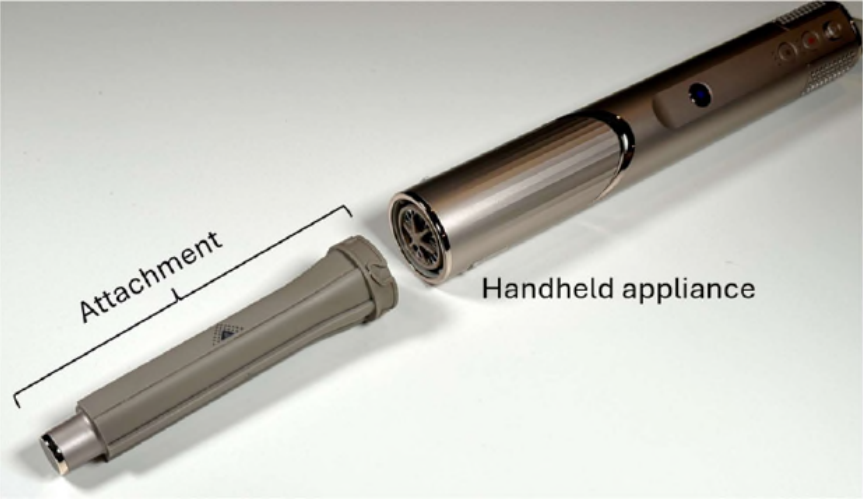
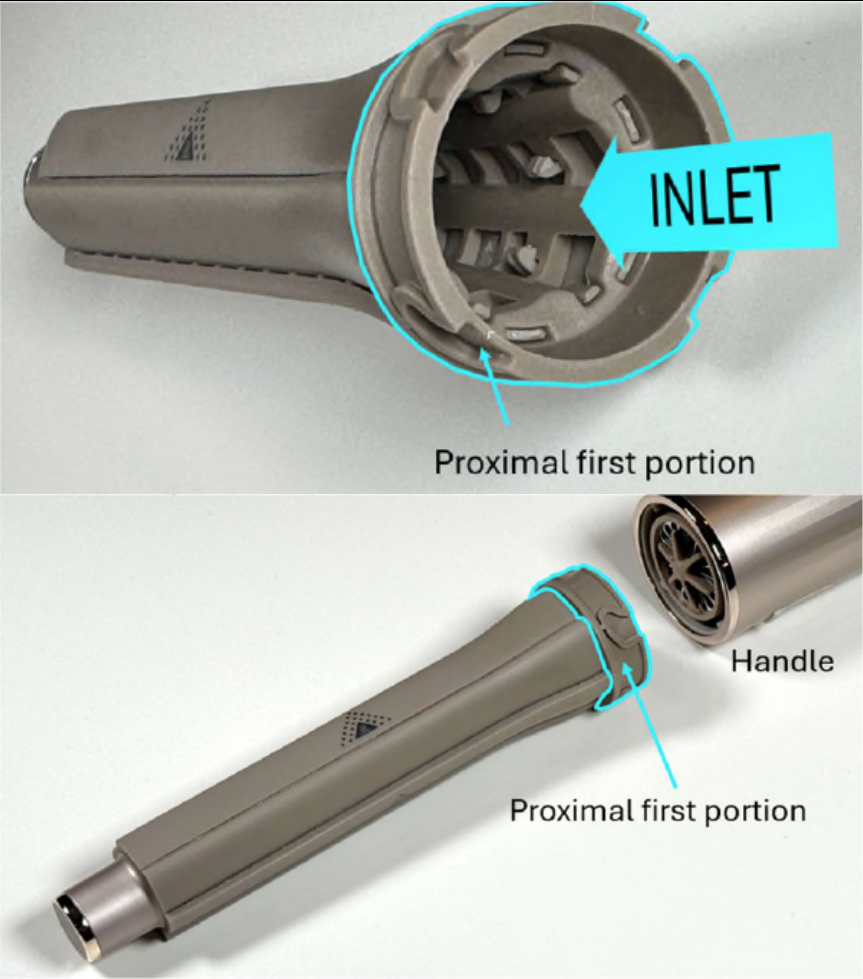
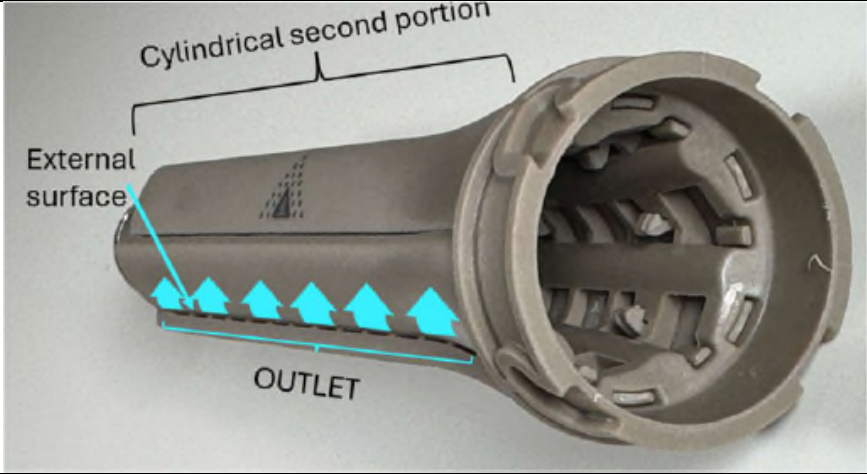
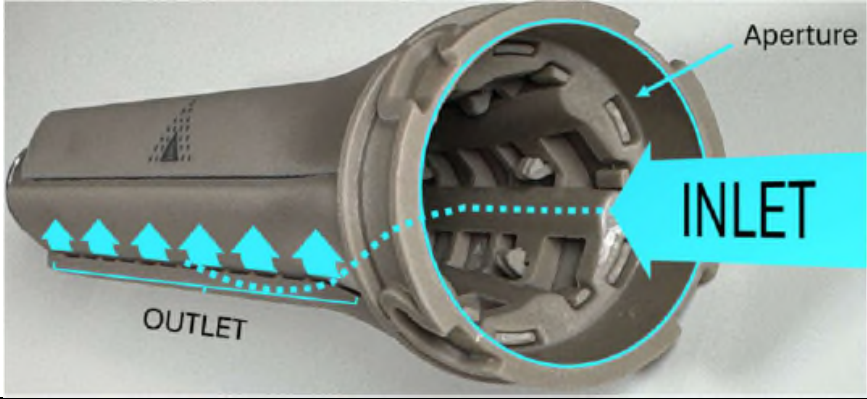
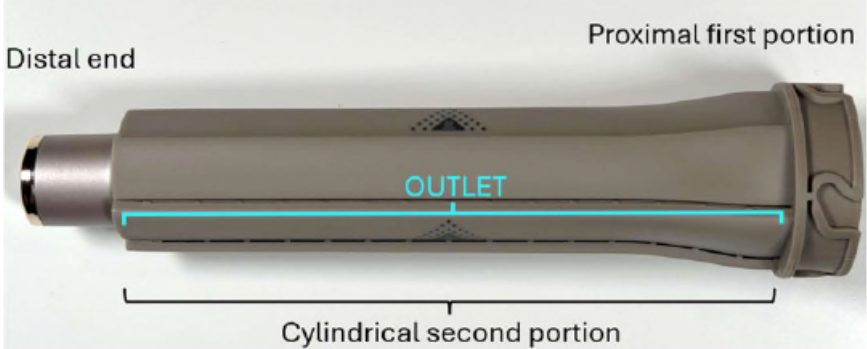
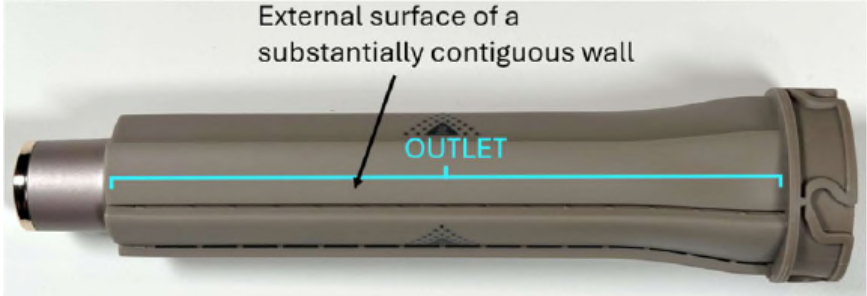


