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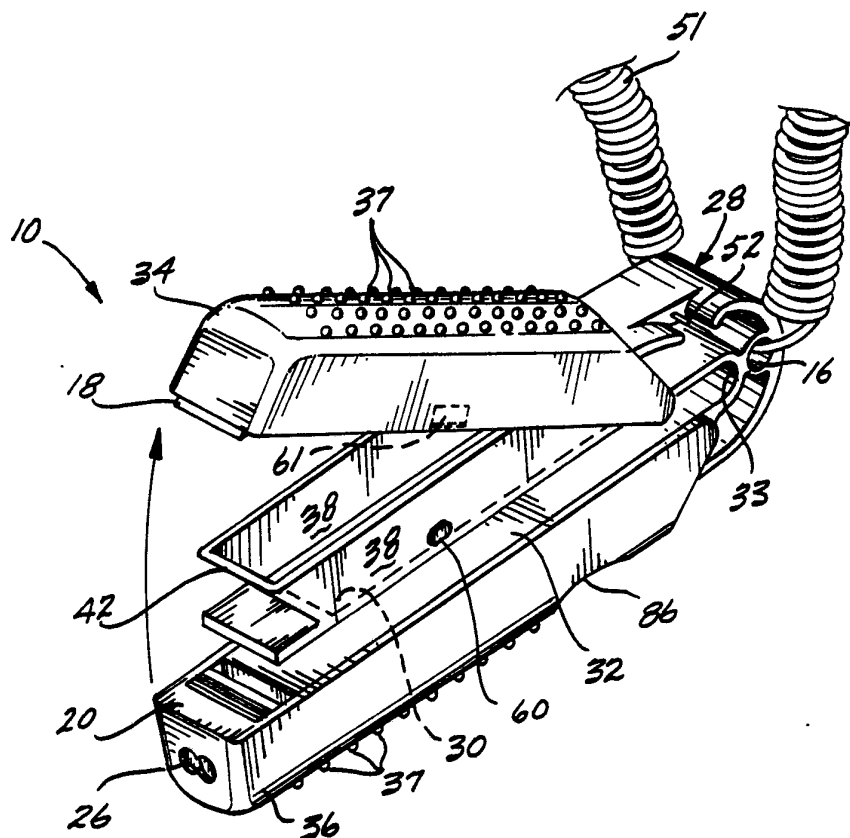
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(54) Title: FISHING TOOL

(57) Abstract

A multipurpose fishing tool (10) to aid in the cutting of line and the maintenance of fish hooks and flies is disclosed. The fishing tool comprises two normally spaced-apart handgrips (12, 14) that are attached to a common flexure assembly (28). A knife blade (18) is mounted to one of the handgrips and is oriented and directed to abut an anvil surface (20) on the other handgrip. One of the handgrips contains a storage compartment (22) that is normally enclosed by an outer cover (34) of the handgrip. The second handgrip contains a file (24) that can be extended through an opening (26) in the butt end of the handgrip by the actuation of a lever (76) normally seated in a slot (85) in the base of the handgrip. A pin (52) for cleaning the eyelets of flies and hooks is mounted to the frame of the tool.



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FISHING TOOL

Field of the Invention

This invention relates generally to a tool to aid fishermen and, more particularly, to a multifunction tool that facilitates line cutting, attachment, removal,
5 storage, and maintenance of fishhooks, flies, and the like.

Background of the Invention

Fishing requires persons practicing the sport to perform a number of different tasks in order to maximize the possibility of having a successful outing. Some of these tasks are associated with tending to the fishing line, which is prone to
10 becoming damaged by tangling, bruising, or cutting. When this occurs, fishermen often have to spend time cutting away the damaged sections of line and cutting off and reattaching hooks, flies, lures, and the like to an undamaged section of the line. Also, fishermen need to keep their hooks sharp so as to increase their chances of being able to land fish. This requires fishermen to frequently file their
15 hooks so that they are always in the appropriate state of readiness. The need to perform these tasks takes away from the time one is able to actually fish and, some believe, serves to detract from the pleasure of the sport. Moreover, some fishermen, such as fly fishermen who fish in midstream, must hold their fishing equipment in their hands or under their arms while tending it. This requires these individuals to exercise a degree of concentration and mechanical dexterity that can
20 further detract from the enjoyment of the activity.

There have been some attempts at providing multipurpose tools to assist fishermen in the repair and maintenance of their equipment. A disadvantage of many of these tools is that, while they serve some functions, they are often difficult to use, especially when a person has only one hand to work the tool, since the
25 other hand is needed to hold the fishing rod or the portion of line being tended.

For example, one known tool requires a person to unsnap and then rotate a lever before the tool can be used to cut line. The same tool also requires a person to place his thumbnail in relatively small indentations in order to access the blades that are stored between the upper and lower plates of the tool. These activities
5 require a degree of concentration and an element of time that contributes to the complexity of the fishing process and can reduce the pleasure of the sport.

Summary of the Invention

This invention comprises a multifunction fishing tool that can be used to cut line and aid in the insertion and removal of fishhooks, flies, weights, bobbers, and
10 the like to and from the line. Only a minimal degree of manual dexterity and time is required to use the individual elements of the tool of this invention and make the tool easy to use when one is trying to accomplish a number of tasks.

The fishing tool of this invention is in the form of a U-shaped device that comprises two normally spaced-apart, hollow handgrips that are attached to a
15 common flexure or hinge assembly so that they can be squeezed together. One of the handgrips is provided with a knife blade that is oriented and dimensioned to abut an anvil surface on the opposed handgrip when the grips are squeezed together. One of the handgrips includes a storage compartment under the outer cover of the grip. The other handgrip holds a file that can be extended for use or
20 retracted back into the handgrip for storage.

In a preferred embodiment of this invention, the fishing tool has a frame formed of an integral piece of material with two spaced-apart inner walls that extend from a common flexure section. Outer covers are secured over each inner wall and are shaped so that, in combination with the associated frame inner wall,
25 they serve as the handgrips. Additional frame wall members are formed adjacent one of the frame inner walls to define the storage compartment. The outer cover associated with the storage compartment can be selectively opened or closed so that the storage compartment can be accessed or covered. The second cover, in combination with the associated inner wall, forms a space in which the file is normally
30 stored. A lever, which is linked to the file, allows the file to be extended or retracted. The knife blade is mounted to the end of one of the covers and is oriented and dimensioned to abut an anvil surface on the end of the other cover. A pin is provided in a recessed break in the frame for opening and cleaning fly and hook eyelets.

