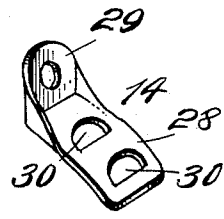
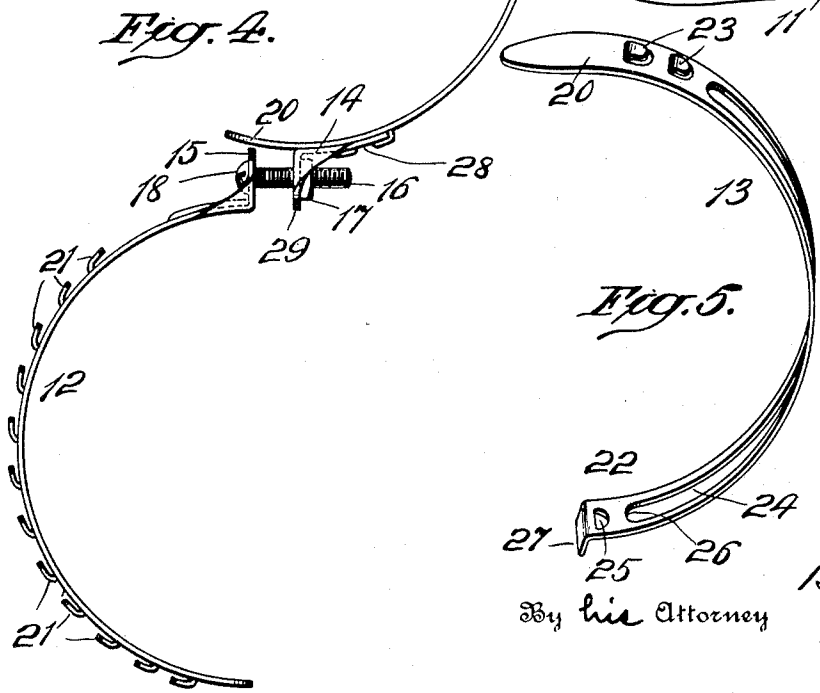
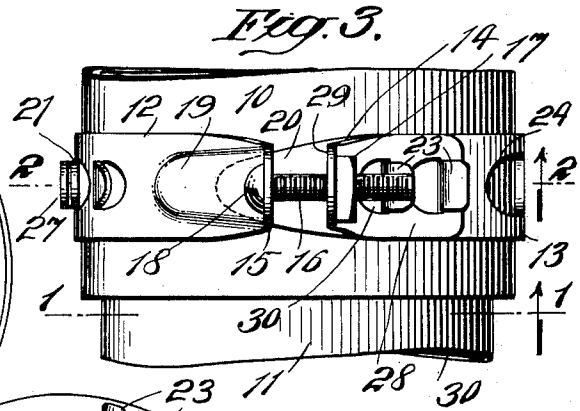
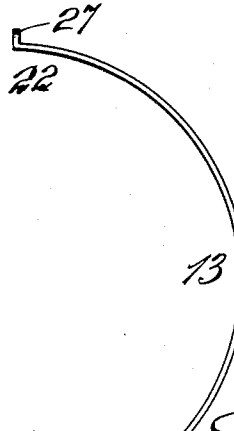
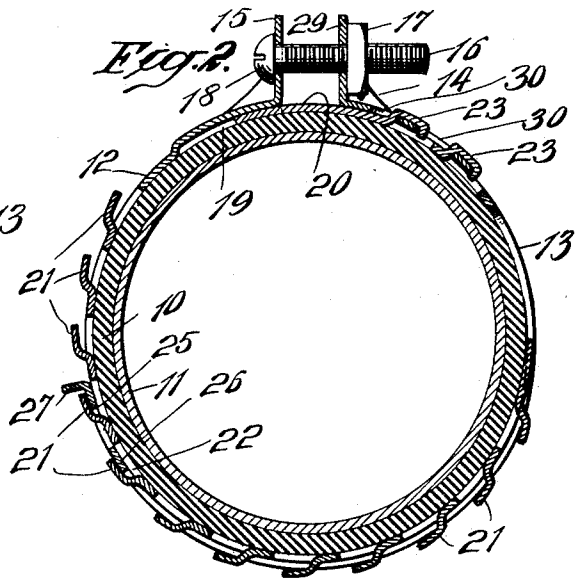
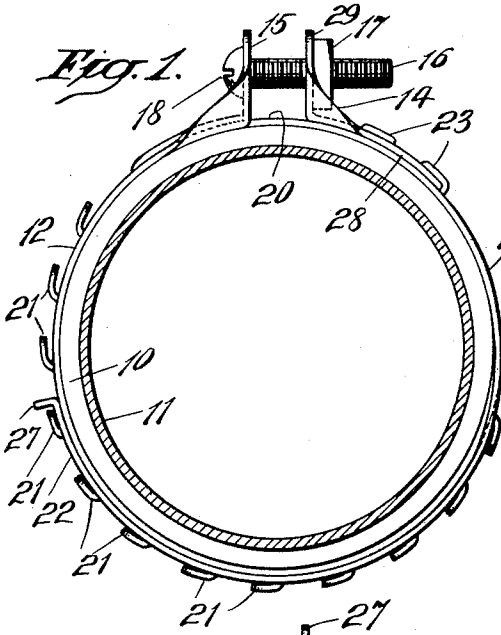


