United States Patent

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[54] **SPRING WHIP**
4 Claims, 1 Drawing Fig.

[52] **U.S. Cl.** **273/84,** 231/2
[51] **Int. Cl.** **A63b 59/00,** **59/00,** B68b 11/00
[50] **Field of Search** 231/2, 3, 4, 5; 273/84

[56] **References Cited**

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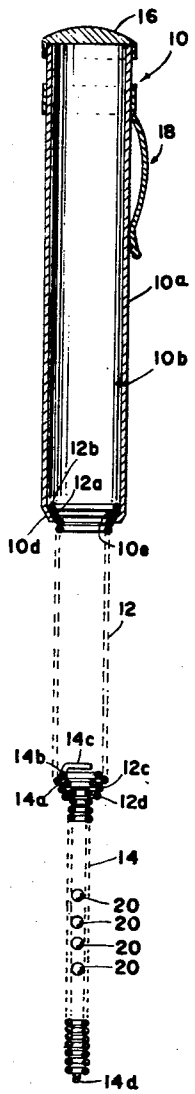
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ABSTRACT: As a defensive weapon, a spring whip formed of interconnected lengths of springs wherein the selected diameters of the springs provide a compact, telescoped arrangement which contributes to the convenience of carrying the device and the conventional spring construction which consists of a succession of helical turns permits interconnecting the spring lengths in their extending operative positions by merely providing variations in the diameters of cooperating helical turns that produce wedging engagement between adjacent spring lengths.



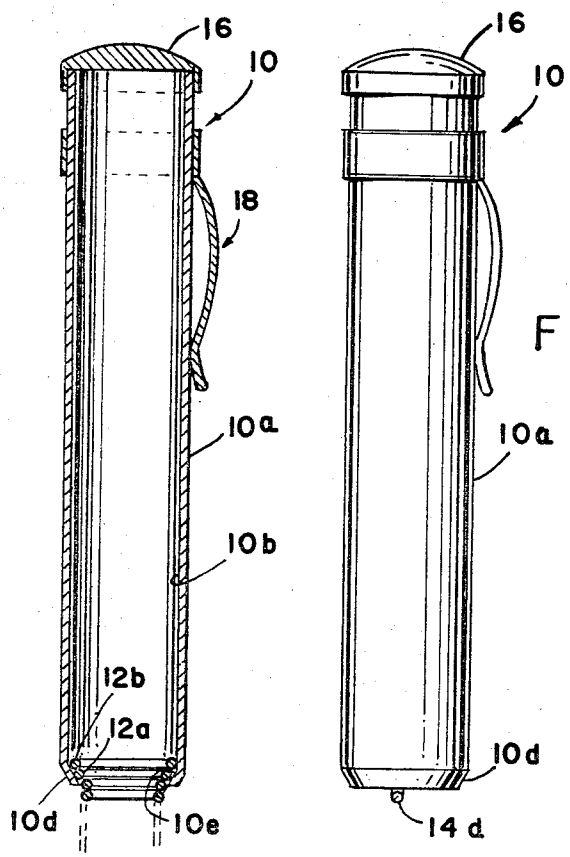
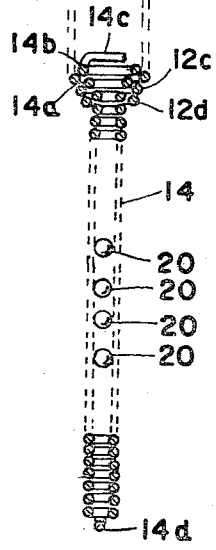


FIG. 1.

FIG. 2.



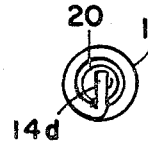


FIG. 3.

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SPRING WHIP

The present invention relates generally to a self-defense weapon, and more particularly to a spring whip adapted to be conveniently carried on the person and thus available to be readily put to use in an emergency situation.

There is a need for a defensive weapon not necessarily of lethal capacity but nevertheless capable of inflicting a degree of pain sufficient to as act as a deterrent, which can be conveniently carried in a woman's purse, in a man's coat pocket, or other such location, from which it can readily be put to use in an emergency situation. Prior art efforts have been restricted, undoubtedly because of the limitations of space, either to alarms rather than actual defensive weapons per se or to the use of weapons, such as firearms or chemicals, which are extremely dangerous. These available prior art weapons are convenient to carry on the person for emergency use but are not used because they present too great a hazard to be kept at home. Alarms on the hand are sufficiently compact, but in only summoning aid are obviously of limited value to the uses user.

Broadly, it is an object of the present invention to provide an improved defensive weapon overcoming the foregoing and other shortcomings of the prior art. Specifically, it is an object to provide a spring whip which can be placed in a compact condition for convenience in carrying and readily converted therefrom into an elongated configuration effectively serving as a whip.

A spring whip demonstrating objects and advantages of the present invention includes a hollow housing, serving as a handgrip, in which several spring lengths are movable from a compact, telescoped storage position into an interconnected, elongated whipping position.

The above brief description, as well as further objects, features and advantages of the present invention, will be more fully appreciated by reference to the following detailed description of a presently preferred, but nonetheless illustrative embodiment in accordance with the present invention, when taken in conjunction with the accompanying drawings, wherein:

FIG. 1 is a front elevational view of the defensive weapon hereof with the spring lengths thereof in their storage position within the handgrip of the weapon;

FIG. 2 is an elevational view, in longitudinal section, illustrating the spring lengths in their extended position from the handgrip; and

FIG. 3 is a detailed end view of the centrally disposed spring length.