35 The fishing tool of this invention can be used to cut line or things, store items such as hooks, flies, and weights, sharpen hooks, and clean fly and hook

eyelets. The knife blade is used by merely squeezing the handgrips together. A simple, one-stroke motion of the lever is all that is required to extend the file for use or retract it for storage. The eyelets of flies and hooks can quickly be cleaned by simply passing them over the pin point. Hooks, flies, and weights can be
5 stored in the compartment so that one does not lose an inordinate amount of time searching for these small items. These features make this tool well suited for use, especially when one is also holding a fishing pole and/or trying to tend to a fishing line as quickly as possible.

Moreover, the fishing tool of this invention is a relatively compact and
10 lightweight device. With the aid of a coil cord that is passed through an opening formed in the frame, the tool can be worn around the neck of the user so that when needed it is readily available and, when not needed, the tool is out of the way and does not interfere with other fishing activities.

Still another advantage of this tool is that when the file is not in use it is
15 stored inside the body of the tool. This minimizes the file's exposure to the elements, which reduces the rate at which it can corrode. Most of the remaining elements of the tool of this invention can be formed of noncorrosive material so that, even with repeated exposure to salt water, there is little possibility the tool will rust. Furthermore, the knife blade of this tool is positioned to abut a surface that
20 functions as a cutting surface yet does not significantly dull the blade. These features of the tool of this invention serve to maximize the useful life of the tool.

Brief Description of the Drawings

The invention is pointed out with particularity in the claims. The above and further advantages of this invention may be better understood by referring to
25 the following description, taken in conjunction with the accompanying drawings, in which:

FIGURE 1 is a perspective view of a fishing tool constructed in accordance with this invention;

FIGURE 2 is a perspective view of the fishing tool depicted in FIGURE 1
30 wherein one of the covers is open to illustrate the container that lies therebeneath;

FIGURE 3 is a cross-sectional view of the fishing tool depicted in FIGURE 1 taken along line 3--3 in FIGURE 1 and shows in dashed lines the file extended and retracted, the lever pivoted, and the storage compartment cover open and closed;

FIGURES 4a-c are perspective views of one embodiment of the invention depicting the extension of the file out of one of the handgrips that form the fishing tool of this invention;

FIGURE 5 is a perspective view of an alternative embodiment of the fishing tool of this invention;

FIGURE 6 is a cutaway view of the fishing tool of FIGURE 5 along the longitudinal axis of the fishing tool; and

FIGURE 7 is a partial cross-sectional view of the fishing tool of FIGURE 7 taken along the lateral axis of the fishing tool to show how the file is secured in place.

Detailed Description of the Preferred Embodiment

FIGURES 1 and 2 depict a fishing tool 10 constructed in accordance with this invention that comprises a pair of first and second handgrips, 12 and 14, respectively, that are connected to a common hinge assembly 16 so that they can be squeezed together. A knife blade 18 is attached to the end of the first handgrip 12 and is oriented and dimensioned to abut an anvil surface 20 on the opposed portion of the second handgrip 14. The first handgrip 12 also includes a storage compartment 22 that is normally covered. An extendable file 24 (FIGURE 3) is normally stored in the second handgrip 14. When needed, the file 24 is extended through an opening 26 formed in the end of the second handgrip 14.

As best represented by FIGURES 2 and 3, the fishing tool 10 has a frame 28 formed of an integral piece of flexible, noncorrosive material, such as acetyl resin plastic marketed by the duPont Company under the trade name DELRIN II. The frame 28 has a pair of spaced-apart inner walls 30 and 32, respectively, that are attached to a common U-shaped flexure section 33 that forms the hinge assembly 16. A first cover 34 is disposed over frame inner wall 30 to enclose the storage compartment 22 and serve as the first handgrip 12. A second cover 36 is disposed over frame inner wall 32 to enclose the file 24 and serve as the second handgrip 14. A pair of sidewalls 38, a front wall 40 adjacent the flexure section 33, and a rear wall 42 extend outward from the frame first inner wall 30 to form the storage compartment 22. The rear wall 42 extends out from the frame first inner wall at an angle of approximately 45 degrees in order to facilitate access to the storage compartment 22.

Frame 28 also has an end wall 44 (FIGURE 3) that extends outward from the frame second inner wall 32 adjacent the flexure 33. A pair of truncated sidewalls 45, one shown in phantom in FIGURE 3, extend between the frame second

inner wall 32 and end wall 44. In the depicted embodiment of the invention, the end wall 44 is marginally closer to the flexure 33 than the opposed front wall 40 associated with the frame first inner wall 30. However, in alternative embodiments of the invention, the storage compartment front wall 40 and the end wall 44 may be equidistant from the flexure 33 or the end wall 44 may be spaced farther from the flexure.

A frame outer wall 46 extends from the outer edge of the compartment front wall 40 to the outer edge of the end wall 44. The outer wall 46 is generally U-shaped and is spaced from the inner walls 30 and 32 and the flexure 33. Flexure 33 and the midsection of the frame outer wall 46 are joined by a pair of symmetrically opposed arcuate sections 48 that also form part of the frame 28. Arcuate sections 48, in combination with the adjacent inner surface of the frame outer wall 46, form a passageway 50 in the frame 28. A cloth-covered, circular, elastic-coil cord 51, partially shown in FIGURE 2, extends through the opening 50. The coil cord 51 allows an individual to wear the tool 10 around his neck so that the tool will be readily available when needed.

As is shown in FIGURE 3, a pin 52 may be mounted to a tab 54 in the frame outer wall 46, which extends inward toward the frame first inner wall 30 between the compartment front wall 40 and the flexure 33. The tab 54 is located approximately along the lateral midpoint of the outer wall 46. The outer wall 46 curves around the outer edge of the tab 54 and has a separation 56 adjacent the inner edge of the tab to facilitate the passage of fly and hook eyelets over the pin 52. In a preferred embodiment of the invention, pin 52 extends 150 mils (.150 inch) above the surface of tab 54; the pin is set back on the tab approximately 90 mils away from the outer surface of the outer wall; and the adjacent lateral edge of the frame outer wall 46 is 175 mils above the tab. The recessed placement of the pin 52 and its relatively short length in comparison to the surrounding outer wall 46 enclose the pin head so as to minimize the possibility of a user being pricked by the pin.

