungsweise der Anlenkpunkt für die Strebe 20 in axialer Richtung beziehungsweise bezüglich der Höhe verstellbar sowie auch feststellbar ist.

In Figur 3 ist der Schieber 28 vergrößert dargestellt, der den Mast 14 beziehungsweise ein Außenrohr 56 nach Art einer Hülse 38 ringförmig umfaßt. Die Hülse weist an ihrer Innenwand zwei Schienen 40 auf, die einander im wesentlichen diametral einander gegenüberliegend zugeordnet sind. Die Schienen 40 sind in Ausnehmungen der Hülse 38 eingelassen und mit der Hülse 38 beispielsweise lösbar verbunden. Die sich in axialer Richtung bezüglich des Masts 14 erstreckenden Schienen weisen Aufnahmen für mehrere Rollen 42 auf. Der Mast 14 beziehungsweise das Außenrohr 56 ist als Profilrohr ausgebildet, wobei in Richtung der Längsachse einander gegenüberliegend Einziehungen 44 zur Aufnahme der Rollen 42 vorgesehen sind. Durch die Rollen 42 übergreifende Stege 46

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sind die Rollen praktisch unverlierbar in der Einziehung 44 aufgenommen.

Der Schieber 28 weist des weiteren einen Griff 48 auf, der bevorzugt einstückig mit der Hülse 38 verbunden ist. Wie aus Figur 3 beziehungsweise Figur 4 ersichtlich ist, ist im Griff 48 eine Taste 50 angeordnet, die der Betätigung eines Riegels 52 dient, welcher in eine Bohrung 54 des Außenrohrs 56 zur Feststellung des Schiebers 28 am Mast 14 greift. Es bietet sich hierbei an, den Riegel 52 mittels einer Vorspannung derart vorzuspannen, daß der Riegel selbsttätig in die Sperr- oder Haltestellung überführt wird. Mittels der Taste 50 kann der Riegel 52 dann entgegen der Federvorspannung in die Entriegelungsstellung überführt werden, worauf dann der Schieber 28 in der Höhe verstellt werden kann, wobei insbesondere aufgrund der beschriebenen Rollenführung ein einwandfreies, leichtes Verschieben des Schiebers 28 am Mast 14 gewährleistet ist.

In den Figuren 5 bis 9 ist die Ausbildung und Anordnung der Teleskopvorrichtung 36 näher beschrieben. Die Teleskopvorrichtung 36 dient zur Höhenverstellung des Mastes 14, wozu am kopfseitigen Ende ein im Außenrohr 56 geführtes Innenrohr 58 mehr oder minder aus dem Außenrohr 56 herauschiebbar ist. Die relative axiale Fixierung von Außenrohr 56 und Innenrohr 58 wird mittels eines Riegelgesperres 60 der Teleskopvorrichtung 36 bewirkt, dessen Funktionsweise und Wirkung insbesondere aus den Darstellungen der Figuren 5, 6 und 8 ersichtlich sind. Das Riegelgesperre 60 weist einen Riegel 62 auf, der mittels einer Federvorspannung in die Sperrstellung vorgespannt ist, in der der Riegel 62 in eine Durchbrechung 66 des Innenrohrs 58 eintaucht und somit das Innenrohr 58 relativ zum Außenrohr 56 fixiert.

Weiterhin sind an der Teleskopvorrichtung 36 beispielsweise zwei Rollen 68 vorgesehen, die in einer Art Käfig 74 eines

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Ringkörpers 70 der Teleskopvorrichtung 36 aufgenommen sind. Diese Rollen 68 rollen mit ihren Lauflächen auf Einziehungen 76 des Innenrohrs 58 ab, wodurch dieses leicht verschiebbar in dem Außenrohr 56 des Masts 14 geführt ist. Im übrigen ist das Innenrohr 58 aufgrund der zum Außenrohr 56 korrespondierenden Profilierung, insbesondere Einziehung 76 sowie Einziehung 44, in dem Außenrohr 56 unverdrehbar aufgenommen. Am Riegel 62 ist ein Handgriff 72 vorgesehen, mit dem der Riegel 62 von der Sperrstellung in eine Freigabestellung des Innenrohrs 58 überführt werden kann.

Der Ringkörper 70 der Teleskopvorrichtung 36 sitzt dem freien oberen Ende des Außenrohrs 56 auf, während die Strebe 20 beispielsweise mittels des Strebenhalters 26 am Innenrohr 58 angelenkt ist (Figur 9).

Durch den Einsatz dieser Teleskopvorrichtung 36 ist somit die Möglichkeit geschaffen, den Mast 14 beispielsweise für Transportzwecke oder Aufbewahrungszwecke auf eine handliche Länge zu verkürzen, während in der Gebrauchsstellung der Mast 14 einfach so weit verlängert werden kann, daß der Schirm 16 in ausreichender Höhe über dem Boden angeordnet ist.

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Bezugszeichenliste

10	Großschirm
12	Ständer
14	Mast
16	Schirm
18	Ausleger
20	Strebe
22	Halter
24	Schirmhalter
26	Strebenhalter
28	Schieber
30	Spannstreben
32	Stützstreben
34	Fuß
36	Teleskopvorrichtung
38	Hülse
40	Schiene
42	Rolle
44	Einziehung
46	Steg
48	Griff
50	Taste
52	Riegel
54	Bohrung
56	Außenrohr
58	Innenrohr
60	Riegelgesperre
62	Riegel
64	Feder
66	Durchbrechung
68	Rolle
70	Ringkörper
72	Handgriff
74	Käfig
76	Einziehung

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Schutzansprüche

1. Großschirm (10) mit einem Mast (14), an dem ein Ausleger (18) höhenverstellbar angelenkt und an dessen freien Ende ein Schirm (16) befestigt ist, wobei der Ausleger (18) über eine Strebe (20) am oberen Ende des Mastes (14) gehalten ist, dadurch gekennzeichnet, daß der Mast (14) im Bereich des oberen Endes eine Teleskopvorrichtung (36) aufweist und mit der Teleskopvorrichtung (36) die mastseitige Anlenkung der Strebe (20) höhen-einstellbar beziehungsweise -feststellbar ist.
2. Großschirm nach Anspruch 1, dadurch gekennzeichnet, daß der Mast (14) ein Außenrohr (56) und ein im Außenrohr (56) wenigstens teilweise aufgenommenes Innenrohr (58) aufweist, wobei Außenrohr (56) und Innenrohr (58) relativ zueinander mittels Feststellmitteln der Teleskopvorrichtung (36) feststellbar sind.
3. Großschirm nach Anspruch 1, dadurch gekennzeichnet, daß die Strebe (20) mittels eines Strebenhalters (26) mit dem oberen Ende eines Innenrohrs (58) des Mastes (14) gelenkig verbunden ist.
4. Großschirm (10) mit einem Mast (14) auf einem Außenrohr (56) und einem wenigstens teilweise im Außenrohr (56) aufgenommenen Innenrohr (58), an dessen freien Ende ein Schirm (16) befestigt ist und mit einer Teleskopvorrichtung (36)
5. Großschirm nach einem der vorhergehenden Ansprüche 1 bis 3, dadurch gekennzeichnet, daß die Teleskopvorrichtung (36) ein Riegelgesperre (60) aufweist, wobei ein am Außenrohr

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(56) geführter Riegel (62) in eine Durchbrechung (66) des Innenrohrs (58) eintaucht.

6. Großschirm nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß Außenrohr (56) und Innenrohr (58) als vom Kreisquerschnitt abweichendes Profilrohr ausgebildet sind, wobei das Profil der Profilrohre sich entlang der Längsachse erstreckende, radial einwärts weisende wulst- oder nutartige, miteinander korrespondierende Einziehungen (44, 46) aufweist.
7. Großschirm nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Teleskopvorrichtung (36) im Bereich der Einziehung (44) des Außenrohrs (56) Rollen (68) besitzt, die der Einziehung (76) des Innenrohrs (58) im wesentlichen anliegen beziehungsweise auf dieser abrollen.
8. Großschirm nach einem der vorhergehenden Ansprüche, dadurch gekennzeichnet, daß die Feststellmittel der Teleskopvorrichtung (36) in einem Ringkörper (70) angeordnet sind, der dem freien Ende des Außenrohrs (56) aufsitzt und/oder mit diesem verbunden ist.
9. Großschirm nach Anspruch 8, dadurch gekennzeichnet, daß der Ringkörper (70) Käfige (74) zur Aufnahme und Lagerung der Rollen (68) aufweist.
10. Großschirm nach dem Oberbegriff von Anspruch 1 oder einem der vorhergehenden Ansprüche 2, 4 bis 9, dadurch gekennzeichnet, daß der Ausleger (18) einem Schieber (28) angelenkt ist, der den Mast (14) nach Art einer Hülse (38) umgreift, wobei der Schieber (28) Feststellmittel zum höhen-einstellbaren Feststellen am Mast (14) aufweist.
11. Großschirm nach Anspruch 10, dadurch gekennzeichnet, daß der Schieber (28), insbesondere mittels Rollen (42)

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geführt, am Mast (14), bevorzugt im Außenrohr (56) axial verschiebbar gelagert ist, wobei die Rollen (42) bevorzugt in eine Einziehung (44) eintauchen.

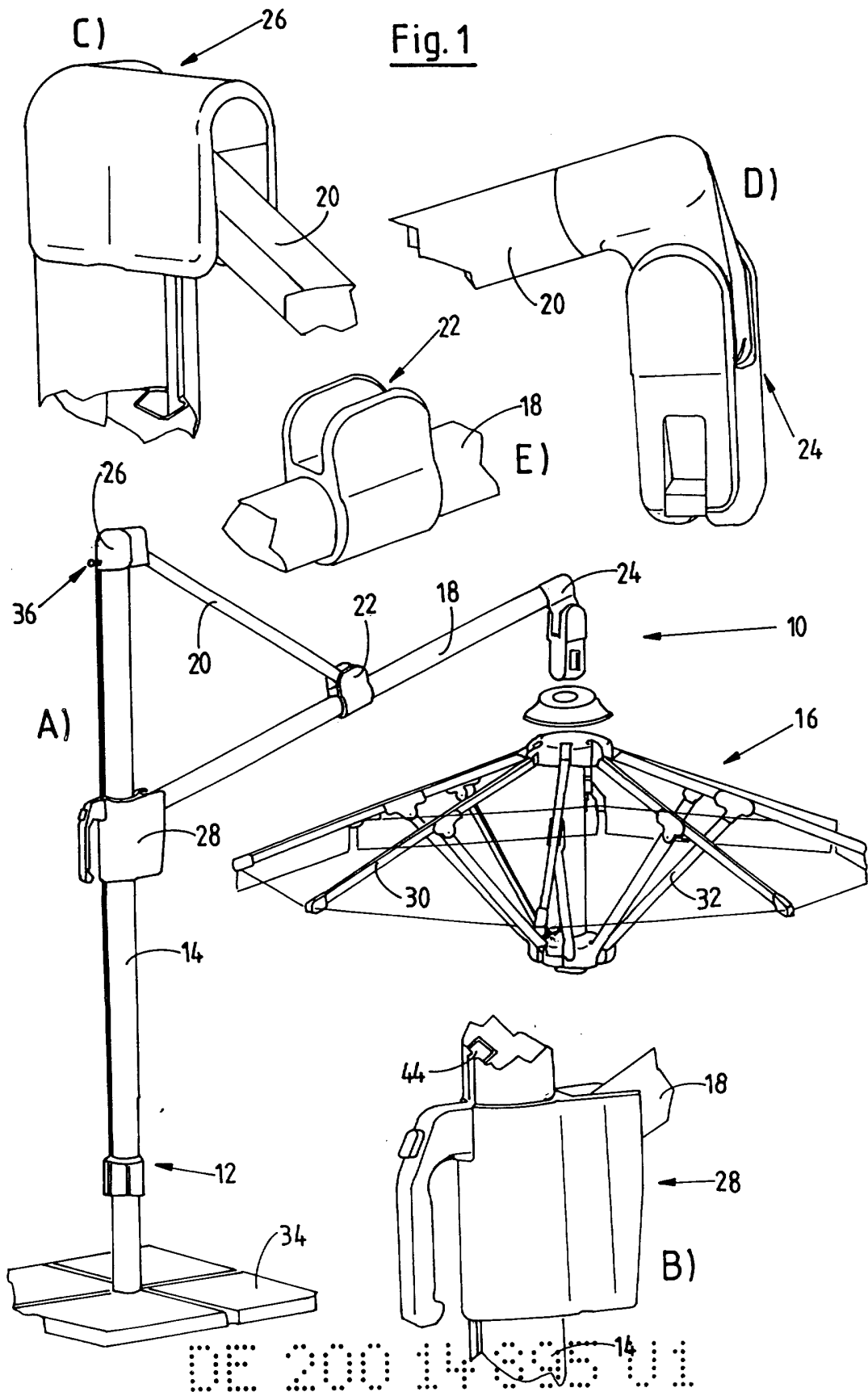
12. Großschirm nach einem der Ansprüche 10 oder 11, dadurch gekennzeichnet, daß die Rollen (42) drehbar an einer oder mehreren Schienen (40) gelagert sind, die Schienen (40) mit der Hülse (38) fest verbunden sind, wobei bevorzugt die Rollen (42) von einem Steg (46) des Mastes (14) oder des Außenrohrs (56), bevorzugt im Bereich der Einziehung (44), teilweise übergriffen sind.
13. Großschirm nach einem der Ansprüche 10 bis 12, dadurch gekennzeichnet, daß die Hülse (38) eine Handhabe, zum Beispiel einen Griff (48), aufweist, mittels einer, bevorzugt an der Handhabe angeordneten Taste (50) ein Riegel (52) betätigbar ist, der in eine Bohrung (54) des Masts (14) oder eines Außenrohrs (56) eingreift.

