(No Model.)

O. THUM.

HOSE CLAMP.

No. 396,625. Patented Jan. 22, 1889.

Fig. 1.

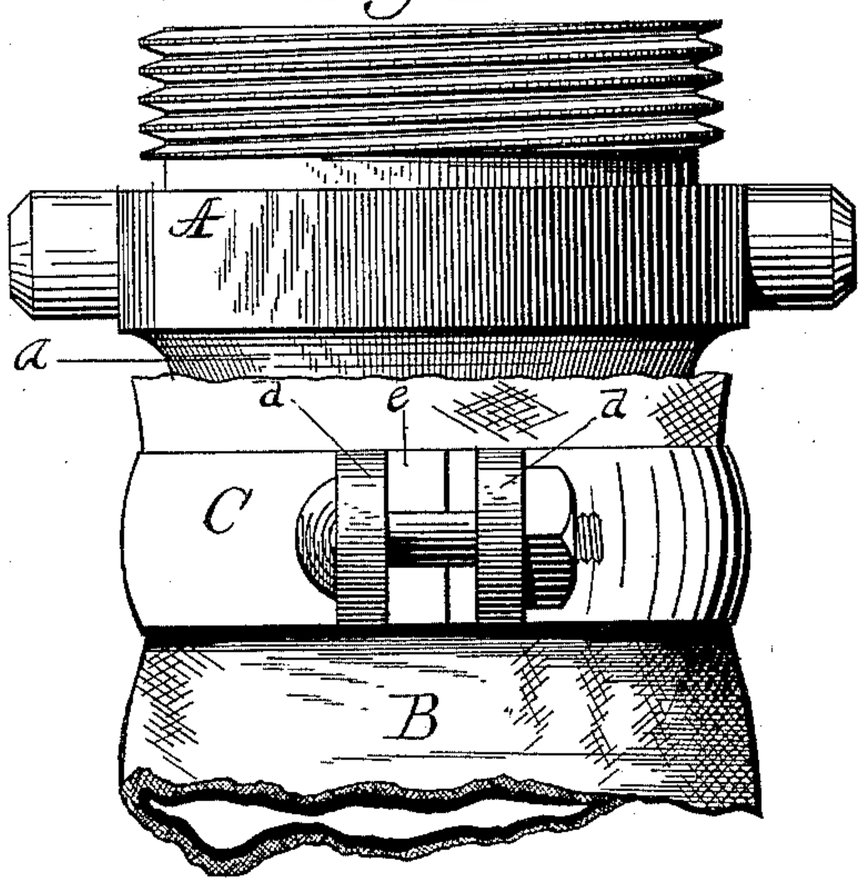
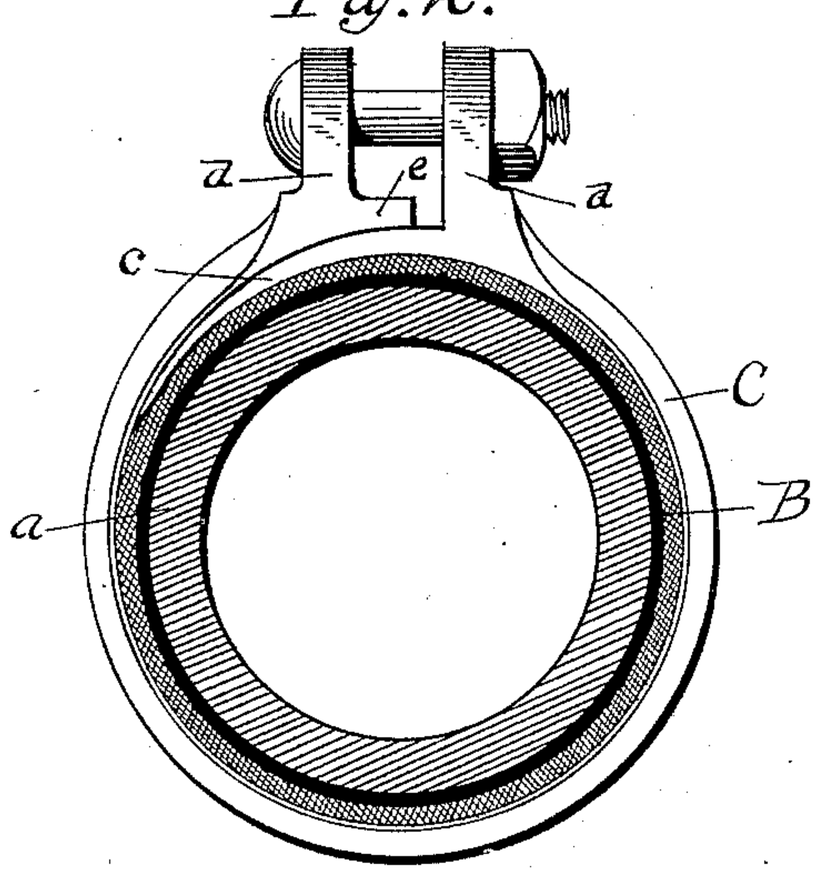


Fig. 2.