The covers 34 and 36 are formed from a resilient plastic material such as acrylonitrile-butadiene-styrene. The outer surface of the base of each cover 34 and 36 is formed with outwardly extending projections 37 to facilitate a person's ability to grip and squeeze the tool 10. The first cover 34 is releasably snap-fitted over the storage compartment 22. A pair of opposed, inwardly extending circular projections from the sides of the first cover 34 interlock into complementary indentations in the compartment sidewalls 38 adjacent the front wall 40 and the frame

first inner wall 30 to form hinge assemblies, represented in phantom by circle 58 (FIGURE 3). A pair of oval projections 60, one shown in FIGURE 2, on each of the compartment sidewalls 38 adjacent the frame first inner wall 30 interlock into complementary indentations 61, one shown in phantom in FIGURE 2, on the inside side wall of the first cover 34 to secure the cover over the storage compartment 22.

The knife blade 18 is mounted in an opening 62 (FIGURE 3) formed in the end of the cover 34 adjacent the free end of the frame first inner wall 30. The knife blade 18 is held in place by a wedge 64 secured in a first section 66 of the opening 62 that has the profile of a truncated triangle. The wedge 64 is held in place by complementary ridges 68 on the wedge and on the adjacent surface of the first cover 34 that defines the opening 62. The knife blade 18 is held in place in a second section 69 of the opening 62 that has a generally rectangular profile by wedge 64 and the adjacent inner surface of the first cover 34 that defines the opening. The knife blade 18 is dimensioned such that its cutting edge abuts an outer portion of the end of the second cover 36 that forms the anvil surface 20 when the handgrips 12 and 14 are squeezed together while the inner end of the knife blade bears against the inside of the first cover 34.

The second cover 36 is snap-fitted to the sidewalls 38 adjacent the frame second inner wall 32 by hinge assemblies similar to those used to secure the first cover 34 in place. Adhesives may be used to permanently secure the second cover to the frame 28. The second cover 36, in combination with the frame second inner wall 32, defines a space 70 in which the file 24 is normally stored. The file 24 is attached to a plastic file holder 72, also disposed inside space 70, that controls the extension and retraction of the file 24. The movement of the file holder 72, and the extension and retraction of the file 24, are controlled by a lever 76 that is pivotally attached to a hub 78 on the file holder. Both the lever 76 and the file holder hub 78 are seated in an elongate slot 80 formed in the base of the second cover 36. The outer surface of the lever 76 is dimensioned to be flush with the adjacent outer surface of the second cover 36. The lever 76 is also provided with circular projections 37 on its outer surface to further facilitate a person's ability to squeeze the handgrips 12 and 14 together. As seen best in FIGURES 3 and 4a-c, the lever 76 is connected to the file holder hub 78 by a connecting rod 82 that is spaced from the main body of the lever by a pair of longitudinally extending arms 83. The lever-connecting rod 82 is snap-fitted into an elongate circular opening 85 formed in the file holder hub 78. The free end of the lever 76 is formed with a pair of

opposed steps 84 and the cover 36 is formed with symmetrically opposed indentations 86 adjacent the slot 80 to facilitate thumb or finger insertion needed to pivot the lever so that the file 24 can be extended and retracted.

5 The file 24 is actually composed of two parallel file elements 77. Each file element 77 is a cylindrical section of metal formed with a set of teeth 79 that define a helix along the length of the element. The file elements 77 are secured together by an epoxy cement that is applied to the ends of the elements.

10 The closed end of the second cover 36 is formed with the opening 26 through which file 24 is extended and retracted. In the illustrated embodiment of the invention, opening 26 is in the form of two overlapping circles so that the individual file elements 77 that form the file 24 can be extended and retracted therethrough. Referring to FIGURE 3, it can be seen that the second cover 36 also defines a space 87 between its closed end and the free end of the frame second inner wall 32 in which an oil-carrying pad 88 may be located for lubricating and cleaning the file 24. In a preferred embodiment of the invention, a felt washer that has been soaked in oil functions as the oil-carrying pad 88; the washer is positioned so that the file 24 extends through the opening formed in the washer. One preferred oil for coating the file 24 is marketed by CRC Industries under the trade name SP-250. Other oils, which are capable of inhibiting corrosion of the file 24 may, of course, be used to coat the file. A plastic washer 90 is positioned against the oil-carrying pad 88. The oil-carrying pad 88 and the washer 90 are held in place by the file 24, which extends through the central openings of these elements. The second cover 36 is formed with an inwardly extending tab 92 that further blocks movement of the pad 88 and washer 90.

25 In the depicted embodiment of the invention, the second cover 36 is formed with a flat surface between the pad and washer space 87 and its butt end. This surface functions as the anvil surface 20 against which the cutting edge of the knife blade 18 abuts.

30 As depicted in FIGURE 4a, the file 24 is stored inside the second cover with the free end of the lever 76 and its opposed steps 84 positioned near the cutting end of the tool 10. When the file 24 is to be used, the lever 76 is pivoted upwardly so that the file can be extended out of the opening 26, as shown in FIGURE 4b. The file 24 can then be held in the fully extended position by locking the lever 76 in the second cover 36 so that the free end of the lever is positioned near the cutting end of the tool 10, as depicted in FIGURE 4c. The file is retracted for storage by reversing the procedure that was used to extend it.

The fishing tool 10 of this invention can be used to accomplish a number of tasks fishermen need to perform and allows them to be performed with a minimal amount of effort. All that is necessary to use the knife blade 18 is to simply press the handgrips 12 and 14 together. The file 24 can be accessed by a simple one-
5 stroke motion of inserting a thumb into the step 84 formed in the lever and the indentation 86 formed in the second cover 36, sliding the file holder 72 with the lever, and then flipping the lever backward to lock the file in place. A fishhook is sharpened by simply running the hook between the separate file elements 77 that form the file 24; both sides of the hook will be sharpened simultaneously by the
10 individual file elements. This eliminates the need to have to first sharpen one side of the hook and then the other side. The pin 52 is readily accessible for cleaning fly or hook eyelets. The storage compartment 22 provides space inside the tool for storing hooks, flies, sinkers, and the like that fishermen often need to attach to the end of the line. Thus, the tool 10 makes it possible for a fisherman to perform a
15 number of tasks with a minimal amount of concentration and in a minimal amount of time. These features also make the tool 10 well suited for use when a fisherman is also holding a fishing pole and/or is desirous of returning the hook to the water as quickly as possible.

Furthermore, the tool 10 of this invention is both light in weight and compact in size. These features of the tool 10, in combination with the coil cord 51,
20 allow the tool 10 to be worn close to the chest of the user so that when it is not needed it does not interfere with other activities yet remains readily accessible when needed.