I. COOPER.
CLAMP.

APPLICATION FILED MAR. 11, 1918.

1,362,784.

Patented Dec. 21, 1920.



Inventor
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By his Attorney
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UNITED STATES PATENT OFFICE.

ISIDOR COOPER, OF BROOKLYN, NEW YORK.

CLAMP.

1,362,784.

Specification of Letters Patent. Patented Dec. 21, 1920.

Application filed March 11, 1918. Serial No. 221,623.

To all whom it may concern:

Be it known that I, ISIDOR COOPER, a citizen of the United States, and a resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

The invention pertains more particularly to clamps of the character employed for binding a piece of hose onto a nipple or pipe, and the object of the invention is to provide a simple and inexpensive clamp capable of being quickly and efficiently applied and also readily adaptable to different diameters of hose or other articles to which it may be applied.

One of the main purposes of the invention is to provide an efficient clamp which may be inexpensive to manufacture and readily adjusted for and applied to varying diameters of hose or pipes, the carrying in stock of a large number of clamps each adapted to some special diameter of hose or pipe being by my invention unnecessary.

The clamp of my invention, aside from the final securing screw and nut, comprises three main parts, two of said parts being semi-cylindrical and one of said parts a head to be fastened to one of the semi-cylindrical parts and affording therefor proper means for receiving one end of the screw and the nut, the head on the other part being integral therewith and adapted to receive the head of the screw. The two main parts are adjustable with relation to each other so as to adapt the clamp for hose of varying diameters.

The invention will be fully understood from the detailed description hereinafter presented, reference being had to the accompanying drawings, in which:

Figure 1 is a vertical section through a piece of pipe or a nipple and having a piece of hose bound thereon by the clamp of my invention, the section being on the dotted line 1—1 of Fig. 3;

Fig. 2 is a vertical section through the clamp of my invention, a piece of pipe and a piece of hose bound on said pipe by said clamp;

Fig. 3 is a top view of the clamp of my invention shown applied to a piece of hose and a piece of piping, the hose and piping being partly broken away;

Fig. 4 is a side elevation of the clamp of my invention showing the two semi-cylindrical parts as swiveled outwardly from each other preparatory to being applied to operative position without requiring a separation of said parts;

Fig. 5 is a perspective view of one of the semi-cylindrical parts comprising my clamp, and

Fig. 6 is a perspective view of the head which I apply to that member of the clamp shown in Fig. 5.

In the drawings, 10 designates a piece of hose with the clamp of my invention applied thereon and binding the same upon a piece of piping or a nipple 11, and the said clamp comprises two semi-cylindrical members 12, 13, a head 14 applied to said member 13, a head 15 formed integrally on one end of said member 12, a screw 16 extending through said heads and a nut 17 engaged by said screw and having a bearing against the head 14. The screw 16 will preferably have a slotted head 18, as usual, adapted to be engaged by an ordinary screw-driver or the like.

The member 12 is formed from a strip of sheet metal and at one end said member is bent outwardly at right angles to form the head 15, adjacent to which said member is longitudinally recessed, as at 19, to receive the tongue end 20 of the member 13, so that at the meeting portions of the members 12, 13, said members may present a smooth flat surface to the hose, this being a feature of importance in securing a proper binding action of the clamp against the hose. The member 12 has struck up from its longitudinal middle portion a series of lips 21 which serve as hooks for adjustably engaging the end 22 of the member 13.

