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(54) **RANGE FINDER CARRIER SYSTEM**

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(57) **ABSTRACT**

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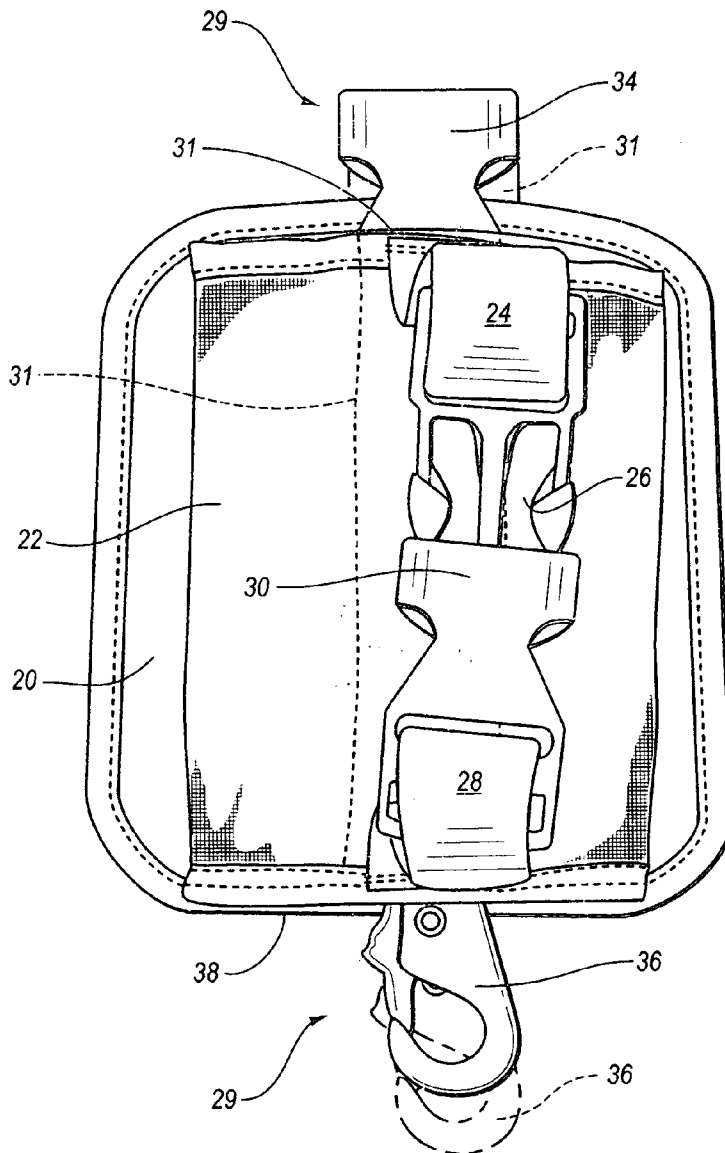
A carrier system for range finders and the like, including a pouch with a main pocket to receive a major portion of a range finder, a closable secondary pocket extending into the main pocket, a flexible water resistant fabric hood cover stored in the secondary pocket and pulled from the secondary pocket to cover both the main pocket and a range finder positioned therein, and the secondary pocket; an adapter to secure the pouch to a shoulder strap and a belt; the adapter being removable from the pouch for independent use; and a strap attachment that is lockable onto a shoulder strap, or other available strap, and that includes a tether attachment to which an elastic tether having one end secured to the range finder is secured.

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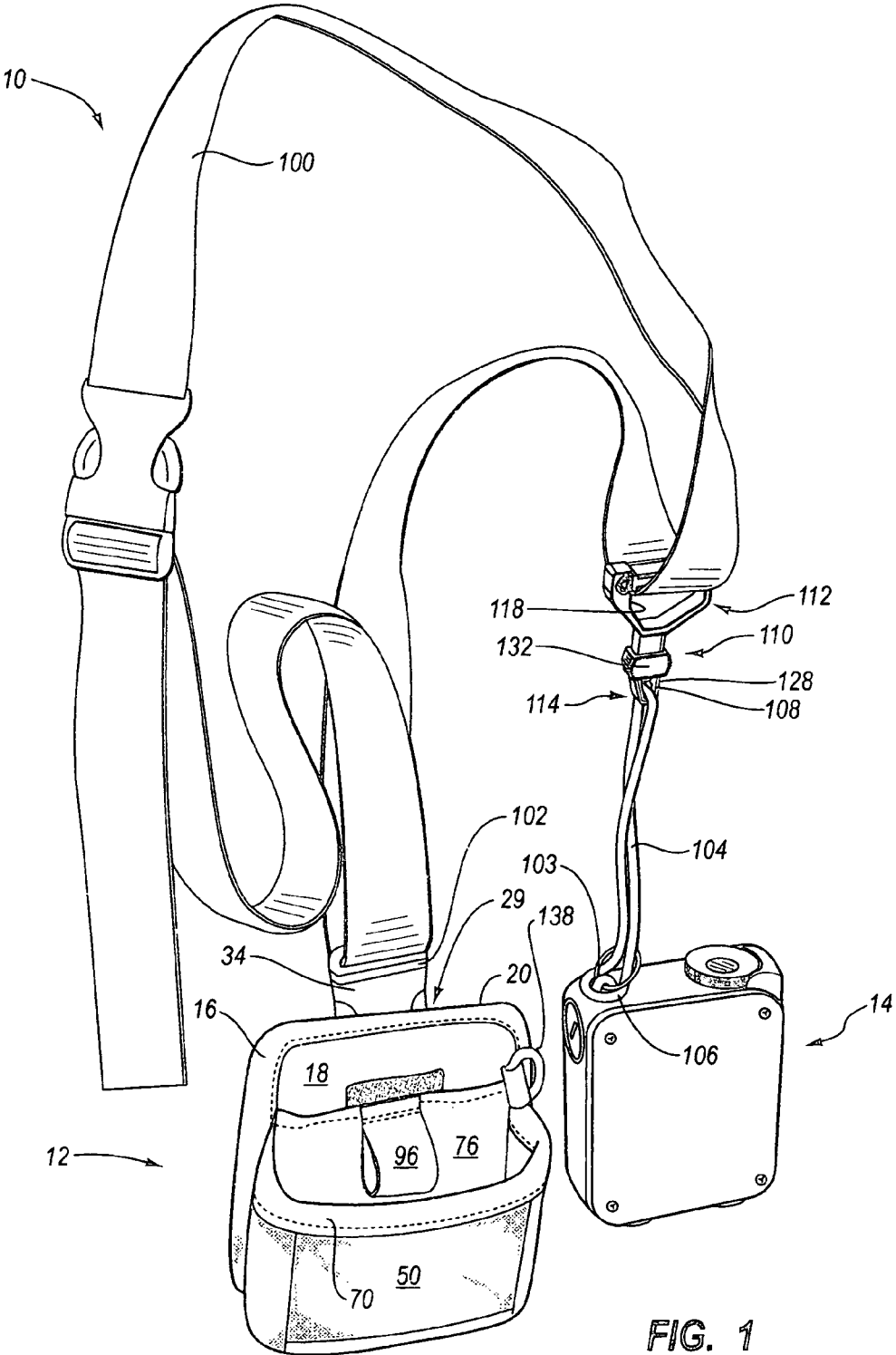