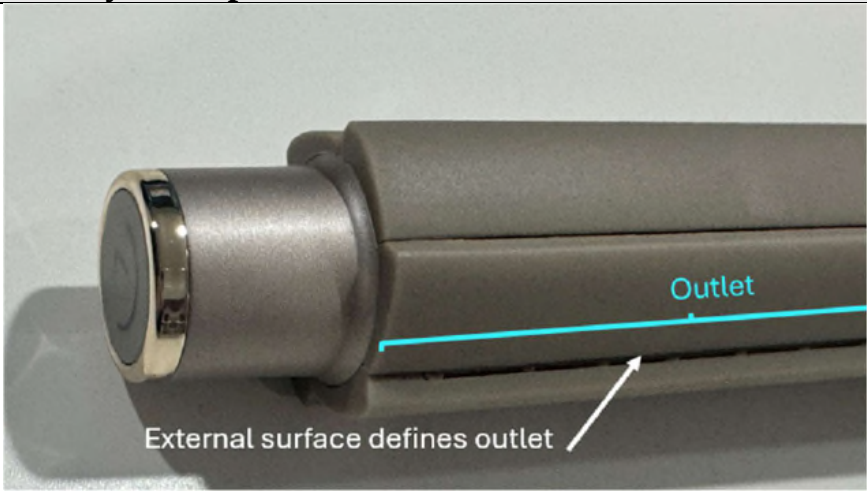
LIMITATION-BY-LIMITATION ANALYSIS OF PETITIONERS' FLEXSTYLE – Tapered Barrel

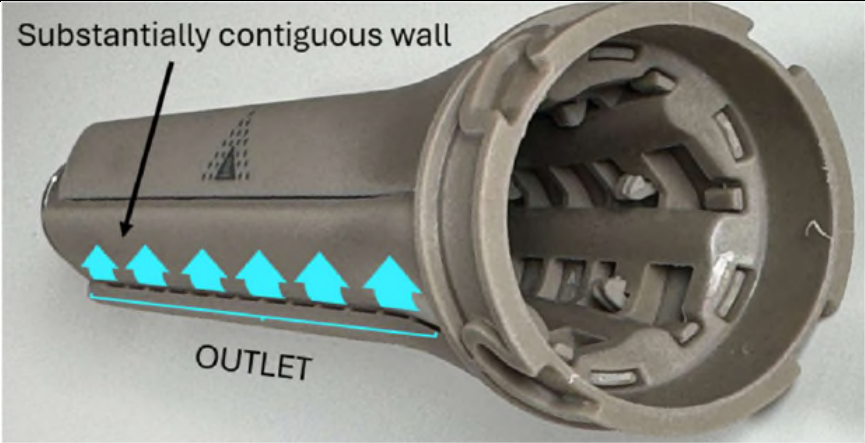
Claim Limitation	FlexStyle – Tapered Barrel
1[pre] An attachment for a handheld appliance comprising	The FlexStyle includes an attachment for a handheld appliance. The FlexStyle .95”Auto-Wrap Curlers, and the Shark FlexStyle 1.25”Auto-Wrap Curlers are attachments for a handheld appliance, namely the FlexStyle, which Shark admits. EX2008, ¶32. 
1[a] an inlet in a proximal first portion of the attachment;	As shown below, the FlexStyle Auto-Wrap Curler attachment includes an inlet to the head at an open aperture at the proximal end.