Most of the components of the fishing tool 10 are formed from noncorrosive materials. The largest metal component, the file 24, is normally contained
25 inside space 70, which minimizes its exposure to corrosive agents in the environment, such as salt water. Also, the knife blade 18 abuts an anvil surface 20 formed of a material that will not deform, so that articles placed thereon can be cut and yet it will not dull the knife blade. These features of the invention serve to
30 maximize the useful life of the tool 10.

Still another advantage of the tool 10 is that the oil-carrying pad 88 cleans the file 24 each time it is extended and retracted. This lubrication serves both to simplify the effort required to sharpen hooks and to further minimize the corrosion of the file 24.

35 An alternative fishing tool 110 of this invention is illustrated by FIGURES 5-7. Fishing tool 100 is substantially identical to fishing tool 10 of the first

described embodiment of this invention except that, instead of having a file that can be selectively extended, it includes a file 112 that is permanently mounted to the handgrip 14a with which it is associated. Access to the file 112 is through an opening 114 formed in the cover 36a that forms the handgrip 14a.

5 The opposed ends of file 112 are fitted into separate mounting blocks 116 that are secured to the outside surface of inner wall 32 of frame 28a. As seen best by FIGURE 7, the frame 28a of this embodiment of the invention is formed with two spaced-apart sidewalls 117 that extend upward from the frame inner wall 32a. Adhesives, or other suitable fastening means such as snap tabs (not illustrated), are
10 used to secure the mounting blocks 116 to the frame inner wall 28a and the side-walls 117.

Mounting blocks 116 are dimensioned to extend above the frame side-walls 114. Each mounting block 116 is formed with a groove 118 having an oval profile adjacent the outer surface of the block. File 112 is formed of two separate
15 cylindrical file elements 120 similar to the first described file elements 77. Only small arcuate sections, approximately 90-degree sections, of each file element extend above the surface of the mounting block 116. The mounting blocks 116 are further formed so that the grooves 116 extend only partially across the mounting blocks. Consequently, the opposed ends of the file elements 120 abut adjacent
20 walls of the mounting blocks 116 that define the grooves 118.

In some embodiments of the invention, the individual file elements 120 may be welded together. In other embodiments of the invention the file elements 120 may be separate from each other and the grooves 118 dimensioned to allow the file elements 120 to rotate in place. An advantage of these versions of the invention is
25 that entire cylindrical surface areas of the individual file elements 120 are allowed to wear evenly.

Cover 36a is formed so that all but the opposed ends of file 112 are accessible through opening 114. The opening 114 is actually defined by a pair of opposed lips 122 that are integral parts of the cover 36a. The lips 122 are dimensioned to extend over the perimeter of the adjacent file element 120 to prevent
30 outward movement of the file elements. Cover 34a is further formed with a pair of longitudinally extending tabs 124 with rectangular profiles that are seated in the spaces adjacent where the mounting blocks 116 extend above the frame side-walls 117. The cover 34a may be secured in place by either adhesives or snap tabs
35 (not illustrated).

An advantage of the fishing tool 110 of this embodiment of the invention is that file 112 is always exposed and therefore always accessible. Also, in the versions of the invention in which the file elements 120 are rotatably secured to the mounting blocks 116, the outer surface of the elements wears evenly to maximize the useful lifetime of the file 112. Moreover, file 110 of this invention can be constructed of relatively few components to minimize the cost of its manufacture.

This description is for the purposes of illustration only. Alternative embodiments of this invention are possible without departing from the scope of the claims. For example, in some versions of the invention it may not be necessary to provide the tool 10 with the oil-embedded pad 88. Moreover, it is not always necessary that the knife blade be carried on the tool inside the handgrip opposite the grip in which the file is contained; in some embodiments of the invention the knife blade may be mounted on the same side as the file. It is also possible to provide the tool of this invention with other features and functions without departing from the scope of the claims. For example, it may be desirable to provide the two opposed interior walls with curved indentations so that ball shot, which are normally formed with an open wedge, can be compressed together such that the wedge with its closure will squeeze down over the line to which it is to be attached. Also, in some embodiments of the tool 10 the anvil surface 20 may be formed of a separate element that is secured to the handgrip with which it is associated.

Therefore, it is the object of the appended claims to cover all such variations and modifications as come within the true scope and spirit of the invention.

The embodiments of the invention in which an exclusive property or privilege is claimed are defined as follows:

1. A fishing tool comprising:
 - a generally U-shaped frame comprising two spaced-apart inner walls attached to a U-shaped flexure, said frame formed of an integral piece of material;
 - first and second covers, each said cover disposed over a separate one of said frame inner walls such that each cover and associated frame inner wall form a handgrip;
 - a knife blade on a first one of said handgrips and an anvil surface on the other of said handgrips, wherein said knife blade is oriented and positioned to abut said anvil surface when said handgrips are squeezed together; and
 - a file disposed in one of said handgrips.
2. The fishing tool of Claim 1, further including a storage compartment disposed in one of said handgrips.
3. The fishing tool of Claim 1 or 2, wherein said file is mounted in one of said handgrips to be moved between a stored position in said handgrip and an extended position away from said handgrip.
4. The fishing tool of Claim 1 or 2, wherein said file is permanently mounted in one of said handgrips and said handgrip cover is formed with an opening through which said file is accessed.
5. The fishing tool of Claim 1, wherein each said cover extends beyond said frame inner wall with which said cover is associated and said knife blade is mounted to one of said covers and said anvil surface is disposed on said other cover opposite said knife blade.
6. The fishing tool of Claim 5, wherein a pair of sidewalls and a front wall and a rear wall are attached to a first one of said frame inner walls to form a storage compartment and said cover associated with said frame first inner wall is releasably secured to said sidewalls over said storage compartment.

7. The fishing tool of Claim 3, wherein said file is disposed in a space between one of said frame inner walls and said cover associated therewith, said file is attached to a file holder also disposed in said space, a lever is pivotally attached to said file holder for extending and retracting said file, and said lever is normally seated in a slot formed in said cover.

8. The fishing tool of Claim 6, wherein said file is disposed in a space between a second of one of said frame inner walls and said cover associated therewith, said file is attached to a file holder also disposed in said space, a lever is pivotally attached to said file holder for extending and retracting said file, and said lever is normally seated in a slot formed in said cover.

9. The fishing tool of Claim 6, wherein said frame further includes: an outer wall disposed around said frame inner walls and said flexure and connected to said frame inner walls by at least one intermediate wall, a tab integral with said frame outer wall and directed to one of said frame inner walls, and a pin mounted to said tab.

10. The fishing tool of Claim 8, wherein said frame further includes an outer wall disposed around said frame inner walls and said flexure and connected to said frame inner walls by at least one intermediate wall, a tab integral with said frame outer wall and directed to one of said frame inner walls, and a pin mounted to said tab.

