

J. R. Hoffman,

Saw Mill.

No. 110,236.

Patented Dec. 20, 1870.

Fig. 1.

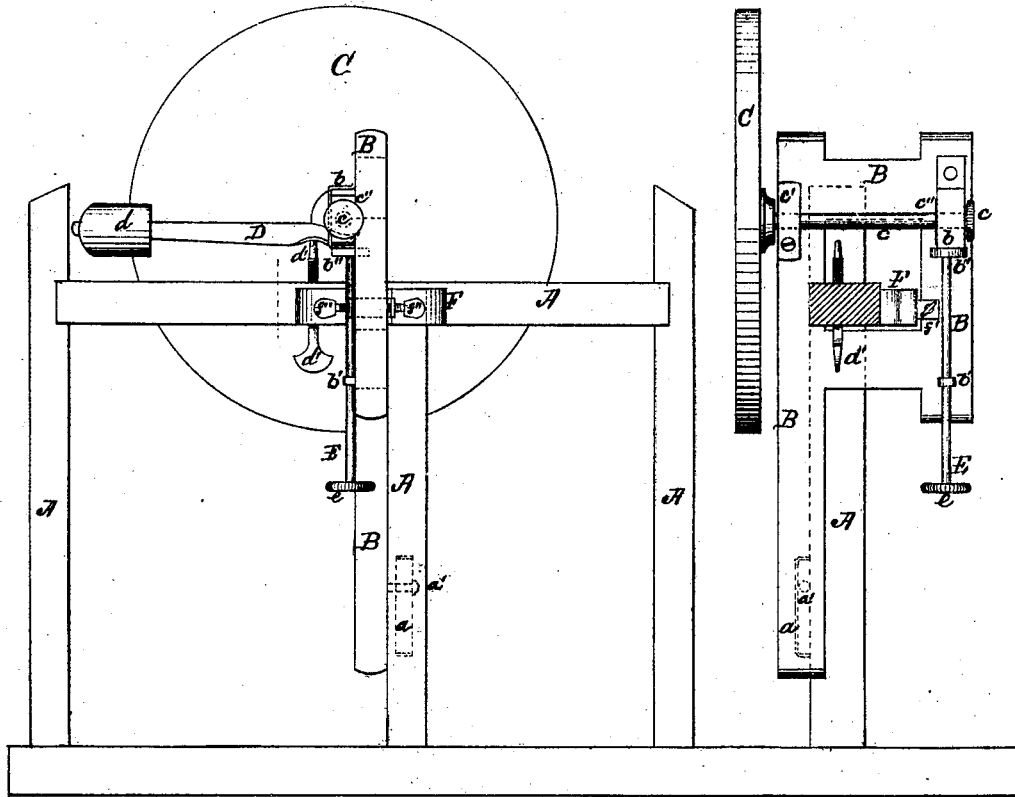


Fig. 2.

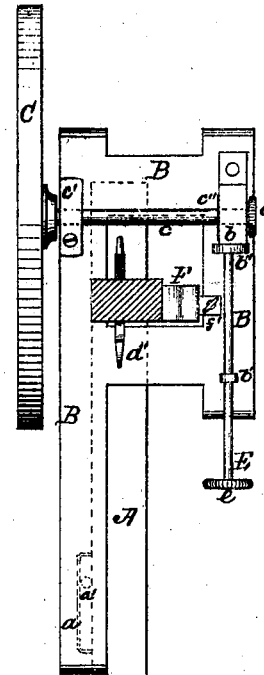
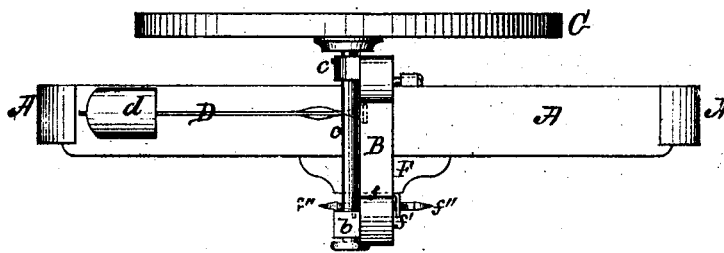


Fig. 3.



Witnesses:

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UNITED STATES PATENT OFFICE.

JACOB R. HOFFMAN, OF FORT WAYNE, INDIANA.

IMPROVEMENT IN SAW-MILLS.

Specification forming part of Letters Patent No. 110,236, dated December 20, 1870.

I, JACOB R. HOFFMAN, of Fort Wayne, in the county of Allen, in the State of Indiana, have made certain Improvements in Band-Saw Mills, of which the following is a specification:

The object of this invention is, first, to obtain a better and surer adjustment of the upper saw-pulley, so that the saw will always be kept in the proper strain upon the pulley; second, to adjust the upper saw-pulley so that the saw will be made to run nearer to or farther from the face of the pulley; and, third, the adjustment of the upper saw-pulley in such manner as to equalize the strain at all parts of the width of the saw upon the pulley; and it consists in the construction, arrangement, and combined action of the devices that are used in producing the results above enumerated.