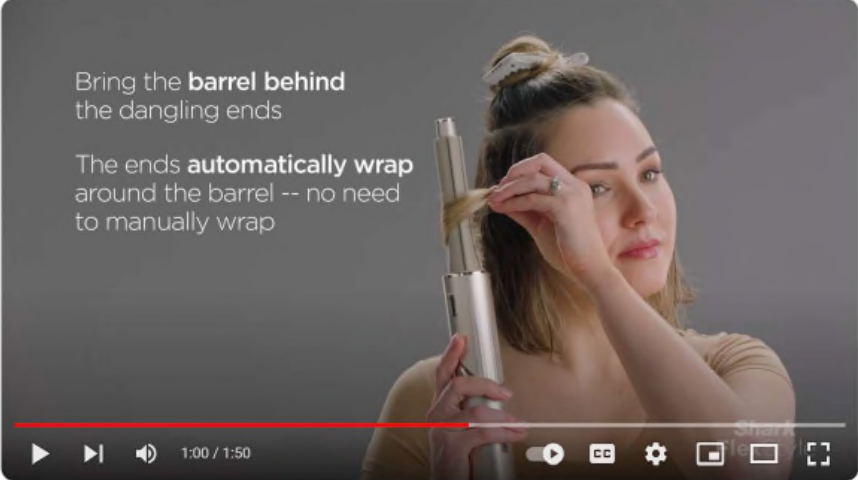
Claim Limitation	FlexStyle – Tapered Barrel
	 The top photograph shows the proximal end of the tapered barrel attachment. A blue arrow points to the opening, which is labeled 'INLET'. The proximal first portion is also indicated by a blue arrow. The bottom photograph shows the proximal end of the tapered barrel attachment. A blue arrow points to the proximal first portion, which is labeled 'Proximal first portion'. A blue arrow also points to the handle, which is labeled 'Handle'.
1[b] an outlet in a cylindrical second portion of the attachment; and	The FlexStyle includes an outlet in a cylindrical second portion of the attachment. The outlet consists of at least one outlet, and in the alternative six outlets for air, each outlet being in a cylindrical second portion of the attachment.

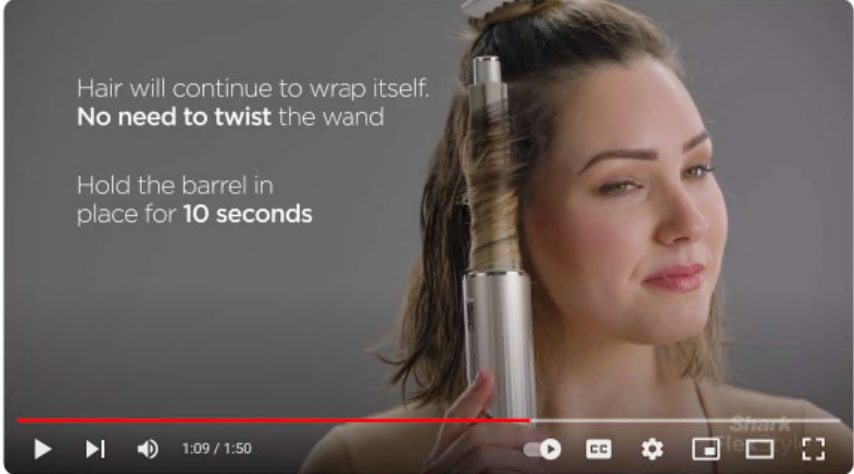
Claim Limitation	FlexStyle – Tapered Barrel
	 The diagram shows a perspective view of the tapered barrel attachment. A bracket at the top points to the 'Cylindrical second portion'. A label 'External surface' points to the side of the barrel. A series of blue arrows along the bottom edge indicate the 'OUTLET' path.
1[c] a fluid flow path between the inlet and the outlet,	As shown below, the FlexStyle includes an inlet within the curler attachment allowing fluid drawn into the fluid flow path within the handle by the fan unit to flow into the inlet, the aperture in the first proximal end of the attachment, and out of the outlet in the sides of the attachment.  This diagram provides a more detailed view of the proximal end. A large blue arrow labeled 'INLET' points into the attachment. A label 'Aperture' points to the opening at the proximal end. Blue arrows along the bottom edge indicate the 'OUTLET' path.
1[d] wherein the outlet in the cylindrical second portion of the attachment comprises at least one	As shown below, the FlexStyle curler attachment includes a slot that extends continuously from the proximal first portion to a distal end of the attachment.

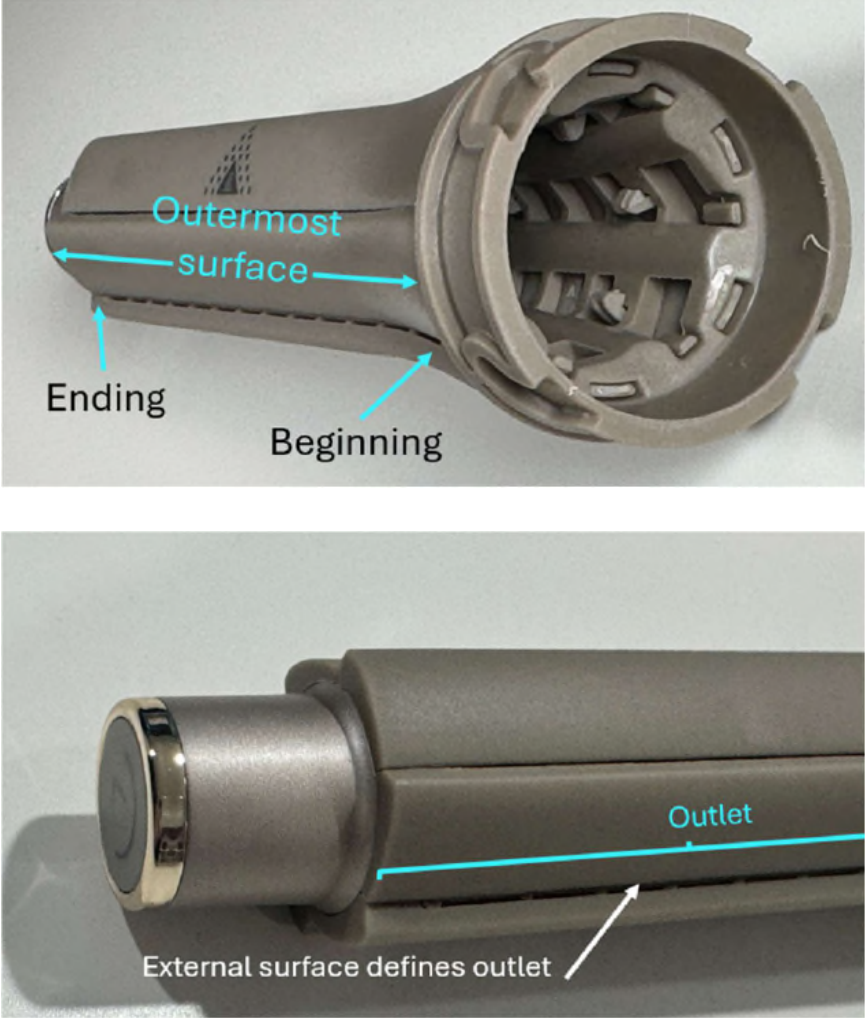
Claim Limitation	FlexStyle – Tapered Barrel
slot extending continuously from the proximal first portion to a distal end of the attachment,	The outlet comprises a slot which also has spacers provided along the length of the slot. A POSITA would understand that this can constitute a single slot. The spacers perform the purpose of maintaining the gap between the adjacent plates forming the slot or thickness of the slot, thereby allowing a more even air flow. See, e.g., EX1001, 3:7-14, 7:24-29; FIGS. 3a, 3b. 
1[e] wherein the outlet is at least partially defined by an external surface of a substantially contiguous wall of the attachment	As shown below, the FlexStyle includes a fluid outlet which outlet is at least partially defined by an external surface of a substantially contiguous wall of the attachment. This arrangement enables fluid (i.e., air) to exit the attachment all the way around the attachment and along the length of the attachment maximizing a hair styling region of the product. 