11. The fishing tool of Claim 1 or 3, wherein said file is composed of two parallel file elements wherein each said file element is in the form of a cylinder with teeth formed on the outer surface thereof, and said file elements are affixed together at at least one end.

12. The fishing tool of Claim 4, wherein said file is composed of two parallel file elements wherein each said file element is in the form of a cylinder with teeth formed on the outer surface thereof, and said file elements are rotatably mounted to said frame.

13. The fishing tool of Claim 10, wherein said frame is formed with an opening and a cord is disposed in said opening.

14. The fishing tool of Claim 3, further including an oil-carrying pad disposed in said cover under which said file is stored, said oil-carrying pad disposed in a space in said cover adjacent an opening formed in said cover through which said file is extended and retracted such that when said file is extended and retracted said file abuts said oil-embedded pad.

15. The fishing tool of Claim 8, wherein said frame, said covers, said anvil surface, said file holder, and said lever are formed from plastic material.

16. A fishing tool, comprising:

a generally U-shaped frame formed of an integral piece of material comprising two spaced-apart inner walls attached to a U-shaped flexure and a pair of sidewalls, a front wall and a rear wall attached to one of said frame inner walls to define a storage compartment;

first and second covers, each said cover disposed over a separate one of said frame inner walls such that each said cover and frame inner wall pair forms a handgrip, wherein said cover disposed over said frame inner wall associated with said storage compartment is releasably secured to said sidewalls over said storage compartment; and

a knife blade on a first one of said handgrips and an anvil surface on a surface of the other of said handgrips, wherein said knife blade is oriented and positioned to abut said anvil surface when said handgrips are squeezed together.

17. The fishing tool of Claim 16, further including a file attached to one of said handgrips.

18. The fishing tool of Claim 17, wherein said file is located in said handgrip that does not include said storage compartment.

19. The fishing tool of Claim 18, wherein said file is mounted in said handgrip to have a first, stowed position wherein said file is located in said handgrip and a second, exposed position wherein said file is extended away from said handgrip.

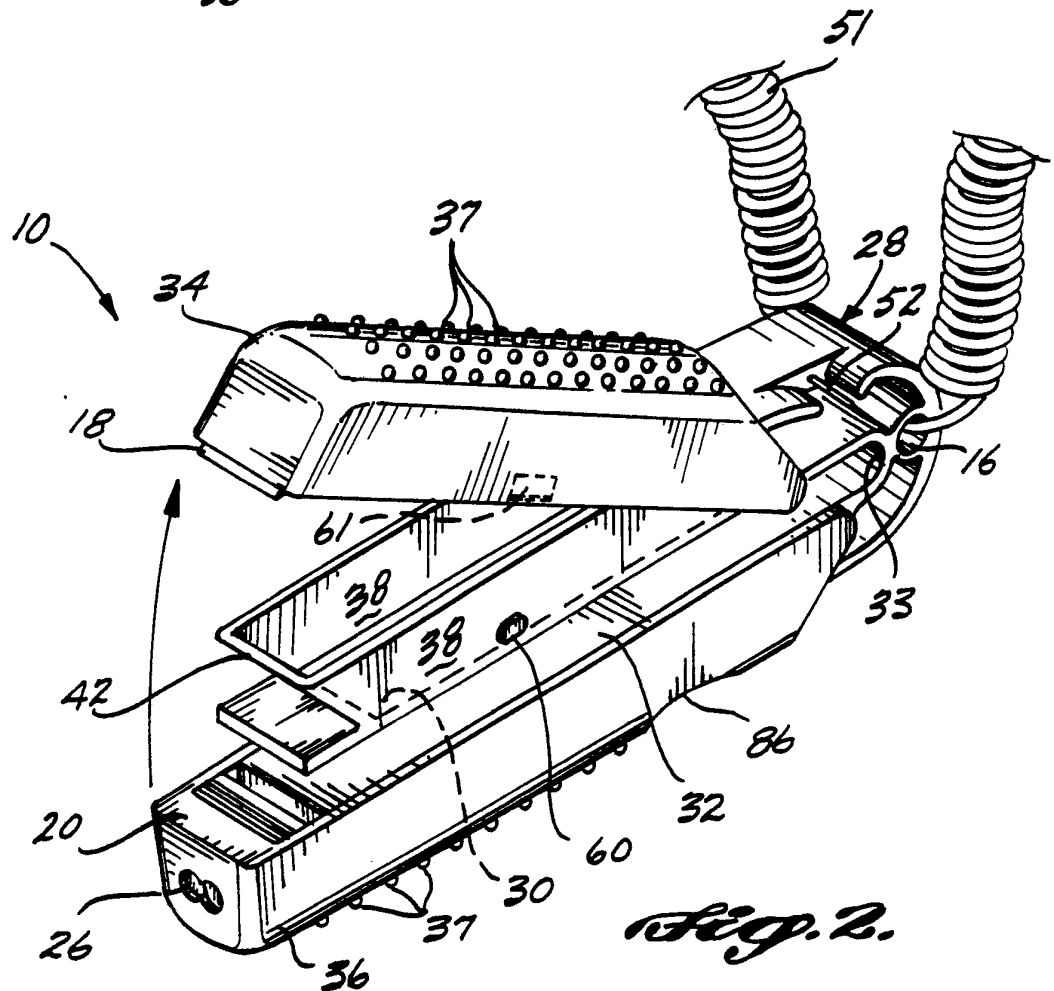
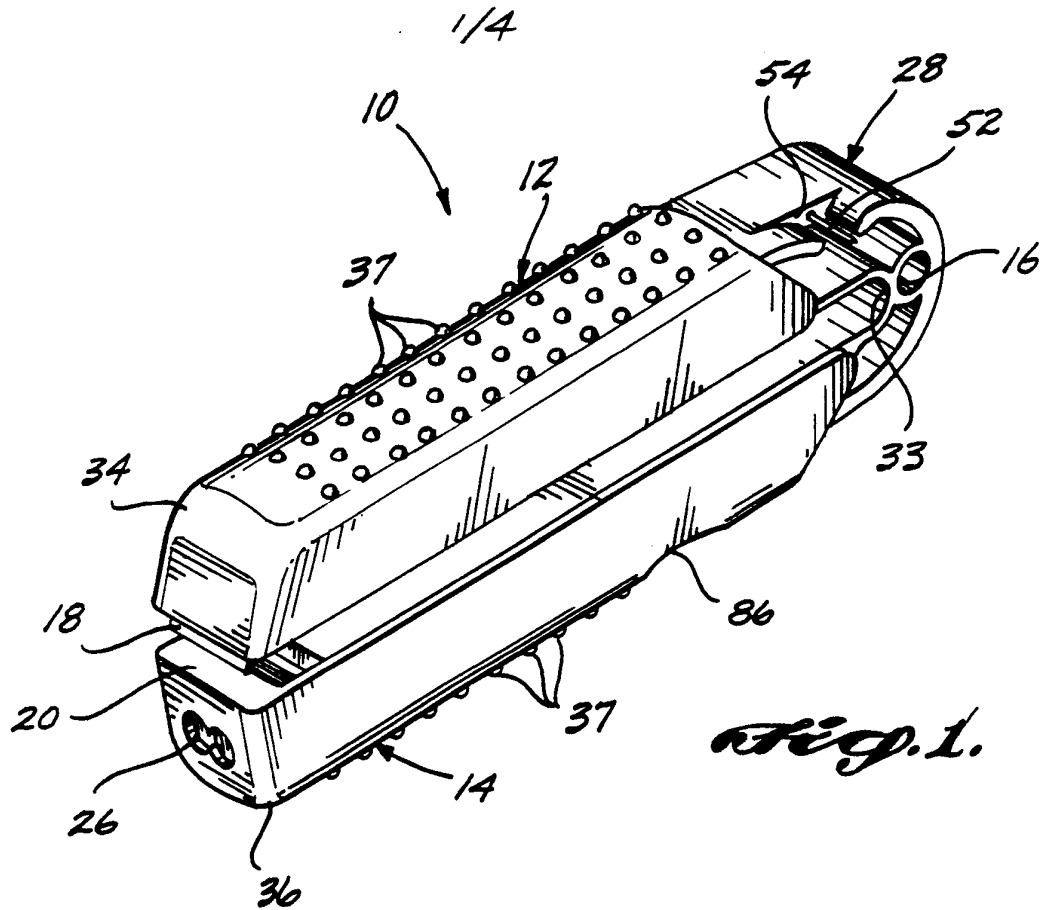
20. The fishing tool of Claim 18, wherein said file is permanently mounted in said handgrip and said handgrip cover is formed with an opening through which said file is accessed.

