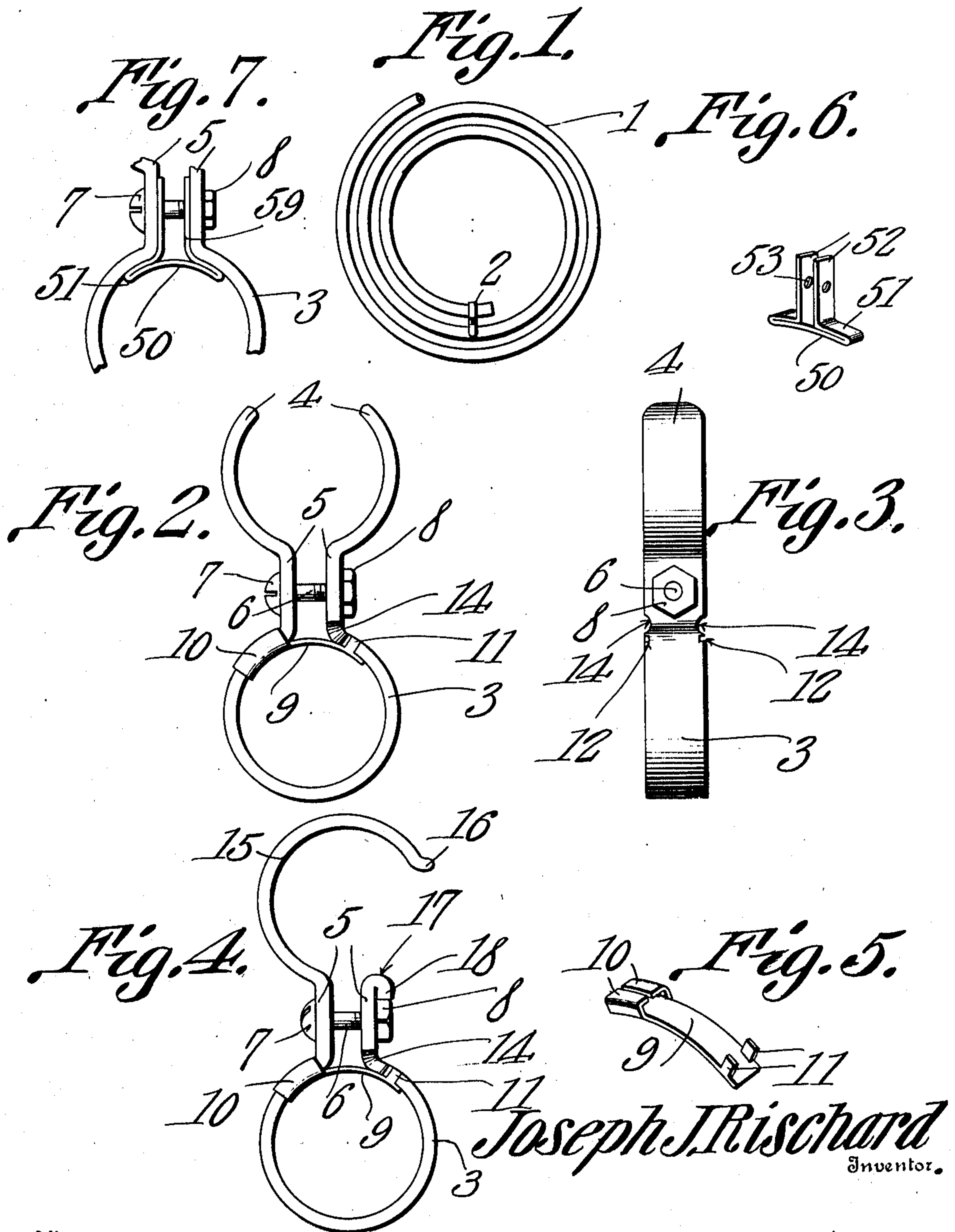


J. J. RISCHARD.  
HOSE CLAMP.  
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Witnesses  
*E. J. Stuart*  
Mason B. Lawton

By *Cash & Co.*  
Attorneys

*Joseph J. Rischard*  
Inventor.



# UNITED STATES PATENT OFFICE.

JOSEPH J. RISCHARD, OF PASADENA, CALIFORNIA.

## HOSE-CLAMP.

978,398.

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*To all whom it may concern:*

Be it known that I, JOSEPH J. RISCHARD, a citizen of the United States, residing at Pasadena, in the county of Los Angeles and State of California, have invented a new and useful Hose-Clamp, of which the following is a specification.

It is the object of this invention to provide a clip, adapted to be mounted upon one end of a hose, to receive a succeeding convolution thereof, so that the hose may be rolled up into a flat, compact hoop.

Another object of the invention is to provide a plate of novel and improved form, adapted to serve as a closure for one portion of the device, and to serve as a means for holding together, yieldable portions of the structure.

Another object of the invention is to provide a means whereby a clamping nut which enters into the structure, may be held against rotation.

With the above and other objects in view, the invention consists in the novel construction and arrangement of parts hereinafter described, delineated in the drawings, and specifically claimed, it being understood that changes, properly falling within the scope of what is claimed, may be made, without departing from the spirit of the invention.

Similar numerals of reference are employed to denote corresponding parts throughout the several figures of the drawings.

In the accompanying drawings,—Figure 1 is a side elevation of a hose, equipped with the clip of my invention, and rolled up, in order to show clearly the function of the clip; Fig. 2 is an edge elevation of one form of clip; Fig. 3 is a side elevation of the clip shown in Fig. 2, the bridging plate being removed, in order to show clearly certain indentations in the edges of the clip; Fig. 4 is an edge elevation of a modified form of the invention; Fig. 5 is a detailed perspective of the bridging plate which is common to both of the forms above briefly described; Fig. 6 is a perspective of a modified closure; and Fig. 7 is a fragmental edge elevation showing the device of Fig. 6 in place.

