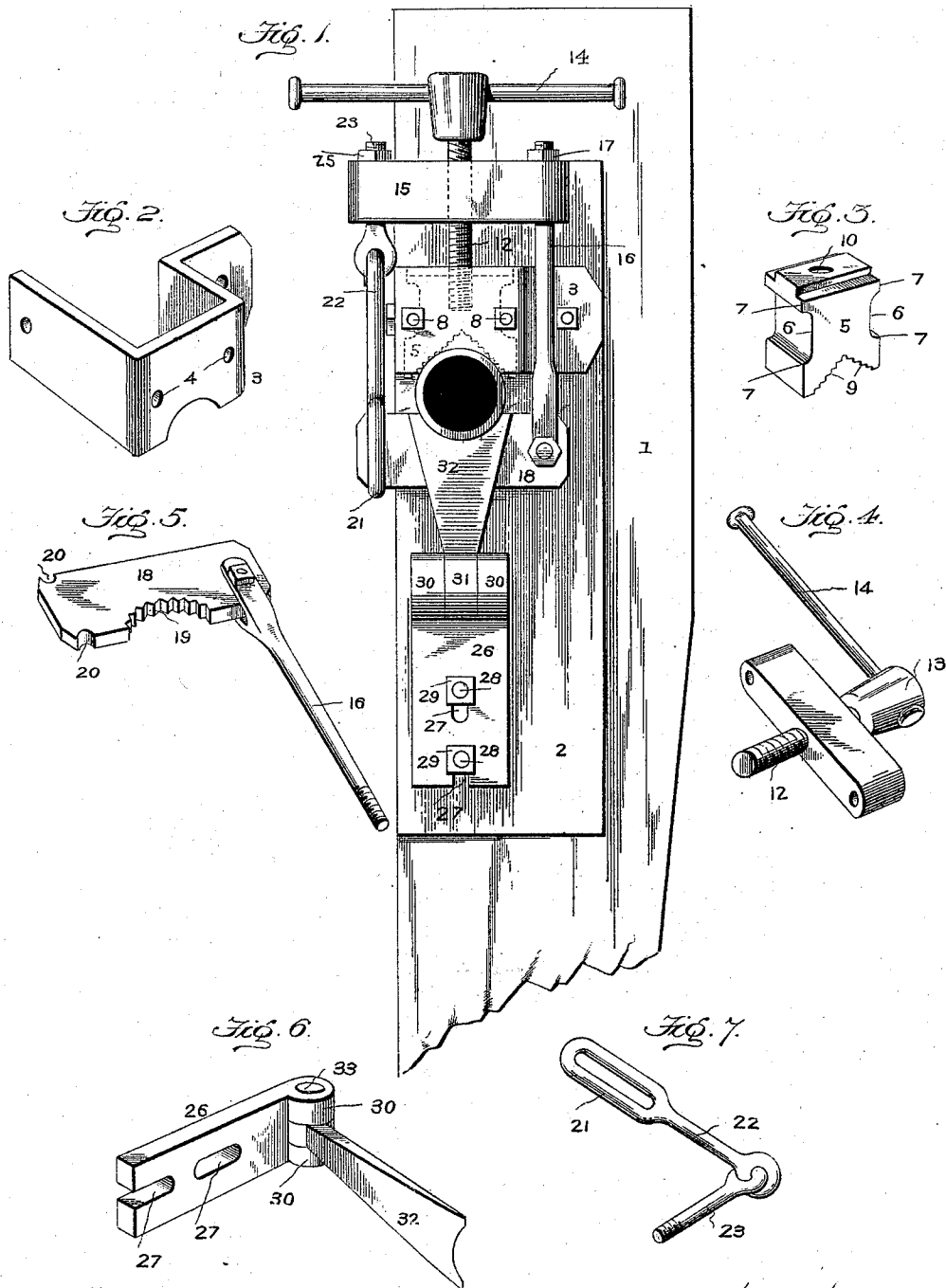


(No Model.)