21. The fishing tool of Claim 16, wherein each said cover extends beyond said frame inner wall with which said cover is associated and said knife blade is mounted to one of said covers and said anvil surface is disposed on said other cover opposite said knife blade.

22. The fishing tool of Claim 16, wherein said frame further includes an outer wall disposed around said frame inner walls and said flexure and connected to said frame inner walls by at least one intermediate wall, a tab integral with said frame outer wall and directed to one of said frame inner walls, and a pin mounted to said tab.

23. The fishing tool of Claim 16, wherein said frame further includes an outer wall disposed around said frame inner walls and said flexure and connected to said frame inner walls by at least one intermediate wall, a tab integral with said frame outer wall and directed to one of said frame inner walls, and a pin mounted to said tab.

24. The fishing tool of Claim 16, wherein said frame, said covers, and said anvil surface are formed from plastic material.



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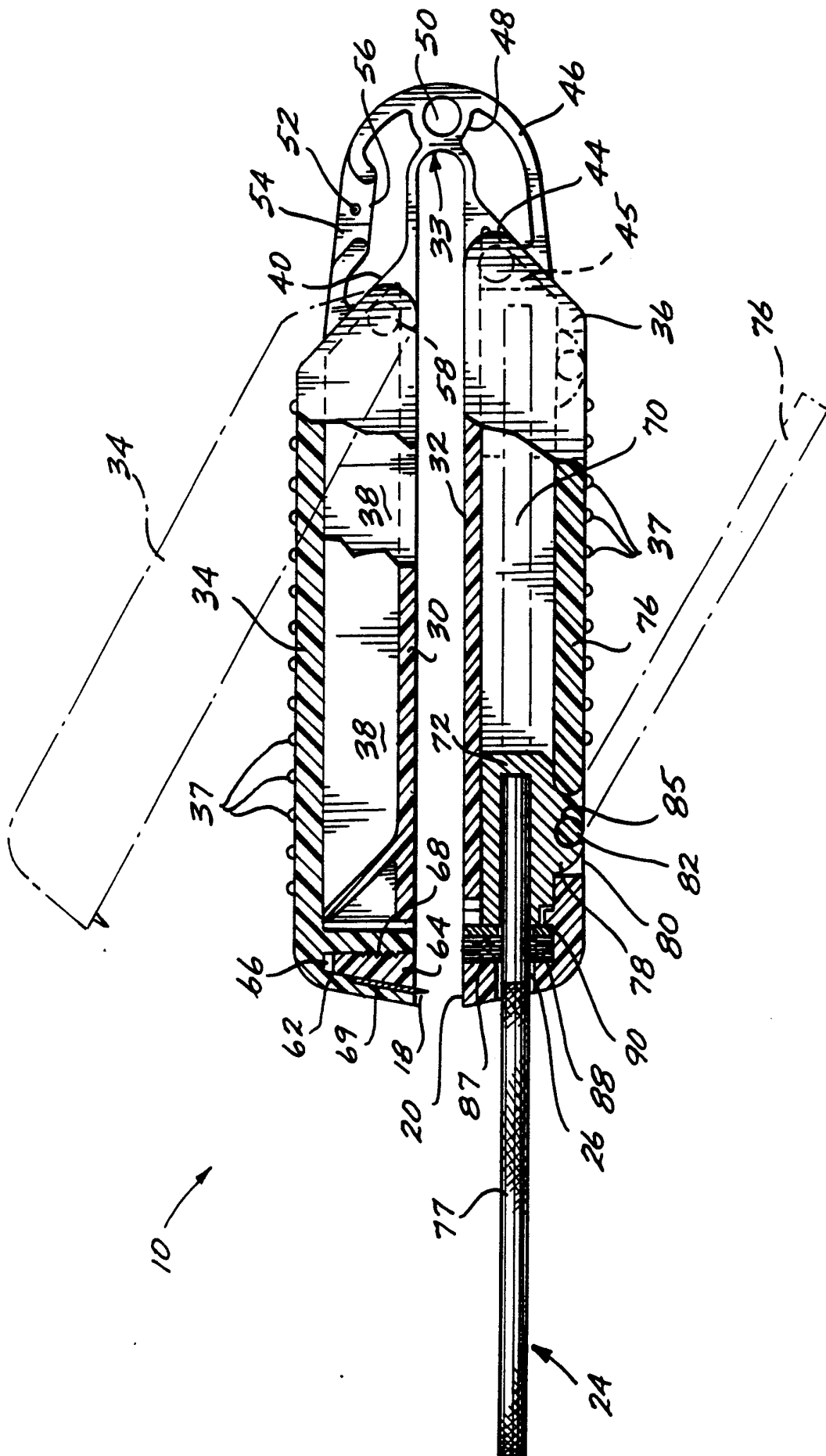
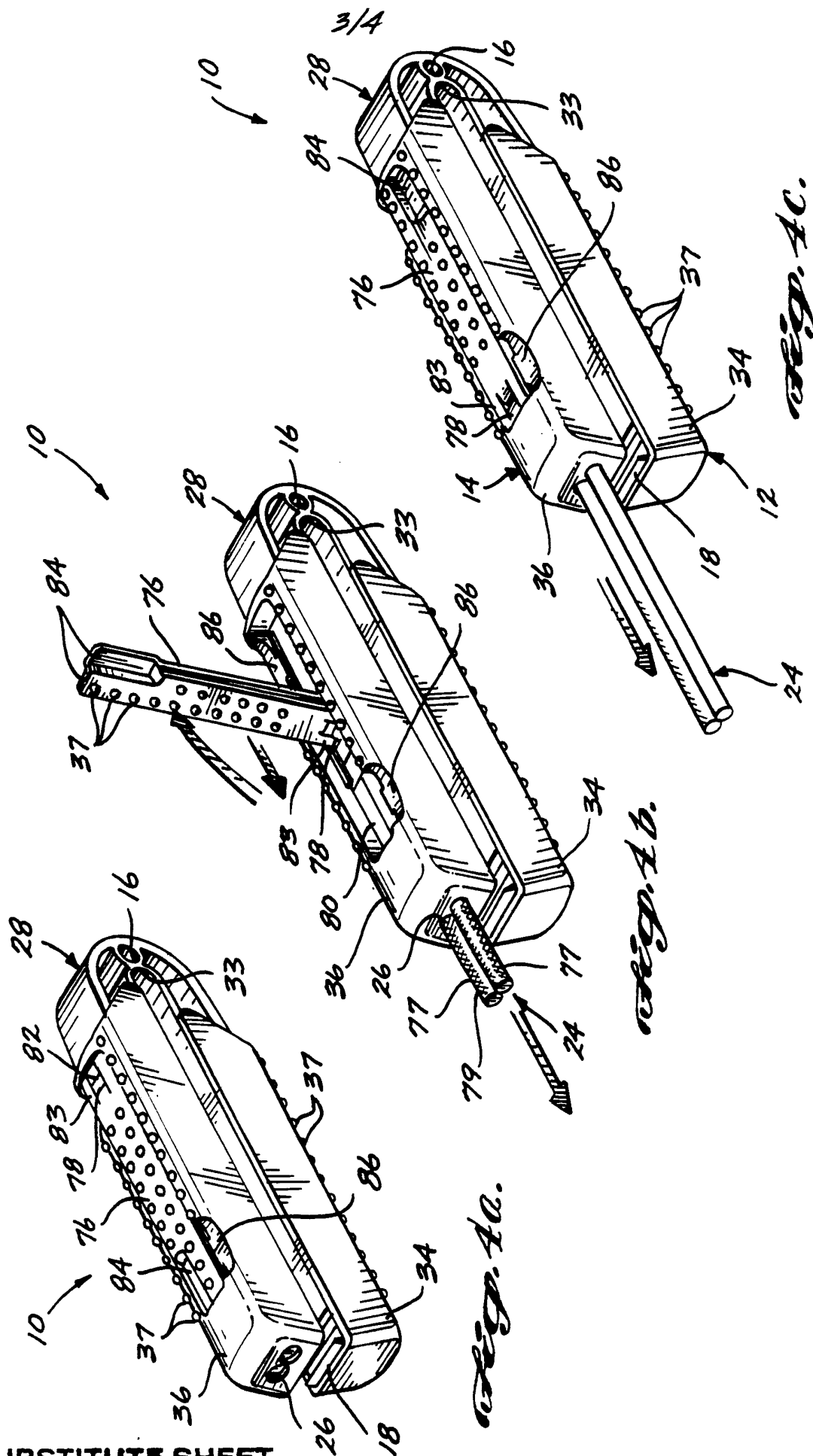


Fig. 3.



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Fig. 5.

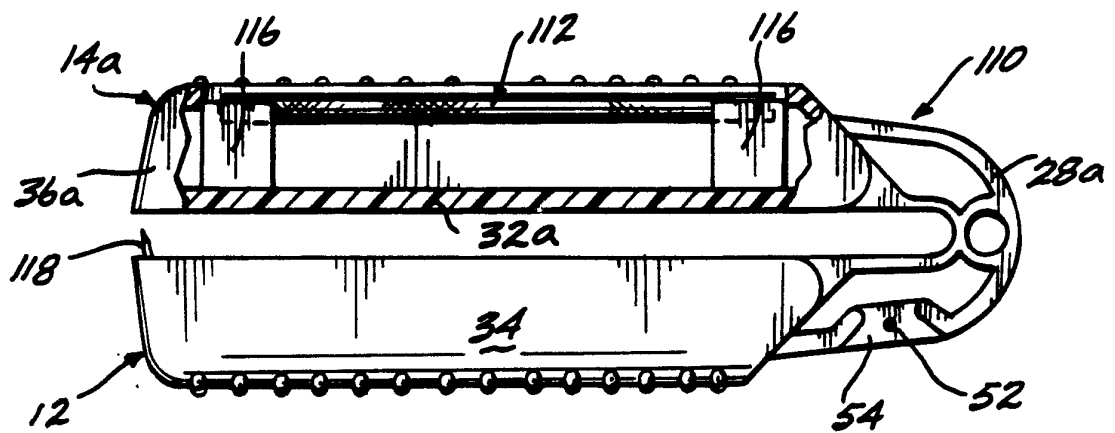
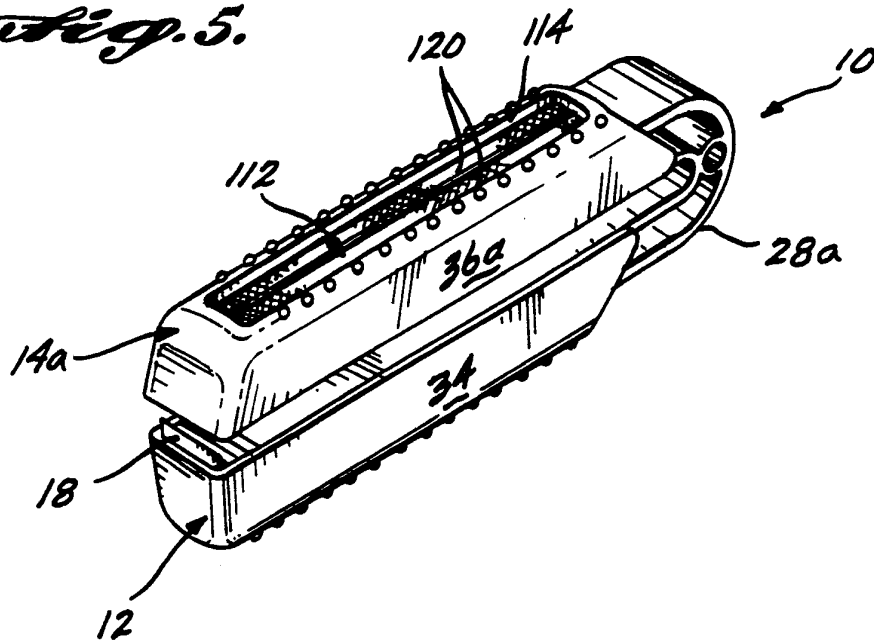


