

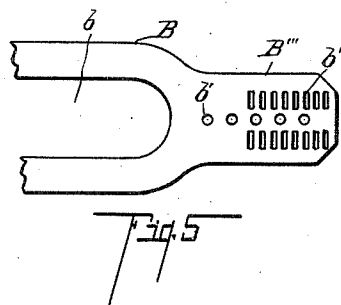
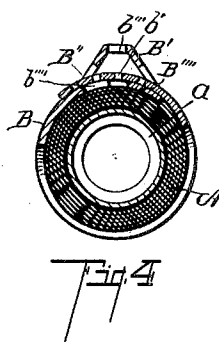
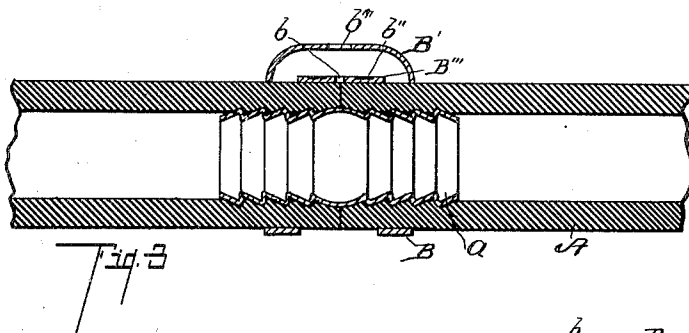
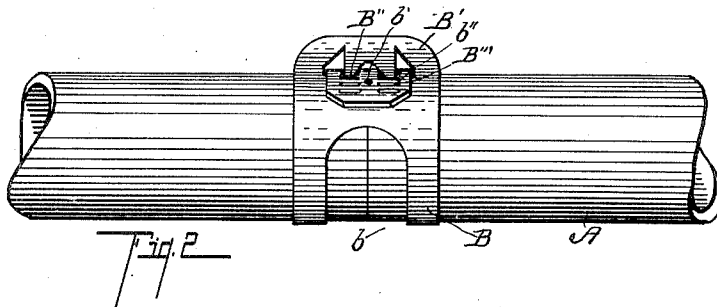
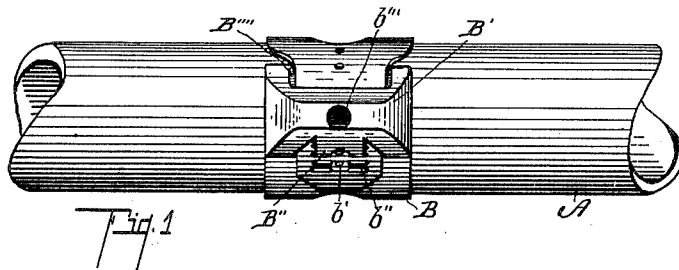
No. 811,343.

PATENTED JAN. 30, 1906.

W. C. WALKER.
HOSE CLAMP.

MODEL.

APPLICATION FILED JULY 7, 1905.



Witnesses:

Edwin J. Adams
Edw. A. Bradford

Inventor,

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By *Chappell & Earl*
Att'y's

UNITED STATES PATENT OFFICE.

WARD C. WALKER, OF BATTLECREEK, MICHIGAN.

HOSE-CLAMP.

No. 811,343.

Specification of Letters Patent.

Patented Jan. 30, 1906.

Application filed July 7, 1905. Serial No. 268,621. (Model.)

To all whom it may concern:

Be it known that I, WARD C. WALKER, a citizen of the United States, residing at the city of Battlecreek, county of Calhoun, State of Michigan, have invented certain new and useful Improvements in Hose - Clamps, of which the following is a specification.

This invention relates to improvements in hose-clamps.

15 It relates particularly to the style of clamp illustrated and described in United States Letters Patent No. 747,811, issued to me December 22, 1903, and is a modification and in some respects an improvement thereon.

15 The objects of this invention are, first, to provide an improved hose-clamp which may be readily applied without the use of special tools; second, to provide an improved hose-clamp which may be formed of a single piece 20 of sheet metal which may be quickly applied or removed and is secure when in position; third, to provide an improved hose-clamp which is very economical to produce and strong and durable and very convenient to 25 use.