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Fig. 1

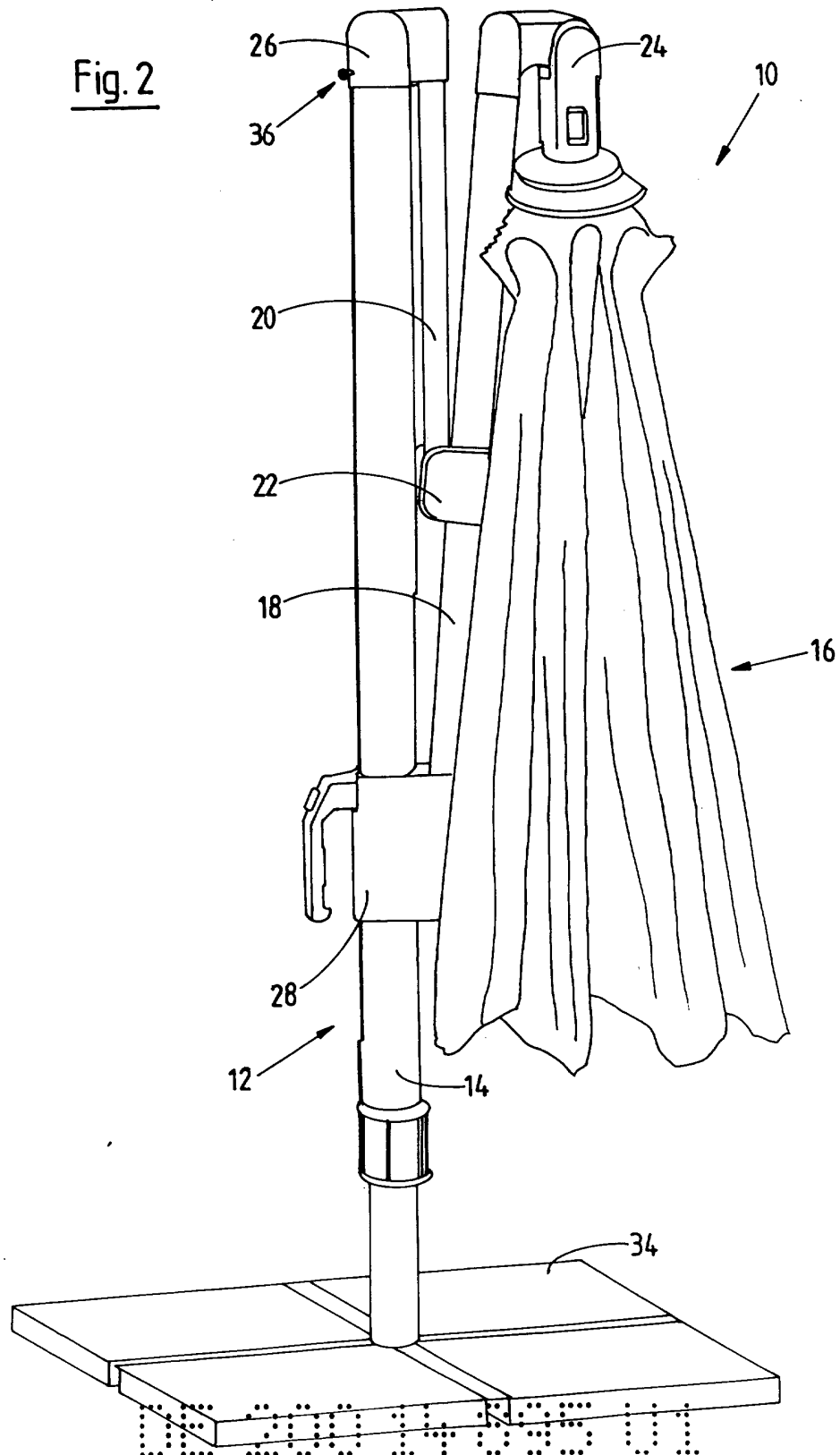


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Fig. 2



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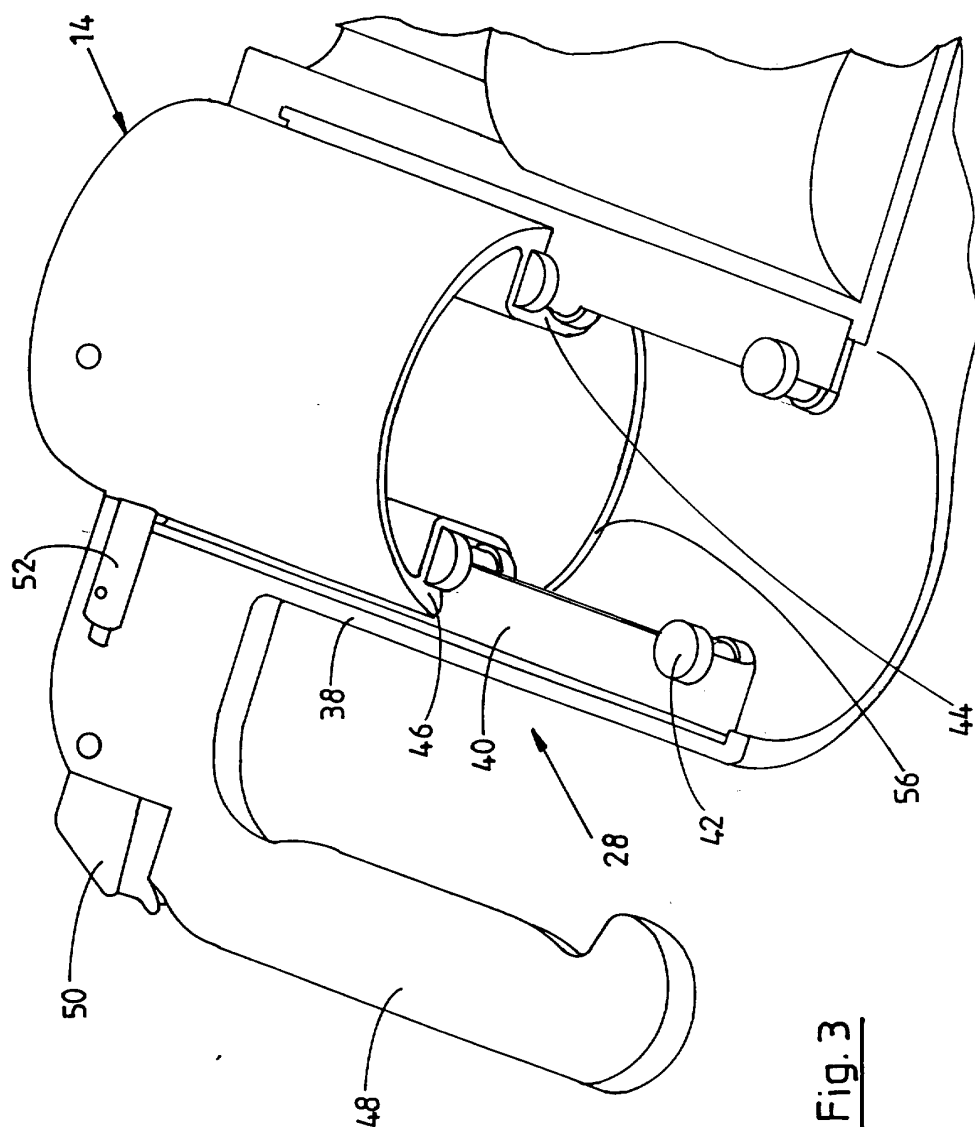


Fig. 3

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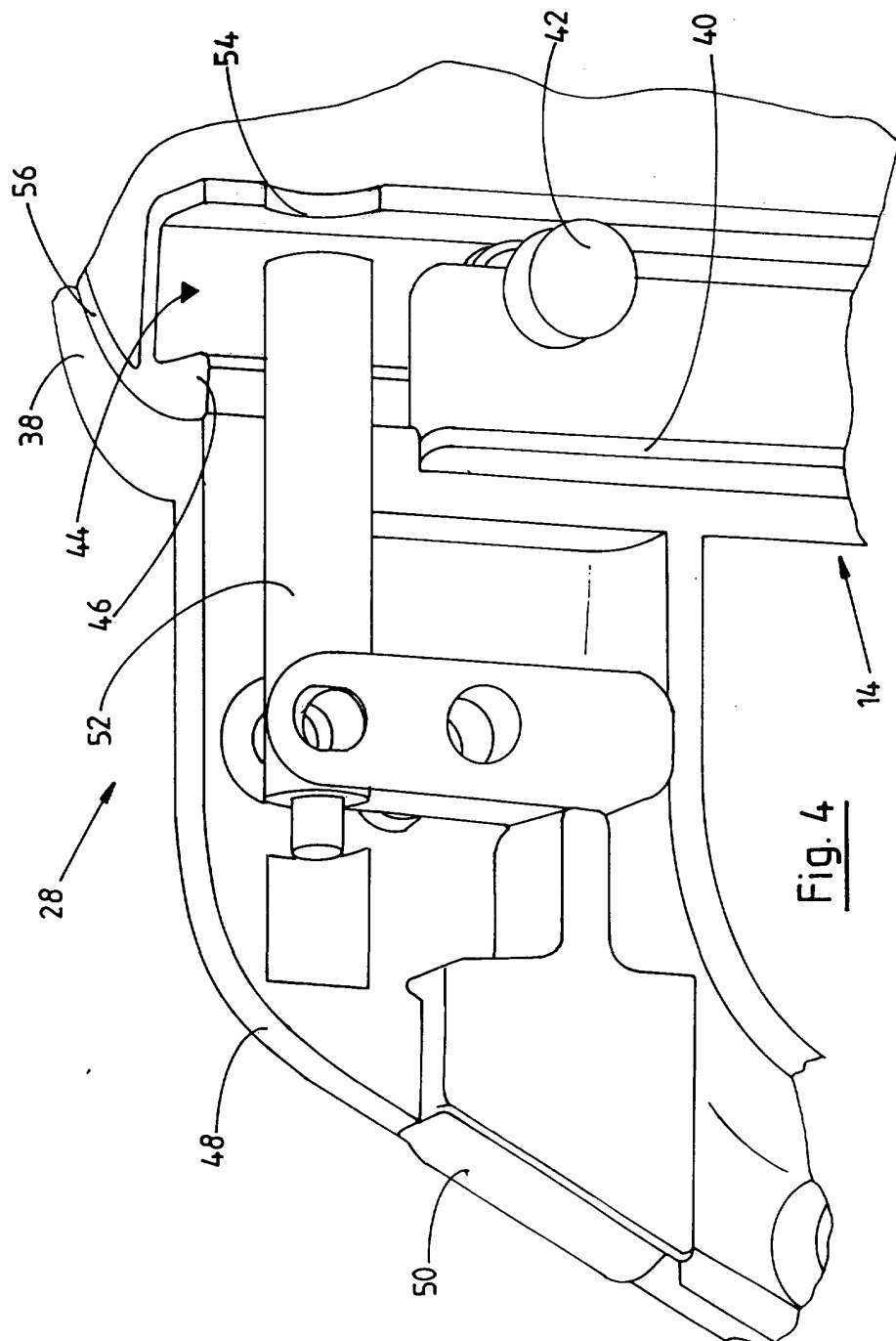


