

[54] LANYARD CONSTRUCTION

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[56] **References Cited**

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|-----------|---------|----------------|----------|
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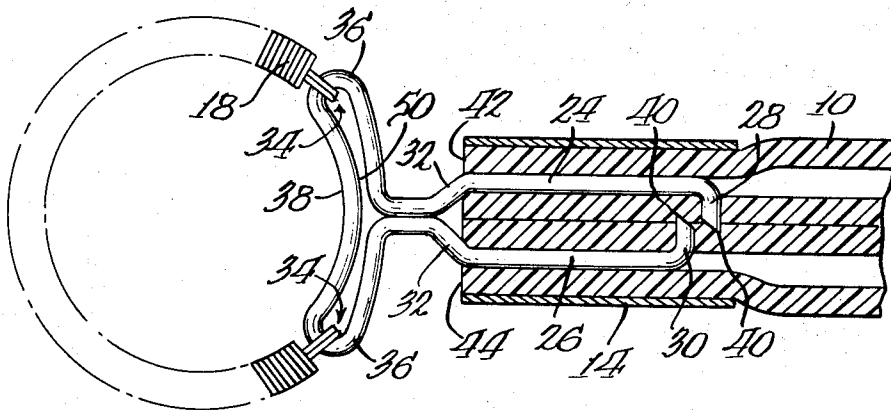
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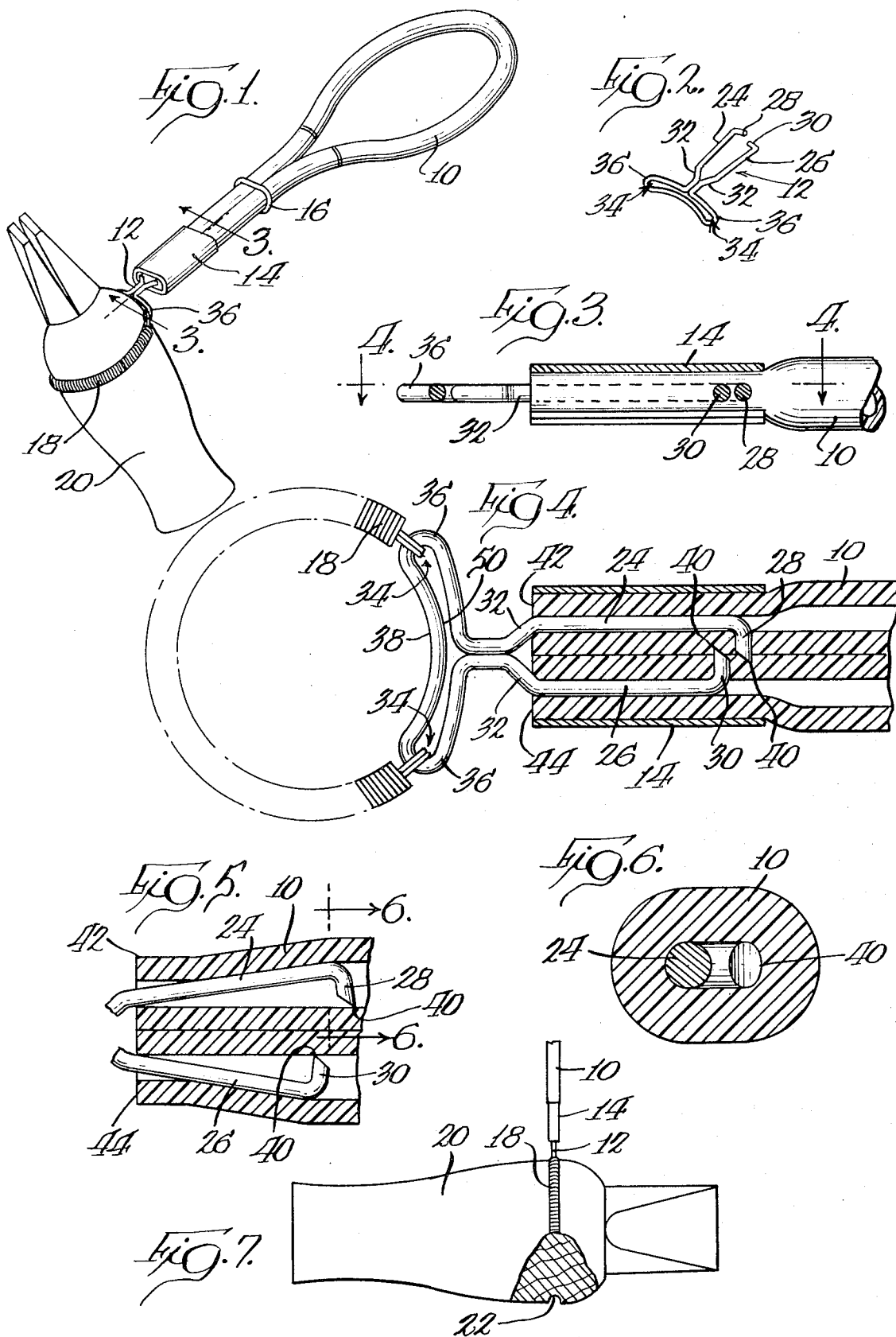
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**ABSTRACT**