Further objects and objects relating to the structural details will definitely appear from the detailed description to follow.

30 I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined and pointed out in the claims.

35 A structure embodying the features of my invention is clearly illustrated in the accompanying drawings, forming a part of this specification, in which—

40 Figure 1 is a plan view of my improved hose-clamp shown in position on a piece of hose. Fig. 2 is a side elevation view of the structure appearing in Fig. 1. Fig. 3 is a detail longitudinal sectional view of my improved hose-clamp. Fig. 4 is a detail transverse sectional view thereof. Fig. 5 is a detail 45 plan view of the outer end of the band portion of my improved hose-clamp.

In the drawings similar letters of reference refer to similar parts throughout the several views.

50 Referring to the drawings, A A represent sections of hose in connection with which my improved hose-clamp is illustrated to show its operative relation thereto. A hollow coupling-plug *a* is provided.

55 My improved hose-clamp consists of a band portion B, adapted to encircle the hose, and

a head portion B', adapted to adjustably secure the band. The band B, which is illustrated as that of a double clamp, has a longitudinal slot *b* therein and a tongue extension 60 B''' at its outer end. The tongue extension B''' is provided with a centrally-arranged series of perforations *b'* and a double series of teeth *b''*, arranged at each side of the perforations. The tongue B''' is adapted to be 65 ranged through the head B' and is secured by the rearwardly and downwardly projecting double pawl B'', which is adapted to engage the teeth *b''*.

A hole *b'''* is formed through the head, 70 through which a tool, such as a nail, may be inserted to engage the perforations *b'* for adjusting the band. The tool is used as a lever, the head serving as a fulcrum therefor to draw the band upon or release it from the 75 hose. The pawl B'', being formed of sheet metal, has sufficient spring to cause it to automatically engage the teeth of the tongue. The band may thus be drawn tight upon the hose, or, if desired to release the clamp, the 80 pawl may be pried out of engagement with the teeth either from the inside or from the outside and the band loosened by merely reversing the movement of the lever.

At the forward end of the head is a cross- 85 piece or strap B''', over which the band is arranged in adjusting. A pair of forwardly-projecting tongues *b''''* are cut out of the head at each side of the pawl and turned down, so that the tongue rests upon the same when arranged 90 over the head. This completes the contact with the hose at the point where the band passes through the head. These tongues also add to the frictional surface of the band upon the hose and by embedding slightly 95 thereon prevent its slipping.

I have illustrated my improved hose-clamp as formed of a single piece of sheet metal. In the manufacture of the same a blank of proper size is formed and slitted to form the 100 pawl B'', the tongues *b''''*, and the strap B'''. The head is then punched up by means of a suitable die, and the clamp is complete.

From the foregoing it is evident that my improved clamp is very simple in construction 105 and very economical to produce. The same may be adjusted and drawn tightly upon the hose without the use of tools, a nail being sufficient for the purpose. It can also be readily removed, if desired. It may be 110 made of very light material and still possess great strength when in position on the hose.

I have shown the same as a double clamp—that is, a clamp which engages both sections of hose to be joined, holding them upon the hollow plug, as *a*—although it is evidently as well adapted for use as a single clamp. When constructed as a single clamp, it is found unnecessary to narrow the band into a tongue *B'''*, as I have illustrated. This structure is very light in weight and is very strong and durable. It is also very compact, and it is evident that it can be manufactured very economically, and being in one piece the expense of assembling is avoided.

While I prefer to form the pawl double, as I have illustrated, the single pawl may be used and still produce a satisfactory structure.

Another feature of advantage is that a clamp of given size is adapted, owing to its complete adjustability, for use on hose of varying diameters.

I have illustrated and described my improved hose-clamp in detail in the form preferred by me, although I am aware that it is capable of very considerable variation in structural details without departing from my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. A hose-clamp, formed of a single piece of sheet metal, consisting of a longitudinally-slotted band portion narrowed into a tongue-like extension at its outer end, said extension having a centrally-arranged series of perforations and a double series of teeth formed therein; and a cup-shaped head portion adapted to receive said tongue extension, having a perforation therein through which said band may be engaged, a strap or cross-piece at its forward end and forwardly-projecting tongue-like projections over which said band is arranged when adjusted upon a hose, and a downwardly and rearwardly projecting double pawl.