In Fig. 1 of the drawings, a hose 1, of any desired construction, is shown. Located adjacent the end of this hose 1, is a resilient clip 2, which, at one end is secured to the hose, and, at the other end, terminates in gripping elements so that, when the hose

is rolled up as shown, a successive convolution of the hose may be engaged by the clip, thus disposing the hose in compact form, without the aid of a reel, or like device. The clip, which, in Fig. 1 of the drawings, is designated generally by the numeral 2, is shown with particularity, in the remaining figures of the drawings.

Referring to Fig. 2, it will be seen that the clip comprises a body, fashioned from a single piece of material, bent to form, at one end of the device, a circular, inclosing loop 3. The ends of this loop 3 are spaced slightly apart, and are connected with spaced, arcuate gripping arms 4, by means of parallel portions 5. These parallel portions 5 are apertured to receive a bolt 6, one end of which is provided with a head 7, adapted to engage the exterior of one of the portions 5, and at the other end threaded to receive a nut 8, adapted to bear against the exterior of the other of the said portions 5.

The space between the adjacent ends of the inclosing loop 3 is bridged by a plate 9, shown in detail in Fig. 5. At one end, this plate 9 is provided with lateral extensions or arms 10, which, as shown most clearly in Figs. 2 and 4, are adapted to be bent about the loop 3 to contact with one of the portions 5. From the edges of the plate 9, adjacent its other extremity, project oppositely disposed fingers 11. As shown to best advantage in Fig. 3, the edges of the loop 3 are inclined, as shown at 14, there being, beyond the inclined faces 14, oppositely disposed notches 12. These notches 12 are adapted to receive the fingers 11 of the plate 9 when the nut 8 is tightened, the fingers first traversing the inclined faces 14 and then dropping into the notches 12, thus positively securing the inclosing loop 3 above the hose 1.

In Fig. 4, a modification of the invention is shown. When constructed in accordance with the showing of Fig. 4, one of the portions 5 is bent to form a hook 15, overhanging the other portion 5, the hook being flexed outwardly at its extremity, as shown at 16, to facilitate the introduction of the hose beneath the hook 15. The extremity of the other portion 11 is bent sharply upon itself at 17, the bend at 17 cooperating with the bend 16 of the hook 15 in facilitating the introduction of the hose within the contour of the hook. More-



over, the end 18 is of such a length that it will engage one of the flat faces of the nut 8. Thus, in tightening the loop 3 about the hose, the nut 8 may be held in place against the end 18 until the nut is engaged by the bolt 6, whereupon the end 18 will prevent the nut from rotating, the bolt 6 being seated firmly by engaging the kerf in the head 7 with a screw driver or other suitable tool.

If desired, the plate which bridges the space between the parallel portions 5 to constitute a closure for the loop 3, may be modified to the extent indicated in Figs. 6 and 7 of the drawings. As there shown, the plate consists of a head 51 and a rectangularly disposed shank 59, giving to the element, in general contour, a T shape. This T shaped element may be fashioned in any desired manner. In Fig. 6, I have shown it as being made from a flat strip of metal, the ends of the head being sharply bent upon themselves, as denoted by the numeral 51, and thence extended, in parallel relation, substantially at right angles to the head 50, to form spaced arms 52, the same constituting the shank portion of the element. In these arms 52, there may be openings 53, adapted to receive the retaining bolt, the T shaped element being disposed as shown in Fig. 7. The portion of the device which is depicted in Fig. 6, obviously, may be applied either to that form of the device shown in Fig. 2, or that shown in Fig. 4.

The operation of the device will probably be clear from the foregoing description, but it may be stated briefly at this place that the hose 1 is threaded through the loop 3, whereupon the bolt 6 is manipulated to clamp the loop closely about the hose, the fingers 11 locking into the notches 12 as hereinbefore described. When a clip 2 has thus been mounted upon the hose, the hose may be readily rolled up, in the form of a hoop.

Having thus described the invention, what is claimed is:—

1. In a device of the class described, a body including compressible parts united at one end of the body to form a loop, and

spaced apart at the other end of the body to form an open gripping element; a plate bridging the space between said body forming parts to constitute a closure for the loop; means for securing the plate adjacent one end to one portion of the loop; interlocking elements upon the edges of the loop and upon the edges of the plate adapted to hold the body-forming parts against relative movement; and means for compressing the body-forming parts to secure a cooperation of the said interlocking elements.

2. In a device of the class described, a body including compressible parts united at one end of the body to form a loop, and spaced apart at the other end of the body to form an open gripping element; and a plate bridging the space between said body-forming parts to constitute a closure for the loop; means for securing the plate adjacent one end to one portion of the loop; the plate, adjacent its other end, being provided upon its edges with projecting oppositely disposed fingers; there being notches in the edges of the loop, into which the fingers are adapted to fit when the body-forming parts are compressed.

3. In a device of the class described, a body including compressible parts united at one end of the body to form a loop, and spaced apart at the other end of the body to form an open gripping element; a plate bridging the space between said body-forming parts to constitute a closure for the loop; means for securing the plate, adjacent one end, to one portion of the loop; a finger projecting from the edge of the plate adjacent its other end; the loop being provided, in its edge, with a notch adapted to receive the finger, the loop being beveled adjacent the notch, to provide an inclined surface over which the finger is adapted to ride, to enter the notch when the said body-forming parts are compressed.

In testimony that I claim the foregoing as my own, I have hereto affixed my signature in the presence of two witnesses.

JOSEPH J. RISCHARD.

Witnesses:

CARL NIEDERWERFER,  
KATHERINE MORTON.