A lanyard for holding instruments having external annular grooves as, for example, duck calls. The lanyard includes a flexible loop adapted to be received around the neck of a wearer terminating in a clip having oppositely extending ears and a concave portion intermediate the ears adapted to be received in the annular groove. A spring interconnects the ears and with the concave portion defines a resilient loop of closed configuration which is sized to expand to be passed about the instrument for snug reception in the annular groove.

**4 Claims, 7 Drawing Figures**





## LANYARD CONSTRUCTION

### BACKGROUND OF THE INVENTION

This invention relates to lanyard constructions, and more particularly to lanyards employed in holding instruments having external annular grooves as, for example, duck calls.

For many years, the lanyards of one type or another have seen extensive use in a variety of fields. One frequent use of the lanyard is in holding instruments as duck calls which typically are provided with an external annular groove by which the lanyard and a duck call may be secured together.

Many lanyard constructions heretofore known are relatively expensive and/or difficult to fabricate depending upon the technique used. Thus, there is a real need for an inexpensively fabricated lanyard of high quality and pleasing appearance that is particularly suited for use in supporting such instruments.

In my U.S. Pat. No. 2,911,694, there is disclosed a lanyard for use in supporting a duck call. The same employs a duck call encircling loop formed of latex rubber. While perfectly satisfactory for its intended purpose, over an extended period of time, the rubber is subjected to some deterioration as can be expected with latex components. Therefore, the life of the same could be increased substantially by eliminating resort to latex.

In my copending application Ser. No. 220,117, filed Jan. 24, 1972, entitled "Lanyard Construction" and assigned to the same assignee as the instant application, there is disclosed a lanyard construction employing a novel clip which is uniquely fastened to the lanyard loop. The disclosed construction has been extremely successful and obviates a number of disadvantages found in prior lanyard constructions.

### SUMMARY OF THE PRESENT INVENTION

It is the principal object of the invention to provide a new and improved lanyard assembly. More specifically, it is an object of the invention to provide a new and improved lanyard adapted for use in holding instruments, such as duck calls, having external annular grooves and which is extremely long lived and reliable.

The exemplary embodiment of the invention achieves the foregoing objects with a construction including a lanyard defining loop formed of hollow tubing. The ends of the tubing receive L-shaped ends of a clip formed of a piece of wire. A surrounding sleeve located on the ends of the tubing cause portions of the L-shaped ends of the wire to piercingly engage the tubing for a secure connection. Preferably, the ends of the wire are pointed to assist in penetration through the tubing walls.