E. P. FITZGERALD.
COMBINED PIPE HOLDER AND VISE.

No. 540,093.

Patented May 28, 1895.



Witnesses:

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UNITED STATES PATENT OFFICE.

EDWARD P. FITZGERALD, OF LENA, ILLINOIS.

COMBINED PIPE-HOLDER AND VISE.

SPECIFICATION forming part of Letters Patent No. 540,093, dated May 28, 1895.

Application filed September 27, 1894. Serial No. 524,305. (No model.)

To all whom it may concern:

Be it known that I, EDWARD P. FITZGERALD, a citizen of the United States, residing at Lena, in the county of Stephenson and State of Illinois, have invented a new and useful Improvement in a Combined Pipe-Holder and Vise, of which the following is a specification.

My invention relates to improvements in apparatus employed in raising and lowering the pump pipes in Artesian and other wells, and also for retaining or holding such pipes in position whenever it is desired to remove one or more joints of pipe, and also for securely clamping and holding the pipe when a portion of the same is to be cut off or screw threads to be cut on the end thereof without removing the pipe from the well.

The object of the invention is to provide an improved apparatus for the above purpose which shall possess superior advantages with respect to efficiency in operation.

The invention consists in the novel construction and combination of parts herein-after fully described and claimed.

In the accompanying drawings, Figure 1 is a plan view of an apparatus constructed in accordance with my invention. Fig. 2 is a detail perspective view of the cap. Fig. 3 is a similar view of the movable clamping-jaw. Fig. 4 is a similar view of the movable cross-head and the right and left handed screw. Fig. 5 is a similar view of the clamping-plate and its pivoted rod. Fig. 6 is a similar view of the tongue and its hinged plate. Fig. 7 is a similar view of the link connected with the clamping-plate.

In the said drawings the reference numeral 1 designates a base of wood or other suitable material, provided with a circular opening for the passage of the pump pipe, and secured to this base is a metal plate 2, having an opening corresponding and coinciding with the opening above referred to.

The numeral 3 designates a metal cap or bracket, provided with bolt holes 4, for the passage of bolts by which it is secured to the base and the plate secured thereto. This cap or bracket when in place forms a housing for a movable clamping jaw 5, recessed at opposite sides, at 6, and forming shoulders 7. The numeral 8, designates bolts passing through the cap or bracket, and forming

guides for the jaw. The shoulders 7, form stops against which the bolts 8, abut to limit the movement of the jaw. At its inner end the said jaw is formed with a V shaped recess provided with angular teeth 9, and at its outer end is formed with a central left hand screw threaded opening 10, to receive the correspondingly threaded inner end of a vise screw 12. These left handed threads only extend part way the length of the screw, the balance of which is formed with right hand threads. At its outer end this screw is provided with a head 13, through which passes an operating bar 14. The numeral 15 designates a movable cross head, provided with a central right handed screw threaded opening, through which the said screw passes and by means of which it is operated. At one end this cross head is provided with a rod 16, which is screw threaded and which passes through a correspondingly threaded opening in the cross head. It is provided with a nut 17, by which it may be adjusted. The opposite end of this rod is bifurcated and pivoted to a clamping plate 18, having a semi-circular recess in its inner edge provided with angular teeth 19. At the other end this plate is provided with notches 20, with which engages an oblong loop 21, of a link 22, which is connected by means of an eye joint with an adjustable screw rod 23, passing through one end of the cross head, and provided with an adjusting nut 25.

Secured to the plate 2, is a short metal plate 26, provided with slots 27, through which pass bolts 28, provided with nuts 29. By this means the said plate may be adjusted so as to bring it nearer to or farther from the openings in the base 1 and plate 2, according to the size of the pump pipe. At its inner end plate 26 is formed with apertured lugs 30, which embrace a similar lug 31, on one end of a tongue 32, which lugs in connection with a pin 33, form a hinge joint. This tongue tapers outwardly from its joint to the opposite end which is flattened and formed with a semi-circular recess with a sharp edge to bite into a pump pipe.