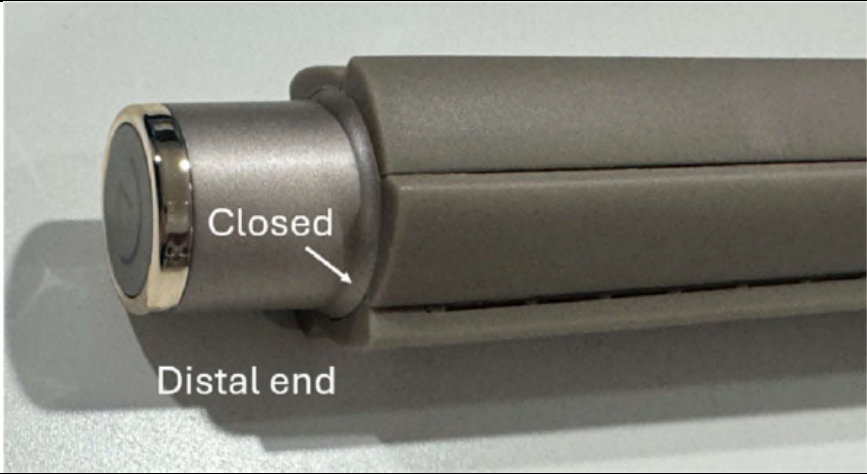
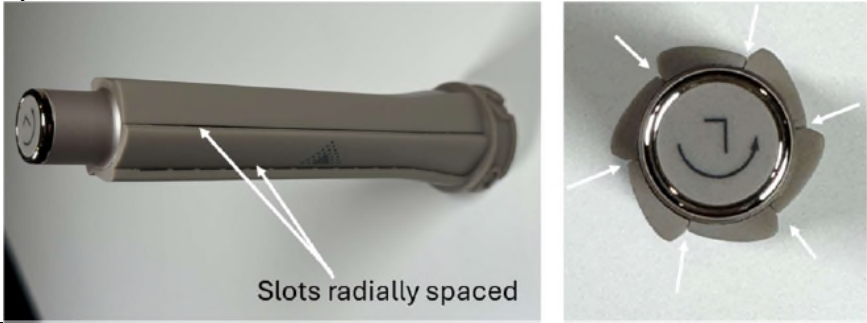
Claim Limitation	FlexStyle – Tapered Barrel
	
1[f] and is configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion,	The FlexStyle practices this limitation. The fluid flowing out of the slots is tangential to the outer surface of the curler attachment plate and joins with the fluid flowing out of the other slots of the fluid outlet forming a fluid flow around the circumference of the attachment. Thus, the fluid is blown out along the external surface of the attachment and this encourages hair to wrap around the attachment automatically. The fluid exiting the outlet is attracted to the curved surface of the attachment by the Coanda effect. This in turn causes hair that is presented to the attachment to automatically wrap around the surface to style into curls.

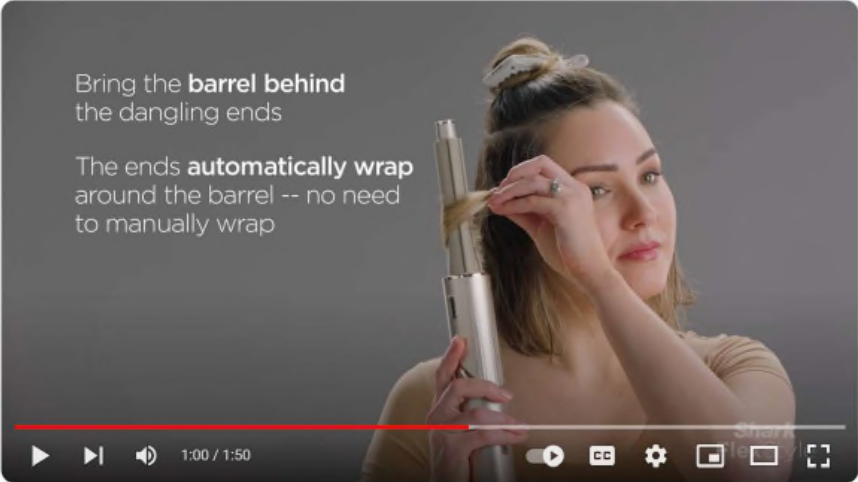
Claim Limitation	FlexStyle – Tapered Barrel
	 The diagram shows a perspective view of a tapered barrel attachment. A black arrow points to the outer surface of the barrel, labeled "Substantially contiguous wall". A series of blue arrows along the bottom edge of the barrel indicate fluid flow moving tangentially along the outer surface. The word "OUTLET" is written below the barrel. The attachment is shown connected to a larger, more complex structure on the right. The configuration of the outlet is critical to the creation of the Coanda effect. The fact that hair automatically wraps around the cylindrical second portion (as shown in the videos, including SharkNinja's video) is evidence that the outlet is in fact configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment.