FIG. 1

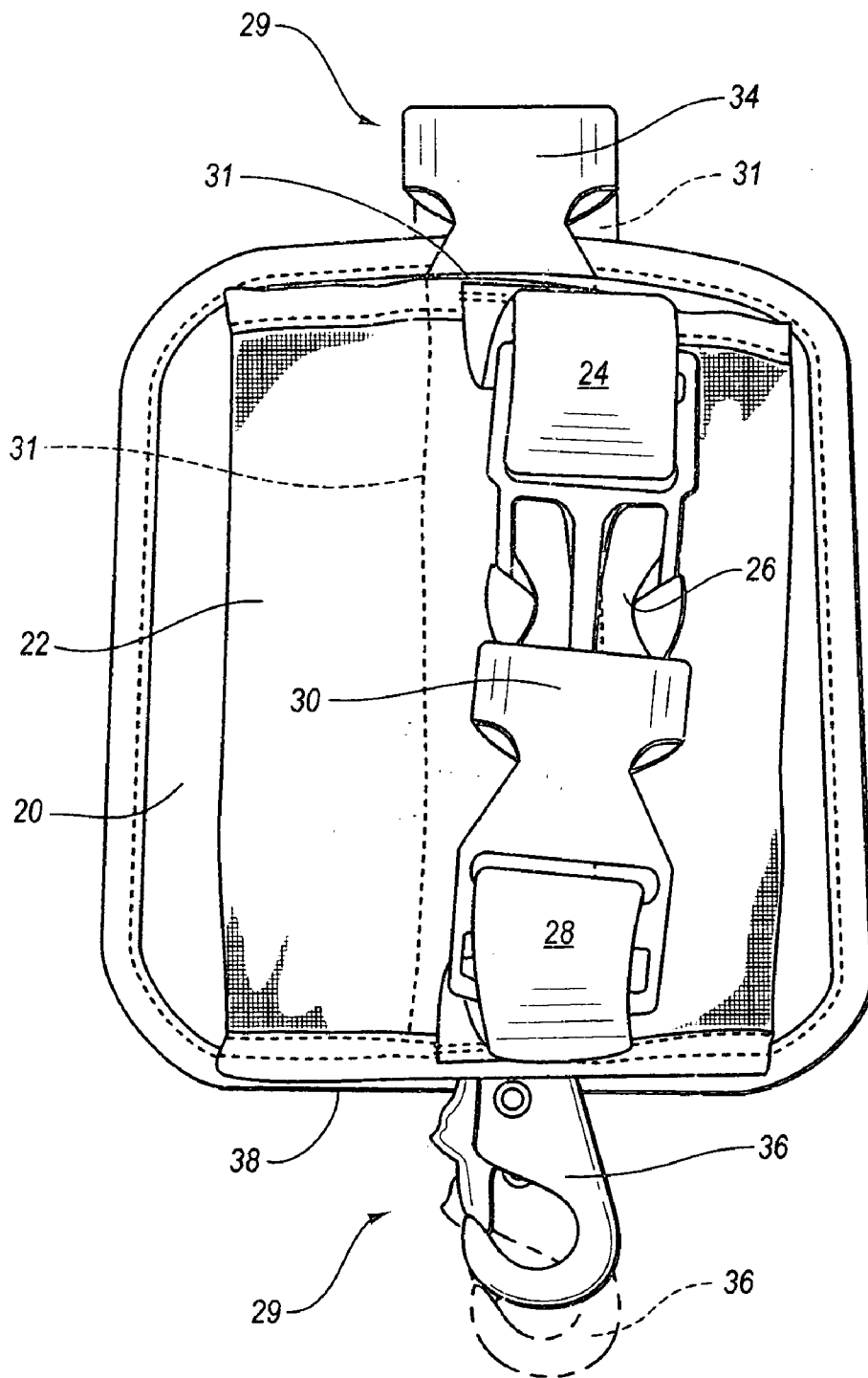


FIG. 2

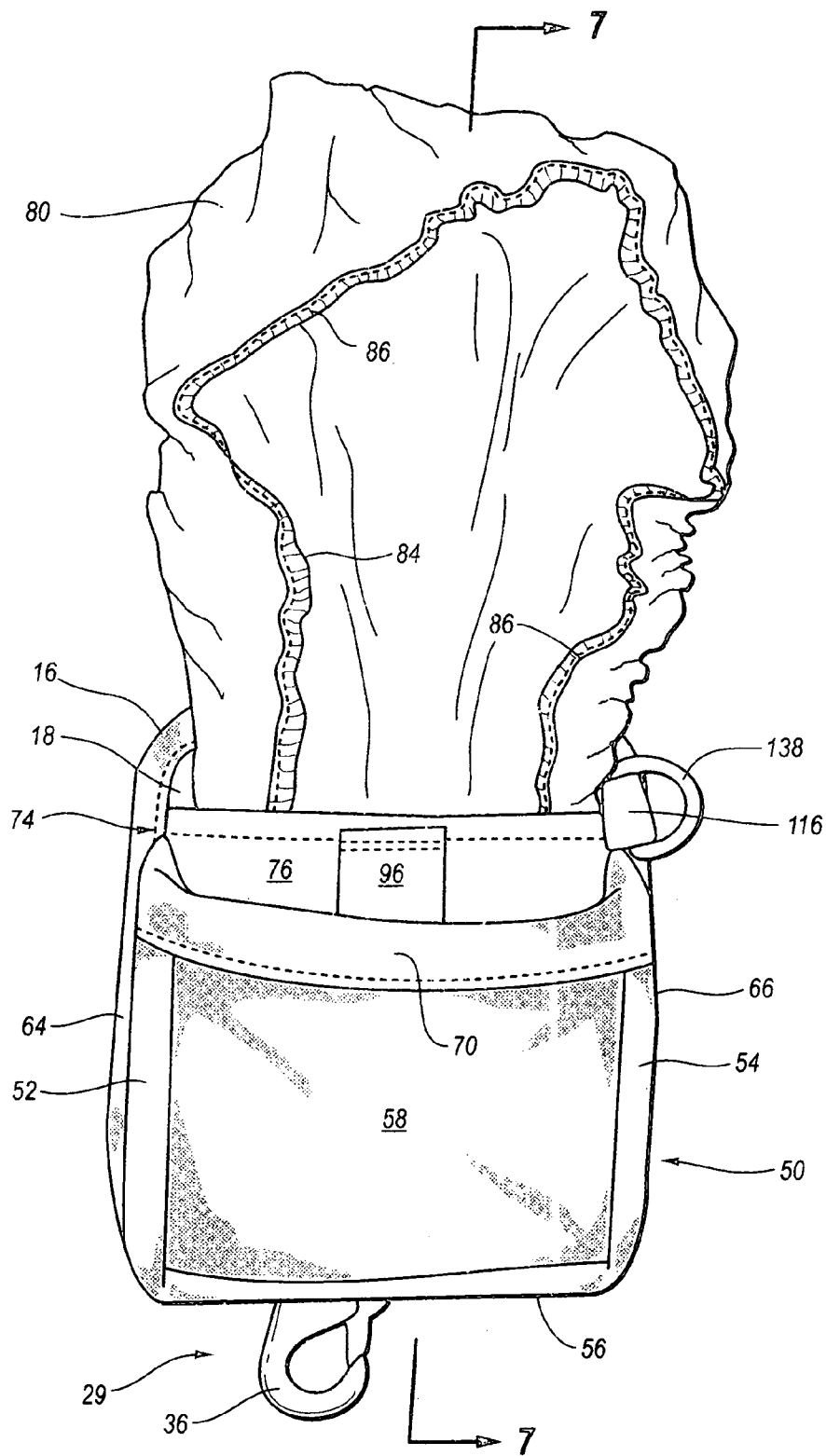


FIG. 3

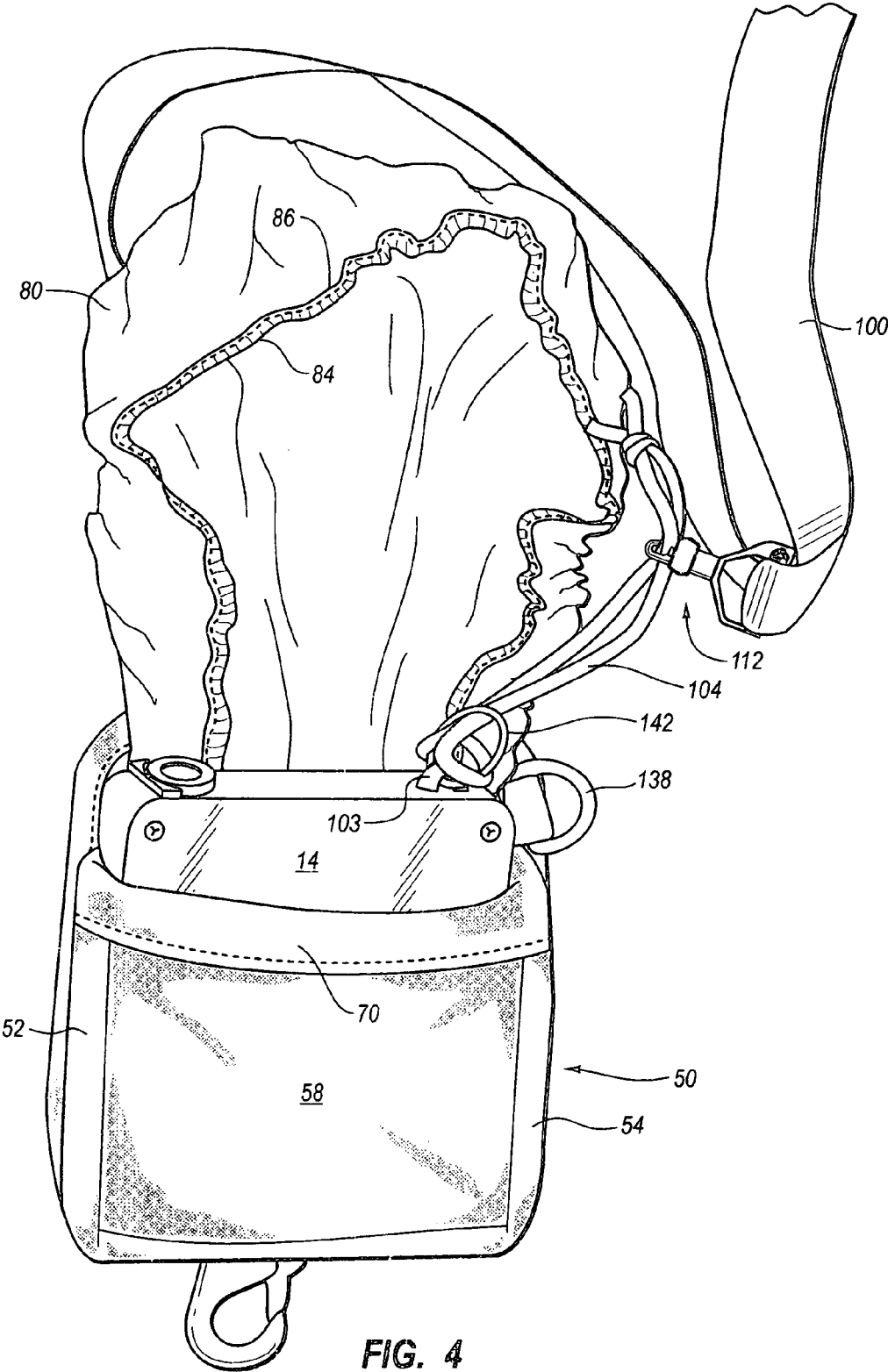


FIG. 4

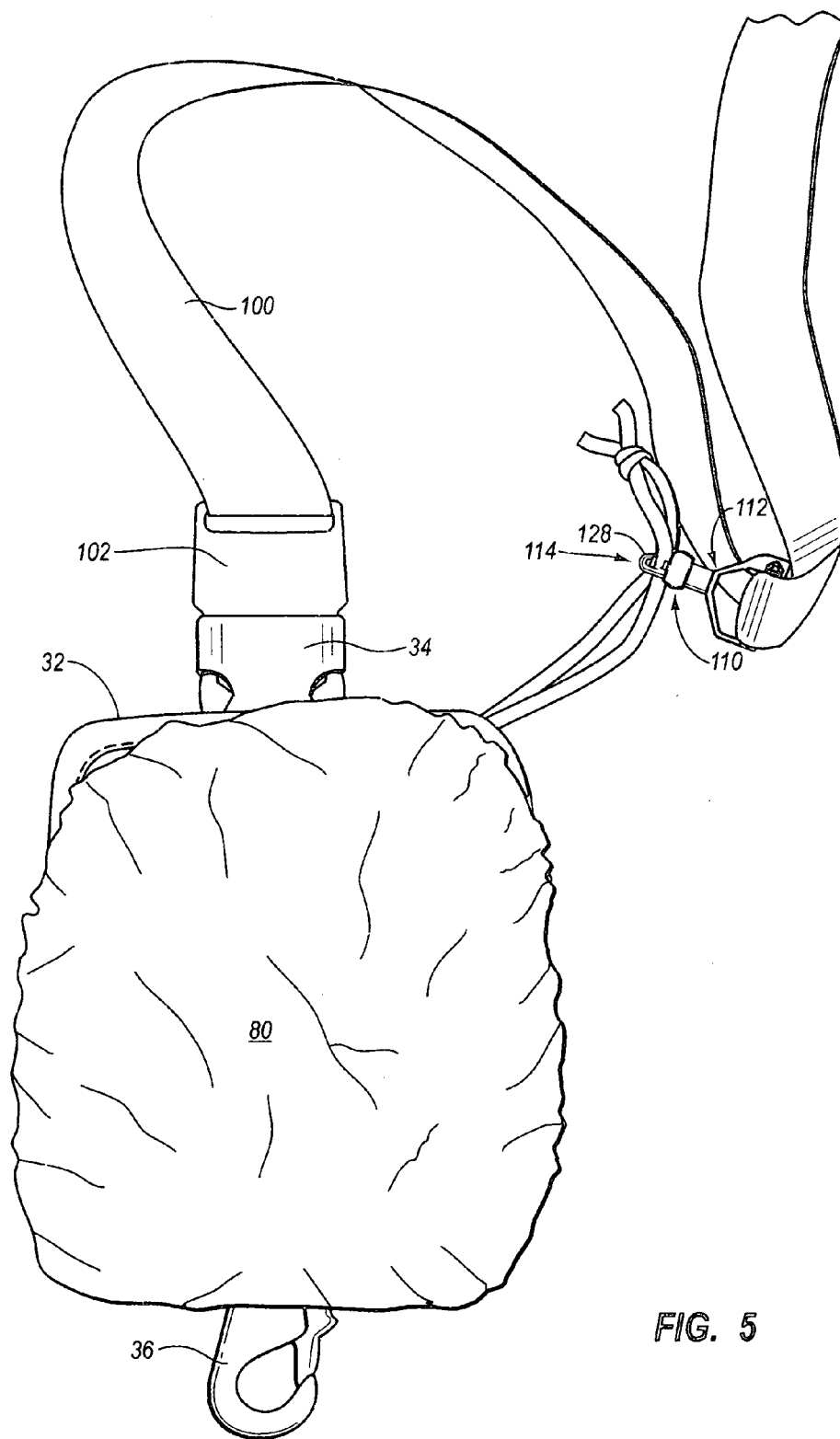


FIG. 5

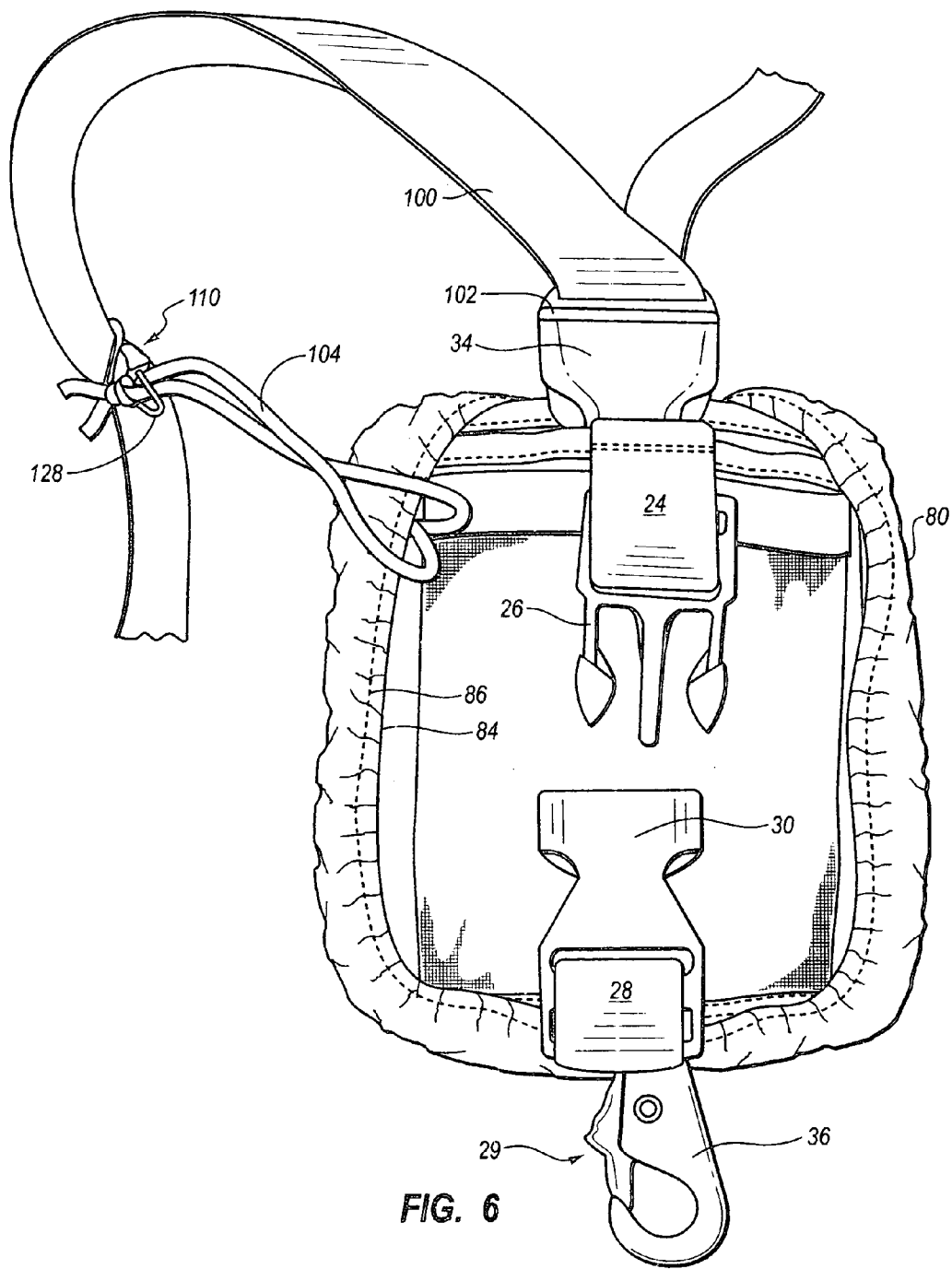


FIG. 6

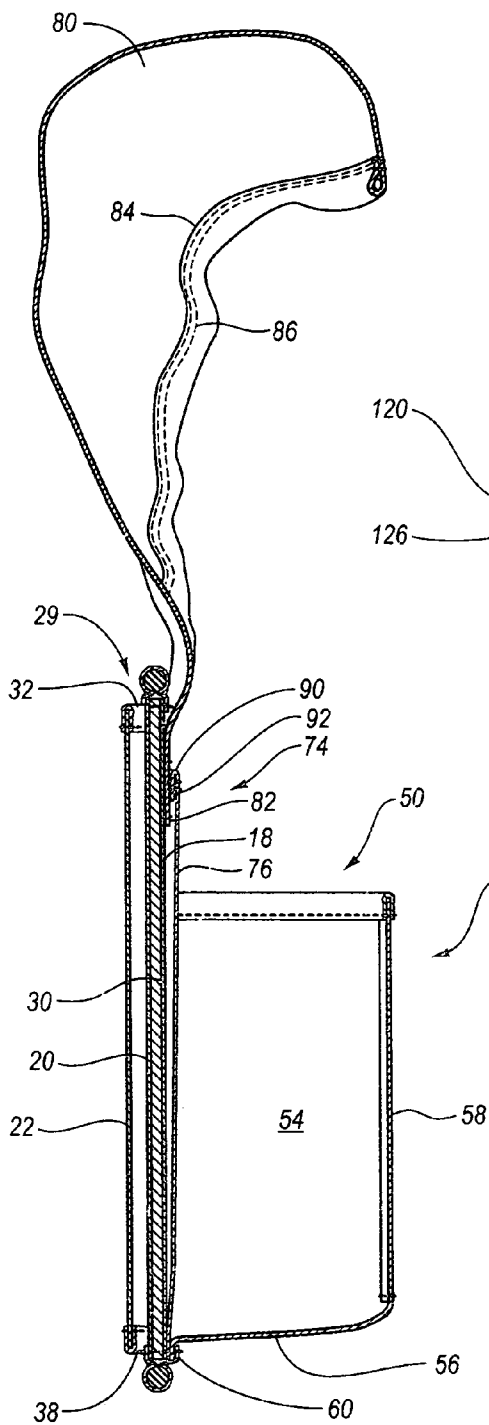


FIG. 7

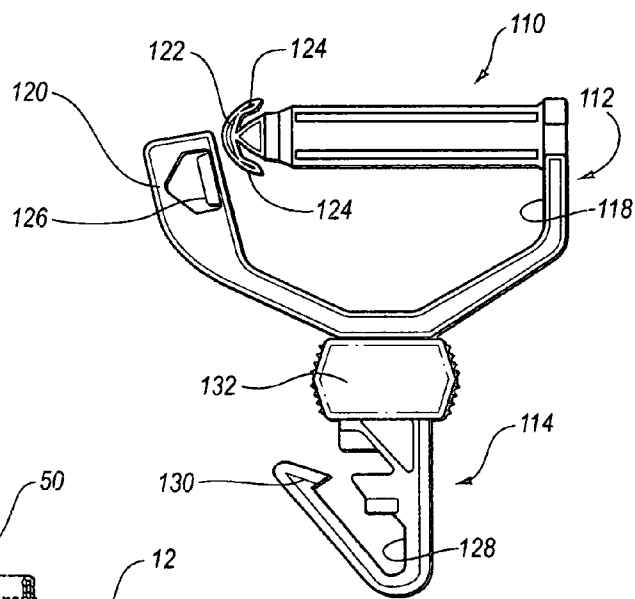


FIG. 8

RANGE FINDER CARRIER SYSTEM

CROSS-REFERENCE TO RELATED APPLICATIONS

[0001] Not Applicable.

STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR DEVELOPMENT

[0002] Not Applicable.

REFERENCE TO MICROFICHE APPENDIX

[0003] Not Applicable.

BACKGROUND OF THE INVENTION

Field of the Invention

[0004] This invention is a pouch or carrying case system for use with a range finder.

[0005] Range finders are laser equipped devices used by a great many persons to determine the distance from one location to another location. Range finders are particularly popular for use by golfers, hunters, archers, and surveyors. They may be used in determining distances by anyone having a clear line of sight to an object positioned at a location to which distance is to be measured.