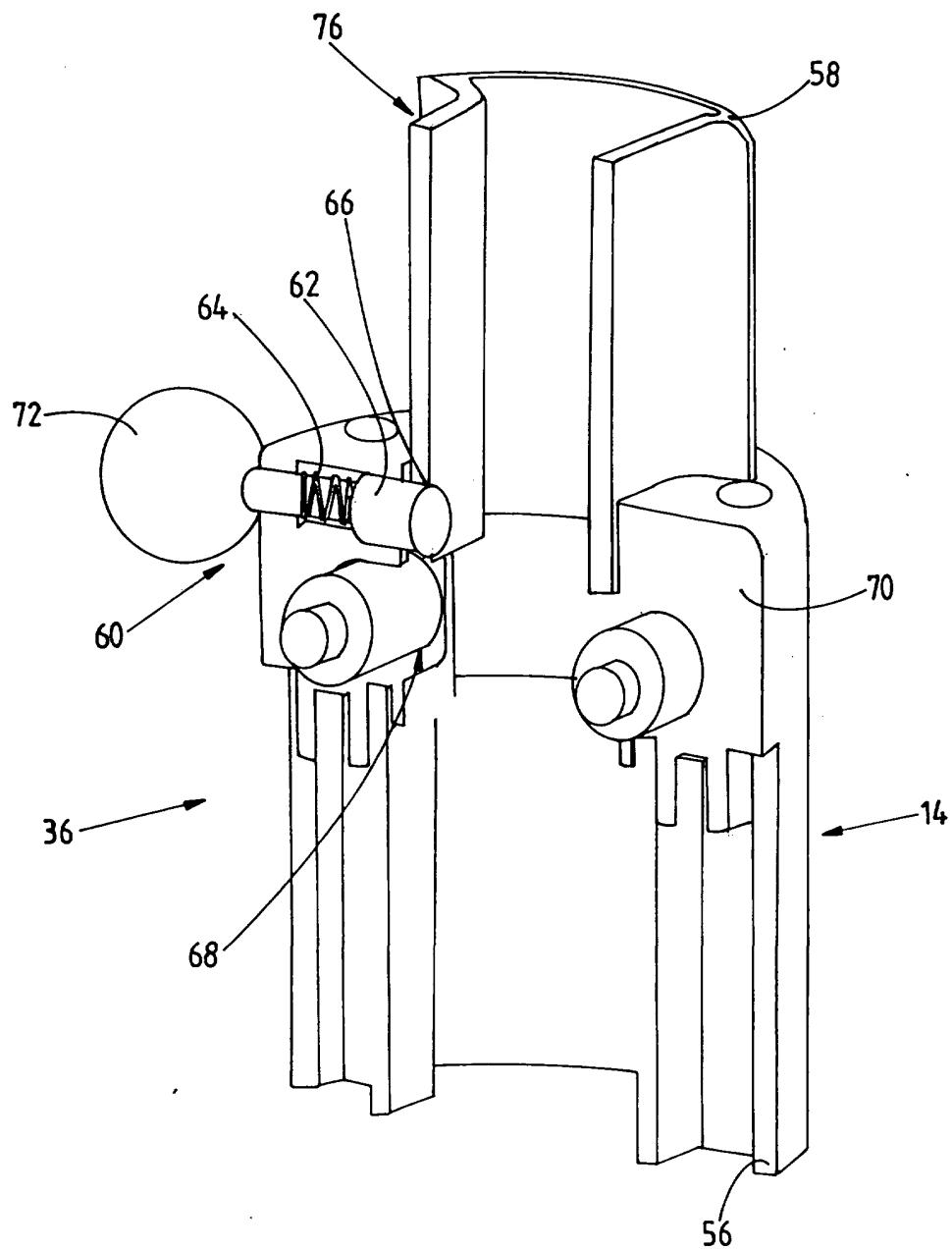
Fig. 4

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Fig. 5

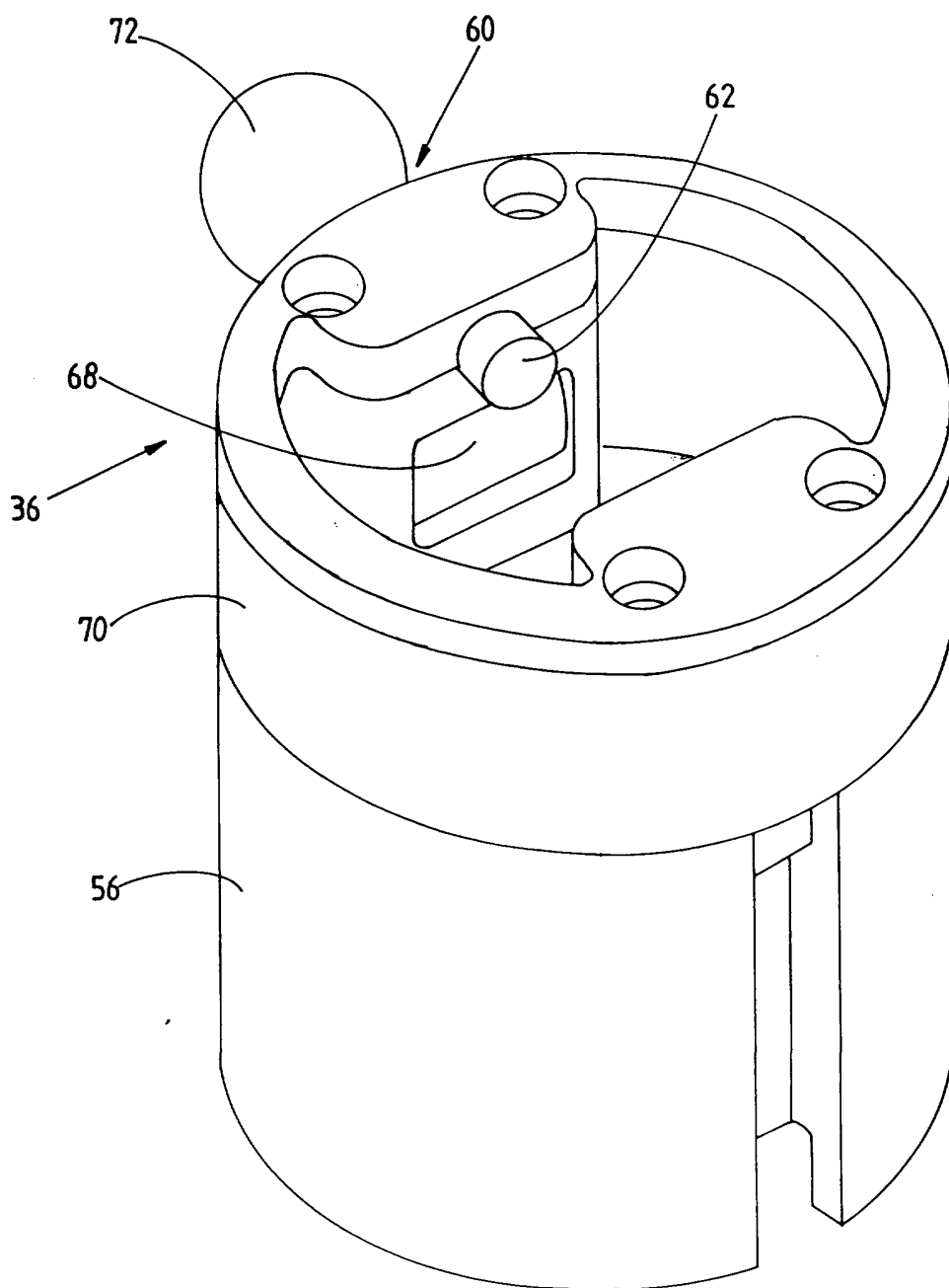


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Fig. 6

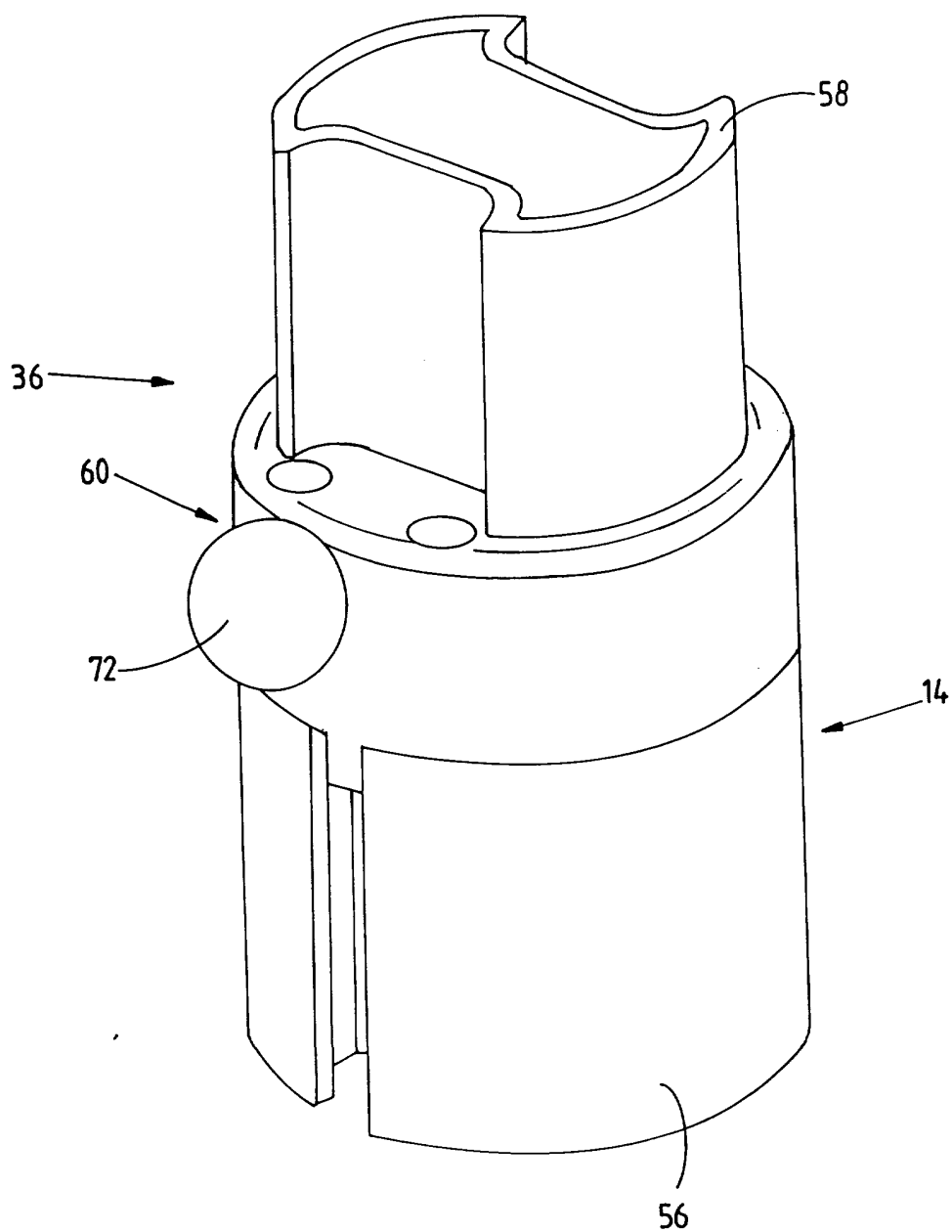


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Fig. 7

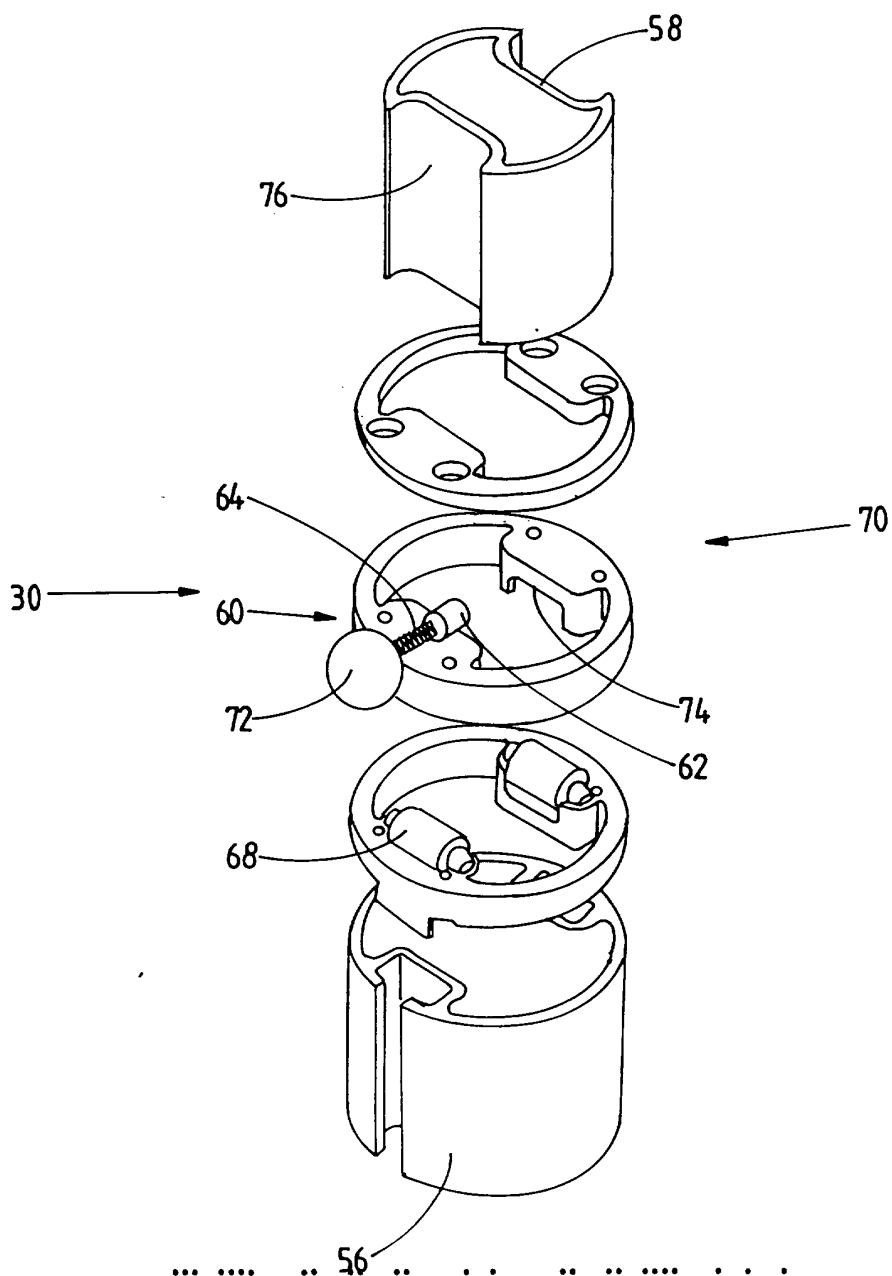


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Fig. 8

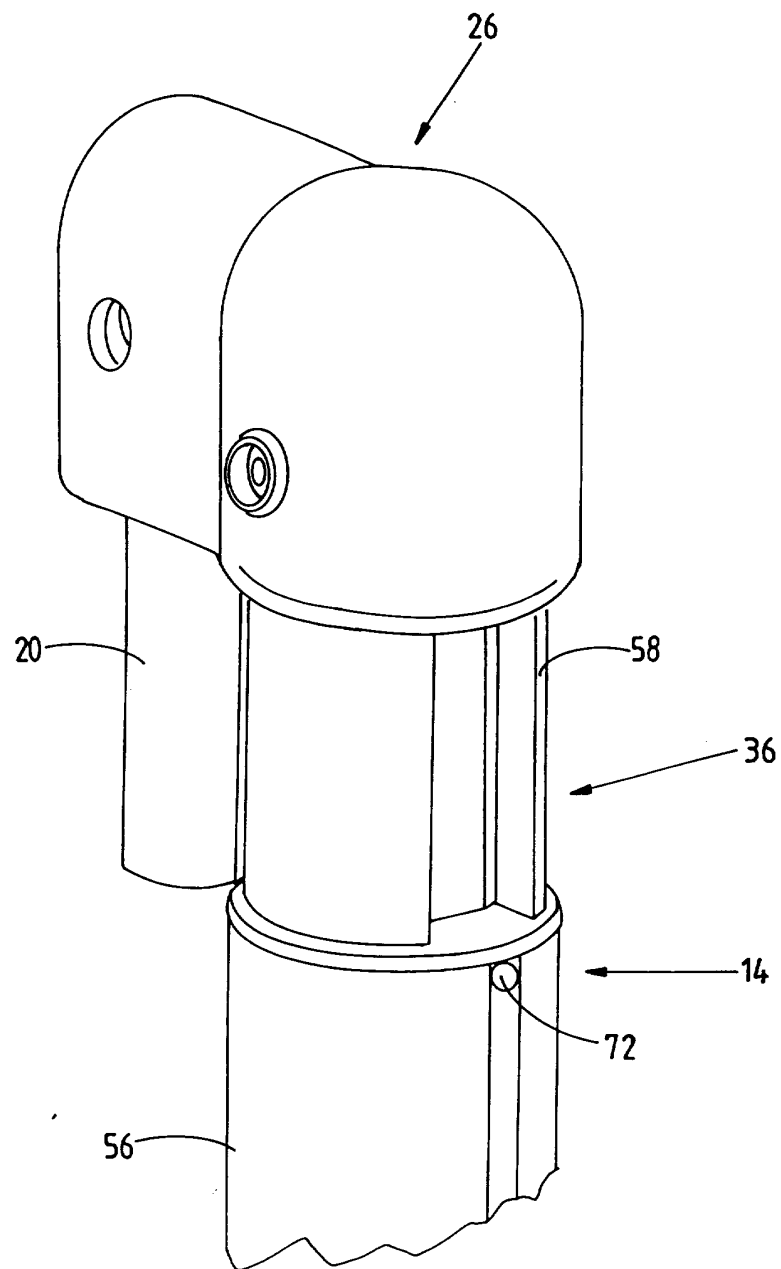


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Fig. 9



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Title: Large umbrella comprising a telescoping device

Description

The present invention relates to a large umbrella comprising a mast, on which a boom articulates in a height-adjustable manner, and an umbrella is attached to the free end of said boom, the latter being supported by a strut on the upper end of the mast.

A large umbrella these features is known from, e.g., DE 33 39 163 C2. This known large umbrella is relatively difficult to handle because the mast is quite expansive and therefore impractical to handle, especially for the purposes of transport, delivery, or storage, e.g. during the winter.

A further disadvantage of the known umbrella is also a result of the height-adjustable boom being quite difficult to adjust via both a fork and a locking bolt, which engages into a hole in the mast.

In addition, a free-arm umbrella is known from WO 97/04682, on the mast of which a boom can be extended and retracted in a guided manner and is supported by means of connecting struts which are arranged parallel to one another. The connecting struts are each pivotably connected to the mast and the boom, whereby the boom can be locked in the extended position by means of a first locking device, and the end of the boom facing the mast bears an unfolding umbrella. The boom can rotate about its axis on the boom, is guided on the connecting struts, and can be fixed in the rotating position by means of a fixation device.

Finally, DE 199 08 192 A1 discloses a multiply foldable umbrella which is centrally attached on the top side of a shaft. The shaft consists of a plurality of tubes which are engageable with one another in the manner of a telescope.

In contrast, the object of the present invention is to further develop a large umbrella which has the features specified in the introductory section and is easy to transport and store, but which includes the advantages of conventional large umbrellas. According to one subaspect of the invention, the boom of the large umbrella is intended to be easily height-adjustable and fixable.

With the large umbrella according to the invention comprising the features specified in the introductory section, this object is substantially achieved by the upper region of the mast

comprising a telescoping device and the mast-side articulation of the struts being height-adjustable and fixable using the telescoping device.

These measures create a large umbrella which comprises the characteristics of conventional large umbrellas during use, but, given the presence of the telescoping device for the mast-side articulation of the struts, can be collapsed into smaller dimensions than the conventional large umbrellas for transport, storage, or delivery purposes. When collapsed and folded together, the large umbrella can then assume a height of, e.g., two meters, or even less, and easily be delivered by a typical transport company, for example to the customer. In addition, a large umbrella collapsed to these dimensions is easy to store, whereby an optional protective cover can easily be pulled over the large umbrella by the user when collapsed and folded together.

According to one advantageous embodiment of the invention, the mast comprises an outer tube and at least one inner tube which is at least partially accommodated in the outer tube, whereby the outer tube and the inner tube are fixable in relation to one another using fixation means of the telescoping device. Due to this measure, the large umbrella can be adjusted to a desired height in the usage position in a simple manner, whereas the large umbrella can be collapsed to a dimension of, e.g., two meters or less for transport or storage purposes.

It has also proven to be advantageous for the strut to be pivotably connected to the upper end of an inner tube of the mast by means of a strut support. Due to this measure, the length of the mast can easily be adjusted to the desired level, even when the boom is swiveled out, because the strut is pivotably articulated on both the mast and the boom.

It is understood that the telescoping device can also find application in a conventional large umbrella, in which the umbrella is secured on a free end of the mast. In this case, the mast preferably consists of an outer tube and an inner tube which is at least partially accommodated in the outer tube, as is known from DE 199 08 192 A1 for, e.g., a conventional hand-held umbrella. For the purpose of adjusting the height of the large umbrella, the telescoping device for the height adjustment and fixation of the mast comprises a telescoping device with a latch lock, whereby a latch that is guided on the outer tube enters a passage opening of the inner tube. If the latch is intended to be removed from the passage opening in the inner tube in order to change the height level, then the inner tube is further pulled out of or further pushed into the outer tube, whereby the clip is then inserted into a further passage opening of the inner tube for fixation. The telescoping device can obviously be attached not only to the region of the free end of the mast, but also to regions

located lower. In principle, the telescoping device according to the present invention can find application in a large umbrella which is directly attached to the free end of the mast, or also to the free end of a boom that articulates on the mast.

The telescoping device advantageously comprises a latch lock as the fixation means, whereby a latch that is guided on the outer tube enters a passage opening of the inner tube. In order to change the height level, the latch is removed from the passage opening of the inner tube, the inner tube is further pulled out of or further pushed into the outer tube, and the clip is inserted into a further passage opening for fixation.

According to another advantageous embodiment of the invention, the outer tube and the inner tube are designed as profile tubes deviating from a circular cross-section, whereby the profile of the profile tubes comprises bead-like or groove-like recessed areas which point radially inward, extend along the longitudinal axis, and correspond to one another. Due to this measure, the inner tube is guided in the outer tube in a non-rotatable and axially displaceable manner.