2. A hose-clamp, formed of a single piece of sheet metal, consisting of a longitudinally-slotted band portion narrowed into a tongue-like extension at its outer end, said extension having a centrally-arranged series of perforations and a double series of teeth formed therein; and a cup-shaped head portion adapted to receive said tongue extension, having a perforation therein through which said band may be engaged, a strap or cross-piece at its forward end over which said band is arranged when adjusted upon a hose, and a downwardly and rearwardly projecting double pawl.

3. A hose-clamp, formed of a single piece of sheet metal, consisting of a longitudinally-slotted band portion narrowed into a tongue-like extension at its outer end, said extension having a centrally-arranged series of perforations and a double series of teeth formed

therein; and a cup-shaped head portion adapted to receive said tongue extension, having a perforation therein through which said band may be engaged, and a downwardly and rearwardly projecting double pawl.

4. A hose-clamp, formed of a single piece of sheet metal, consisting of a band portion having a centrally-arranged series of perforations and a double series of teeth formed therein; and a cup-shaped head portion adapted to receive said band, having a perforation therein through which said band may be engaged, a strap or cross-piece at its forward end and forwardly-projecting tongue-like projections, over which said band is arranged when adjusted upon a hose, and a downwardly and rearwardly projecting double pawl.

5. A hose-clamp, formed of a single piece of sheet metal, consisting of a band portion having a centrally-arranged series of perforations and a double series of teeth formed therein; and a cup-shaped head portion adapted to receive said band, having a perforation therein through which said band may be engaged, a strap or cross-piece at its forward end over which said band is arranged when adjusted upon a hose, and a downwardly and rearwardly projecting double pawl.

6. A hose-clamp, formed of a single piece of sheet metal, consisting of a band portion having a centrally-arranged series of perforations and a double series of teeth formed therein; and a cup-shaped head portion adapted to receive said band, having a perforation therein through which said band may be engaged, and a downwardly and rearwardly projecting double pawl.

7. A hose-clamp formed of a single piece of sheet metal, consisting of a band portion having teeth formed therein; and a head portion adapted to receive said band, having an opening therein through which said band may be engaged, a strap or cross-piece at its forward end, and forwardly-projecting tongue-like projections over which said band is arranged when adjusted upon a hose, and a downwardly and rearwardly projecting pawl.

8. A hose-clamp, formed of a single piece of sheet metal, consisting of a band portion having teeth formed therein; and a head portion adapted to receive said band, having an opening therein through which said band may be engaged, a strap or cross-piece at its forward end, over which said band is arranged when adjusted upon a hose, and a downwardly and rearwardly projecting pawl.

9. A hose-clamp, consisting of a band portion, having a centrally-arranged series of perforations and a double series of teeth formed therein; and a head portion adapted to receive said band, having an opening therein through which said band may be engaged,

having a cross-piece at its forward end over which said band is arranged when adjusted upon a hose, and a downwardly and rearwardly projecting double pawl.

5 10. A hose-clamp, consisting of a band portion having a centrally-arranged series of perforations and a double series of teeth formed therein; and a head portion adapted to receive said band, having an opening therein
o through which said band may be engaged, and a downwardly and rearwardly projecting double pawl.

15 11. A hose-clamp, consisting of a band portion having teeth formed therein; and a head portion adapted to receive said band, having an opening therein through which said band may be engaged, having a cross-piece at its forward end over which said band is arranged

when adjusted upon a hose, and a downwardly and rearwardly projecting pawl. 20

12. A hose-clamp, consisting of a band portion, having a centrally-arranged series of perforations and a double series of teeth therein; and a head portion adapted to receive said band, having an opening therein 25 through which said band may be engaged, and a downwardly and rearwardly projecting double pawl.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses. 30

WARD C. WALKER. [L. S.]

Witnesses:

ALLAN WELLS,
NELSON S. WELLS.