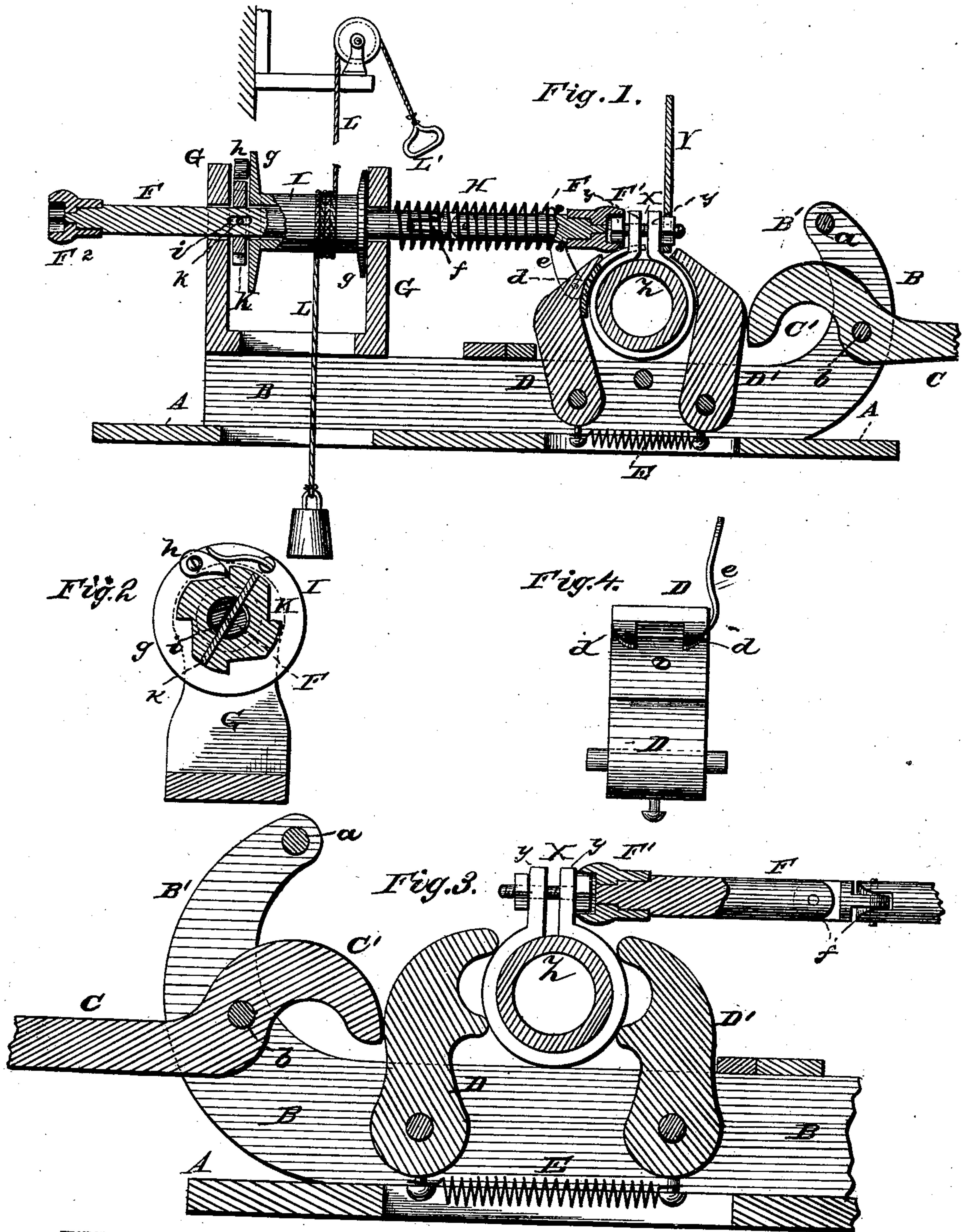


(Model.)

J. F. MALLINCKRODT.  
Machine for Clamping Hose.  
No. 243,591. Patented June 28, 1881.



WITNESSES

Ad. G. Dieterich.  
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By his Attorneys

John F. Mallinckrodt  
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INVENTOR



# UNITED STATES PATENT OFFICE.

JOHN F. MALLINCKRODT, OF DENVER, COLORADO.

## MACHINE FOR CLAMPING HOSE.

SPECIFICATION forming part of Letters Patent No. 243,591, dated June 28, 1881.

Application filed April 4, 1881. (Model.)

*To all whom it may concern:*

Be it known that I, JOHN F. MALLINCKRODT, of Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Machines for Clamping Hose; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a longitudinal vertical section of my machine. Fig. 2 is a vertical cross-section through the ratchet-wheel for operating the spindle. Fig. 3 is a sectional view, showing a modified construction of the jaws; and Fig. 4 is a rear view of one of the jaws detached from the machine.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to means or implements for clamping rubber or other flexible hose and screwing up the bolts which hold the clamps; and it consists in the construction and combination of parts of a machine to accomplish this object in a speedy and satisfactory manner, thus saving both time and labor and making a better job than can be done in the ordinary way by hand.

