No. 633,790. Patented Sept. 26, 1899.

A. M. BURGHER.

HOSE CLAMPING DEVICE.

(Application filed Jan. 6, 1899.)

(No Model.)

FIG. 1.

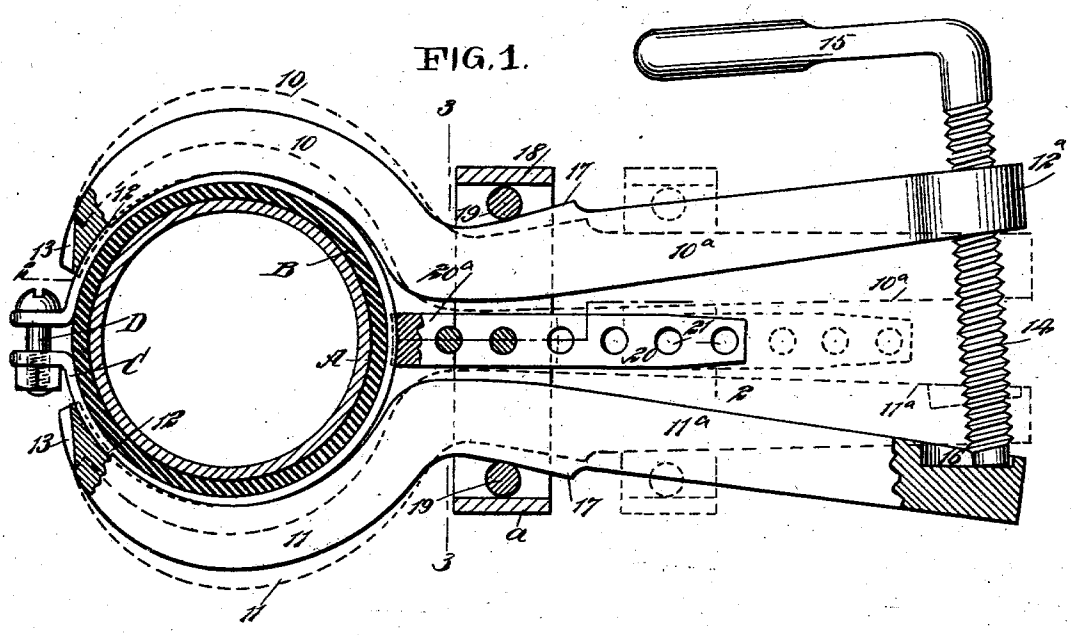


FIG. 2.

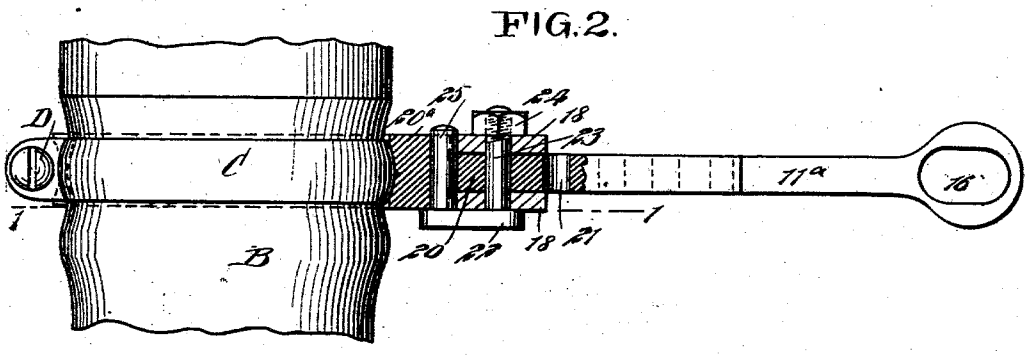
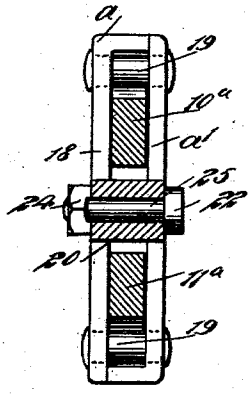


FIG. 3.



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ALBERT MARION BURGHER, OF CLAY CITY, KENTUCKY.

HOSE-CLAMPING DEVICE.

SPECIFICATION forming part of Letters Patent No. 633,790, dated September 26, 1899.

Application filed January 6, 1899. Serial No. 701,342. (No model.)

To all whom it may concern:

Be it known that I, ALBERT MARION BURGHER, of Clay City, in the county of Powell and State of Kentucky, have invented a new and Improved Hose-Clamping Device, of which the following is a full, clear, and exact description.

The object of the invention is to provide a tool or a device especially adapted for clamping a hose to a coupling and to so construct the device that it will not only be simple, durable, and economic, but which may be adjustable to hose-clamps of different diameters or sizes.

A further object of the invention is to so construct the device that it may be applied by one individual and be held automatically in place until the clamp is secured upon the hose.

The invention consists in the novel construction and combination of the several parts, as will be hereinafter fully set forth, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial side elevation of the device applied to a clamp and a partial section taken on the line 1 1 of Fig. 2, portions of the device being also broken away. Fig. 2 is a longitudinal section taken substantially on the line 2 2 of Fig. 1, and Fig. 3 is a transverse section taken practically on the line 3 3 of Fig. 1.