According to a further advantageous embodiment of the invention, it is provided that the telescoping device comprises rolling bodies in the region of the recessed area of the outer tube, which rolling bodies adjoin the recessed area of the inner tube in a substantially flush manner. Due to this measure, a further improvement in the axial guidance or support of the inner tube in the outer tube is ensured.

The fixation means of the telescoping device are advantageously arranged in an annular member which sits on the free end of the outer tube, or rather the mast, and/or is attached thereto.

According to a further embodiment of the invention, it is provided that the annular member comprises cages for accommodating and bearing the rolling bodies.

According to an inherently independent embodiment of the invention, it is further provided that the boom articulates on a slider which encloses the mast in the manner of a sleeve, whereby the slider comprises fixation means for the height-adjustable fixation of the mast. The advantage achieved thereby is that the boom is height-adjustable and fixable on the mast in a quite straightforward manner, as a result of which the tilt angle of the boom is variable in a quick and straightforward manner.

Effective axial guidance of the slider on the mast is provided along with easy adjustability as a result of the slider being borne on the mast in an axially slidable manner, in particular guided by means of rolling bodies and in this case in particular preferably on the outer tube, whereby the rolling bodies preferably enter a recessed area of the outer tube.

The rolling bodies are preferably rotatably borne on one or multiple rails, whereby the rails are in particular fixedly connected to the sleeve. The rolling bodies are preferably partially overlapped by a bar of the mast or the outer tube, preferably in the region of the recessed area, thus also resulting in effective radial fixation of the slider on the mast.

It is further provided that the sleeve comprises a handling means, e.g. a handle, and a latch or the like is operable by means of a button that is preferably arranged on the handle, whereby the latch engages in a hole of the mast or the outer tube for the purpose of axial fixation of the slider on the mast. In order to adjust the slider, the latch is operated by means of the button and is removed from the hole so that the height of the slider on the mast can be adjusted. The latch then enters a further hole of the mast or the outer tube in order to fix the slider.

Further features, advantages, possible applications, and embodiments of the invention follow from the description of embodiments hereinafter. In this context, all of the features described or shown as illustrations form the subject matter of the present invention on their own, regardless of their summary in the claims or in dependent reference.

Shown are:

Fig. 1a one embodiment of a large umbrella according to the invention in the usage position,

Fig. 1b an enlarged illustration of the slider in Fig. 1a,

Fig. 1c an enlarged illustration of the strut support in Fig. 1a,

Fig. 1d an enlarged illustration of the umbrella support in Fig. 1a,

Fig. 1e an enlarged illustration of the support in Fig. 1a,

- Fig. 2 the large umbrella in Fig. 1a in a collapsed state or folded together for transport or storage,
- Fig. 3 an enlarged and partially sectioned illustration of one embodiment of the slider according to the invention,
- Fig. 4 an enlarged illustration of the slider in Fig. 3 in detail,
- Fig. 5 a sectional illustration of one embodiment of the telescoping device according to the invention,
- Fig. 6 a perspective view of the telescoping device in Fig. 5,
- Fig. 7 the telescoping device atop the outer tube along with the inner tube,
- Fig. 8 an exploded view of a further embodiment of the telescoping device comprising the outer tube and the inner tube,
- Fig. 9 a partial illustration of the top-side end region of the mast of the large umbrella comprising the telescoping device, the strut support, and the strut.

The large umbrella 10 illustrated in Fig. 1 includes a shaft 12, which comprises a mast 14. A boom 18 articulates on the mast 14 in a height-adjustable manner, and an umbrella is attached to the free end of said boom by means of an umbrella support 24. The boom 18 is supported by means of a strut 20 on the top-side end of the mast 14. In particular, one end of the strut 20 is connected to the boom 18 via a support 22, and the other end is connected to the mast 14 by means of a strut support 26. Provided for fixation is a slider 28, which is axially slidable and fixable on the mast 14.

All articulations of the boom 18, the strut 20, and the umbrella 16 are, as can be gathered from Figs. 1b, c, d, and e, designed to be pivotable so that the umbrella can also transition from the usage position shown in Fig. 1a to the transport or storage position seen in Fig. 2.

The umbrella itself comprises clamping struts 30 as well as support struts 32, using which the umbrella covering illustrated in Fig. 2 can be spread wide or compressed. A base 34 is provided at the lower end of the shaft 12 or the mast 14, whereby the mast 14 is (as illustrated in Fig. 1a and Fig. 2) connectable to the tube piece of the base 34 by means of,

e.g., a screw or clamp connection. Provided at the top-side end of the mast 14 is a telescoping device 36, using which the axial length of the mast can be adjusted, whereby the strut support 26, or rather the articulation point for the strut 20, is both height-adjustable in the axial direction (i.e., with respect to height) and fixable by means of the telescoping device 36.

Fig. 3 is an enlarged illustration of the slider, which surrounds the mast 14 or the outer tube 56 in the manner of a sleeve or ring. The inner wall of the sleeve comprises two rails 40, which are substantially arranged diametrically opposite one another. The rails 40 are embedded in cavities of the sleeve 38 and are, e.g., releasably attached to the sleeve 38. The rails, which extend in an axial direction in relation to the mast 14, comprise receptacles for multiple rolling bodies 42. The mast 14, or rather the outer tube 56, is designed as a profile tube, whereby recessed areas 44 arranged opposite one another in the direction of the longitudinal axis are provided for accommodating the rolling bodies 42. Due to bars 46 which overlap the rolling bodies 42, the rolling bodies are accommodated in the recessed area 44 in a basically captive manner.