In the annexed drawings, A represents the bed of the machine, which may be elevated upon suitable legs or supports (not shown in the drawings) to a convenient height. Upon this bed are placed longitudinally two parallel sills, B, curved at one end, as shown at B', to form bearings for the fulcrum *b* of a lever, C, which has a cam, C', at its inner or lower end. The lever C is prevented from tilting too far back by a stop-pin, *a*, inserted through the upper part of the bearings B'.

Between the pair of sills B are pivoted a pair of curved jaws, D and D', facing one another, and connected at their lower ends by a spring, E. One of these jaws, D, (a rear view of which is shown in Fig. 4 of the drawings,) has a fork, *d*, at its upper end, for guiding the clamp in line with the spindle, as hereinafter described. The jaw D' opposite bears with its convex shoulder against the cam C' of lever C. Upon one side of jaw D is a small standard or upright, *e*, for holding the inner end of the jointed

spindle to one side while the bolt is being inserted through the ears of the clamp.

F is the spindle, which revolves in boxes or bearings G G, and has a universal joint at *f*. To the inner end of the spindle is affixed the socket-wrench F' for screwing the bolts up, and at its outer end is a corresponding socket-wrench, F<sup>2</sup>, for unscrewing bolts when the clamps are to be removed. That part of the spindle between its inner bearing, G, and socket-wrench F' is encircled by a coiled guide-spring, H.

I is a sleeve, which is placed loosely upon that part of spindle F between its bearings G G, and provided with disks *g g* at opposite ends. Upon the outer face of the outermost disk is pivoted a spring-pallet, *h*, which engages with a ratchet-wheel, K, through the central aperture of which the spindle passes. At this point the spindle has a short longitudinal slot, *i*, through which is inserted or into which projects a pin, *k*, secured in the ratchet-wheel, so that the spindle may have a short longitudinal stroke or motion to either side, forward or back, in respect of the latter, and yet be rotated by it when the ratchet-wheel is operated by its pallet *h*.

L is a rope, which is wound around sleeve or cylinder I between its two disks, and has a weight at its lower end, while its upper end is passed around a pulley in a suitable bracket or bearing located above the machine. This rope has a handle, L', by pulling which sleeve I will be rotated so as to cause its pallet to engage with and rotate the ratchet-wheel K and spindle F. When let go the weighted rope will rotate cylinder I in the reverse direction without operating the spindle. Suitable means are provided for preventing the rope from slipping off of its pulley.

The operation of my machine will be readily understood by reference to the drawings, and is as follows: The section of hose to be clamped is placed between the jaws D D', which are brought together by depressing lever C, previous to which, however, the clamp (shown at X) has been placed around the hose Z Z between the jaws. The jointed inner end of spindle F is then slipped to one side over the upright *e*, and the bolt is inserted through the ears *y y* of the clamp, one of which is held between the guide-fingers or fork *d* of the inner



jaw, D. The jointed end of the spindle is now slipped back to its normal straight position and its socket-wrench F' inserted over the bolt-head. The nut is placed on the opposite end of the bolt, given a turn or two by hand, and a wrench (shown at Y) placed on it. The operator, holding this wrench in one hand, pulls handle L' with the other, when the bolt is screwed home by the rotation of the spindle, in the manner described. The slot *i* in the spindle permits this to be shoved backward or forward a sufficient distance to release or insert the bolt-head from the socket-wrench F' at the inner end of spindle.

This machine may also be used for unscrewing the bolts from the clamps by inserting the bolt-head into the socket F<sup>2</sup> and pulling cord L, while the nut is being held in place and prevented from turning with the bolt by placing a wrench on it. To unscrew the clamping-bolts no jaws are required to clamp and hold the hose, inasmuch as the socket F<sup>2</sup> and the wrench by which the nut is held will afford sufficient support during this operation.

I do not confine myself to any particular shape or construction of the jaws D D', as that will depend upon the size and style of hose to be treated.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. The hose clamp or holder composed of the parallel sills B, pivoted jaws D' D, having connecting-spring E, fork *d*, and upright *e*, and lever C, having cam C', constructed and combined substantially as and for the purpose herein shown and set forth.

2. The spindle F, having universal joint *f*, spring H, socket-wrench F', and means for rotating the spindle, in combination with the clamping-jaws D D' and lever C C', constructed and arranged to operate substantially as and for the purpose shown and specified.

3. The described machine for clamping hose, composed of the bed A and parallel sills B, curved at one end to form bearings B' for the fulcrum *b*, and having box-standards or spindle-bearings G G, cam-lever C C', clamping-jaws D D', jointed spindle F F' F<sup>2</sup>, slotted at *i*, ratchet-wheel K, having pin *k* projecting into said slot, sleeve L, having disks *g g* and pallet *h*, and weighted cord L, having handle L', all constructed, arranged, and combined to operate substantially in the manner and for the purpose herein shown and set forth.

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

JOHN F. MALLINCKRODT.

Witnesses:

B. H. COLVER,  
C. F. LEIMER.