[0006] Regardless of the use to be made of a range finder, it is desirable that a user has a convenient way to position a range finder to be available when necessary. Presently it is common for users to simply attach a strap to the range finder and to loop the strap over their neck, thereby allowing the range finder to dangle in front of the user's body. Such an arrangement is often not satisfactory because the range finder swings in front of the user and often gets in the way of performance of other activities by the user. The range finder can also be put into a user's pocket from which it may fall and get lost, or from which it is difficult to retrieve when it is desired that it be used. Frequently, a user who is hunting will need to retrieve the range finder quickly, in order to obtain a range to allow for proper firing at a target before the target moves. It is not uncommon that persons using range finders are also carrying numerous other objects that must also be readily available. For example, the user may be carrying binoculars, a camera, a compass, a navigation system, a hand held level, or numerous other objects. The various objects being carried may be placed in holders and/or containers for such objects. It has been found most convenient for a range finder to be held securely against the user of the body so that it will not flop around in front of the user and detract from use of other devices, or to prevent use of other devices, or to be in the way as a user walks, runs, or otherwise moves about.

BRIEF SUMMARY OF THE INVENTION

Objects of the Invention

[0007] Principal objects of the present invention are to provide carrier system with a pouch that can be attached to the body of a user in a variety of ways, but that will be secured to the user's body and will not flap around during movement by the user.

[0008] Other objects are to provide a pouch that will quickly and easily receive a range finder and that will hold

such range finder in place during movement by the user, while still affording quick, easy retrieval and positioning of the range finder by the user.

[0009] Still other objects of the invention are to provide pouch parts that are easily manipulated by a user and that can be secured by an over the shoulder strap, or even by a waist belt.