The slider 28 further comprises a handle 48, which is preferably integrally connected to the sleeve 38. As seen in Fig. 3 or Fig. 4, a button 50 is arranged in the handle 48 and is used to operate a latch 52 of the outer tube 56, which latch engages in a hole 54 of the outer tube 56 for fixation of the slider 28 on the mast 14. It is in this case advantageous to pretension the latch 52 using a pretensioning means such that the latch autonomously transitions into the locked or supported position. By means of the button 50, the latch 52 can then transition into the unlocked position against the spring pretension, whereupon the slider 28 can then be adjusted upward, thus ensuring seamless and straightforward sliding of the slider 28 on the mast 14, in particular by virtue of the rolling body guidance described.

Figs. 5 to 9 describe the design and arrangement of the telescoping device 36 in greater detail. The telescoping device 36 is used for the height adjustment of the mast 14, for which purpose an inner tube 58 guided within the outer tube 56 at the top-side end can to a greater or lesser degree be slid out of the outer tube 56. The relative axial fixation of the outer tube 56 and the inner tube 58 is achieved by means of a latch lock 60 of the telescoping device 36. The manner of function and effect of the latch lock is seen in Figs. 5, 6, and 8. The latch lock 60 comprises a latch 62, which is pretensioned into the locked position by means of spring pretension. In this locked position, the latch 62 enters a passage opening 66 of the inner tube 58, thereby fixing the inner tube 58 in relation to the outer tube 56.

Also provided on the telescoping device 36 are, e.g., two rolling bodies 68, which are accommodated in a kind of cage 76 in an annular member 70 of the telescoping device 36. The running surfaces of these rolling bodies 68 roll on recessed areas 76 of the inner tube 58, as a result of which the latter is easily guided in a slidable manner within the outer tube 56 of the mast 14.

Moreover, the inner tube 58 is, by virtue of the profiling (in particular recessed area 76 as well as recessed area 44) that corresponds to the outer tube 56, accommodated in the outer tube 56 in a non-rotatable manner. Provided on the latch 62 is a handle 72, using which the latch 62 can be transitioned from the locked position into a released position of the inner tube 58.

The annular member 70 of the telescoping device 36 sits upon the free, upper end of the outer tube 56, while the strut 20 articulates on the inner tube 58 by means of, e.g., the strut support 26.

Therefore, the use of this telescoping device 36 creates the option of shortening the mast 14 to a manageable length for, e.g., transport purposes or storage purposes, whereas the mast 14 can in the usage position easily be extended far enough that the umbrella 16 is arranged at a sufficient height above the ground.

List of reference signs

10	Large umbrella
12	Shaft
14	Mast
16	Umbrella
18	Boom
20	Strut
22	Support
24	Umbrella support
26	Strut support
28	Slider
30	Locking struts
32	Supporting struts
34	Base
36	Telescoping device
38	Sleeve
40	Rail
42	Rolling body
44	Recessed area
46	Bar
48	Handle
50	Button
52	Latch
54	Hole
56	Outer tube
58	Inner tube
60	Latch lock
62	Latch
64	Spring
66	Passage opening
68	Rolling body
70	Annular member
72	Cage
76	Recessed area

Claims

1. A large umbrella (10) comprising a mast (14), on which a boom (18) articulates in a height-adjustable manner, and an umbrella is attached to the free end of said boom, wherein the boom (18) is supported by a strut (20) on the upper end of the mast (14), characterized in that the region of the upper end of the mast (14) comprises a telescoping device (36), and the mast-side articulation of the strut (20) is height-adjustable and fixable using the telescoping device (36).
2. The large umbrella according to claim 1, characterized in that the mast (14) comprises an outer tube (56) and an inner tube (58) that is at least partially accommodated in the outer tube (56), wherein the outer tube (56) and the inner tube (58) are fixable in relation to one another using fixation means of the telescoping device (36).
3. The large umbrella according to claim 1, characterized in that the strut (20) is pivotably connected to the upper end of an inner tube (58) of the mast (14) by means of a strut support (26).
4. A large umbrella (10) comprising a mast (14) on an outer tube (56) and an inner tube (58) that is at least partially accommodated in the outer tube (56), the free end of which mast is attached to an umbrella (16), said large umbrella further comprising a telescoping device (36).
5. The large umbrella according to one of the preceding claims 1 to 3, characterized in that the telescoping device (36) comprises a latch lock (60), wherein a latch (62) that is guided on the outer tube (56) enters a passage opening (66) of the inner tube (58).
6. The large umbrella according to one of the preceding claims, characterized in that the outer tube (56) and the inner tube (58) are designed as profile tubes deviating from a circular cross-section, wherein the profile of the profile tubes comprises bead-like or groove-like recessed areas (44, 46) which point radially inward, extend along the longitudinal axis, and correspond to one another.
7. The large umbrella according to one of the preceding claims, characterized in that the telescoping device (36) comprises rolling bodies in the region of the recessed area (44) of the outer tube, which rolling bodies adjoin the recessed area (76) of the inner tube in a substantially flush manner, or rather roll along the latter recessed area.

8. The large umbrella according to one of the preceding claims, characterized in that the fixation means of the telescoping device (36) are arranged in an annular member (70), which sits on the the free end of the outer tube (56) of the mast and/or is attached thereto.
9. The large umbrella according to claim 8, characterized in that the annular member (70) comprises cages (74) for accommodating and bearing the rolling bodies (68).
10. The large umbrella according to the preamble of claim 1 or one of the preceding claims 2 or 4 to 9, characterized in that the boom (18) articulates on a slider (28) which surrounds the mast (14) in the manner of a sleeve (38), wherein the slider (28) comprises fixation means for height-adjustable fixation on the mast (14).
11. The large umbrella according to claim 10, characterized in that the slider (28) is borne on the mast (14) in an axially slidable manner, in particular guided by means of rolling bodies (42), wherein the rolling bodies (42) preferably enter a recessed area of the outer tube (56).
12. The large umbrella according to one of claims 10 or 11, characterized in that the rolling bodies (42) are rotatably borne on one or multiple rails (40), the rails (40) being fixedly connected to the sleeve (38), wherein the rolling bodies (42) are preferably partially overlapped by a bar (46) of the mast (14) or of the outer tube (56), preferably in the region of the recessed area (44).
13. The large umbrella according to one of claims 10 to 12, characterized in that the sleeve (38) comprises a handling means, such as a handle (48), a latch (52) is operable by means of a button (50) which is preferably arranged on the handle, and the latch engages in a hole (54) of the mast (14) or of the outer tube (56).

Abstract

A large umbrella (10) comprising a mast (14), on which a boom (18) articulates in a height-adjustable manner, and an umbrella is attached to the free end of said boom, wherein the boom (18) is supported by a strut (20) on the upper end of the mast (14), characterized in that the region of the upper end of the mast (14) comprises a telescoping device (36), and the mast-side articulation of the strut (20) is height-adjustable and fixable using the telescoping device (36).

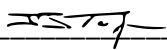


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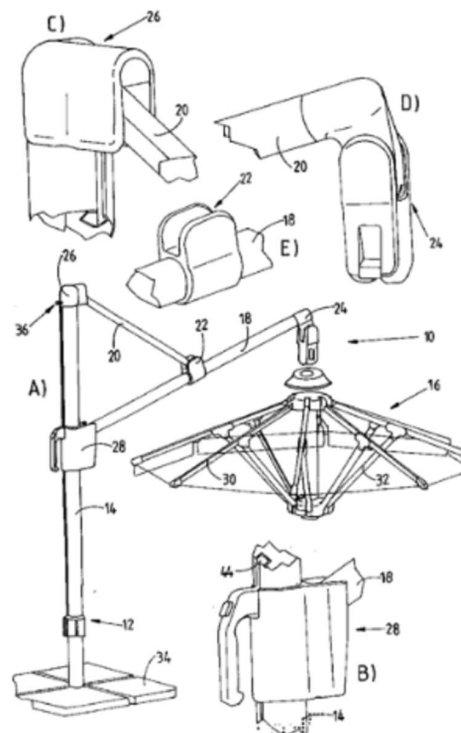
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(54) Large umbrella comprising a telescoping device

(57) A large umbrella (10) comprising a mast (14), on which a boom (18) articulates in a height-adjustable manner, and an umbrella (16) is attached to the free end of said boom, wherein the boom (18) is supported by a strut (20) on the upper end of the mast (14), characterized in that the region of the upper end of the mast (14) comprises a telescoping device (36), and the mast-side articulation of the strut (20) is height-adjustable and fixable using the telescoping device (36).



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Title: Large umbrella comprising a telescoping device

Description

The present invention relates to a large umbrella comprising a mast, on which a boom articulates in a height-adjustable manner, and an umbrella is attached to the free end of said boom, the latter being supported by a strut on the upper end of the mast.

A large umbrella these features is known from, e.g., DE 33 39 163 C2. This known large umbrella is relatively difficult to handle because the mast is quite expansive and therefore impractical to handle, especially for the purposes of transport, delivery, or storage, e.g. during the winter.

A further disadvantage of the known umbrella is also a result of the height-adjustable boom being quite difficult to adjust via both a fork and a locking bolt, which engages into a hole in the mast.

In addition, a free-arm umbrella is known from WO 97/04682, on the mast of which a boom can be extended and retracted in a guided manner and is supported by means of connecting struts which are arranged parallel to one another. The connecting struts are each pivotably connected to the mast and the boom, whereby the boom can be locked in the extended position by means of a first locking device, and the end of the boom facing the mast bears an unfolding umbrella. The boom can rotate about its axis on the boom, is guided on the connecting struts, and can be fixed in the rotating position by means of a fixation device.

Finally, DE 199 08 192 A1 discloses a multiply foldable umbrella which is centrally attached on the top side of a shaft. The shaft consists of a plurality of tubes which are engageable with one another in the manner of a telescope.

In contrast, the object of the present invention is to further develop a large umbrella which has the features specified in the introductory section and is easy to transport and store, but which includes the advantages of conventional large umbrellas. According to one subaspect of the invention, the boom of the large umbrella is intended to be easily height-adjustable and fixable.

With the large umbrella according to the invention comprising the features specified in the introductory section, this object is substantially achieved by the upper region of the mast comprising a telescoping device and the mast-side articulation of the struts being height-adjustable and fixable using the telescoping device.

These measures create a large umbrella which comprises the characteristics of conventional large umbrellas during use, but, given the presence of the telescoping device for the mast-side articulation of the struts, can be collapsed into smaller dimensions than the conventional large umbrellas for transport, storage, or delivery purposes. When collapsed and folded together, the large umbrella can then assume a height of, e.g., two meters, or even less, and easily be delivered by a typical transport company, for example to the customer. In addition, a large umbrella collapsed to these dimensions is easy to store, whereby an optional protective cover can easily be pulled over the large umbrella by the user when collapsed and folded together.

According to one advantageous embodiment of the invention, the mast comprises an outer tube and at least one inner tube which is at least partially accommodated in the outer tube, whereby the outer tube and the inner tube are fixable in relation to one another using fixation means of the telescoping device. Due to this measure, the large umbrella can be adjusted to a desired height in the usage position in a simple manner, whereas the large umbrella can be collapsed to a dimension of, e.g., two meters or less for transport or storage purposes.

It has also proven to be advantageous for the strut to be pivotably connected to the upper end of an inner tube of the mast by means of a strut support. Due to this measure, the length of the mast can easily be adjusted to the desired level, even when the boom is swiveled out, because the strut is pivotably articulated on both the mast and the boom.

It is understood that the telescoping device can also find application in a conventional large umbrella, in which the umbrella is secured on a free end of the mast. In this case, the mast preferably consists of an outer tube and an inner tube which is at least partially accommodated in the outer tube, as is known from DE 199 08 192 A1 for, e.g., a conventional hand-held umbrella. For the purpose of adjusting the height of the large umbrella, the telescoping device for the height adjustment and fixation of the mast comprises a telescoping device with a latch lock, whereby a latch that is guided on the outer tube enters a passage opening of the inner tube. If the latch is intended to be removed from the passage opening in the inner tube in order to change the height level, then the inner tube is further pulled out of or further pushed into the outer tube, whereby the clip is then inserted into a further passage opening of the inner tube for fixation. The telescoping device can obviously be attached not only to the region of the free end of the mast, but also to regions located lower. In principle, the

telescoping device according to the present invention can find application in a large umbrella which is directly attached to the free end of the mast, or also to the free end of a boom that articulates on the mast.

The telescoping device advantageously comprises a latch lock as the fixation means, whereby a latch that is guided on the outer tube enters a passage opening of the inner tube. In order to change the height level, the latch is removed from the passage opening of the inner tube, the inner tube is further pulled out of or further pushed into the outer tube, and the clip is inserted into a further passage opening for fixation.

According to another advantageous embodiment of the invention, the outer tube and the inner tube are designed as profile tubes deviating from a circular cross-section, whereby the profile of the profile tubes comprises bead-like or groove-like recessed areas which point radially inward, extend along the longitudinal axis, and correspond to one another. Due to this measure, the inner tube is guided in the outer tube in a non-rotatable and axially displaceable manner.

According to a further advantageous embodiment of the invention, it is provided that the telescoping device comprises rolling bodies in the region of the recessed area of the outer tube, which rolling bodies adjoin the recessed area of the inner tube in a substantially flush manner. Due to this measure, a further improvement in the axial guidance or support of the inner tube in the outer tube is ensured.

The fixation means of the telescoping device are advantageously arranged in an annular member which sits on the free end of the outer tube, or rather the mast, and/or is attached thereto.

According to a further embodiment of the invention, it is provided that the annular member comprises cages for accommodating and bearing the rolling bodies.

