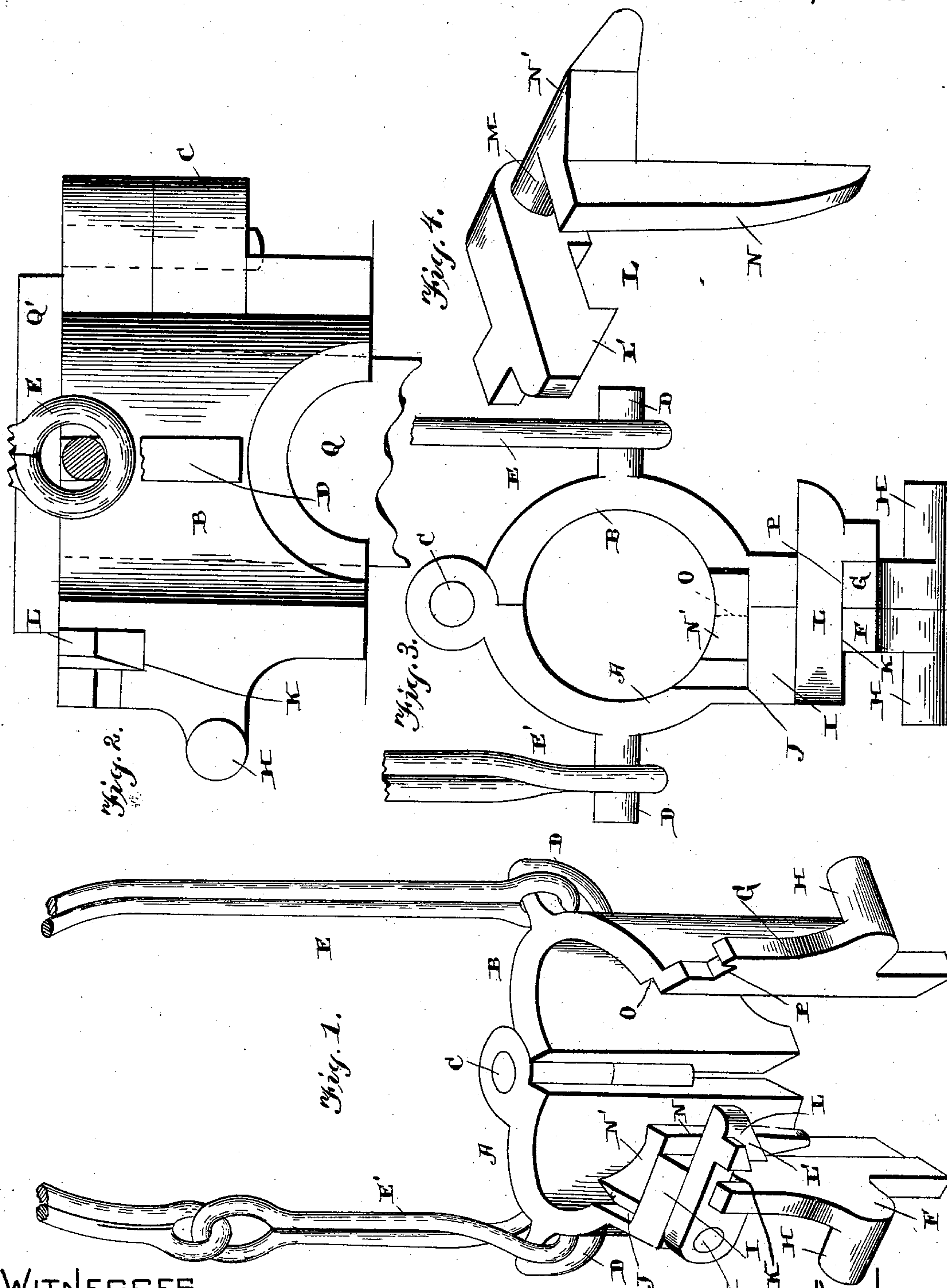


(No Model.)

W. H. DOWNING.
TUBE ELEVATOR.

No. 506,585.

Patented Oct. 10, 1893.



WITNESSES.

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UNITED STATES PATENT OFFICE.

WILLIAM H. DOWNING, OF GOODELL, PENNSYLVANIA.

TUBE-ELEVATOR.

SPECIFICATION forming part of Letters Patent No. 506,585, dated October 10, 1893.

