J. R. CLANCY.

HOSE CLAMP.

APPLICATION FILED MAR. 11, 1916.

1,270,927. Patented July 2, 1918.

Fig. 1.

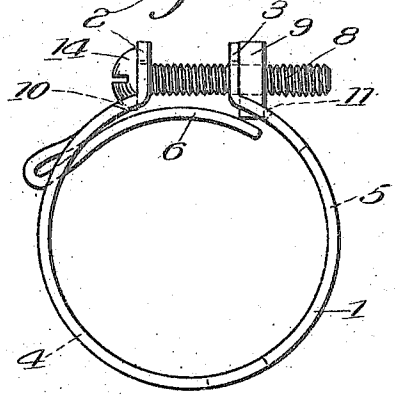


Fig. 2.

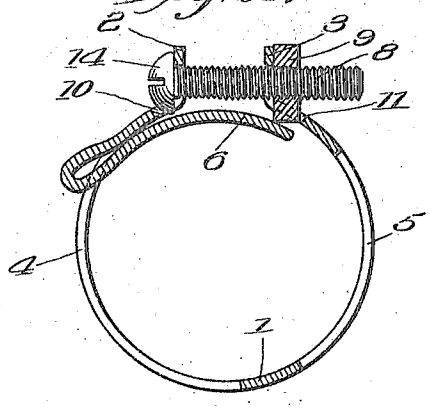


Fig. 3.

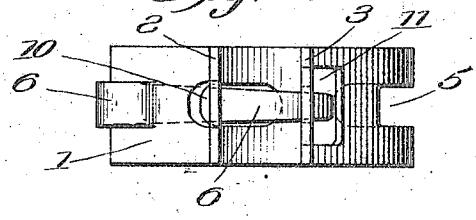


Fig. 4.

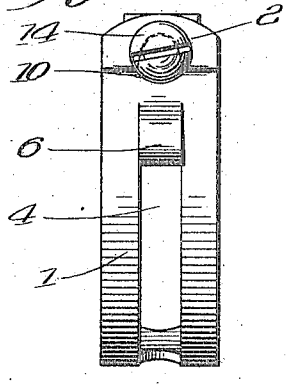
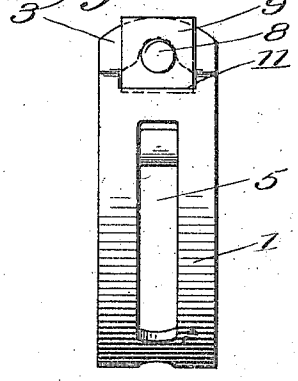


Fig. 5.



Inventor

John R. Clancy

By his Attorney

Alfred Wilkinson

UNITED STATES PATENT OFFICE.

JOHN R. CLANCY, OF SYRACUSE, NEW YORK.

HOSE-CLAMP.

1,270,927 Specification of Letters Patent. Patented July 2, 1918.

Application filed March 11, 1916. Serial No. 83,487.

To all whom it may concern:

Be it known that I, JOHN R. CLANCY, a citizen of the United States, residing at Syracuse, in the county of Onondaga and State of New York, have invented new and useful Improvements in Hose-Clamps, of which the following is a specification.

This invention relates to hose clamps and consists in an improved construction and arrangement of the parts thereof and is particularly applicable to the type of clamp wherein outwardly bent ears are provided on the ends of the band to receive suitable tightening and securing means. The latter commonly consists of a threaded bolt received in suitable apertures in the ears and provided with a nut threaded on the end thereof and desirably locked against rotation.

An important feature of my present invention consists of an improved arrangement of the securing means, preferably the bolt and nut aforesaid, wherein it is positioned to be substantially in alinement with the band or body of the clamp. This I accomplish by suitably recessing the band of the clamp so as to receive the nut and the head of the bolt thus permitting the bolt to assume a more inward position than heretofore. As a result of this construction the ears may be materally shortened or lowered and an effective lock for the nut is provided by the recess in the band which receives it. In my improved clamp a valuable advantage is gained for by shortening of the ears and arranging the tightening means to engage at the base of the ears the stresses are applied with substantially no tendency toward upsetting and bending of the ears. Further advantages obtained in consequence of my improvements consist in a saving of metal by shortening of the ears and the elimination of special provision for locking of the nut.

Other features and advantages of my improved clamp will be understood by reference to the accompanying drawing wherein the reference numerals of this description are applied to corresponding parts in the several views.

In the drawing, Figure 1 illustrates in side elevation a desirable embodiment of my invention. Fig. 2 is a longitudinal vertical sectional view thereof. Fig. 3 is a plan view and Figs. 4 and 5 are end elevational views thereof respectively from the left and right hand side.

The clamp embodying the features of my invention is here shown consisting of an annular band 1 having its ends outwardly bent to form the oppositely arranged ears 2 and 3. The clamp so formed is desirably stamped out of sheet metal of uniform width with elongated slots 4 and 5 and bent into annular form as shown. In the forming of the slot 4 an integral tongue element 6 is formed and is bent inwardly to span the space between the ears for the protection of the hose in the usual manner.

The ears 2 and 3 are perforated to receive the threaded shank of the screw bolt 8 having threaded thereon the securing nut 9. In accordance with my invention I provide slots or openings 10 and 11 in the band ends at the base of each ear. As shown these slots are formed by enlargements or continuations of the apertures for the bolt 8 thus permitting both slots and apertures to be formed by stamping out of a single piece of metal. The apertures for the bolt 8 are arranged to position the bolt inwardly toward the clamp band so as to be as close thereto as possible thereby reducing the height of the ears to the minimum. When in position as shown, the slotted head 14 of the bolt is received in the opening 10 and the securing nut 9 similarly enters into the opening 11 in the band, these openings thereby permitting of the bolt assuming its inward position indicated. As a result of the described arrangement it will be seen that upon tightening of the clamp by means of the bolt and nut, the tightening pressure will be applied to the ears at the base thereof and substantially directly in alinement with the band proper of the clamp. In consequence there is produced no upsetting strains on the ears which has been an objectionable factor of clamps employing the larger ears as heretofore made.

A further valuable feature incidental to my improved construction consists in the employment of the opening 11 for the nut 9 to perform the function of a nut lock whereby the nut is rigidly held from rotation. For this purpose the opening 11 is of a size relative to the nut to receive it in the position shown but to be inclosed by its side walls so as not to permit of the nut turning therein. The necessity of providing special nut locking means is thus eliminated.

The clamp thus formed is particularly simple and economical to manufacture, pos-

ses added strength by reason of elimination of the bending strain on the ears by applying the stresses in line with the band ends and moreover has the advantage accompanying the lowering of the ears of offering a smaller projection than heretofore.

While I have shown and described an approved embodiment of my invention herein it will be understood that it is subject to various modifications without departing from the scope of the invention. It is therefore intended that all matter contained herein shall be interpreted as illustrative and not in a limiting sense.

Having described my invention I claim,

A hose clamp comprising a flat metal band bent into substantially circular form and having on its ends outwardly extending short ears and provided with apertures at the junction of the ears with the body of the band, a tightening bolt fitted to the apertures and a nut threaded on the bolt, said apertures being arranged to position the bolt to exert the tightening stress on the clamp in alinement with the body and said apertures being extended into the body portion to permit of the bolt being so positioned and to provide a locking means for the nut, and an integral tongue bent inwardly from the body portion of the band and underlying the nut, substantially as described.

In testimony whereof I have signed my name to this specification.

JOHN R. CLANCY