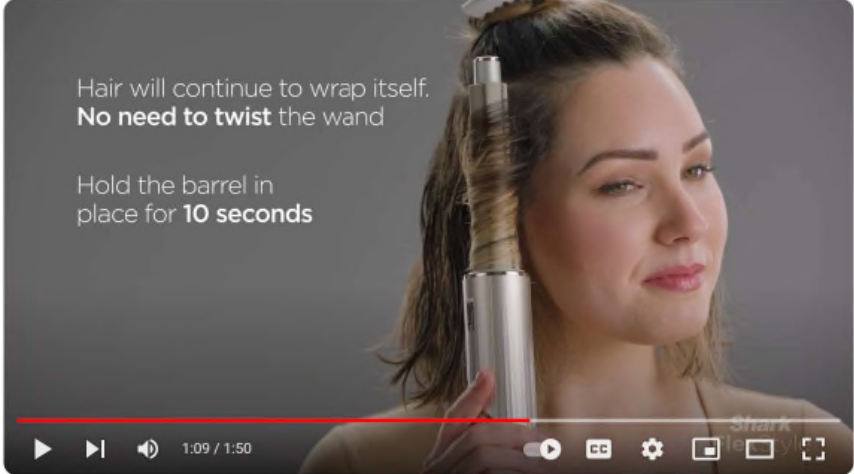
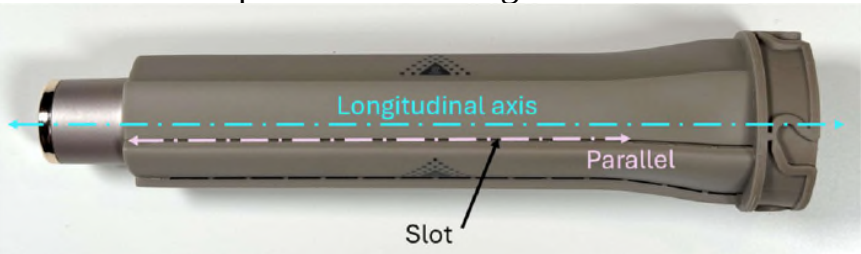
Claim Limitation	FlexStyle – Tapered Barrel
	 Hair Styler Soft Curls for Wavy Hair with the Shark FlexStyle™ .95" Auto-Wrap Curlers  Shark Beauty 2.76K subscribers Subscribe  58   Share  Save 

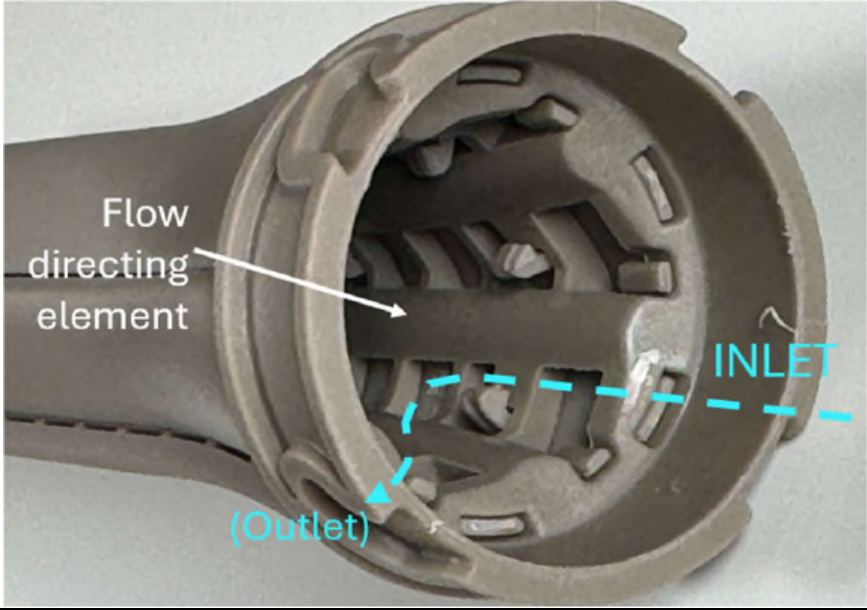
Claim Limitation	FlexStyle – Tapered Barrel
	 Hair Styler Soft Curls for Wavy Hair with the Shark FlexStyle™ .95" Auto-Wrap Curlers  Shark Beauty 2.76K subscribers  58  Share  Save ... EX2070 (https://www.youtube.com/watch?v=kMKtGb2wWrk) Petitioners' documents confirm that the FlexStyle uses the Coanda effect to curl the hair, and that its outlet is configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion. EX2028, EX2029.
1[g] wherein the external surface of the substantially contiguous wall is an outermost surface of the attachment along an entire length of the attachment from a	As shown below, the FlexStyle includes an outermost surface along the entire length of the attachment from the beginning of each slot to the end of each slot. This arrangement enables the air to flow onto and across the outermost surfaces to help guide the hair.

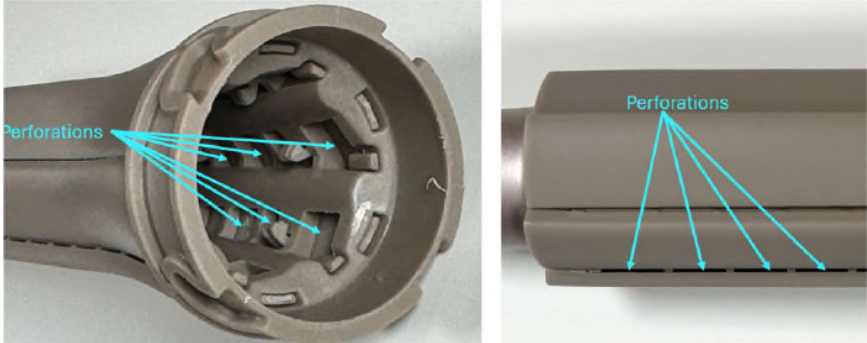
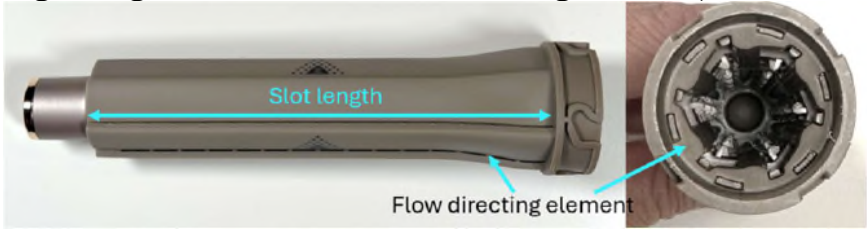
Claim Limitation	FlexStyle – Tapered Barrel
beginning of the at least one slot to an end of the at least one slot,	
1[h] and wherein the distal end of the attachment is closed.	As shown below, the distal end of the FlexStyle curler attachment is closed.

