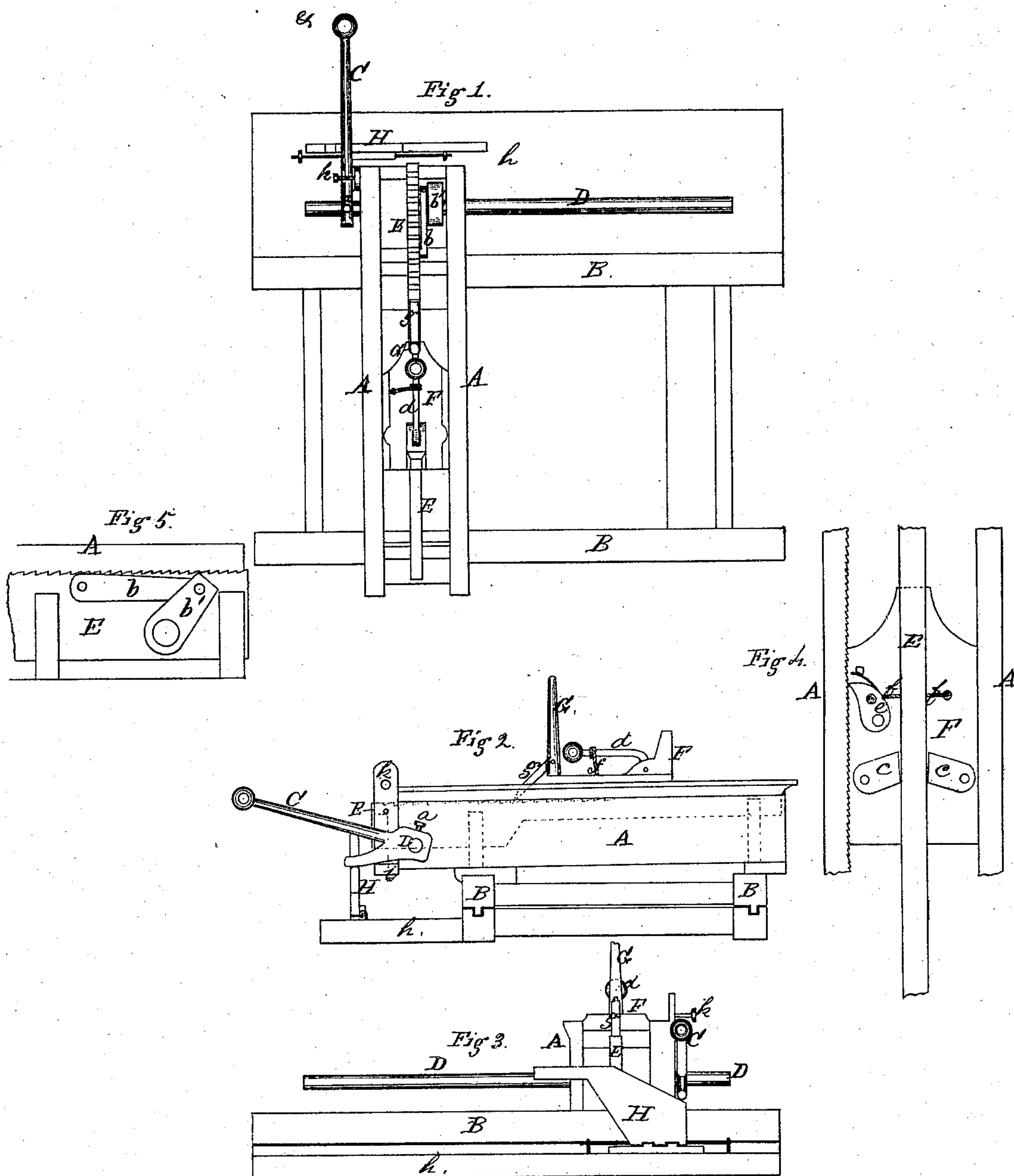


J. H. & G. Burket,

Head Block.

No. 99,838.

Patented Feb. 15, 1870.



Witnesses

W. Purris
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Inventors

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JOHN H. BURKET, OF FINDLAY, AND GEORGE BURKET, OF BLUFFTON,
OHIO.

Letters Patent No. 99,838, dated February 15, 1870.

IMPROVEMENT IN HEAD-BLOCK FOR SAW-MILLS.

The Schedule referred to in these Letters Patent and making part of the same.

To all whom it may concern:

Be it known that we, JOHN H. BURKET, of Findlay, in the county of Hancock, and GEORGE BURKET, of Bluffton, in the county of Allen, and State of Ohio, have invented a new and improved Head-Block for Saw-Mills; and we do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the accompanying drawings making a part of this specification, in which—

Figure 1 is a top view;

Figure 2 is a side elevation;

Figure 3 is an end view;

Figure 4 is an under side view in detail of knees of head-block, showing arrangement of clamps and pawl.

Figure 5 is also a view in detail, showing particularly the manner of attaching rod to rack.

Like letters in the figures of the drawings indicate like parts.