According to an inherently independent embodiment of the invention, it is further provided that the boom articulates on a slider which encloses the mast in the manner of a sleeve, whereby the slider comprises fixation means for the height-adjustable fixation of the mast. The advantage achieved thereby is that the boom is height-adjustable and fixable on the mast in a quite straightforward manner, as a result of which the tilt angle of the boom is variable in a quick and straightforward manner.

Effective axial guidance of the slider on the mast is provided along with easy adjustability as a result of the slider being borne on the mast in an axially slidable manner, in particular guided by means of rolling bodies and in this case in particular preferably on the outer tube, whereby the rolling bodies preferably enter a recessed area of the outer tube.

The rolling bodies are preferably rotatably borne on one or multiple rails, whereby the rails are in particular fixedly connected to the sleeve. The rolling bodies are preferably partially overlapped by a bar of the mast or the outer tube, preferably in the region of the recessed area, thus also resulting in effective radial fixation of the slider on the mast.

It is further provided that the sleeve comprises a handling means, e.g. a handle, and a latch or the like is operable by means of a button that is preferably arranged on the handle, whereby the latch engages in a hole of the mast or the outer tube for the purpose of axial fixation of the slider on the mast. In order to adjust the slider, the latch is operated by means of the button and is removed from the hole so that the height of the slider on the mast can be adjusted. The latch then enters a further hole of the mast or the outer tube in order to fix the slider.

Further features, advantages, possible applications, and embodiments of the invention follow from the description of embodiments hereinafter. In this context, all of the features described or shown as illustrations form the subject matter of the present invention on their own, regardless of their summary in the claims or in dependent reference.

Shown are:

Fig. 1a one embodiment of a large umbrella according to the invention in the usage position,

Fig. 1b an enlarged illustration of the slider in Fig. 1a,

Fig. 1c an enlarged illustration of the strut support in Fig. 1a,

- Fig. 1d an enlarged illustration of the umbrella support in Fig. 1a,
- Fig. 1e an enlarged illustration of the support in Fig. 1a,
- Fig. 2 the large umbrella in Fig. 1a in a collapsed state or folded together for transport or storage,
- Fig. 3 an enlarged and partially sectioned illustration of one embodiment of the slider according to the invention,
- Fig. 4 an enlarged illustration of the slider in Fig. 3 in detail,
- Fig. 5 a sectional illustration of one embodiment of the telescoping device according to the invention,
- Fig. 6 a perspective view of the telescoping device in Fig. 5,
- Fig. 7 the telescoping device atop the outer tube along with the inner tube,
- Fig. 8 an exploded view of a further embodiment of the telescoping device comprising the outer tube and the inner tube,
- Fig. 9 a partial illustration of the top-side end region of the mast of the large umbrella comprising the telescoping device, the strut support, and the strut.

The large umbrella 10 illustrated in Fig. 1 includes a shaft 12, which comprises a mast 14. A boom 18 articulates on the mast 14 in a height-adjustable manner, and an umbrella is attached to the free end of said boom by means of an umbrella support 24. The boom 18 is supported by means of a strut 20 on the top-side end of the mast 14. In particular, one end of the strut 20 is connected to the boom 18 via a support 22, and the other end is connected to the mast 14 by means of a strut support 26. Provided for fixation is a slider 28, which is axially slidable and fixable on the mast 14.

All articulations of the boom 18, the strut 20, and the umbrella 16 are, as can be gathered from Figs. 1b, c, d, and e, designed to be pivotable so that the umbrella can also transition from the usage position shown in Fig. 1a to the transport or storage position seen in Fig. 2.

The umbrella itself comprises clamping struts 30 as well as support struts 32, using which the umbrella covering illustrated in Fig. 2 can be spread wide or compressed. A base 34 is provided at the lower end of the shaft 12 or the mast 14, whereby the mast 14 is (as illustrated in Fig. 1a and Fig. 2) connectable to the tube piece of the base 34 by means of, e.g., a screw or clamp connection. Provided at the top-side end of the mast 14 is a telescoping device 36, using which the axial length of the mast can be adjusted, whereby the strut support 26, or rather the articulation point for the strut 20, is both height-adjustable in the axial direction (i.e., with respect to height) and fixable by means of the telescoping device 36.

Fig. 3 is an enlarged illustration of the slider, which surrounds the mast 14 or the outer tube 56 in the manner of a sleeve or ring. The inner wall of the sleeve comprises two rails 40, which are substantially arranged diametrically opposite one another. The rails 40 are embedded in cavities of the sleeve 38 and are, e.g., releasably attached to the sleeve 38. The rails, which extend in an axial direction in relation to the mast 14, comprise receptacles for multiple rolling bodies 42. The mast 14, or rather the outer tube 56, is designed as a profile tube, whereby recessed areas 44 arranged opposite one another in the direction of the longitudinal axis are provided for accommodating the rolling bodies 42. Due to bars 46 which overlap the rolling bodies 42, the rolling bodies are accommodated in the recessed area 44 in a basically captive manner.

The slider 28 further comprises a handle 48, which is preferably integrally connected to the sleeve 38. As seen in Fig. 3 or Fig. 4, a button 50 is arranged in the handle 48 and is used to operate a latch 52 of the outer tube 56, which latch engages in a hole 54 of the outer tube 56 for fixation of the slider 28 on the mast 14. It is in this case advantageous to pretension the latch 52 using a pretensioning means such that the latch autonomously transitions into the locked or supported position. By means of the button 50, the latch 52 can then transition into the unlocked position against the spring pretension, whereupon the slider 28 can then be adjusted upward, thus ensuring seamless and straightforward sliding of the slider 28 on the mast 14, in particular by virtue of the rolling body guidance described.

Figs. 5 to 9 describe the design and arrangement of the telescoping device 36 in greater detail. The telescoping device 36 is used for the height adjustment of the mast 14, for which purpose an inner tube 58

guided within the outer tube 56 at the top-side end can to a greater or lesser degree be slid out of the outer tube 56. The relative axial fixation of the outer tube 56 and the inner tube 58 is achieved by means of a latch lock 60 of the telescoping device 36. The manner of function and effect of the latch lock is seen in Figs. 5, 6, and 8. The latch lock 60 comprises a latch 62, which is pretensioned into the locked position by means of spring pretension. In this locked position, the latch 62 enters a passage opening 66 of the inner tube 58, thereby fixing the inner tube 58 in relation to the outer tube 56.

Also provided on the telescoping device 36 are, e.g., two rolling bodies 68, which are accommodated in a kind of cage 76 in an annular member 70 of the telescoping device 36. The running surfaces of these rolling bodies 68 roll on recessed areas 76 of the inner tube 58, as a result of which the latter is easily guided in a slidable manner within the outer tube 56 of the mast 14.

Moreover, the inner tube 58 is, by virtue of the profiling (in particular recessed area 76 as well as recessed area 44) that corresponds to the outer tube 56, accommodated in the outer tube 56 in a non-rotatable manner. Provided on the latch 62 is a handle 72, using which the latch 62 can be transitioned from the locked position into a released position of the inner tube 58.

The annular member 70 of the telescoping device 36 sits upon the free, upper end of the outer tube 56, while the strut 20 articulates on the inner tube 58 by means of, e.g., the strut support 26.

Therefore, the use of this telescoping device 36 creates the option of shortening the mast 14 to a manageable length for, e.g., transport purposes or storage purposes, whereas the mast 14 can in the usage position easily be extended far enough that the umbrella 16 is arranged at a sufficient height above the ground.

List of reference signs

10	Large umbrella
12	Shaft
14	Mast
16	Umbrella
18	Boom
20	Strut
22	Support
24	Umbrella support
26	Strut support
28	Slider
30	Locking struts
32	Supporting struts
34	Base
36	Telescoping device
38	Sleeve
40	Rail
42	Rolling body
44	Recessed area
46	Bar
48	Handle
50	Button
52	Latch
54	Hole
56	Outer tube

58	Inner tube
60	Latch lock
62	Latch
64	Spring
66	Passage opening
68	Rolling body
70	Annular member
72	Cage
76	Recessed area

Claims

1. A large umbrella (10) comprising a mast (14), on which a boom (18) articulates in a height-adjustable manner, and an umbrella is attached to the free end of said boom, wherein the boom (18) is supported by a strut (20) on the upper end of the mast (14), characterized in that the region of the upper end of the mast (14) comprises a telescoping device (36), and the mast-side articulation of the strut (20) is height-adjustable and fixable using the telescoping device (36).
2. The large umbrella according to claim 1, characterized in that the mast (14) comprises an outer tube (56) and an inner tube (58) that is at least partially accommodated in the outer tube (56), wherein the outer tube (56) and the inner tube (58) are fixable in relation to one another using fixation means of the telescoping device (36).
3. The large umbrella according to claim 1, characterized in that the strut (20) is pivotably connected to the upper end of an inner tube (58) of the mast (14) by means of a strut support (26).
4. A large umbrella (10) comprising a mast (14) on an outer tube (56) and an inner tube (58) that is at least partially accommodated in the outer tube (56), the free end of which mast is attached to an umbrella (16), said large umbrella further comprising a telescoping device (36).
5. The large umbrella according to one of the preceding claims 1 to 3, characterized in that the telescoping device (36) comprises a latch lock (60), wherein a latch (62) that is guided on the outer tube (56) enters a passage opening (66) of the inner tube (58).
6. The large umbrella according to one of the preceding claims, characterized in that the outer tube (56) and the inner tube (58) are designed as profile tubes deviating from a circular cross-section, wherein the profile of the profile tubes comprises bead-like or groove-like recessed areas (44, 46) which point radially inward, extend along the longitudinal axis, and correspond to one another.
7. The large umbrella according to one of the preceding claims, characterized in that the telescoping device (36) comprises rolling bodies in the region of the recessed area (44) of the outer tube, which rolling bodies

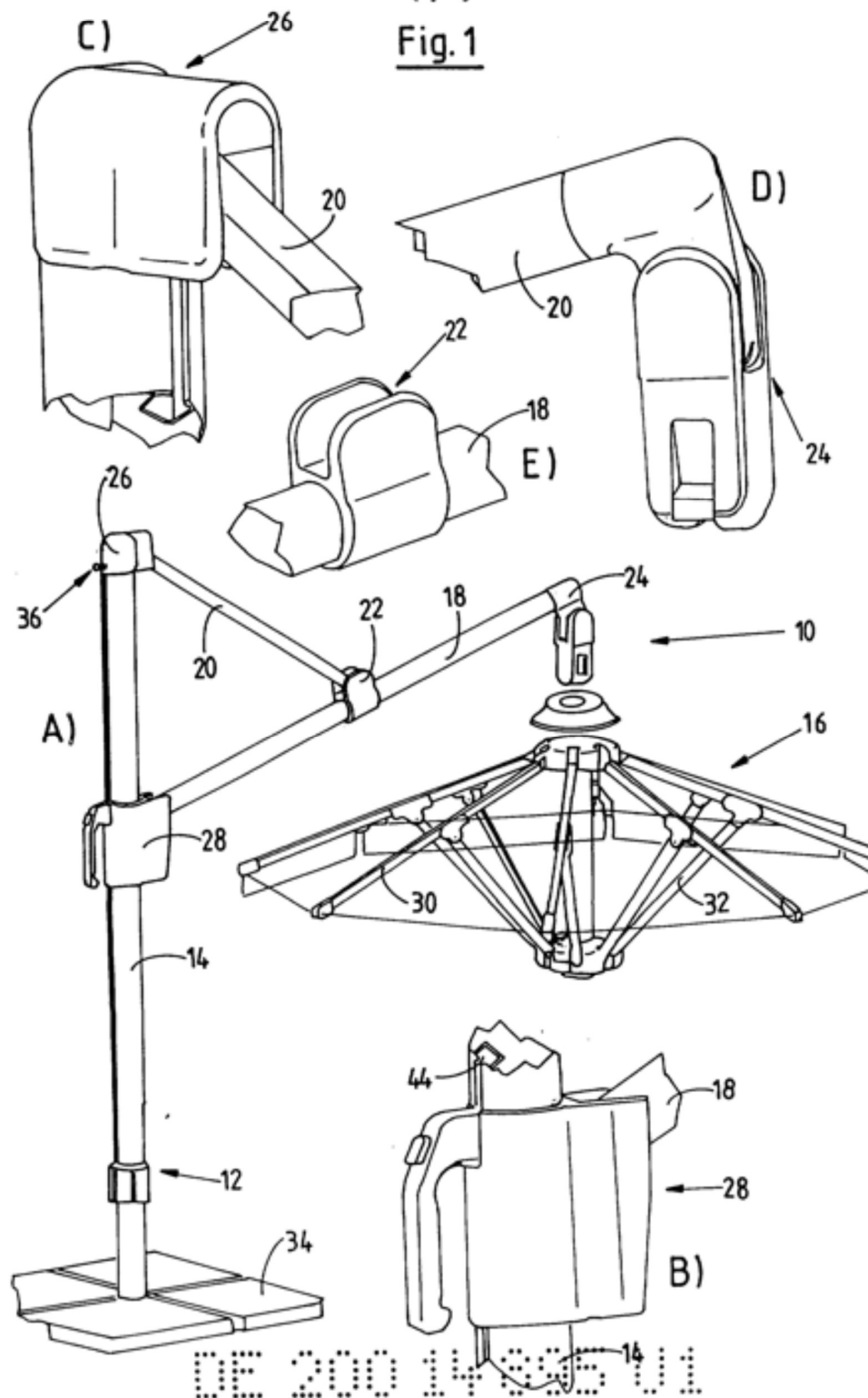
adjoin the recessed area (76) of the inner tube in a substantially flush manner, or rather roll along the latter recessed area.