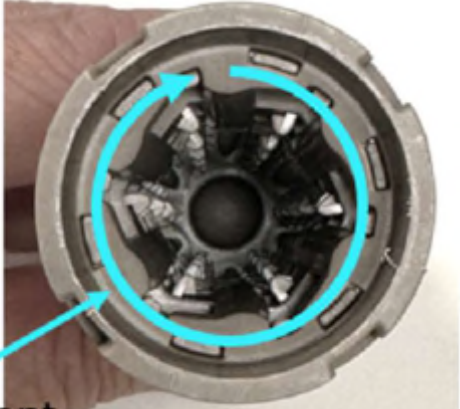
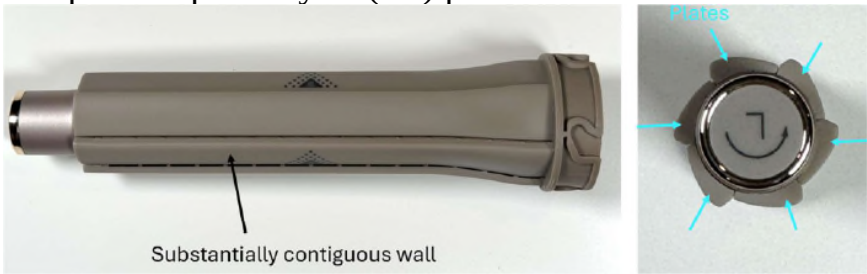
Claim Limitation	FlexStyle – Tapered Barrel
	
2. The attachment of claim 1, wherein the outlet comprises a plurality of slots radially spaced around the attachment.	As shown below, the FlexStyle includes a plurality of (i.e., six) slots radially spaced around the attachment. 
3. The attachment of claim 1, wherein the attachment is configured so that, in use, the fluid emitted from the outlet is attracted to the external surface of the attachment.	As shown below, including SharkNinja's video, the FlexStyle curler attachment is configured so that, in use, the fluid emitted from the outlet is attracted to the external surface of the attachment (e.g., Coanda effect).

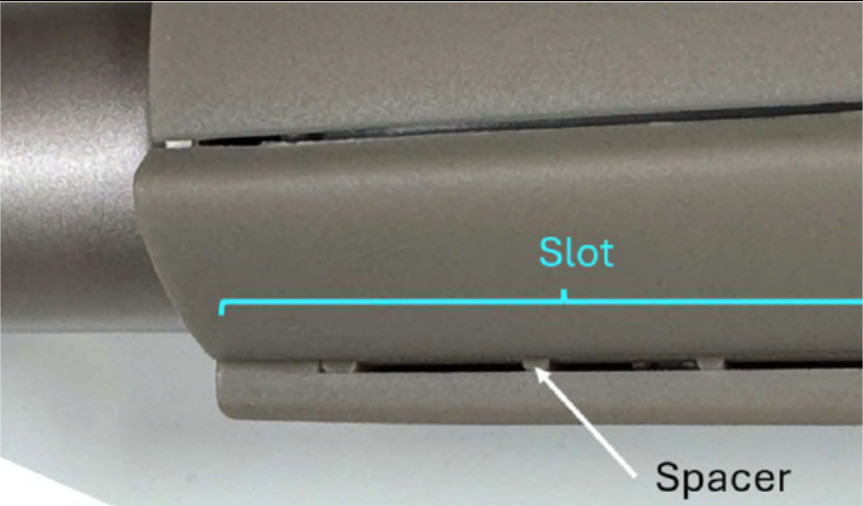
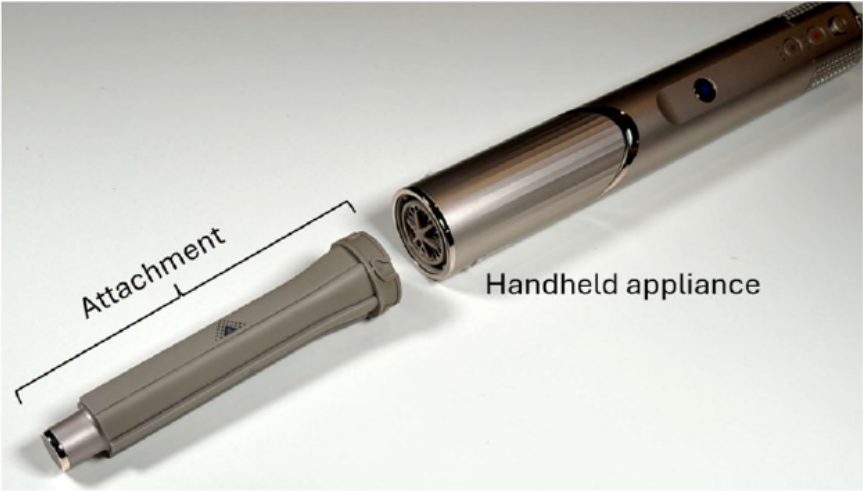
Claim Limitation	FlexStyle – Tapered Barrel
	 Hair Styler Soft Curls for Wavy Hair with the Shark FlexStyle™ .95" Auto-Wrap Curlers  Shark Beauty 2.76K subscribers Subscribe  58   Share  Save 

