

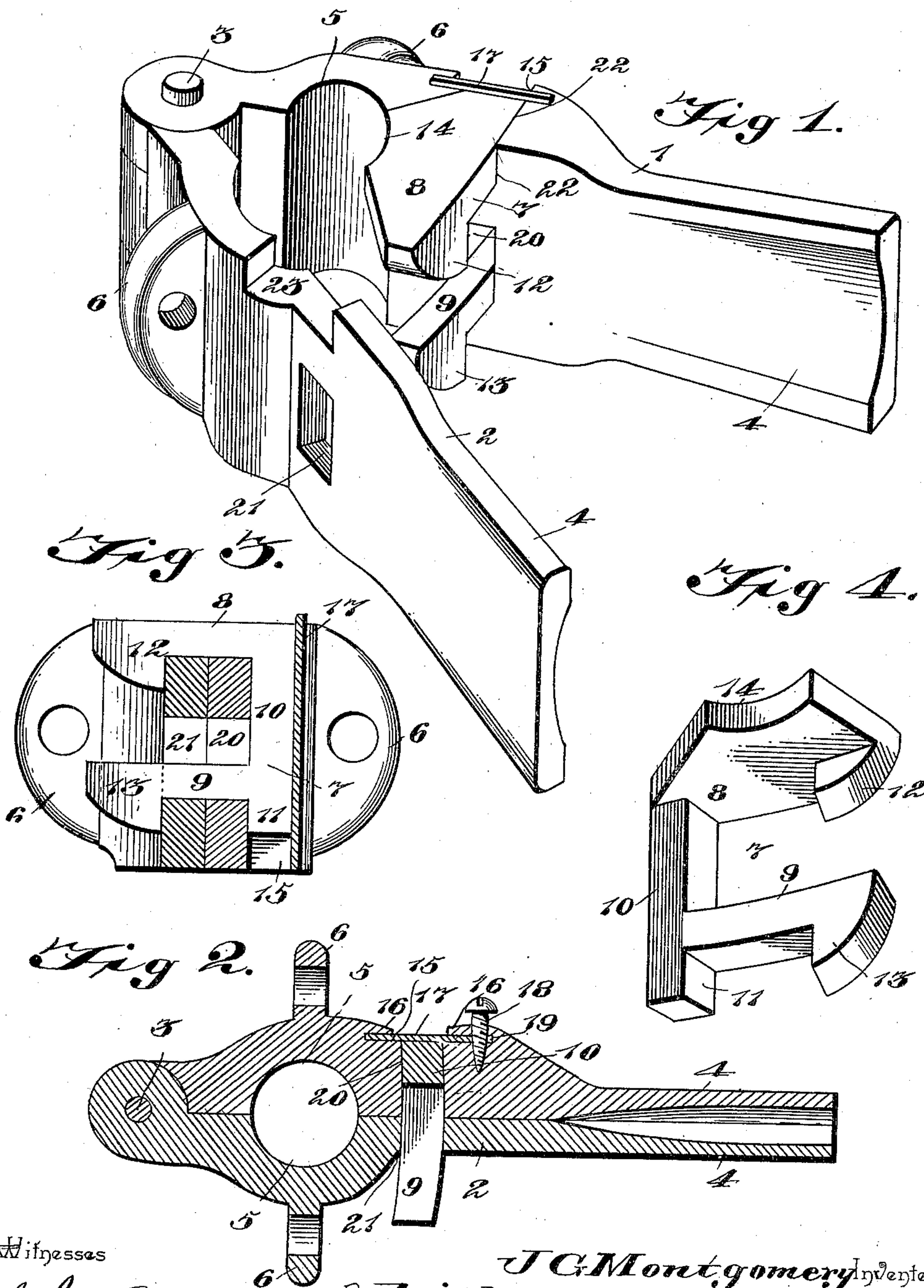
No. 652,132.

J. G. MONTGOMERY.  
TUBE CLAMP.

Patented June 19, 1900.

(No Model.)

(Application filed Mar. 1, 1900.)



Witnesses

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# UNITED STATES PATENT OFFICE.

JAMES G. MONTGOMERY, OF KANE, PENNSYLVANIA.

## TUBE-CLAMP.

SPECIFICATION forming part of Letters Patent No. 652,132, dated June 19, 1900.

Application filed March 1, 1900. Serial No. 6,998. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES G. MONTGOMERY, a citizen of the United States, residing at Kane, in the county of McKean and State of Pennsylvania, have invented a new and useful Tube-Clamp, of which the following is a specification.

This invention relates to tube-clamps for raising and lowering oil-well tubes, and has for one object to provide an improved device of this character in which the opposite clamp members are firmly interlocked, so as to relieve the pivotal or hinged connection thereof of strain, and at the same time permitting of the members being readily released from the tube. It is furthermore designed to provide an improved gravity-latch for interlocking the clamp members, to locate the same in position for convenient operation to release the members, and finally to provide for the convenient application and removal of the latch.

With these and other objects in view the present invention consists in the combination and arrangement of parts, as will be hereinafter more fully described, shown in the accompanying drawings, and particularly pointed out in the appended claims, it being understood that changes in the form, proportion, size, and minor details may be made within the scope of the claims without departing from the spirit or sacrificing any of the advantages of the invention.