A represents a coupling; B, the hose in which the coupling is placed; C, the clamp adapted to secure the hose to the coupling, and D the locking device for the clamp. The clamp is of the usual construction, consisting of a split ring having flanges projected from its ends, and the locking device consists of a bolt passed through the flanges of the ring and a nut for the said bolt. In the improved device two opposing jaws 10 and 11 are employed, the jaws being oppositely curved, and the handles 10^a and 11^a for the jaws are made to diverge, the space between the handles being greatest at their outer ends. A groove or channel 12 is made longitudinally in the inner face of each of the jaws 10 and 11 at the free ends of the said jaws, the grooves or channels 12 terminating at a point between the ends of the jaws, as illustrated in dotted lines in Fig. 1. Each jaw is further provided with a longitudinal recess 13 in its outer face at its free end in order that the jaws may be brought quite close together, yet not interfere with the application of the locking device to the clamp fitted to the hose by the device.

The handle of the jaw 10, for example, is made to terminate in an enlargement 12^a, having a threaded opening through which a screw 14 is passed, provided, preferably, with a handle 15 at its upper end. The opposite end of the screw 14 has bearing upon the base or bottom wall of a recess 16, made in the handle of the opposing jaw, as shown in Fig. 1, and the base or bottom wall of the recess 16 is slightly inclined, so that the greatest pressure will be in a line parallel with the screw, whereby the screw is not liable to be bent.

A projecting inclined surface 17 is produced upon the outer longitudinal edge of the handle of each jaw, the inclined surface diminishing in direction of the jaws, as is also best shown in Fig. 1. A fulcrum-strap 18 is adapted to slide over the handles, and when the device is in operation the strap is to be located over the outer inclined surfaces 17. The strap is usually made in two parts a and a', as illustrated in Fig. 3, the parts being connected by pins 19, and in the operation of the device the pins 19 of the straps engage with the outer inclined surfaces 17 of the handles of the device, as shown in Fig. 1.

A bearing-block 20 is located between the handles of the jaws, the said bearing-block being provided with a head 20^a at its outer end, having its outer face concaved to engage with the central rear portion of the clamp to be applied, as shown in Figs. 1 and 2. A series of transverse apertures 21 is produced longitudinally in the bearing-block 20, and the bearing-block is adapted to slide likewise between the side members of the fulcrum-strap. The bearing-block is adjusted outward or inward, according to the size or diameter of the clamp to be applied; but in every event when a clamp is to be applied the head of the bearing-block is brought to an engagement with the back portion of the

clamp. The bearing-block 20 is arranged to move with the fulcrum-strap, and to that end a fastening device is employed, which consists of a flat link 22, having a leg 23 in the form of a bolt, which leg is passed through an aperture in the central side portions of the strap and through a registering aperture in the bearing-block. The other leg 25 of the fastening device is in the nature of a pin and is simply passed through a forward aperture in the bearing-block, as illustrated in Fig. 2. The leg 23 is provided with a nut 24, having bearing against the outer face of the strap, whereby the fastening device is held in place. When an adjustment of the bearing-block is to be made, the fastening device is removed from engagement with the strap and the said bearing-block.

In the operation of the improved hose-clamping device the handle is grasped near its ends by the left hand. The screw 14 is then manipulated, so as to separate the jaws, bringing the handles together, and the fulcrum-strap is slipped toward the screw until the jaws may be readily passed over the hose and the clamp adapted to secure said hose to a coupling. The hose and clamp having been received between the jaws of the device, the fulcrum-strap is slipped toward the jaws until the pins 19 have bearing upon the outer inclined surfaces 17 on the handles and until the bearing-block engages with the rear or back surface of the clamp. The screw 14 is now turned in a direction to cause the separation of the ends of the handles with which it engages, and consequently draw the jaws together and force the clamp to a firm engagement with the hose. When the flanges of the clamp are brought sufficiently close together, they are straightened, if crooked, or otherwise brought into parallelism, and the clamp-screw D is then passed through the said flanges and secured. It will be observed that the pins 19 in the strap 18 serve as fulcrums for the handles in the operation of the device. After the clamp has been properly secured the jaws are separated, the fulcrum-block carried toward the screw, and the device is detached from the clamp.

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

1. A device for attaching clamps to hose, consisting of opposing jaws arranged to receive the clamp, handles for the jaws, a device for adjusting the jaws, a fulcrum for the handles, and a device located between the handles adapted for engagement with the clamp to be secured.

2. A device for attaching clamps to hose, consisting of opposing jaws, each provided with a handle, means for moving the free ends of the handles to and from each other, a movable fulcrum for the handles, and a bearing-block carried by the movable fulcrum, and arranged for engagement with the clamp to be secured, as and for the purpose set forth.

3. In a device for attaching clamps to hose, opposing jaws adapted to receive a clamp, each jaw being provided with an independent handle, means for adjusting the free ends of the handles to and from each other, a sliding fulcrum through which the handles are passed, and a bearing-block adjustably attached to said fulcrum, the bearing-block being located between the handles and arranged for engagement with the clamp to be secured, as set forth.

4. A device for attaching clamps to hose, said device comprising opposing jaws, the jaws having independent handles and the handles being arranged to diverge, a screw carried by one of the handles, having bearing against the other handle, a strap arranged to receive both handles, pins carried by the strap, adapted as fulcrums for the handles, and a bearing-block connected with the strap, and arranged for engagement with the clamp to be secured, as set forth.

5. The herein-described tool, comprising handled jaws, a fulcrum device embracing and mounted to slide upon the handles and an adjusting device for the handles acting to rock said handles upon said fulcrum device.

6. The herein-described tool, comprising handled jaws, means engaging the handles for adjusting the jaws, and a bearing-block arranged between the handles to coact with the jaws.

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