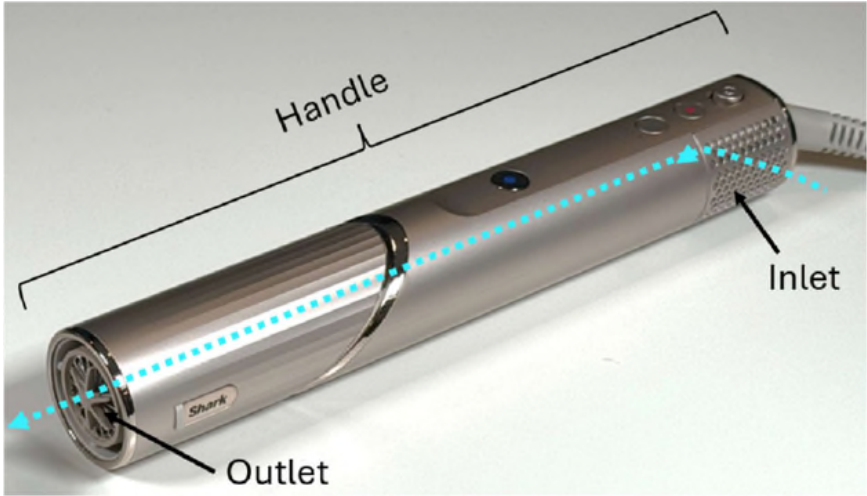
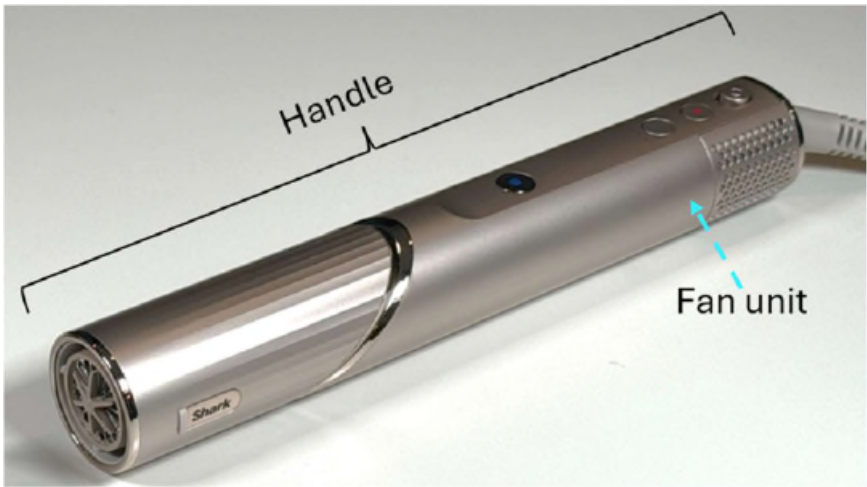
Claim Limitation	FlexStyle – Tapered Barrel
	 Hair Styler Soft Curls for Wavy Hair with the Shark FlexStyle™ .95" Auto-Wrap Curlers Shark Beauty 2.76K subscribers Subscribe 58 Share Save EX2070 (https://www.youtube.com/watch?v=kMKtGb2wWrk)
5. The attachment of claim 1, wherein the attachment has a longitudinal axis and the at least one slot is parallel to the longitudinal axis.	As shown below, the FlexStyle attachments include a longitudinal axis, and at least one slot parallel to the longitudinal axis.  Longitudinal axis Parallel Slot
8. The attachment of claim 1, further comprising a flow	As shown below, the FlexStyle includes a flow directing element between the inlet and the outlet, which is the skeletal substructure of the FlexStyle. This

Claim Limitation	FlexStyle – Tapered Barrel
directing element between the inlet and the outlet.	element changes the direction that air flows out from the outlet tending to give a flow that is more normal to the surface of the attachment. 
9. The attachment of claim 8, wherein the flow directing element comprises a perforated layer.	As shown below, the FlexStyle's flow directing element includes a perforated layer (see discussion of claim 8).

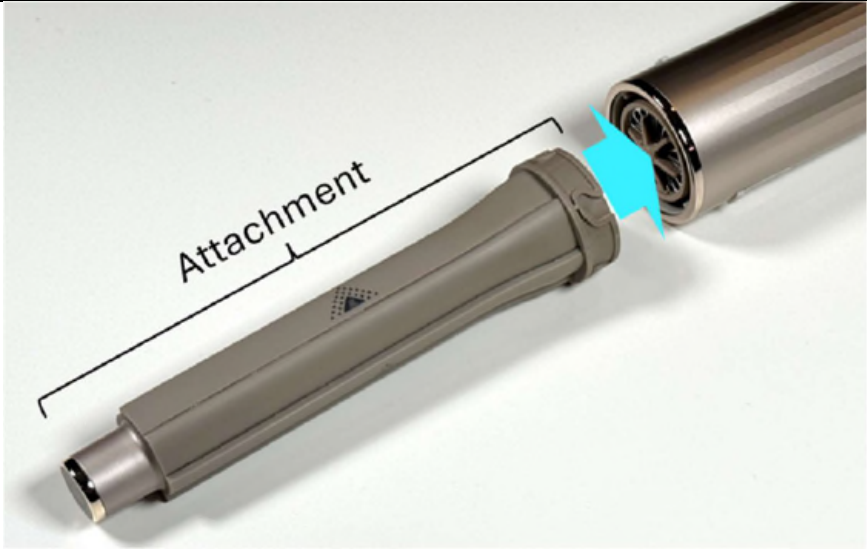
Claim Limitation	FlexStyle – Tapered Barrel
	
12. The attachment of claim 9, wherein the flow directing element extends substantially along a length of the at least one slot.	As shown below, the FlexStyle's flow directing element extends substantially along a length of the at least one slot (see also discussion of claim 8 regarding discussion of flow directing element). 
13. The attachment of claim 9, wherein the flow directing element extends substantially around an inner circumference of the attachment.	As shown below, the FlexStyle's flow directing element extends substantially around an inner circumference of the attachment (see also discussion of claim 8 regarding flow directing element).

Claim Limitation	FlexStyle – Tapered Barrel
	 Flow directing element
14. The attachment of claim 1, wherein the wall comprises a plurality of plates.	As shown below, the FlexStyle curler attachment includes a wall that comprises a plurality of (six) plates.  Substantially contiguous wall Plates
15. The attachment of claim 1, wherein the at least one slot is formed by a gap between adjacent sections of the wall that are joined by at least one spacer disposed between the beginning of the at least one slot and the end of the at least one slot and the end	As shown below, the FlexStyle curler attachment's at least one slot is formed by a gap between adjacent sections of the wall that are joined by at least one spacer disposed between the beginning of the at least one slot and the end of the at least one slot to maintain the gap.