Application filed March 15, 1893. Serial No. 466,101. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM H. DOWNING, of Goodell, in the county of McKean and State of Pennsylvania, have invented certain new and useful Improvements in Tube-Elevators; and I do hereby 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in tube elevators, and it consists in the novel features of construction hereinafter fully described, and especially referred to in the claims at the end of this specification.

The object of my invention is to provide an elevator which may be readily and conveniently attached to and detached from the tubing being operated upon.

Referring to the accompanying drawings:—Figure 1, is a perspective view of my improved elevator. Fig. 2, is a side elevation of the same. Fig. 3, is a plan view. Fig. 4, is a detached perspective view of the latch.

My improved elevator consists essentially of the clamp sections A, B, which are hinged together at C, as shown. Upon the outer sides of these clamp sections are the ears D and secured thereto is the lifting bail E, which is linked at E', as shown, thus making it possible for the same to more readily conform to the various positions of the elevator.

The free ends of the sections A, B, are formed with the lateral projections F and G respectively, which latter are provided with the right angle hand holds H, as shown. The section A is also provided with the extension or enlargement I, and immediately behind the same is the depressions J. The extension F immediately in front of the enlargement I, is slotted as at K, and adapted to turn down in this slot is the latch L, which is secured to the outer end of pivot M which extends transversely through the enlargement I. To the inner end of this pivot is rigidly secured the depending prong N, the shank N' of which fits and turns in the depression J. The said latch and prong being rigid on the said pivot of course are moved in unison. In order that the adjacent faces of the extensions F and G, may abut each other when the clamp sections

are closed around the tube, I provide the section B with the longitudinal depression O for the accommodation of the tongue N, while the extension G is slotted on its upper edge as at P, to accommodate the laterally projecting latch. This latch L is beveled on its outer edge as at L', so as to slip into and engage the said notch when the sections are closed together, as will be readily understood.

In operation when the tubing is to be elevated within the derrick the elevator is clamped around the same immediately beneath the thimble Q' of the tube Q, so as to secure a firm hold thereon. It will be seen when in this position that the said thimble rests directly on the said latch which is flush with the top edges of the clamp sections and thereby the said latch is prevented from raising and the sections are prevented from opening while the elevator is in position on the tube. The tongue N is provided for automatically opening the tube sections when the latch L is raised.

When the outer end of the latch is raised for detaching the elevator, of course the tongue N moving with it is forced outward at its lower end, thus moving laterally in the depression O, and forcing the clamp section B away from the sections A, thus separating the said sections.

By this construction it will be seen that if the operator or the one who is detaching the elevator is in such a position that he can only raise the latch without drawing apart the clamp sections, they will of themselves separate automatically.

The projections H afford a convenient hold for the operator in drawing together the clamp sections around the tube.

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

1. An improved elevator comprising two clamp sections secured together at one end, a latch for connecting their free ends, and a means for automatically separating the said sections when the said latch is released, substantially as shown and described.

2. An improved elevator comprising two clamp sections secured together at one end, a latch for connecting their free ends, and a tongue depending between the said clamp sec-

tions which moves with the said latch for the purpose of opening the clamp sections, substantially as shown and described.

3. An improved elevator comprising two
5 clamp sections secured together at one end, a latch pivoted to the free end of one of the sections for engaging the corresponding end of the other section when the same are closed together, and a tongue depending between the
10 clamp sections which is secured to the pivot of the latch for the purpose of separating the sections when the said latch is raised, substantially as shown and described.

4. An improved elevator comprising two
15 clamp sections, secured together at one end, extensions F and G at their free ends, a vertically swinging latch pivoted in extensions F, and tongue N depending between the clamp sections and adapted to move with the said
20 latch, substantially as shown and described.

5. An improved elevator comprising two clamp sections secured together at one end, one of the sections being formed with the depression J, enlargement I outside of the said
25 depression, a pivot extending transversely through the said enlargement, a latch secured to the outer end of the said pivot for the pur-

pose of engaging the opposite clamp section, and tongue N depending between the clamp sections and resting within the depression J, 30 where it is secured to the said pivot, substantially as shown and described.

6. An improved elevator comprising the clamp sections A and B secured together at one end, section A being formed with the depression J, and section B with the depression O, extensions F and G at the respective free ends of said sections, enlargement I, on the section A, a pivot extending through the said enlargement, a latch secured to the outer end of the
40 said pivot which is adapted to engage said extension E, a tongue N depending between the clamp sections and within the depression O, and which tongue at its upper end is secured to the inner end of said pivot with
45 which it moves, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. DOWNING.

Witnesses:

WALTER W. LEWIN,
W. J. FREDERICKS.