In the drawings, Figure 1 is a perspective view of a tube-clamp constructed and arranged in accordance with the present invention. Fig. 2 is a longitudinal sectional view taken through both members of the clamp. Fig. 3 is a transverse sectional view taken on the line 3-3 of Fig. 2. Fig. 4 is a detail perspective view of the gravity-latch.

Corresponding parts in the several figures of the drawings are designated by like characters of reference.

Referring to the accompanying drawings, 1 and 2 designate, respectively, the opposite clamp members, which have a pivotal or hinged connection 3 at one end of the clamp, and at the opposite end thereof each member is provided with a handle 4 to open and close the clamp for application and removal from a tube. Adjacent to the hinged connection of the members each of the latter is laterally

enlarged, and upon its inner face is provided with a semicylindrical groove 5, the opposite grooves being designed to register, as indicated in Fig. 2 of the drawings, when the members are closed and clamped upon a tube. Projecting laterally outward from the outer sides of the enlarged portions of the members are the opposite perforate ears 6, that are aligned transversely across the centers of the grooves and designed to be connected to the hoisting device, (not shown,) whereby the clamp and the tube to which it is applied may be raised or lowered.

The means for locking the members in their closed position comprises a substantially U-shaped latch 7, having the substantially-parallel upper and lower arms 8 and 9, that are connected at their rear ends by means of a substantially-straight cross-bar 10, which projects beyond the lower arm 9, so as to form a lug or shoulder 11. At the outer free extremities of the arms there are provided the pendent and beveled or rounded catch-heads 12 and 13, respectively. The upper arm is in the form of a substantially-triangular plate, the apex of the plate being concaved, as at 14, so as not to project into the grooves of the clamp members. To mount this latch, the outer side of the clamp member 1 is provided with a vertical transverse groove 15 to slidably receive the transverse cross-bar 10, the flanges 16 being designed to confine a plate 17, so as to prevent lateral displacement of the latch. The plate is held against longitudinal displacement by means of a screw or other fastening 18, that enters the clamp member from the outer side thereof and engages a notch or opening 19, formed in one longitudinal edge of the plate. Both members of the clamp are provided adjacent to their lower edges with the respective transverse openings 20 and 21, that are aligned when the members are closed, so as to receive the lower arm 9 of the latch. The upper edge of each member is provided with a transverse notch 22 and 23, respectively, for the reception of the upper arm of the latch, the forward side of each notch being inclined inwardly to fit the respective inclined ends of the arm. Thus the opening 21 and the notch 23 form keepers for engagement by the respective catch-heads of the latch.



From the foregoing description it will be apparent that the tube to be raised or lowered is clamped in the combined semicylindrical grooves 5 by drawing the handles 4 inwardly in opposite directions, whereby the catch-heads of the latch automatically rise over the inner edges of the opening and the notch in the member 2 and then drop at the outer side of the member, so as to engage said outer side, as best shown in Fig. 3, to firmly interlock the members. To release the clamp, the latch may be conveniently raised out of engagement with the member 2 by pressing upwardly upon either of the exposed catch-heads when the members may be separated upon their hinged connection as a center.

It is preferable to employ two latch-arms adjacent to the opposite edges of the clamp, so as to firmly interlock the members and to relieve strain from the hinged connection thereof. As best shown in Fig. 2, the arms of the latch are bowed, so as to facilitate their engagement with the member 2, and, as indicated in Fig. 3, the openings 20 and 21 are long enough to permit of the vertical movement of the latch-arms during the engagement and disengagement of the latch. By reason of the removable plate 17 the latch is effectively held against lateral displacement and at the same time may be conveniently removed, so as to be replaced when worn or broken. Also the upper arm is broad and in the form of a plate, so as to form a strong and durable locking connection, and it also fits flush with the upper faces of the members, so as not to present any projections which might interfere with the proper operation of the device.

What I claim is—

1. A tube-clamp, comprising a pair of opposite hingedly-connected clamp members, one of the latter having a notch formed in its

upper edge, and a slot or opening formed adjacent to its lower edge, and a substantially U-shaped gravity-latch mounted upon the opposite member, the arms of the latch being provided with catch-heads for engagement with the respective notches or openings.

2. A tube-clamp, comprising a pair of opposite hingedly-connected members, having corresponding lateral openings, and one of the members having a vertical groove intersecting the opening thereof, a latch slidably mounted in the groove, and having a lateral arm to extend through the combined openings of the members in their closed position, and a plate confined in the groove, to hold the latch in place.

3. A tube-clamp, comprising a pair of opposite hingedly-connected members, having corresponding notches in their upper edges, and corresponding openings or slots adjacent to their lower edges, one of the members having a groove formed upon the outer side thereof and intersecting the notch and opening therein, a substantially U-shaped latch, having its cross-bar slidably mounted in the groove, and its opposite arms slidably projecting inwardly through the notch and opening, respectively, and provided at their outer ends with rounded or beveled catch-heads for engagement simultaneously through the respective notch and opening in the opposite clamp member, and a plate closing the groove, and a removable fastening to connect the plate to the clamp member.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

JAMES G. MONTGOMERY.

Witnesses:

J. C. WEST,  
JOHN H. REIGEL.