The member 13 is formed from a strip of sheet metal and is of about the same width as the member 12, and said member 13 in addition to having the tongue end 20, is formed with two lips 23 adjacent to said tongue end 20 and with a longitudinal slot 24 which is considerably elongated and wide enough to straddle the lips 21 on the member 12. At its end 22 the member 13 is formed with a recess 25 and a transverse bar 26, and these parts are so disposed that in adjusting the clamp upon a piece of hose, the recess 25 may engage one of the lips 21 of the member 12 and the transverse bar 26 engage the next adjacent lip 21, thereby affording two points of connection of the end 22 of the member 13 with the member

12 and increasing the security of the connection between the members 12, 13. The end 22 of the member 13 is also formed with an outwardly projecting right angular lip 27, which serves as a convenient means whereby the operator may draw the end 22 of the member 13 along the member 12 until said end has reached the correct position at which its recess 25 and cross-bar 26 are to engage the lips or hooks 21 of said member 12.

The head 14 is stamped up from sheet metal and has a curved member 28 to engage the outer surface of the member 13 and a right angular member 29 which is apertured to receive the screw 16, said member 29 also affording a bearing for the nut 17. The member 28 of the head 14 is formed with two semi-cylindrical apertures 30 adapted to be hooked upon the lips 23 of the member 13, and said apertures are so disposed and proportioned with relation to the lips or hooks 23 that when said head is applied to position on the member 13, the ends of said lips or hooks may be bent downwardly, the first lip 23 having its outer end bent into the second aperture 30 of the head 14 and the second lip 23 bent downwardly over the outer edge of said head 14, as shown more particularly in Fig. 2, thereby permanently connecting the head 14 with the member 13 in a simple manner and with the material afforded by said head 14 and member 13, extra securing means not being required. The head 14 is of the same width as the member 13 and is separately formed and then permanently secured to said member 13. There is a considerable saving of metal in forming the head 14 separately from the member 13, since in the formation of the head 14 I construct the same with the right angular member 29 and also with triangular shaped parts which connect the sides of said member 29 with the sides of the outer end portion of the body of the head 14.

I form the members 12, 13 in two substantially semi-cylindrical and co-extensive parts, and these parts may be carried in stock while connected together by the screw 16 and nut 17, and then when the clamp is to be applied to position, the parts may be turned outwardly from each other or to the condition shown in Fig. 4, when one of said members may be applied to the hose and the other then swiveled on the screw 16 to position to be applied to the hose and against the other member, the member 12 being first applied to the hose and the member 13 immediately thereafter. On applying the members 12, 13 to the hose, said mem-

bers will first loosely engage the hose, and thereupon the operator will take hold of the lip 27 and draw the end 22 of the member 13 along the free end of the member 12 until said members have entered into close relation to the hose, whereupon he will cause the recess 25 and cross-bar 26 to engage the appropriate lips or hooks 21, and thereafter the final binding action of the clamp against the hose may be secured by operating the screw 16 in the usual manner. On removing the clamp from the hose the operator would first loosen the screw 16 and then unhook the end 22 of the member 13 from the lips or hooks 21 of the member 12.

I consider it desirable that all of the parts of the clamp may be connected together in the manner I illustrate, so that the clamps may be carried in their entirety in stock instead of in separate pieces to be assembled by the user. The primary assembly of the parts of the clamp is also a convenience to the user, and in the construction presented the parts of the clamp do not have to be dismembered or the screw 16 removed on applying the clamp to position. When the clamp is in position, the projecting tongue end 20 of the member 13 spans the space between the heads 14, 15 and enters the recess 19 formed in the member 12 adjacent to the head 15.

What I claim as my invention and desire to secure by Letters-Patent, is:

A clamp of the character described, comprising two flexible members forming the body of the clamp, opposed heads at adjacent ends of said members, means for acting on said heads for tightening the clamp upon the article to which it may be applied, and means on said members at the portions thereof removed from said heads for interlocking the end of one member on the other member, said means comprising a series of hook lips on one of said members, a cross-bar on one end of the other member adapted to engage one of said hook lips, and an outwardly projecting finger-pull on the end of said member having said cross-bar and which member is slotted to straddle said hook lips of and closely engage the other member.

Signed at New York city, in the county of New York and State of New York, this 8th day of March, A. D. 1918.

ISIDOR COOPER.

Witnesses:

ARTHUR MARION,
CHAS. C. GILL.