Our invention has reference to so constructing the head-block as that the knee thereof may be set either by hand or by power; and

It consists—

First, of a weighted lever attached to a rod passing through near the end of the head-block, said rod connecting with the rack by crank-levers in combination with the knee, having clamps so arranged on its under side with the rack and so connecting with a weighted lever above as that the clamps will be caused by the weight thereof to press against the sides of the rack, so that as the latter is moved the knee will be moved also, and thus set to the sawing of thick or thin lumber, as may be required, the log being properly fastened to the knee, the said knee being properly regulated by pawls engaging with teeth on the side of head-block so that it cannot be drawn back by the motion of the rack, and having a lever and pawl so connected and arranged with the teeth of the rack as that the knee may be moved by the lever to set one end of the log ahead of the other without moving the rack.

Second, of an inclined plate attached to the floor or base on which the head-block is constructed, in combination with the weighted lever attached to the rod as above mentioned, so that, by a series of holes in the side of the head-block, or in a plate attached thereto, next to the end thereof, and a pin inserted in the proper hole, the weighted lever may be regulated by the pin so that the lever will be carried against the incline of the plate by the movement of the head-block so that it will be raised as if by hand, and thus operate the rack and set the knee for sawing thick or thin lumber, as may be required.

We construct our invention as follows:

A is the head-block, constructed and attached in the proper manner to the sliding track B.

C is the weighted lever, having a forked end with a hole therein fitting over the rod D, and held thereto by a set-screw, *a*, or otherwise. This rod passes through the head-block near the rear end thereof and through a slot in the rack E, which slot is of sufficient size to allow the rack to move free of the rod.

The rack E is connected with the rod by the crank-levers *b' b*; *b'* being rigidly attached to the rod and then by a pivot to lever *b*, which is pivoted to the side of the rack, so that every time the rod is turned by the lever C, the rack will be caused to move, the rack being properly arranged to slide or move in the end pieces of the head-block.

F is the knee, having tongued sides fitting sufficiently loose in the grooved sides of the head-block as to admit of its being freely moved therein, and provided on its under side with clamps *c c*, arranged on each side of the rack and pivoted to the knee, and so connecting with the weighted lever *d* above as that the weight thereof will keep the clamps pressed against the sides of the rack; thus, as the rack is moved by the lever C, the pressure of the clamps will become tightened thereon, and the knee will be necessarily carried forward so that it may be set to any required thickness of lumber to be sawed.

To prevent the knee from being drawn back by the movement of the rack, a pawl, *e*, with spring and pin, is arranged on the under side of knee, to engage with teeth on the side of the head-block. This pawl is connected with the lever *d* by a stout cord or chain, *f*, so that to draw the knee back the lever must be raised, which will release the pawl as well as the clamps.

To move the knee without moving the rack, so as to carry one end of the log ahead of the other, a lever, G, is pivoted to the rear end of the knee, having a pawl, *g*, which, engaging with the teeth of the rack, serves as a fulcrum for the lever to act upon in impelling the knee forward.

H is the inclined plate hinged in a suitable manner to the floor *h* on which the track is constructed.

I is an upright plate attached to the side of the head-block next to the end thereof, and having a projection, *i*, at the bottom of it, on which the fork of lever C rests. This plate is provided with one or more holes, and a pin, *k*, to be inserted in the proper hole for regulating the action of the lever C on the rack in setting the knee.

Our invention is operated as follows:

The knee sets or adjusts the log, which is properly fastened to it, to the desired thickness of lumber to be sawed by raising the lever C to the proper height,

which causes the rod, by means of the crank-levers, to impel the rack forward, the motion of which causes the clamps *c c* to embrace either side of the rack tightly, and hence move and set the knee. To set the knee by power, this is accomplished by raising the inclined plate *H* to an upright position, which, when operating the lever *C* by hand, is laid down on the floor. This plate raises the lever to the proper height by the motion of the head-block, which causes the fork of the lever to strike the lower edge of the incline and ascend thereon until it is raised up to the horizontal projection of the incline, when the fork of the lever leaves it, and the plate is then turned to one side or laid down on the floor, so as to be out of the way on the return motion of the head-block. The distance the lever is thus raised of course depends upon the angle of inclination and the extent of it between the upper and lower edges of plate, but whatever it is, the knee will be moved a distance corresponding with that made by lever, estimated vertically between two parallel lines drawn horizontally from the upper and lower points of the incline.

Now, to set or gauge the knee to the thickness desired, the holes in the plate *I* will give this, which will be so arranged that by placing the pin *k* in a certain hole a certain thickness will be given; thus, by inserting the pin in a hole above the projection *i* and under the fork of the lever *C*, the fork resting on the

pin, the lever will strike above the lower edge of the incline, and by removing pin and placing it in a hole still higher up, lever will strike further above on the incline, and so on, so that the distance which the lever is raised or lowered may be so regulated by the pin as that the knee may be set to the sawing of thick or thin lumber, as may be required.

Having thus fully described my invention,

What I claim therein as new, and desire to secure by Letters Patent, is—

1. The knee *F* provided with the weighted lever *d*, in combination with clamps *c* and rack *a*, substantially as and for the purpose set forth.

2. The arrangement of lever *G*, pawl *g*, weighted lever *d*, pawl *e*, and clamps *c*, knee *F*, and rack *a*, substantially in the manner and for the purpose herein set forth.

3. The weighted forked lever *C*, rod *D*, cranks *b b*, upright plate *K*, with projection *i* and hinged incline *H*, and rack *a*, all the parts being constructed and arranged substantially in the manner and for the purpose herein shown and set forth.

JOHN H. BURKET.
GEORGE BURKET.

Witnesses:

CHARLES S. BANN,
JACOB F. BURKET.