The base of the clip is defined by a pair of oppositely extending ears in turn defined by loops in the wire and interconnected by a concave portion having a radius of curvature approximately equal to that of the annular groove on the instrument to be secured to the lanyard. A resilient element interconnects the ears to define an expandable loop for encircling the instrument to be snugly received in the annular groove. Preferably, the resilient element is a spiral type spring having its ends received in associated loops in the wire clip. Preferably, the clip is configured in such a way that the ends of the springs are not permitted to slide along the wire but are

retained in the outermost portion of the loops thereof to aid in assembly of the lanyard to an instrument.

Other objects and advantages will become apparent from the following specification taken in conjunction with the accompanying drawings.

### DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view of a lanyard made according to the invention and supporting a duck call;

FIG. 2 is a perspective view of a clip employed in the lanyard;

FIG. 3 is a side elevation of the end of the lanyard loop and the clip with parts shown in section;

FIG. 4 is a horizontal section taken approximately along the line 4—4 of FIG. 3;

FIG. 5 is a fragmentary horizontal section illustrating the relation of the lanyard loop to the clip prior to final assembly;

FIG. 6 is a vertical section taken approximately along the line 6—6 of FIG. 5; and

FIG. 7 is a fragmentary elevation of the lanyard and duck call assembly with a portion of the duck call shown in section for clarity.

### DESCRIPTION OF THE PREFERRED EMBODIMENT

An exemplary embodiment of a lanyard made according to the invention is illustrated in FIG. 1 and is seen to include 5 basic components. The first is a loop 10 of plastic tubing or the like. Depending upon how the lanyard is to be utilized by the wearer, the loop of tubing 10 can be of a variety of lengths. For example, long lengths will be employed if the Lanyard is to be worn around the neck, while significantly shorter lengths may be employed if the lanyard is to be worn around the wrist or about a finger.

A second component of the lanyard is an attaching clip 12 formed of wire and which is secured by a means to be described in greater detail hereinafter to the ends of the plastic tubing 10.

A third element comprises a crimped ferrule 14 which surrounds the ends of the plastic tubing to hold the lanyard in assembled relation while a fourth element comprises a slidable wire loop 16 which can be moved along the length of the tubing 10 to increase or diminish the size of the loop defined thereby.

The last element is a resilient retaining means 18 which is adapted to surround and be received within an external annular groove in an instrument to be held by the lanyard. For example, as best seen in FIGS. 1 and 7, the lanyard is illustrated as holding a conventional duck call 20 having a peripheral external groove 22.

With reference now to FIG. 2, the clip 12 is seen to be generally Y-shaped in configuration and includes an exaggerated base and a pair of legs 24 and 26. The ends 28 and 30 of the legs 24 and 26 are directed inwardly and are offset from each other by reason of the leg 26 having a shorter length than the leg 24. In general, portions of the legs 24 and 26 adjacent the ends 28 and 30 are parallel as illustrated in FIG. 2, while portions of the legs 24 and 26 adjacent the connection to the base are defined by outwardly diverging portions 32. The presence of the outwardly diverging portions 32 provide for spacing of the parallel portions of the legs 24 and 26.

In general, the length of the inturned ends 28 and 30 will be approximately equal with due allowance for tol-

erances and inexpensive manufacturing procedures, and the sum of their lengths is chosen to be greater than the spacing between the parallel portions of the legs 24 and 26 for purposes to be seen.

The base of the clip 12 is provided with retaining means, generally designated 34 for retaining the resilient element 18. According to the preferred form of the invention, the retaining means 34 are two in number and are defined by oppositely extending ears 36 formed from loops of the wire defining the clip 12. That is, the retaining means comprise the outermost extremities of the ear defining loops 36.

The base also includes a concave portion 38 interconnecting the opposed ears 36. Preferably, the radius of curvature of the concave portion 38 conforms to that of the groove 22.

FIG. 4 illustrates a preferred construction of the interturned ends 28 and 30 in terms of their being provided with sharpened points 40 to assist in penetrating the tubing 10. The sharpened points 40 may be formed simply by cutting the wire used to make up the clips 12 on the diagonal. Preferably, the clip 12 is formed of a corrosion resistant material such as stainless steel wire so that throughout its useful life, the entire lanyard will have a pleasing appearance.