8. The large umbrella according to one of the preceding claims, characterized in that the fixation means of the telescoping device (36) are arranged in an annular member (70), which sits on the the free end of the outer tube (56) of the mast and/or is attached thereto.
9. The large umbrella according to claim 8, characterized in that the annular member (70) comprises cages (74) for accommodating and bearing the rolling bodies (68).
10. The large umbrella according to the preamble of claim 1 or one of the preceding claims 2 or 4 to 9, characterized in that the boom (18) articulates on a slider (28) which surrounds the mast (14) in the manner of a sleeve (38), wherein the slider (28) comprises fixation means for height-adjustable fixation on the mast (14).
11. The large umbrella according to claim 10, characterized in that the slider (28) is borne on the mast (14) in an axially slidable manner, in particular guided by means of rolling bodies (42), wherein the rolling bodies (42) preferably enter a recessed area of the outer tube (56).
12. The large umbrella according to one of claims 10 or 11, characterized in that the rolling bodies (42) are rotatably borne on one or multiple rails (40), the rails (40) being fixedly connected to the sleeve (38), wherein the rolling bodies (42) are preferably partially overlapped by a bar (46) of the mast (14) or of the outer tube (56), preferably in the region of the recessed area (44).
13. The large umbrella according to one of claims 10 to 12, characterized in that the sleeve (38) comprises a handling means, such as a handle (48), a latch (52) is operable by means of a button (50) which is preferably arranged on the handle, and the latch engages in a hole (54) of the mast (14) or of the outer tube (56).

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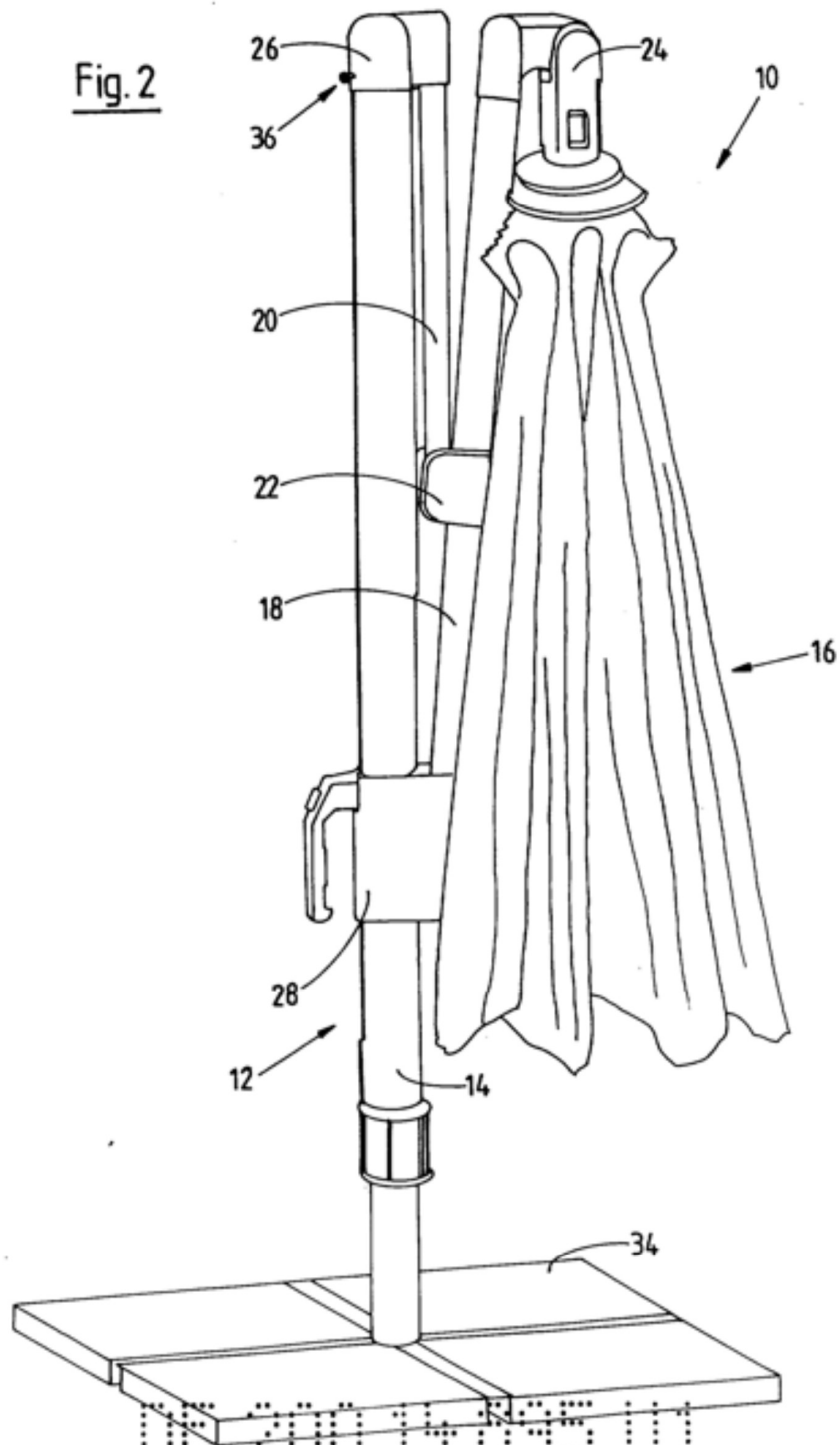
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Fig. 1



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Fig. 2



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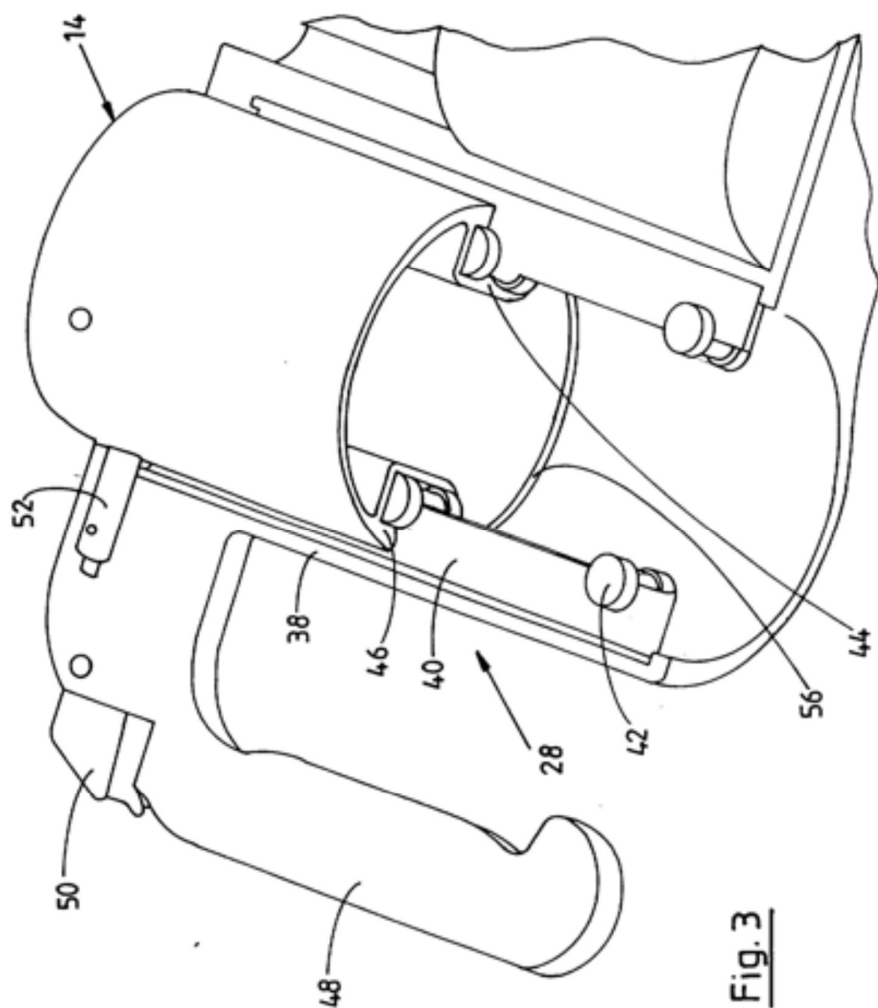


Fig. 3

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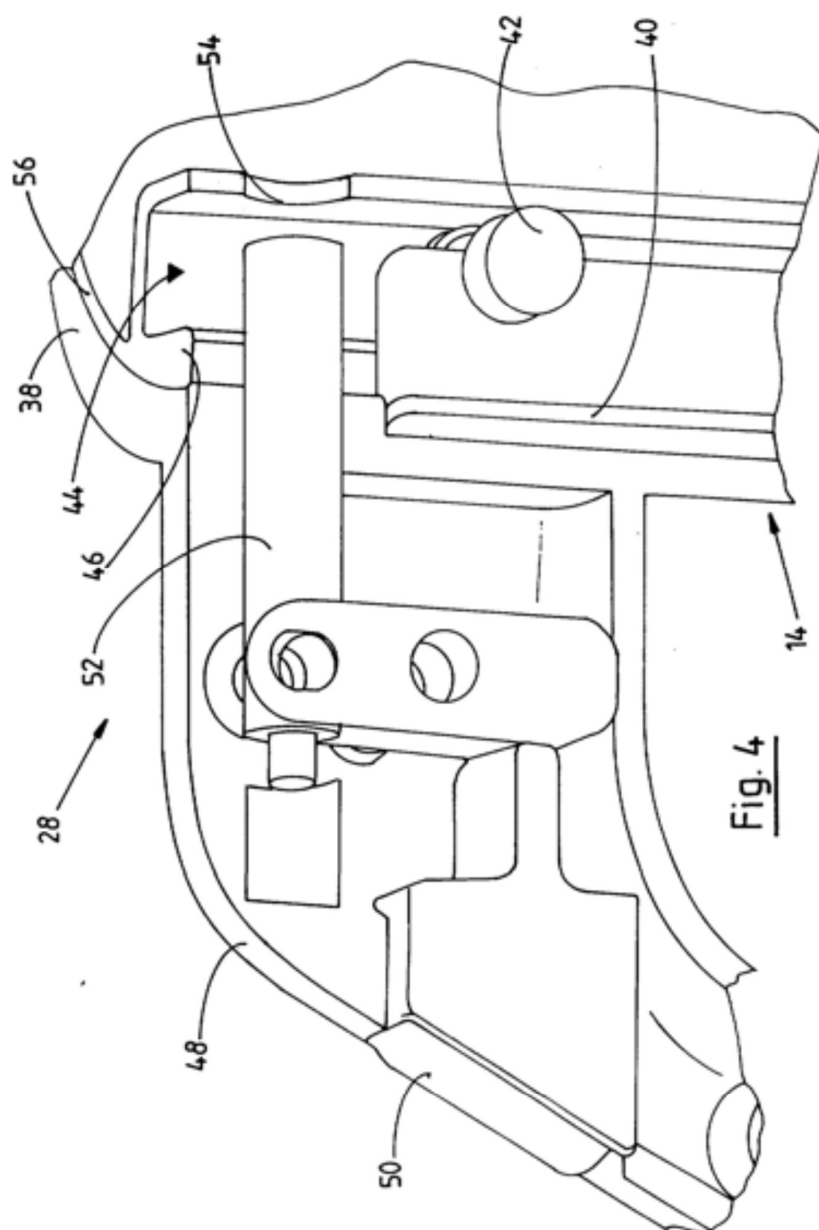
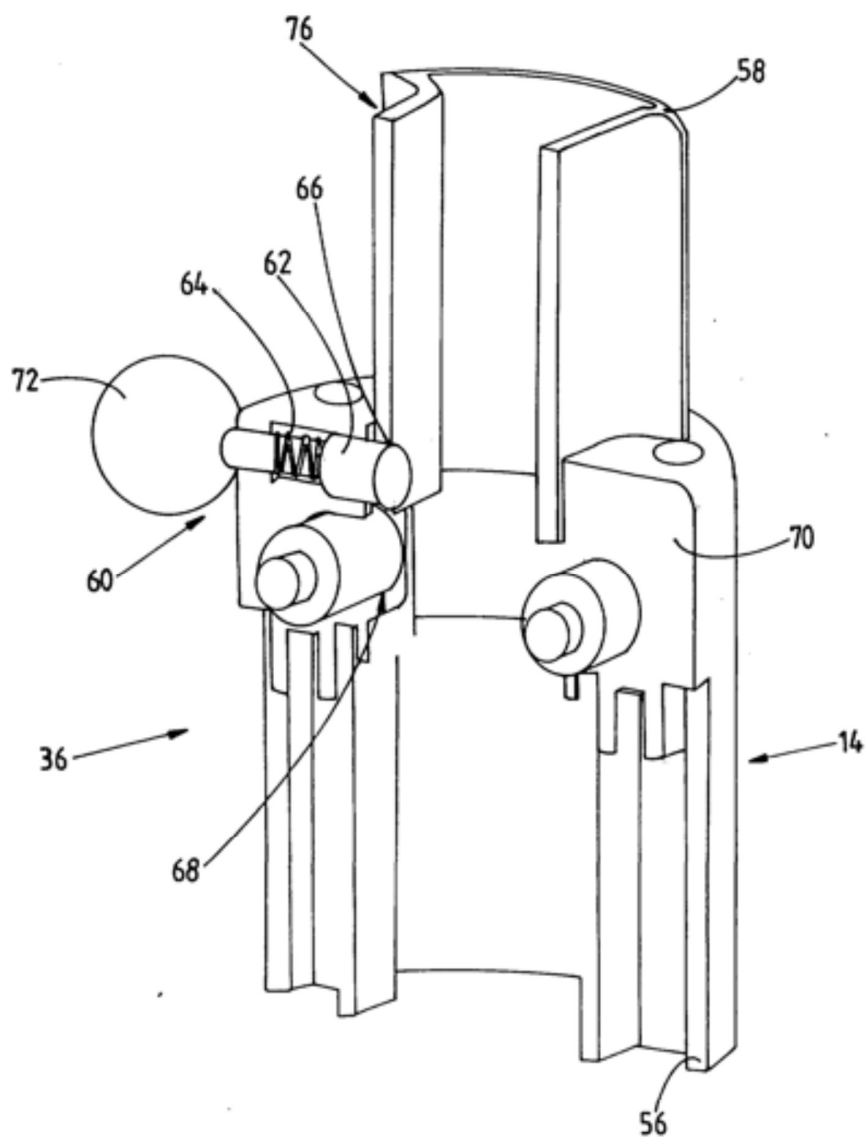