The operation is as follows: When used in raising a pipe from a well, the apparatus is placed over the mouth of the same, and the link disengaged from the clamping plate which latter is thrown aside and the tongue thrown

back. The pump pipe is then passed through the openings in the base and plate 2, and the tongue then thrown forward so as to contact with the pipe. The pipe may now be raised
 5 by any suitable means, the tongue offering no resistance thereto. When the pipe is released, however, it will be prevented from downward movement by the tongue biting into the same, and pressing it against the
 10 clamping jaw.

When used to clamp and hold the pipe the apparatus is brought into position as above described. The link is then engaged with the clamping plate, and the vise screw rotated,
 15 the left handed screw threaded end of which acting in the correspondingly threaded opening in the clamping jaw will force the same inwardly. At the same time the right handed threads of the screw will move the cross head
 20 outwardly or in the opposite direction and through the medium of the connecting rod and link will draw the clamping plate inwardly so that the pipe will be securely clamped between said plate and jaw and securely held in place.

25 Having thus fully described my invention, what I claim is—

1. In an apparatus of the character described, the combination with a base having formed therein an opening or passage for a
 30 pipe, of two clamping jaws, 5, 18, arranged on opposite sides of said opening in the base, the jaw 5 having an internally threaded socket formed therein and opening through its outer
 35 face of the jaw 5 and connected with the jaw 18, said cross head having an internally threaded passage, the threads of which extend in the opposite direction to those in the socket in the jaw 5, and an operating screw
 40 provided for a portion of its length with a thread, adapted to engage the thread in the passage in the cross head, and at one end with an oppositely extending thread which engages with the thread in the socketed jaw
 45 whereby both jaws will be simultaneously moved by the screw in opposite directions, substantially as set forth.

2. In an apparatus of the character described, the combination with a base provided
 50 with an aperture or passage, of two jaws, 5, 18, arranged on opposite sides of said opening in the base, the jaw 5 having an internally threaded socket which opens through the

outer face thereof, a cross head provided with an internally threaded passage in line with
 55 the aforesaid socket in the jaw 5, adjustable connections between the cross head and the jaw 18, and an operating screw provided with oppositely threaded sections adapted to respectively engage with the thread in the cross
 60 head and in the socket of the jaw 5, whereby said screw is adapted to simultaneously move both jaws in opposite directions, substantially as set forth.

3. In an apparatus of the character de-
 65 scribed, the combination with a base provided with an aperture or passage, of two jaws, 5, 18, arranged on opposite sides of said opening in the base, the jaw 5 having an internally threaded socket which opens through the
 70 outer face thereof, a cross head provided with an internally threaded passage in line with the socket in said jaw, a rod pivotally connecting the cross head and the jaw 18 on one side of the opening in the base, a link con-
 75 nected to the cross head on the opposite side of the opening in the base and adapted to be detachably connected to the jaw 18, and an operating screw provided with oppositely
 80 extending threads adapted to respectively engage with the threaded passage in the cross head and the socket in the jaw 5, substantially as and for the purpose specified.

4. In an apparatus of the character described, the combination with the base and
 85 plate having openings therein, the bracket or cap forming a housing, the clamping jaw, having teeth at its inner end and cut away at opposite sides forming guideways and shoulders, and the guide pins, of the right and left
 90 handed screw the inner end of which engages with a screw threaded opening in said jaw, the cross head having a screw threaded opening through which said screw passes, the adjustable connecting rod secured to said cross
 95 head, the clamping plate, provided with teeth, with which said rod is connected, the link adapted to engage with said plate and the adjustable rod connected therewith and secured to the cross head, substantially as de-
 100 scribed.

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Witnesses:

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 G. W. YOUNG.