Attest.
Walter P. Steene.
F. L. Middleton

Inventor.
Otto Thum.
by Ellis Spear
Atty.

UNITED STATES PATENT OFFICE.

OTTO THUM, OF GRAND RAPIDS, MICHIGAN.

HOSE-CLAMP.

SPECIFICATION forming part of Letters Patent No. 396,625, dated January 22, 1889.

Application filed October 5, 1888. Serial No. 287,284. (No model.)

To all whom it may concern:

Be it known that I, OTTO THUM, of Grand Rapids, in the county of Kent and State of Michigan, have invented a new and useful Improvement in Clamps for Hose; and I do hereby declare that the following is a full, clear, and exact description of the same.

My invention is designed to secure hose ends to the extensions of hose-couplings, and has for its object to provide a clamp which will encircle the hose evenly and be capable of adjustment upon itself without strain upon the material of the hose and without undue strain upon the parts of the clamp. Heretofore various kinds of clamps have been used; but the one in most general use consists of a divided clamp or ring having its ends upturned to form lugs, these lugs being connected by a bolt and nut, and by tightening the latter the clamping action has been secured. This construction is objectionable, for the reason that as soon as pressure is put upon the parts of the clamp the lower shoulders of the lugs pinch the material of the hose, thus forcing it up between the inner faces of the lugs, and this not only puts an undue strain upon the hose, but it also breaks the smooth interior thereof, thus offering resistance to the water, and sometimes a channel is formed through which the water is apt to find its way. Again, in this construction it is necessary to make the clamp-ring of very strong material, for the reason that when a portion of the hose is pinched between the lugs greater pressure is required to draw the parts of the ring together, and the effect is, unless the material of the ring is very heavy, to bend the lugs toward each other, and of course any further pressure will have no effect to increase the clamping action of the ring.

My invention obviates the objectionable features of the clamp above referred to, while at the same time it retains the feature of the projecting lugs, as this is a desirable mode of connecting the ends of the ring. Heretofore to obviate this difficulty clamps have been devised with an underlapping portion extending underneath the end of the overlapping portion, the underlapping portion being extended beyond the lock.

My invention consists in an improvement upon this, and in it the overlapping portion also has an extension beyond the lock, whereby the lock on the end which overlaps is prevented from springing and turning the sharp corner down upon the underlapping portion, and thereby binding and throwing undue strain upon the lock.

In the drawings, Figure 1 represents a plan view of the clamp in place. Fig. 2 is a side elevation and section of pipe.

In the drawings, A represents one-half of an ordinary pipe-coupling, having a tubular extension, *a*. The end of the hose fits over this extension and is shown at B.

My improved clamping-ring C fits over the hose and clamps it securely and evenly to the extension of the coupling. The ring is divided, as shown, and has one end formed tapering, as shown at *c*, and the other end, adapted to overlap, conforms to the curved shape of the upper surface of the underlap. A lug, *d*, is formed on the right-hand part of the ring, as in Fig. 2, a suitable distance from the tapering end of the underlapping portion, while near the end of the left-hand portion a similar lug is formed. These lugs extend parallel to each other. The left-hand part of the ring has a short extension beyond its lug *e*, so as to form a bearing therefor and prevent binding and undue strain upon the lock. These lugs are perforated and a threaded bolt passes through the same, and the nut upon the end allows the two parts to be held together. The divided ends of the ring overlap, as shown, the underlap forming a long bearing between its lug and its end. It will thus be seen, when the ring is placed around the hose, the bolt inserted in the holes of the lugs, and the nut placed upon the threaded portion, that the adjustment of the parts of the ring is easily effected, the one part sliding upon the other, and as the lugs are strengthened at the bases by being formed slightly thicker at that point than the thickness of the ring, they are quite capable of sustaining the strain that may be placed upon them, and thus the ring may be adjusted and clamp the hose with any amount of pressure to the extension of the coupling, and it will be apparent that no pinching can possibly

occur, so that the hose is left smooth upon the outside and inside and a clear passage left for the water.

I claim as my invention—

A clamp consisting of a divided ring having a tapering underlap and an overlapping portion, parallel studs *d*, connected by means of a bolt, the stud of the overlap being set back from the end of the ring to form the strengthening-lug *e*, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

OTTO THUM.

Witnesses:
FRED. LOETTGERT,
WM. THUM.