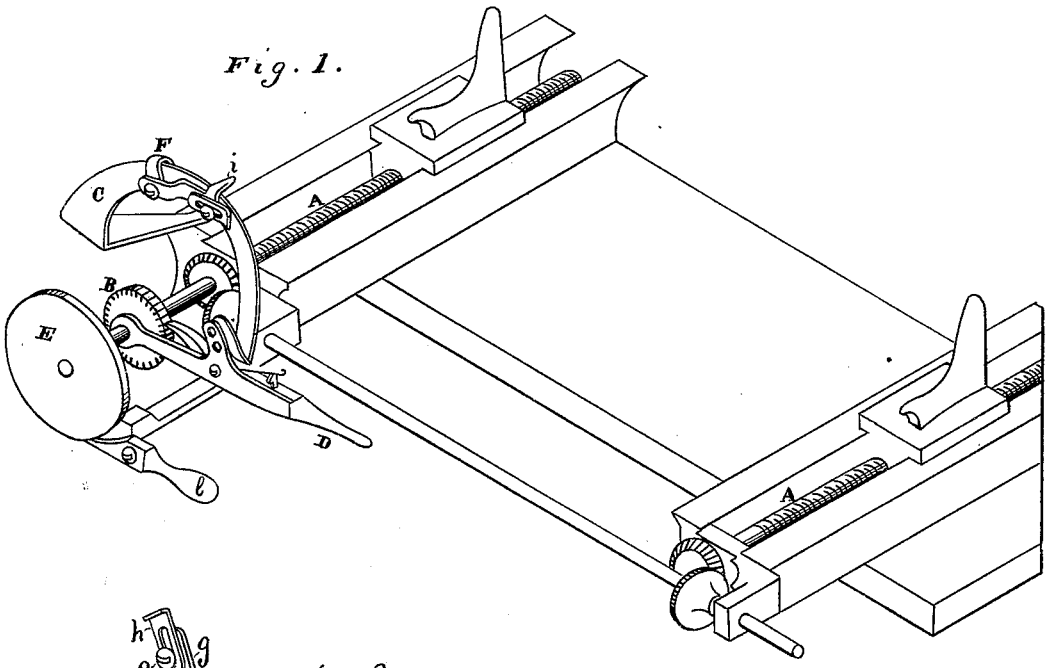
J. A. ROBB.
SAWMILL SET-WORKS.

No. 195,650. Patented Sept. 25, 1877

Fig. 1.



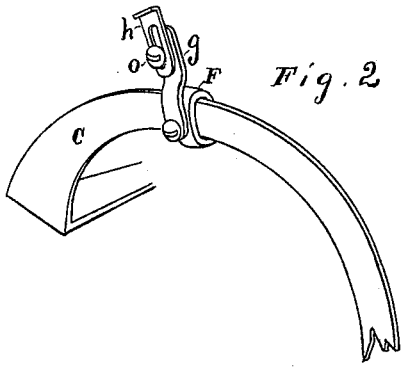
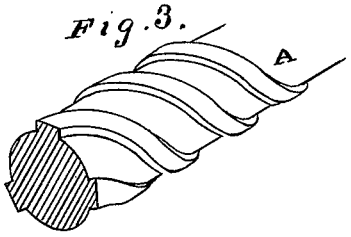


Fig. 2

Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

JAMES A. ROBB, OF SAN FRANCISCO, CALIFORNIA.

IMPROVEMENT IN SAW-MILL SET-WORKS.

Specification forming part of Letters Patent No. **195,659**, dated September 25, 1877; application filed February 16, 1877.

To all whom it may concern:

Be it known that I, JAMES A. ROBB, of the city and county of San Francisco, and State of California, have invented an Improvement in Saw-Mill Set-Works; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings.

The principal object of my invention is to combine a hinged supplemental stop attachment with the quadrant beside which the set-lever of a saw-mill set-works operates, so that it can be used to shorten the throw of the lever when it is desired to take out the width of the saw-kerf in sawing planks of more than usual thickness.