[0010] Still another object is to provide a pouch that is normally open to allow for easy placement of a major portion of a range finder therein and for easy grasping and removal of such range finder for use, while still providing means for selectively covering the entire main pocket of the pouch and any range finder placed therein, to prevent damage to the range finder from dust and moisture.

[0011] Yet another object is to provide a clip-on ring attachment, that may be used as part of the pouch and that will also allow for simple, quick, easy attachment to straps of other articles, including a binocular strap or a strap of a pack carried by a user.

[0012] Another object is to provide a carrier that is usable with or without a shoulder strap, and with or without a pouch to secure a range finder, or the like, to the body of a user while providing for easy movement of the ranger finder, or the like, to an eye level use position.

[0013] Features of the Invention

[0014] Principal features of the invention include a carrier system having a pouch with a main pocket including an upper end that is open to receive major portion of a range finder and from which the range finder may be quickly and easily retrieved. Retrieval is easily achieved by grasping, or pulling on an exposed smaller portion of the range finder, or a tether attached thereto.

[0015] Other features include a shoulder strap having an attached tether that is slidable up and down the shoulder strap and that is secured to the range finder so that when the range finder is removed from the pouch the sliding tether will allow the user to easily and quickly move the range finder into a sighting position.

[0016] An additional feature of the invention is a slide connector assembly for easily securing the tether to a shoulder strap, or the like, and that will allow the tether to be alternatively attached to selected straps of other devices, i.e., binoculars, packs, etc., as well as to the shoulder strap of the pouch. In addition, the pouch includes an adjustable belt strap to form a loop that is adjustable to fit a belt of the user. The adjustable belt strap will hold the pouch tightly to the body of a user. In addition, the pouch has a main pocket for receiving the major portion of the range finder and a secondary pocket within the main pocket. The secondary pocket holds and stores a hood-type cover when the pouch is to remain open. The hood-type cover may be pulled from the secondary pocket to extend over the pockets of the pouch and over a range finder positioned in the main pocket.