Fig. 4

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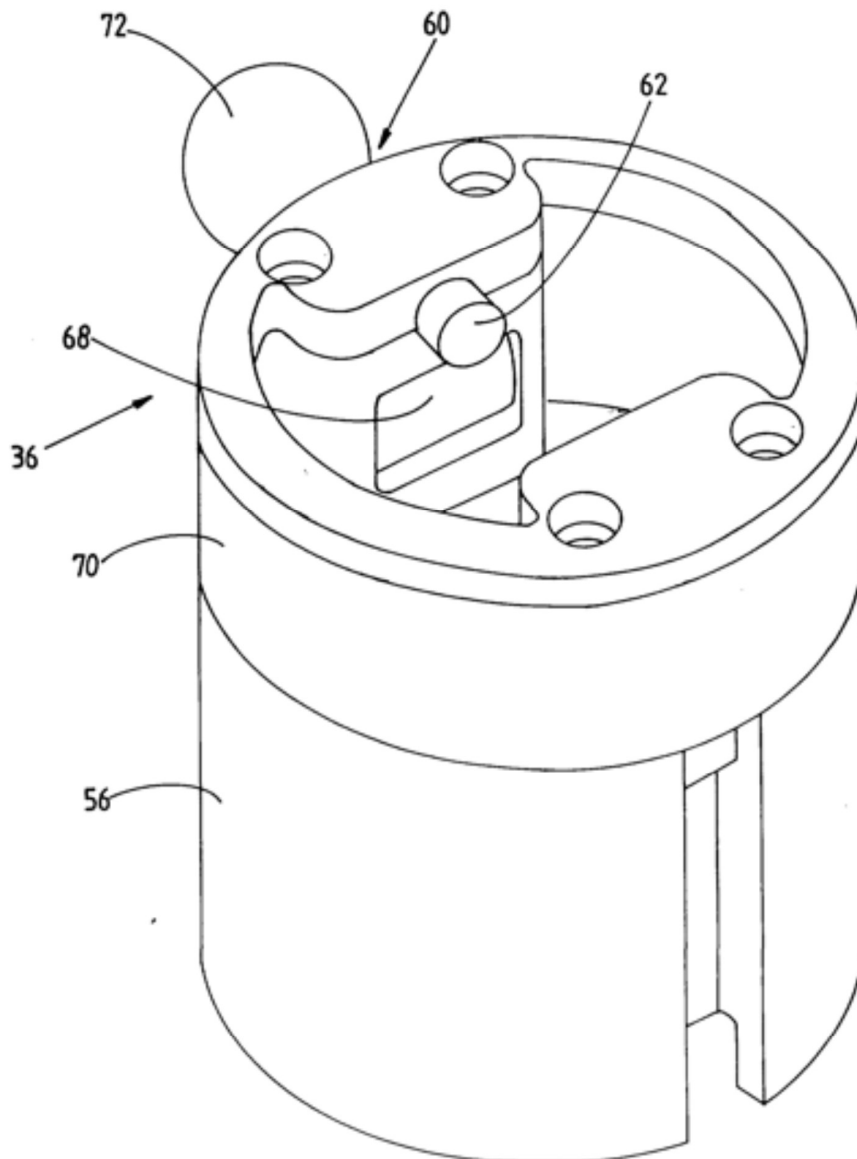
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Fig. 5

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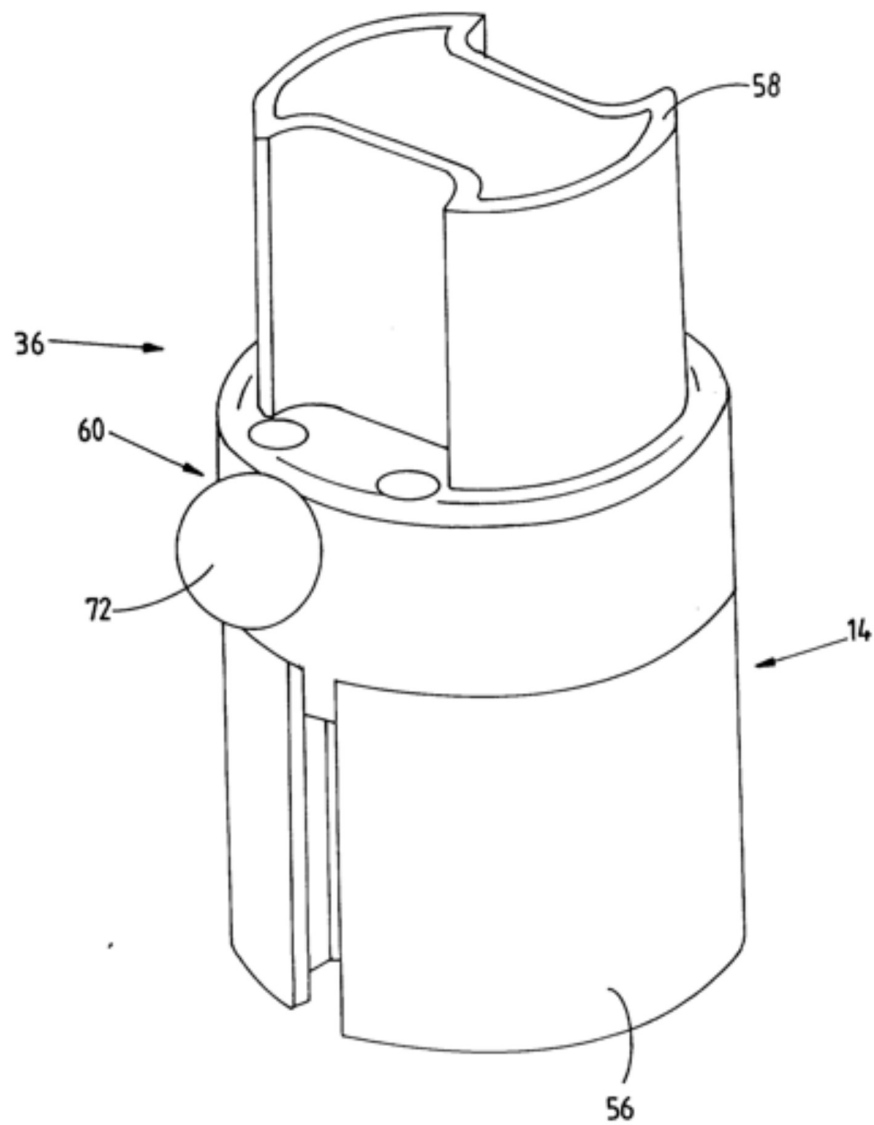
Fig. 6

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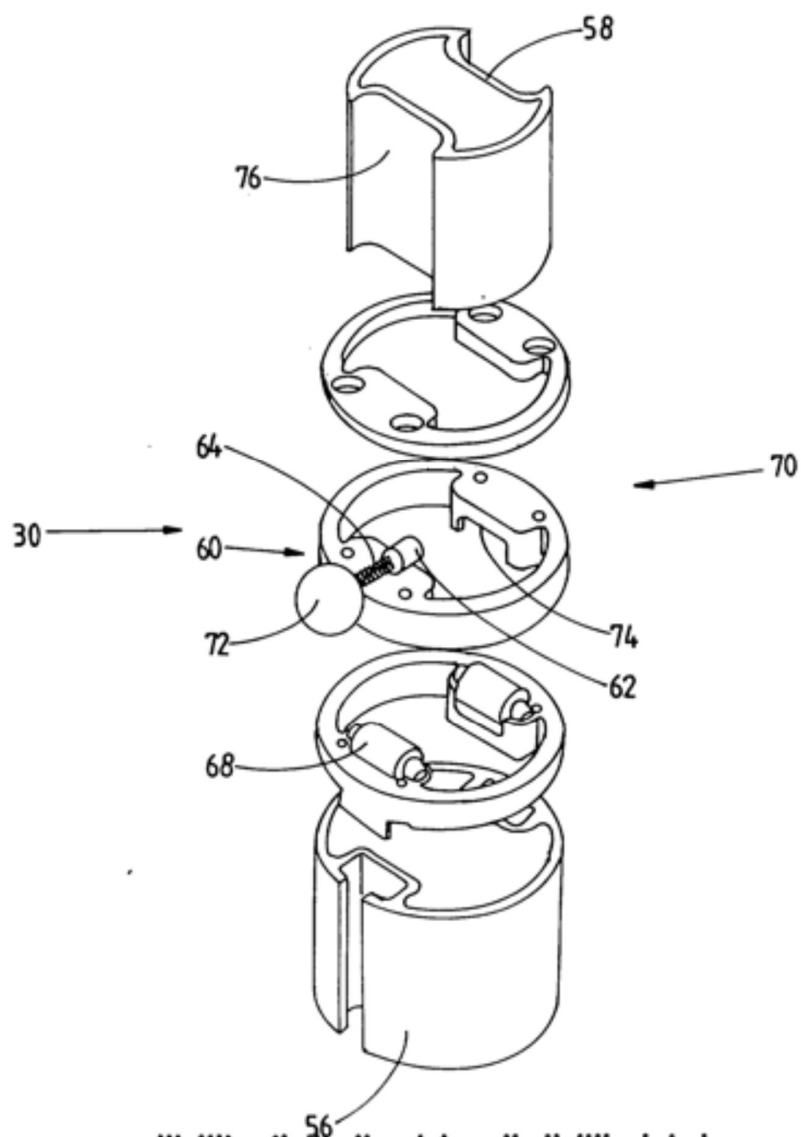
Fig. 7



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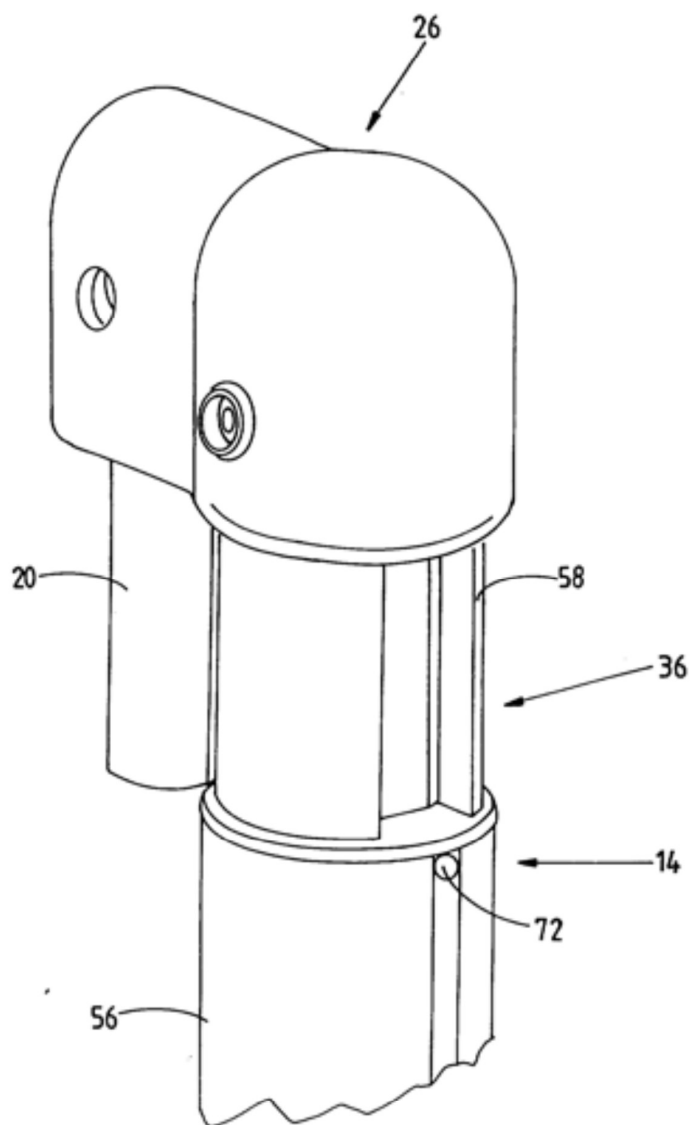
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Fig. 8

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Fig. 9

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