The stop usually employed for limiting the movement of the set-lever is permanently adjusted to a certain thickness of board, so that each throw of the lever will move the standard a specified and uniform distance. If, however, it be desired to saw a board of double thickness, and the lever is given two throws or motions, each throw stopping at the permanent stop, it is evident that the board will have an excess of thickness equal to the width of the kerf which the saw would have removed if it had been run through the log after the first throw. My supplemental stop is intended to obviate this difficulty by limiting each motion or throw of the lever, after the first motion of the lever has been once made, in the ordinary way sufficiently to take out this excess of thickness.

My invention also includes a weighted brake for preventing the momentum of the hand-wheel from rotating the screw-shaft beyond the point to which it is carried by the lever; also, an improvement in the screw-rods which move the head-blocks, all as hereinafter described.

Referring to the accompanying drawings, Figure 1 is a perspective view of my invention; Fig. 2, an enlarged view of the quadrant and stop, and Fig. 3 a part of the screw-shaft.

A A represent the set-shafts of a saw-mill, on one of which the ratchet B is secured, and C is the quadrant beside which the set-lever D, with its pawl, operates in the usual way to rotate the shafts.

E is the crank-wheel, by means of which the attendant rotates the set-shafts in order to return the head-blocks after each log is sawed.

F is the ordinary stop, which is secured to the quadrant C for the purpose of stopping or providing a limit for the throw of the lever D, in order to regulate the thickness of the board to be sawed.

My attachment consists of an adjustable plate, which I hinge or otherwise loosely attach to the stop F or quadrant C, as preferred, and which can be either dropped down upon the quadrant so as to form an extension of the stop F, as shown at Fig. 1, or raised so as to stand up out of the way, as represented at Fig. 2. This attachment I make in two parts, *g h*. The part *g* is loosely attached to the ordinary stop F, and has a hook or side extension, *i*, on its extremity, which will rest upon the edge of the quadrant when the attachment is thrown down upon it. The part *h* is slotted, and a set-screw, O, passes through the slot into the outer end of the plate *g*, so that it can be extended or shortened, as desired. The extremity of the plate *h* projects beyond the end of the plate *g*, and serves as a stop for the set-lever when the attachment is down. The length of this attachment can be regulated to correspond with the thickness of the saw by extending or shortening the plate *h* on the plate *g*.

When boards of a uniform thickness are being sawed, the ordinary stop F is adjusted to the proper point, but if it be desired to saw boards of double the ordinary thickness, I first throw the lever the usual distance against the ordinary stop, which moves the head-blocks the usual distance. If I should now move the head-blocks an equal distance a second time without running the saw through the log, I would have a board with an excess of thickness over the double thickness desired equal to the width of the saw-kerf; but to avoid this, I drop the extension or supplemental stop, which shortens the second throw of the lever sufficiently to take out the thickness of the saw-blade, and this is repeated as often as the thickness of the board is duplicated. When not in use, this supplemental stop is turned up out of the way.

It often happens that the screw-shafts are carried beyond the point desired by the momentum imparted to it by the lever. To prevent this, I apply a weighted brake, *l*, to the rim of the hand-wheel E, so as to stop the rotation of the shaft the instant the lever strikes the stop.

My improvement in the screw-shafts consists in providing them with three parallel screw-threads, as represented at Fig. 3. This is an important improvement, because it gives a greater bearing-surface in the nut, consequently holding the head-blocks steadier, and rendering the motion more positive and certain.

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

1. The supplemental hinged stop *g h*, attached to the quadrant C, substantially as and for the purpose described.

2. A supplemental hinged stop, consisting of the hinged plate *g* with its side extension or projection *i* and the slotted extension-plate *h*, arranged to be adjusted by means of the set-screw O, in combination with the quadrant C, set-lever D, ratchet B, and screw-shafts A, substantially as and for the purpose described.

In witness whereof I have hereunto set my hand and seal.

JAMES A. ROBB. [L. S.]

Witnesses:
GEO. H. STRONG,
OLWYN T. STACY.