With reference now to FIGS. 3-7 inclusive, the manner in which the clip is employed in fabricating a lanyard will be described in greater detail. Referring specifically to FIG. 5, one end 42 of the length of plastic tubing 10 receives the leg 24 of the clip, while the opposite end 44 of the length of tubing 10 receives the leg 26 of the clip. Because the plastic used is a relatively soft material and most certainly is softer than the material used in forming the clip 12, the plastic will yield as shown in FIG. 6 to allow insertion and when the legs 24 and 26 are fully inserted in their respective ends of the plastic tubing, they may be forced together to assume a configuration generally as shown in FIG. 4.

In particular, the end 28 of the leg 24 has completely pierced the end 42 of the tubing 10 and partially pierced the end 44 of the plastic tubing as well. By the same token, the end 30 of the leg 26 has completely pierced the end 44 of the plastic tubing and partially pierced the end 42 thereof. As a result, there is some overlap between the ends 28 and 30 of the legs 24 and 26 but it will be recalled that the leg 26 is shorter than the leg 24 so that no interference results. Thereafter, the ferrule 14 is applied and crimped as illustrated in both FIGS. 3 and 4 to firmly hold the clip 12 in assembled relation with the tube 10.

Prior to such assemblage, the resilient means 18 is applied to the clip 12. According to the preferred form of the invention, the resilient means 18 comprises a spiral type spring with the last two convolutions of each end thereof bent generally transverse to the axis of the spring and passed about the legs 24 and 26 respectively to be received in the ear defining loops 36. That is, one end of the spring will be received in one loop and the

other end of the spring will be received in the other loop. As a result, the spring together with the concave portion of the clip 12 will define a closed loop which is expandable and resilient. The resilient loop is dimensioned so as to have a periphery no greater than the length of the periphery of the groove 22 to insure a snug fit and, preferably, the loop is somewhat smaller so that the spring will be in tension once received in the groove 22.

As a result, once the lanyard is completely assembled with the spring, the spring may be expanded against its inherent resilience to fit about the periphery of the duck call 20 until the same is received in the groove 22. Upon such occurrence, it will retract and firmly hold the duck call 20 in association with the lanyard.

To aid such assembly, it is preferable that the concave portion 38, and specifically, the reverse side thereof, designated 50 be sufficiently close to the opposite sides of the loops so that the spring ends cannot move appreciably from their respective, correct positions at the remote ends of the loops.

From the foregoing it will be appreciated that a lanyard made according to the invention is exceedingly simple to fabricate and can be done so with low cost parts and without time-consuming labor. Moreover, it will be appreciated that the same is long-lived and provides a firm, reliable support for the instrument which may be easily disassembled if desired.

I claim:

1. A lanyard for use with an instrument having an external annular groove comprising: means defining a lanyard loop terminating in a clip having a base defined by opposed ears and an interconnecting concave surface arranged to extend annularly in said groove; and resilient means having ends connected to respective ones of said ears and defining, in conjunction with said concave surface, a closed loop sized no greater than the periphery of said annular groove whereby said resilient means can expand to allow an instrument having an annular groove to be inserted in said loop and retract to seat in said groove and snugly grasp said instrument.

2. A lanyard according to claim 1 wherein said clip is formed of a wire and said ears are defined by loops therein, said resilient means being affixed to said loop by portions extending through said loops.

3. A lanyard according to claim 2 wherein said resilient means comprises a metallic spring of the spiral type, the ends of said spring being received in respective ones of said loops; and means on said clip for holding said spring ends in said loops.

4. A lanyard according to claim 2 wherein said lanyard defining loop is formed of hollow tubing and the ends of said wire are L-shaped and received in respective ends of said tubing, the extreme ends of said wire piercing said tube; and a ferrule encircling both ends of said tubing and said wire ends to hold said extreme ends within the walls of said tubing.

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