(No Model.)

W. M. LUSK & W. H. HINKLE.

CLAMPING COLLAR FOR HOSE PIPES.

No. 455,967. Patented July 14, 1891.

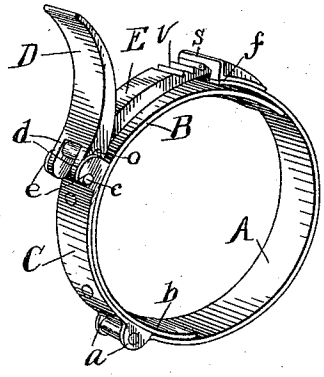


Fig. 1.

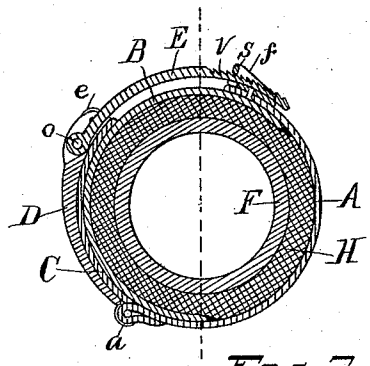


Fig 2

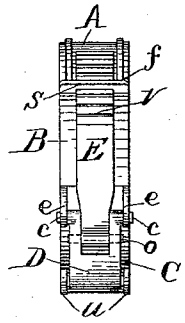


Fig. 5.

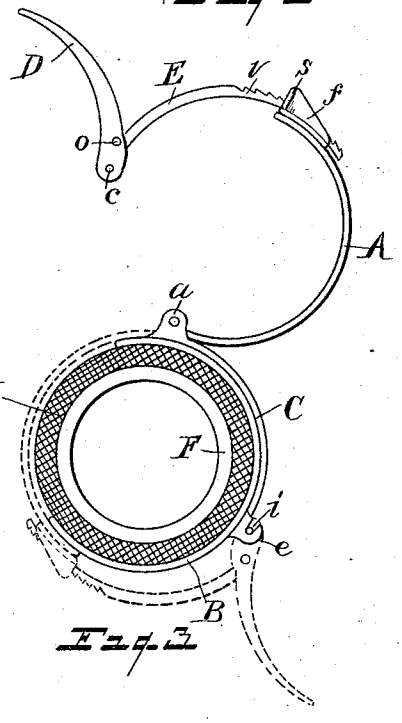


Fig. 3.

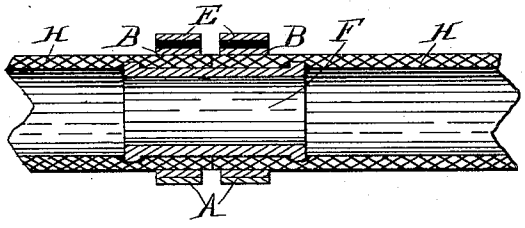


Fig. 4.

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WILLIAM M. LUSK AND WILLIAM H. HINKLE, OF FENTON, MICHIGAN.

CLAMPING-COLLAR FOR HOSE-PIPES.

SPECIFICATION forming part of Letters Patent No. 455,967, dated July 14, 1891.

Application filed April 24, 1891. Serial No. 390,223. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM M. LUSK and WILLIAM H. HINKLE, citizens of the United States, residing at Fenton, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Clamping-Collars for Hose-Pipes; and we do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon, which form a part of this specification.

This invention relates to new and useful improvements in clamping-collars especially designed for attaching and coupling hose; and it consists in a certain construction and arrangement of parts, as hereinafter fully set forth, the essential features of which being pointed out particularly in the claims.

The object of the invention is to produce a two-part hinged and adjustable clamping-collar by means of which the hose may be readily coupled or attached to a hydrant or penstock and in which the construction is such that said collar may be readily clamped upon or removed from a line of hose at any point in said line. This object is attained by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of our improved clamping-collar, showing the locking-lever thrown up in position before clamping the collar upon the hose. Fig. 2 is a central cross-section through the collar clamped upon a section of hose. Fig. 3 is a side elevation showing a portion of the collar on the hose and a hinged segment of the collar thrown out in position, as when placing the collar upon the hose. Fig. 4 is a reduced longitudinal section through two sections of hose secured to an inner coupling-tube by two of our clamping-collars, all parts being in section. Fig. 5 is an edge elevation of the clamping-collar, showing the curved rack, by means of which the circumferential adjustment of said collar is effected.

Our clamping-collar is composed of two parts A and B, made of any suitable spring metal. The part B of the collar is provided with the re-enforcing-plate C attached thereto, one end of said plate having the integral lugs *a* and the opposite end being provided with the integral lugs *e*, said lugs projecting outwardly from the face of said plate at right angles thereto.

