H. O. Hooper,

Door Clamp.

No. 112,342. Patented Mar. 7. 1871.

Fig. 1

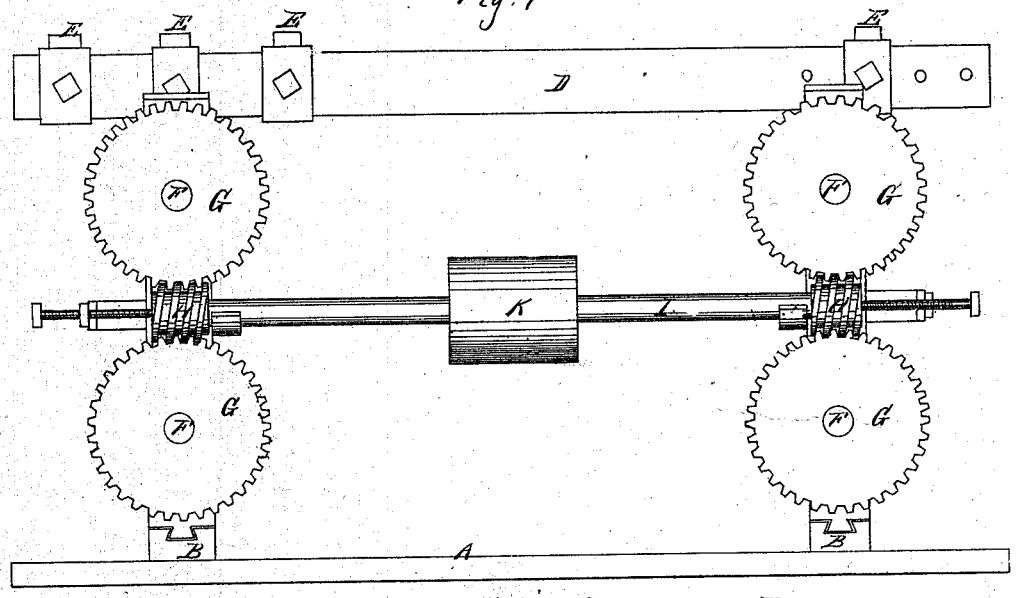
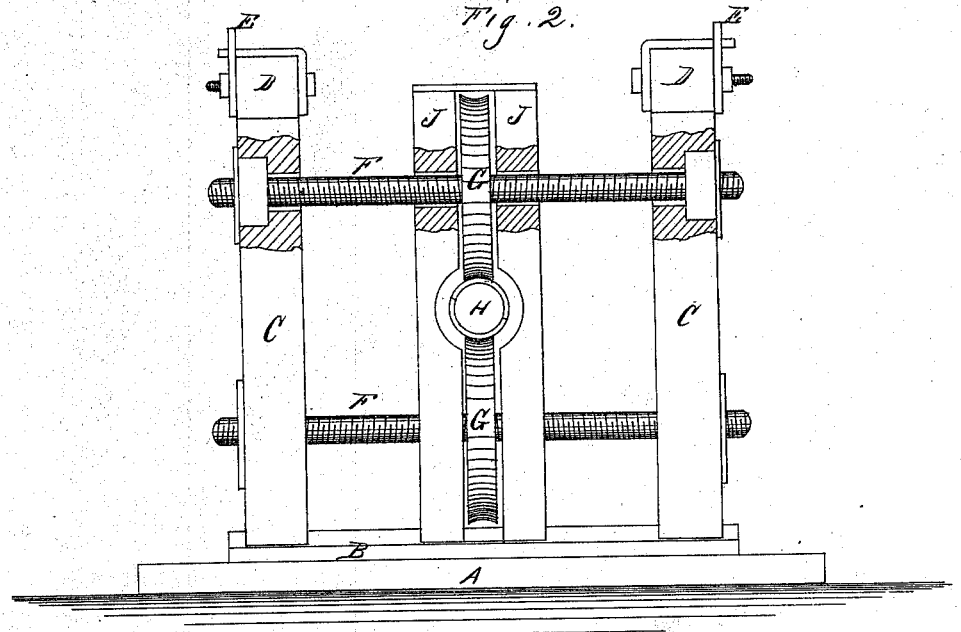


Fig. 2.



Witnesses.
Geo. H. Strong.
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Inventor.
Henry O. Hooper.
By his Atty's
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UNITED STATES PATENT OFFICE.

HENRY O. HOOPER, OF DIAMOND SPRINGS, CALIFORNIA.

IMPROVEMENT IN DOOR-CLAMPS.

Specification forming part of Letters Patent No. **112,342**, dated March 7, 1871.

To all whom it may concern:

Be it known that I, HENRY O. HOOPER, of Diamond Springs, county of El Dorado, State of California, have invented certain new and useful Improvements in Door-Clamps; and I do hereby declare the following description and accompanying drawings are sufficient to enable any person skilled in the art or science to which it most nearly appertains to make and use my said invention or improvements without further invention or experiment.

My present invention has for its object an improvement in door-clamps; and it relates more especially to a door-clamp for which Letters Patent were granted to me, No. 92,531, and dated July 13, 1869.

It consists in so forming the movable side pieces of the clamp which holds the door, and their operating screws and gears, that these side pieces shall be moved equally at the top and bottom, and not necessitate an extension of those pieces down through the floor, as is practically the case in the former machine.

Referring to the accompanying drawing for a more complete explanation of my invention, Figure 1 is an end view, and Fig. 2 is a side elevation.

A is the bed or floor which the cross-beams B rest. The upright posts C are fitted so as to slide at the bottom on the guiding-beams B, or they may travel on rollers, if desired. At the top of the posts C are placed, longitudinally, the bars D, which serve to support the door.

The projections or lugs E, which rise above the edge of the door as it lies, serve to clamp it when the sides D are moved toward each other.

The sides of the clamp are operated by two screw-bars, F, at each end, one pair extending through the upper part and the other pair through the lower part of the posts C.

Nuts are firmly secured in the posts for each of the screws to pass through, and the threads of each screw are made either right or left hand, according to their position, so that when they are turned the sides may be brought simultaneously toward each other, or separated, as desired.

At or near the center of each of the four screw-bars F is placed a worm-wheel, G, the two wheels at either end coming near enough together to be both operated by the same worm or screw H. By this arrangement only two worms are needed to operate the top and bottom of both clamps, and these are placed at the ends of a shaft, I. This shaft is suitably supported by the central posts, J, within which the worms turn and through which the screw-bars pass, as shown.

The shaft I is turned by a belt which passes around the pulley K, and its motion can be reversed, to separate the sides by a cross-belt, upon the same pulley. By this arrangement I am enabled to insure a perfectly parallel movement of the clamps, so that, whether widely separated or near together, the clamps will always stand vertically, and will thus hold the door more securely.

I am also enabled to dispense with the extension of the posts C, which were formerly necessary in a practical machine.

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

The upper and lower sets of worm-wheels G, upon their respective screw-rods F, together with the shaft I and the worms H, when constructed to operate upon the posts C of the clamp, substantially as and for the purpose described.

In witness that the above-described invention is claimed by me I have hereunto set my hand and seal.

HENRY O. HOOPER. [L. S.]

Witnesses:

JOHN L. BOONE,

GEO. H. STRONG.