Claim Limitation	FlexStyle – Tapered Barrel
of the at least one slot to maintain the gap.	 A close-up photograph of a tapered barrel. A horizontal slot is visible, with a red bracket above it labeled "Slot". Below the slot, a white arrow points to a small rectangular feature labeled "Spacer".
17[pre] A hand held appliance comprising	As shown below, the FlexStyle includes a hand held appliance. See analysis related to claim element 1[pre], incorporated here by reference.  A photograph showing two components: a "Handheld appliance" and an "Attachment". The handheld appliance is a long, cylindrical device with a blue button and a circular nozzle at one end. The attachment is a smaller, tapered component with a similar nozzle. A bracket labeled "Attachment" spans the length of the smaller component.

Claim Limitation	FlexStyle – Tapered Barrel
17[a] a handle having a fluid flow path from a handle inlet to a handle outlet,	As shown below, the FlexStyle includes a handle having a fluid flow path from a handle inlet to a handle outlet.  The diagram shows a perspective view of the FlexStyle handle. A bracket labeled 'Handle' spans the length of the device. A dashed blue line with arrows at both ends indicates the fluid flow path, starting from the 'Inlet' at the right end and ending at the 'Outlet' at the left end. The 'Shark' logo is visible on the side of the handle.
17[b] a fan unit for drawing fluid into the handle inlet,	As shown below, the FlexStyle includes a fan unit for drawing fluid into the handle inlet.  The diagram shows a perspective view of the FlexStyle handle, similar to the one above. A bracket labeled 'Handle' spans the length of the device. A dashed blue arrow points from the 'Fan unit' towards the 'Inlet' at the right end of the handle. The 'Shark' logo is visible on the side of the handle.

Claim Limitation	FlexStyle – Tapered Barrel
	How it works  Cool Shot Press and hold Cool Shot as desired to seal the hair cuticle and lock in your styles. Airflow Low / Medium / High Temperature No Heat / Low / Medium / High On/Off Styler Attachment Location Push styler onto the nozzle until it clicks. 'click' Styler Lock Slide lock down to unlock the styler so it can be removed. Hinge Latch Slide latch down and rotate the nozzle left to switch to the hair dryer mode. TIP: All 3 red Temperature lights will be OFF when Cool Shot is engaged. EX2036 (https://support.sharkclean.com/hc/en-us/article_attachments/8830005972764)
17[c] and an attachment for attaching to the handle,	As shown below, the FlexStyle includes an attachment (i.e., the Auto-Wrap Curler attachment) for attaching to the handle. See analysis related to claim element 1[pre], incorporated here by reference.

Claim Limitation	FlexStyle – Tapered Barrel
	
17[d] the attachment comprising an inlet in a proximal first portion of the attachment;	See analysis related to claim element 1[a], incorporated here by reference.
17[e] an outlet in a cylindrical second portion of the attachment;	See analysis related to claim element 1[b], incorporated here by reference.
17[f] and a fluid flow path between the inlet and the outlet,	See analysis related to claim element 1[c], incorporated here by reference.
17[g] wherein the outlet in the cylindrical second portion of the attachment comprises at least one slot extending continuously from the proximal first portion to a distal end of the attachment,	See analysis related to claim element 1[d], incorporated here by reference.
17[h] wherein the outlet is at least partially defined by an external	See analysis related to claim element 1[e], incorporated here by reference.

Claim Limitation	FlexStyle – Tapered Barrel
surface of a substantially contiguous wall of the attachment	
17[i] and is configured to direct fluid flow emitted from the outlet tangentially along and around the external surface of the substantially contiguous wall to form a circumferential fluid flow around the cylindrical second portion of the attachment that encourages hair to automatically wrap around the cylindrical second portion,	See analysis related to claim element 1[f], incorporated here by reference.
17[j] wherein the external surface of the substantially contiguous wall is an outermost surface of the attachment along an entire length of the attachment from a beginning of the at least one slot to an end of the at least one slot,	See analysis related to claim element 1[g], incorporated here by reference.
17[k] and wherein the distal end of the attachment is closed.	See analysis related to claim element 1[h], incorporated here by reference.
18. The appliance of claim 17, wherein the outlet comprises a plurality of slots radially spaced around the attachment.	See analysis related to claim 2, incorporated here by reference.

Claim Limitation	FlexStyle – Tapered Barrel
19. The appliance of claim 17, wherein the attachment is configured so that, in use, the fluid emitted from the outlet is attracted to the external surface of the attachment.	See analysis related to claim 3, incorporated here by reference.
21. The appliance of claim 17, wherein the attachment has a longitudinal axis and the at least one slot is parallel to the longitudinal axis.	See analysis related to claim 5, incorporated here by reference.
24. The appliance of claim 17, further comprising a flow directing element between the inlet and the outlet.	See analysis related to claim 8, incorporated here by reference.
25. The appliance of claim 24, wherein the flow directing element comprises a perforated layer.	See analysis related to claim 9, incorporated here by reference.
27. The appliance of claim 24, wherein the flow directing element extends substantially along a length of the at least one slot.	See analysis related to claim 12, incorporated here by reference.
29. The appliance of claim 24, wherein the flow directing element extends	See analysis related to claim 13, incorporated here by reference.

Claim Limitation	FlexStyle – Tapered Barrel
substantially around an inner circumference of the attachment.	
30. The appliance of claim 17, wherein the appliance is a hair care appliance.	See analysis related to claim element 1[pre], incorporated here by reference.
31. The appliance of claim 17, wherein the appliance is a hot styling appliance.	As shown below, the FlexStyle is a hot styling appliance, a fact Petitioners admit. See, e.g., EX2008, ¶ 31 (“The Shark FlexStyle™ Air Styling & Drying System is a revolutionary product that can act as a fast, powerful hair dryer, and with just a twist transforms into an ultra-versatile multi-function hair styling product”).

How it works.



TIP: All 3 red temperature lights will be OFF when Cool Shot is engaged.

Claim Limitation	FlexStyle – Tapered Barrel
	How it works  Cool Shot Press and hold Cool Shot as desired to seal the hair cuticle and lock in your styles. Airflow Low / Medium / High Temperature No Heat / Low / Medium / High On/Off Styler Attachment Location Push styler onto the nozzle until it clicks. Styler Lock Slide lock down to unlock the styler so it can be removed. Hinge Latch Slide latch down and rotate the nozzle left to switch to the hair dryer mode. TIP: All 3 red Temperature lights will be OFF when Cool Shot is engaged. EX2036 (https://support.sharkclean.com/hc/en-us/article_attachments/8830005972764)