[0017] An adapter having a slide connector assembly that will cooperate with a connector on a shoulder strap or the line, and a hook to engage a belt loop is removably secured to the pouch.

[0018] Additional objects and features of the invention will become apparent to persons skilled in the art to which the invention pertains from the following detailed description, drawings and claims.

BRIEF DESCRIPTION OF THE FIGURES OF
THE INVENTION

[0019] In the Drawings

[0020] FIG. 1, is a front perspective view of the pouch of the invention, with a perspective view of an attached conventional attached range finder;

[0021] FIG. 2, an enlarged rear elevation view of the pouch of FIG. 1;

[0022] FIG. 3, a front elevation view of the pouch of FIG. 1 showing the main pocket and the hood cover pulled out of the secondary pocket;

[0023] FIG. 4, a view like that of FIG. 3, but with a major portion of the range finder in the main pocket of the pouch and a smaller portion of the range finder projecting from the main pocket;

[0024] FIG. 5, a front elevation view with the hood cover positioned over the pockets of the pouch and the range finder in the main pocket;

[0025] FIG. 6, a rear elevation view showing the hood cover positioned to cover the pockets of the pouch and the range finder;

[0026] FIG. 7, a vertical section taken on the line 7-7 through FIG. 3, and showing the hood cover removed from the secondary pocket of the pouch; and

[0027] FIG. 8, an enlarged perspective view of a clip-on attachment ring for use in securing a tether line connected to the range finder to a strap.

DETAILED DESCRIPTION

[0028] Referring Now the Drawings

[0029] In the illustrated preferred embodiment, the range finder carrier system includes a pouch, shown generally at 12. A conventional, typical, range finder to be carried in the pouch is shown at 14.

[0030] Pouch 12 includes a backing sheet 16 with a front face 18 and a back face 20. A reinforcement panel 22, which is preferably made of a heavy canvas fabric, or similar material, is sewn to the back face 20.

[0031] A strap 24 has a male coupler member 26 on one end and its other end sewn to the reinforcement panel 22. Another strap 28 is secured to the bottom of the reinforcement panel and has a female coupler component 30 attached thereto. The male coupler member 26 is releasably locked into the female coupler member 30, so that the straps 24 and 28 and the coupling members form a loop with the reinforcement panel 22, through which a user's belt (not shown) may pass.

[0032] An adapter 29 has another strap 31 that is passed through the space formed between backing sheet 16 and reinforcement panel 22. The adapter 29 extends upwardly beyond the top edge 32 of the backing sheet 16, a female coupling member 34 is attached to the upper end of the strap 31.

[0033] A snap hook 36 is secured to the opposite end of strap 31 and extends beyond the bottom edge 38 of reinforcement panel 22.

[0034] The adapter 29 can be pulled from the pouch 12, for use without the pouch, should such use be desired.

[0035] A main pocket 50 includes a pair of sidewalls 52 and 54, a bottom 56 and a front wall 58. The sidewalls 52 and 54 and bottom 56 all are sewn, or otherwise attached, to extend and project from the front face 18 of backing sheet 16. A front wall 58 interconnects the sidewalls 52 and 54 and

the bottom 56. Bottom 56 is secured to backing sheet 16 at a lower end 60 of the backing sheet 16 and the sidewalls 52 and 54 project from opposite sides 64 and 66, respectively, of the backing sheet 16.

[0036] A top edge binding 70 of canvas or other suitable heavy fabric is sewn to the top of pocket 50 and provides sufficient rigidity to insure that the top of the pocket remains open during use.

[0037] The sidewalls 52 and 54 and front wall 58 extend upwardly from lower end 60 of the backing sheet 40 to allow for insertion of a major portion of the range finder 14 into pocket 50, with a smaller portion of the range finder extending out of the top of pocket 50.

[0038] A secondary pocket 74 is formed with the front face 18 of backing sheet 16 by a fabric panel 76 that extends loosely across the face 18 from above the top edge binding 70 of pocket 50 and downwardly into the pocket 50. The fabric panel 76 is sewn at its side edges and bottom to the front face 18 of backing sheet 16. The secondary pocket 74 has a closable top end that will receive a hood cover 80.

[0039] Hood cover 80 has a bottom edge 82 that is sewn to the front face 18 of backing sheet 16 below the top end of secondary pocket 74. Hood cover 80 is made of a flexible sheet material, such as nylon, that is water resistant, large enough, and flared outwardly from bottom edge 82 to cover the pockets 50 and 74 and a range finder 14 placed in main pocket 50. The outer edge 84 of hood cover 80 has an elastic member 86 sewn therein and the outer edge 84 is gathered so that it can be stretched to fit over the pockets and to be relaxed against the back face 20 of backing sheet 16.

[0040] A strip 90 of hook fastener is fixed to the front face 18 of backing sheet 16, above the bottom edge 82 of hood cover 80.

[0041] A strip 92 of loop fasteners is fixed to the interior top edge of front wall 58 of main pocket 50.

[0042] Hood cover 80 is folded into secondary pocket 74 and the cooperating strip of loop fasteners 92 is pushed against and interlocked with the strip of hook fasteners 90 to close the top of secondary pocket 74 with hood cover 80 stored therein.

[0043] A pull tab 96, sewn to the fabric panel 76, is pulled to open the secondary pocket 74 to permit removal of the hood cover 80 from the secondary pocket 74. When removed from the secondary pocket 74, the hood cover 80 can be positioned to cover the main and secondary pockets and range finder 14 by stretching outer edge 84, as previously set forth.

[0044] An adjustable length shoulder strap 100, having a male connector 102 slidably mounted thereon, is coupled to female connector 34 to allow the pouch 12 to be suspended in front of a user. Straps 24 and 28 are connected behind the user's belt using coupling members 26 and 36. The pouch 12 is thus held at the waist of a user.