Between the lugs *a* of the plate C is hinged one end of the part A of the collar, the end portion *b* of the part B extending by the hinged point and lapping onto the part A, thereby strengthening the hinge and preventing a sharp angle at that point when the collar is clamped upon the hose, whereby a uniform curve to the collar is maintained, causing it to bear alike on all points of the encircled hose.

D indicates the curved locking-lever, the bifurcated end *d* of which is provided with the pins *c*, projecting from its outer face, said pins being adapted to engage in the slots or notches *i* in the lugs *e*, (see Fig. 3,) whereby said lever is detachably pivoted thereto.

E indicates a curved rack, one end of which is pivoted at *o* in the bifurcated end of the lever D, the opposite end of said rack carrying the teeth *v*, passing through an aperture in the plate *f*, secured to the free end of the part A of the collar, which overlaps the free end of the part B thereof, the teeth of said rack being adapted to engage the under edge of the bridge *s* of the plate *f*, clearly shown in Figs. 1, 2, and 5, whereby said parts are detachably and adjustably coupled.

To apply this improved collar to a hose the lever D is thrown up to the position shown in Fig. 1 and is then detached from the lugs *e* and the part A swung out to the position shown in Fig. 3, the hose H placed in the part B of the collar, the part A swung back into place, and the pins *c* of the lever D re-engaged with the lugs *e*. The lever D is then thrown down, drawing upon the rack E and contracting the collar upon the hose, compressing it firmly around the gasket F or other coupling to which the hose is to be attached, as clearly shown in Fig. 2. The lever D is curved to conform to the curve of the collar, and is adapted to fit closely thereto when locked, its free end lying behind the hinge *a*, which forms a guard therefor and prevents the end of said lever catching any obstruction and be-

coming accidentally unlocked as the hose is drawn along.

By employing the bifurcated lever D and pivoting the end of the rack E in the fork thereof above the pivotal point of the lever to the lugs *e* a straight leverage pull is exerted to contract the collar when said lever is thrown down, enabling the hose to be clamped with great force, and when in the operation of clamping the collar upon the hose by means of said lever the pivotal point *o* of the rack is carried past a line from the point of engagement of the rack with the plate *f*, through the center of the bearing-pins *c*, said lever is drawn down against the collar by the resistance of the collar and hose, insuring a secure and perfect locking of the clamp.

When clamping the collar upon a hose, should it be found too large or too small to make a perfect coupling, the lever D is thrown up and its pins *c* disengaged from the lugs *e*, and the part A swung out, as shown in Fig. 3. The rack may then be adjusted through the plate *f*, as desired, and re-engaged with said plate in the proper notch. The parts are then returned to their former position and the locking-lever thrown down to clamp the collar upon the hose, as before described. This feature of adjustment adapts the collar to various sizes of hose, enabling a perfect joint to be effected under all conditions of variation.

In coupling two sections of hose together, as shown in Fig. 4, the opposite ends of the gasket F are inserted in the adjacent ends of the meeting sections. A collar is then clamped upon each of the meeting ends of the hose, whereby a tight and perfect coupling is made.

By forming a two-part hinged collar it may be applied to the hose at any point of the line and does not require to be slipped over the end of the hose in order to place it thereon, as is the case with collars of this class that are formed integral, enabling the collar to be employed for closing a leak, as well as to couple the sections of hose, as shown in Fig. 4.

This improved clamping-collar may also be employed to attach a nozzle to the end of the hose, as will be readily understood.

Having thus fully set forth our invention, what we claim as new, and desire to secure by Letters Patent, is—

1. A hose-clamp comprising a two-part spring-metal collar, one part overlapping the other, and said parts being hinged together at that point, in conjunction with a curved lever having a curved rack-bar pivoted thereto, said rack-bar being adjustably attached to the free end of one of the collar-sections, the curved lever being detachably coupled to the adjacent collar-section, substantially as specified.

2. In a hose-clamp, the two-part spring-metal collar hinged together, the free swinging end of one part adapted to lap onto the free end of the adjacent part, combined with the curved lever having the toothed rack pivoted thereto, said toothed rack having an adjustable and detachable connection with the swinging end of one of the collar-sections, the locking-lever having a pivotal detachable connection with the opposite collar-section.

In testimony whereof we affix our signatures in presence of two witnesses.

WILLIAM M. LUSK.
WILLIAM H. HINKLE.

Witnesses:
H. B. LATOURETTE,
L. L. BOOTH.