Figure 1 is a side view of the upper saw-pulley and the devices which produce the different adjustments. Fig. 2 is a transverse view, and Fig. 3 is a top view, of the same.

A is the frame which supports the several parts, the upper saw-pulley, and the devices for the several adjustments of the pulley. B is an auxiliary frame, that is sustained by and is adjusted upon frame A, and has attached thereto the shaft and its pulley, upon which the saw is carried and strained. C is the upper saw-pulley, firmly attached to its shaft *c*, and with which it revolves in proper journal-bearings, *c'* and *c''*, that are attached to frame B. D is a weighted lever, having adjustable or sliding weight thereon, resting upon the adjusting fulcrum-screw *d'*, and its extreme end from the weight bearing against the under side of the upper cross-girt of frame B.

The fulcrum-screw *d'* has a screw-nut, through which it passes firmly, set in or upon the upper beam of frame A, so that the screw-fulcrum can be adjusted higher or lower, in order to have the lever and weight exert their full power upon the pulley C, through frame B, and keep the saw-pulley in position to strain the saw properly.

The frame B, on the side next the pulley, extends downward alongside of the middle post of frame A, and against which it slides, and is, in part, guided by it in its reciprocations up and down, while the opposite side extends not so far down, but far enough to re-

ceive a cross-girt underneath the upper beam of frame A, and is wide enough between the uprights to embrace the upper beam of frame A and go between proper guides at the rear side of said frame A.

Upon the middle post of frame A, and near the lower end of the long upright of frame B, is a metal guide-staple, *a*, in which guide-pin *a'*, that is fast in the long upright of frame B, will freely slide, and thereby keep the frame B and pulley C from getting too far from a perpendicular position, which is free to slide up and down against the middle post and beam or block on the upper beam of frame A.

Shaft *c*, upon which pulley C is made fast, turns in bearings or boxes *c'* and *c''*. Box *c'* is fast to the long upright of frame B, and is attached thereto below the shaft *c*, and so that it may turn upon the bolt by which it is fastened, and allow shaft *c* to be raised at its rear end out of a level position.

Box *c''*, in which the rear end of shaft *c* is sustained and revolves, is kept in its place and in contact with the frame B by means of keeper *b*, that is secured to the short and rear upright of frame B, and is free to slide up and down in said keeper, but not horizontally.

E is a temper-screw shaft, with hand-wheel *e* at its bottom end, and attached to the short rear upright of frame B by eyebolt *b'*, and has a screw upon its upper end, which turns into a nut in the lower end of box *c''*. This screw-shaft also passes through the projecting bottom part of keeper *b*, and has attached to it, just below said keeper, a stop-nut, *b''*, that revolves with the screw-shaft, but keeps it from rising or falling, and thereby causing the box *c''* to slide within the keeper either up or down, as the temper-screw-shaft may be turned, and with the box *c''* the rear end of the shaft *c* is raised or lowered, causing box *c'* to oscillate upon its pivot-point, and thereby the saw-pulley C will be made to take a position out of perpendicular when desired, and by such adjustment of the saw-pulley the saw is kept in equal strain on all parts of its width.

In order to give proper width to frame B, to the more easily control and guide its movements in the adjustments at different heights, a block, F, or other equivalent device, is bolted, or by other means firmly attached, to the

rear side of the upper beam of frame A, and to the rear side of the block is attached a metal or other guideway, f , having right-angled projections f' at each end, between which the rear upright of frame B is placed, and can freely slide up or down, and can be moved laterally by means of the temper-screws $f'' f'''$, that are tapped through the projections f' , and can bear against the rear upright of frame B.

The distance between the projections f' is made greater than the width of the rear upright of frame B, in order that the rear upright can be made to slide a little laterally, and be held in the desired position by the temper-screws $f'' f'''$. This adjustment of frame by the screws $f'' f'''$ causes the pulley C to vary from a parallel with the frame A, and by which adjustment the saw is made to go nearer to or farther from the face of the pulley C, and can be caused to assume any desired position on the pulley C with great exactness.

By this construction and arrangement of the adjusting devices the saw is quickly and certainly moved to its proper position, and kept in the right strain on the pulley, as all the

means of adjustment are within the reach of the attendant sawyer.

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

1. The weighted lever D, in combination with the adjustable fulcrum-screw d' and auxiliary frame B, carrying the upper saw-pulley, C, all constructed and arranged to operate substantially as described.

2. The hand temper-screw shaft E, having stop-nut b'' , in combination with the boxes $c'' c'$, shaft e , and upper saw-pulley, C, all arranged to operate substantially in the manner and for the purpose described.

3. The plate f , having projections $f' f''$ and temper-screws $f'' f'''$, in combination with the frame B, carrying the shaft e , and saw-pulley C, constructed and arranged substantially in the manner and for the purpose described.

JACOB R. HOFFMAN.

Witnesses:

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