[0045] Range finder 14 has a D-ring 103 affixed thereto. An elastic card tether 104 has one end connected at 106 to the D-ring. The other end 108 of the tether is connected to a slide connector 110 (FIG. 8) that is movable along the length of shoulder strap 100.

[0046] Slide connector 110 includes a strap connector 112 at one end that loosely encircles the shoulder strap 100 and an integral tether connector 114 at an opposite end to which the tether 104 is attached.

[0047] Strap connector 112 comprises a substantially rigid loop 118 that will encircle a strap. Loop 118 has a receiving

end **120** and an insert end **122**. While made of substantially rigid plastic, nylon, or the like, the strap connector end of slide connector **110** has sufficient flexibility to allow pivoting of the insert end **120**. Inclined hooks **124** formed on the insert end **122** have sufficient flexibility to pass through shoulders **126** in the receiving end, but will not allow the insert end to be pulled from the receiving end without breaking of the hooks **124**.

[0048] The opposite end of slide connector **110** comprises the tether connector **114**, and includes a loop **128** with a hooked end **130**. The hooked end pivots to close the loop and a slide member **132** slides over the hooked end **130** to close the loop **128** and to maintain loop **128** closed.

[0049] A D-ring **138** is attached to backing sheet **16** with a strap **140** passed through the D-ring and having ends sewn, or otherwise secured to the front face **18** of the backing sheet **16**.

[0050] The elastic tether cord **104**, which serves as a tether, may interconnect a ring **142** on the range finder **14** and the slide connector **110**.

[0051] The carrier system herein disclosed allows a user to carry an article, i.e., a range finder such that the range finder is held conveniently against the user's body and in a storage position, but ready for easy retrieval and movement to a use position. The sliding connections between support strap and carrier and the resilient tether facilitate movement between a stored position and a use position.

[0052] Although a preferred embodiment of my invention has been herein described, it is to be understood that the present disclosure is by way of example and that variations are possible without departing from the subject matter coming within the scope of the following claims, which subject matter I regard as my invention.

I claim:

1. A carrier system for a range finder and the like comprising

a pouch having a main pocket to receive a major portion of a range finder, and a secondary pocket extending into said main pocket;

a flexible water resistant hood cover connected into said secondary pocket, foldable into said secondary pocket and removable from said secondary pocket to cover said pockets and a range finder extending into said main pocket; and

means for securing the pouch to the body of a user.

2. A carrier system as in claim 1, wherein

the hood cover has an elasticized edge to engage a back of the pouch when said hood cover is stretched to cover the pockets and a range finder having a major portion extending into the main pocket.

3. A carrier system as in claim 2, wherein the means for securing the pouch to the body of a user includes

an adapter secured to a back of the pouch; and said adapter including an adapter strap extending from adjacent a top edge of the pouch and a bottom edge of the pouch and intermediate opposite sides of the pouch; a strap connector at a top end of the adapter strap; and means at an opposite end of the adapter strap for securing said adapter strap to the body of a user.

4. A carrier system as in claim 3, wherein the means at an opposite end of the adapter strap for securing said adapter strap to the body of a user comprises a snap hook.

5. A carrier system as in claim 3, wherein the adapter is removably secured to the pouch.

6. A carrier system as in claim 5, further comprising an adjustable length shoulder strap and means for securing the strap connector slidably thereto.

7. A carrier system as in claim 6, wherein

the means for securing the strap connector slidably to the shoulder strap includes a coupler member slidably mounted on the shoulder strap and cooperatively releasably engageable with the strap connector on a top end of the adapter.

8. A carrier system as in claim 7, further including a slide connector slidably mounted on said shoulder strap, said slide connector comprising

a strap connector secured to said shoulder strap;

a tether connector; and

a tether having one end adapted to be secured to the range finder and an opposite end attached to the tether connector.

9. A carrier system as in claim 8, wherein the strap connector is permanently secured to the shoulder strap and the tether connector is releasably secured to the tether.

10. A carrier system as in claim 1, wherein the means for securing the pouch to the body of a user includes

an adapter secured to a back of the pouch;

said adapter including an adapter strap extending from adjacent a top edge of the pouch and a bottom edge of the pouch and intermediate opposite sides of the pouch; and

a strap connector at a top end of the adapter strap and means at an opposite end of the adapter strap for securing said adapter strap to the body of a user.

11. A carrier system as in claim 10, wherein the means at an opposite end of the adapter strap for securing said adapter strap to the body of a user comprises a snap hook means.

12. A carrier system as in claim 11, wherein the adapter is removably secured to the pouch.

13. A carrier system as in claim 12, further comprising an adjustable length shoulder strap and means for securing the strap connector slidably thereto.

14. A carrier system as in claim 13, wherein

the means for securing the strap connector slidably to the shoulder strap includes a coupler member slidably mounted on the shoulder strap and cooperatively releasably engageable with the strap connector on a top end of the adapter.

15. A carrier system as in claim 14, further including a slide connector slidably mounted on said shoulder strap, said slide connector including

a strap connector at one end of said slide connector;

a tether connector at an opposite end of said slide connector; and

a resilient tether having one end secured to the range finder and an opposite end attached to the tether connector.

16. An adapter for use with a range finder carrier system comprising

a length of strap having a coupler member on one end thereof to engage and to be connected to a coupler member of a support structure; and

a snap hook on an opposite end of said length of strap.

17. A slide connector for use with a range finder carrier system comprising

a strap connector having a substantially rigid strap encircling loop, a receiving end opening formed in the loop

and an insert end formed in the loop, said insert end being locked into said receiving end; and
a tether connector connected to and formed integral with said strap connector, said tether connector having a loop with a pivotable end and means to releasably secure the pivoted end into a loop.

18. A slide carrier as in claim **17**, wherein the tether connector pivoted end is hooked to hold the loop together and wherein the means to releasably secure the pivoted end into the loop comprises

a slide member to slide over and off of the hooked end.

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