Reference s is now made to the drawings, wherein there is shown a defensive weapon, specifically, a spring whip, generally designated **10**, demonstrating objects and advantages of the present invention. As its name implies, the defensive weapon **10** is constructed essentially of lengths of springs. In the illustrated embodiment there are two in number, namely, springs **12** ad and **14** and these, as clearly shown in FIG. 2, have an interconnected position forming an elongated configuration in which they effectively serve as a whip. The primary contemplated use of the weapon **10**, as already noted, is for self-defense, and to this end, the springs **12**, **14**, in addition to having an extending whipping position as illustrated in FIG. 2, also have a compact, telescoped storage position such that the weapon or device can be conveniently carried in a woman's purse, in a man's coat pocket, or other such location, form which it can conveniently be put to use in an emergency situation.

Turning now to the details of construction of the spring whip **10**, the same includes a hollow cylindrical housing **10*a*** bounding an internal cylindrically shaped storage compartment **10*b***, provided with an upper entrance opening **10*c*** normally closed with a friction-fit cap **16** after placement of the springs **12**, **14** within the storage compartment **10*b***. The opposite end of the housing **10*a*** has a conical lip **10*d*** which provides a lower housing exit opening of a progressively diminishing extent for a purpose soon to be described. Housing **10*a***, to

add to the convenience of carrying the defensive weapon **10**, also includes a pocket clip construction **18**.

From the foregoing description, it should be readily appreciated that the housing **10*a*** effectively serves not only as a storage compartment for the springs **12**, **14** when the defensive weapon is not being used, but also as a handgrip for the weapon during use. To place the weapon **10** in condition for use, the springs **12**, **14** need only be projected from their telescoped stored position within the housing **10*a***, as illustrated in FIG. 1, into their whipping extending position from the housing **10*a***, as illustrated in FIG. 2. To achieve this, spring **12**, which will be understood to be a conventional, helically wound spring, has at one end (the upper end as viewed in FIG. 2) the last two of its helical turns **12*a***, **12*b*** made in progressively increasing diameters so that it is not possible for the spring **12** to fit through the progressively diminishing exit opening **10*e***. At the opposite end of the spring **12**, the last two of its helical turns **12*c***, **12*d*** are made with a progressively diminishing diameter so as to serve the same purpose as the conical lip **10*d***, but with respect to the spring length **14** as will now be described.

Spring **14**, like spring **12**, is a conventional, helically wound spring, At the end of spring **14**, which cooperates with spring **12**, the last two of its helical turns, **14*a***, **14*b***, are made in progressively increasing diameters so that when the springs **12**, **14** are projected into their extending positions from the storage compartment **10*b***, the respective helical turns **12*c***, **12*d***, and **14*a***, **14*b***, form a wedging engagement with each other to hold the springs **12**, **14** in their extended positions.

To facilitate the movement of the springs **12**, **14** into their projected positions extending from the storage compartment **10*b***, plural weights **20** are movably disposed within the hollow interior of the spring **14** and are confined to this area by the bent respective opposite ends **14*c***, **14*d*** of this spring.

From the foregoing, it should be readily appreciated that the defensive weapon **10** hereof is effective for purposes of self-defense defense in that the springs **12** and **14** can inflict sufficient pain to act as a deterrent, and the telescoped, storage positions of the spring **12**, **14** within the cylindrical housing **10*a*** in an obvious manner contribute to the cone convenience of carrying the defensive weapon on the person of the user until it is required in an emergency situation.

A latitude of modification, change and substitution is intended in the foregoing disclosure and in some instances some features of the invention will be employed without a corresponding use of other features. Accordingly, it is appropriate that the appended claims be construed broadly an d in a manner consistent with the spirit and c scope of the invention herein.

I claim:

1. As a defensive weapon, a spring whip comprising a hollow housing serving as a handgrip bounding an internal storage compartment, plural lengths of helically wound springs including a center spring and at least one outer spring, said springs being of selected diameter sizes operatively arranged relevant to each other so as to be movable between a telescoped storage position within said storage compartment and a whipping position extending therefrom, said selected diameters of said springs being effective to cause interconnection of said telescoped ends of said springs in said extending positions thereof, plural weights movably disposed within said center spring, and spaced means confining said weights within said center spring so that the movement of said weights projects said springs into said extending positions thereof.

2. A defensive weapon as defined in claim 1 wherein said interconnected ends of adjacent telescoped pairs of said springs are of cooperating progressively diminishing diameters so as to cause a wedging engagement therebetween at the termination of movement of said springs into said extending positions thereof.

3. A defensive weapon as defined in claim 1, wherein said spaced confining means comprise opposite ends of said center spring extending inwardly to be disposed in the path of movement of said with weights.

4. A defensive weapon as defined in claim 1, wherein said housing is provided with a conical lip defining an exit opening of a progressively diminishing extent, said outer spring including an end of progressively increasing diameter said outer spring end and said conical lip cooperating to cause a wedging engagement therebetween at the termination of movement of said springs into said extending positions thereof.