Fig. 6.

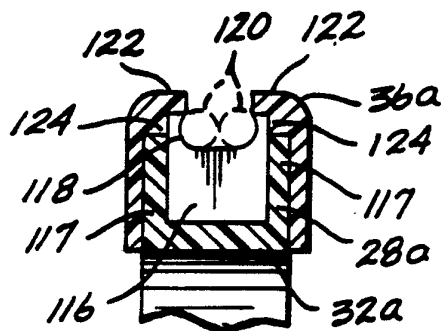
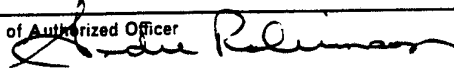


Fig. 7.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/US92/00611

I. CLASSIFICATION OF SUBJECT MATTER (if several classification symbols apply, indicate all) ⁶				
According to International Patent Classification (IPC) or to both National Classification and IPC				
IPC(5) : B25F		1/04		
U.S. Cl.:		7/106		
II. FIELDS SEARCHED				
Minimum Documentation Searched ⁷				
Classification System	Classification Symbols			
U.S.	7/106,125,127,129,130,132,133,170 29/80 30/28,123,145			
Documentation Searched other than Minimum Documentation to the Extent that such Documents are Included in the Fields Searched ⁸				
III. DOCUMENTS CONSIDERED TO BE RELEVANT ⁹				
Category *	Citation of Document, ¹¹ with indication, where appropriate, of the relevant passages ¹²			Relevant to Claim No. ¹³
A	U.S., A, O, 612,990 (KIEFABER) SEE ENTIRE DOCUMENT			25 OCTOBER 1898 1-24
A	U.S., A, O, 797,576 (HAVELL) SEE ENTIRE DOCUMENT			22 AUGUST 1905 1-24
A	U.S., A, O, 810,402 (FYIESE) SEE ENTIRE DOCUMENT			23 JANUARY 1906 1-24
A	U.S., A, 1,363,164 (OESTERWITZ) SEE ENTIRE DOCUMENT			21 DECEMBER 1920 1-24
A	U.S., A, 2,719,995 (HOHENSTEIN) SEE ENTIRE DOCUMENT			11 OCTOBER 1955 1-24
A	U.S., A, 2,806,229 (PLETZ) SEE ENTIRE DOCUMENT			17 SEPTEMBER 1957 1-24
A	U.S., A, 2,977,668 (MANESS) SEE ENTIRE DOCUMENT			04 APRIL 1961 1-24
A	U.S., A, 3,261,094 (BLISS) SEE ENTIRE DOCUMENT			19 JULY 1966 1-24
* Special categories of cited documents: ¹⁰ "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family				
IV. CERTIFICATION				
Date of the Actual Completion of the International Search			Date of Mailing of this International Search Report	
30 MARCH 1992			08 MAY 1992	
International Searching Authority			Signature of Authorized Officer	
ISA/US			 ROSCOE V PARKER SR.	

FURTHER INFORMATION CONTINUED FROM THE SECOND SHEET

FURTHER INFORMATION CONTAINED HEREIN IS UNCLASSIFIED				
A	U.S., A,	3,315,354 (OATES, JR.) SEE ENTIRE DOCUMENT	25 APRIL 1967	1-24
A	U.S., A,	3,447,173 (KLEIMAN) SEE ENTIRE DOCUMENT	03 JUNE 1969	1-24
A	U.S., A,	3,754,290 (NICHOLSON) SEE ENTIRE DOCUMENT	28 AUGUST 1973	1-24
A	U.S., A,	3,825,961 (KLEIN) SEE ENTIRE DOCUMENT	30 JULY 1974	1-24
A	U.S., A,	4,625,386 (BIEGANSKI) SEE ENTIRE DOCUMENT	02 DECEMBER 1986	1-24

V. ☐ OBSERVATIONS WHERE CERTAIN CLAIMS WERE FOUND UNSEARCHABLE 1

This international search report has not been established in respect of certain claims under Article 17(2) (a) for the following reasons:

1. ☐ Claim numbers _____, because they relate to subject matter ¹² not required to be searched by this Authority, namely:
2. ☐ Claim numbers _____, because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out ¹³, specifically:
3. ☐ Claim numbers _____, because they are dependent claims not drafted in accordance with the second and third sentences of PCT Rule 6.4(a).

VI. ☐ **OBSERVATIONS WHERE UNITY OF INVENTION IS LACKING²**

This International Searching Authority found multiple inventions in this international application as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims of the international application.
2. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims of the international application for which fees were paid, specifically claims:
3. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claim numbers:
4. ☐ As all searchable claims could be searched without effort justifying an additional fee, the International Searching Authority did not invite payment of any additional fee.

Remark on Protest

- ☐ The additional search fees were accompanied by applicant's protest.
☐ No protest accompanied the payment of additional search fees.

III. DOCUMENTS CONSIDERED TO BE RELEVANT (CONTINUED FROM THE SECOND SHEET)		
Category *	Citation of Document, with indication, where appropriate, of the relevant passages	Relevant to Claim No
A	U.S., A, 4,711,031 (ANNELLO) 08 DECEMBER 1987 SEE ENTIRE DOCUMENT	1-24
A	U.S.,A, 4,799,326 (MERTENS) 24 JANUARY 1989 SEE ENTIRE DOCUMENT	1-24