B. P. PERRY & O. S. MOTE.

Head-Blocks for Saw-Mills.

No. 166,222. Patented Aug. 3, 1875.

Fig 1

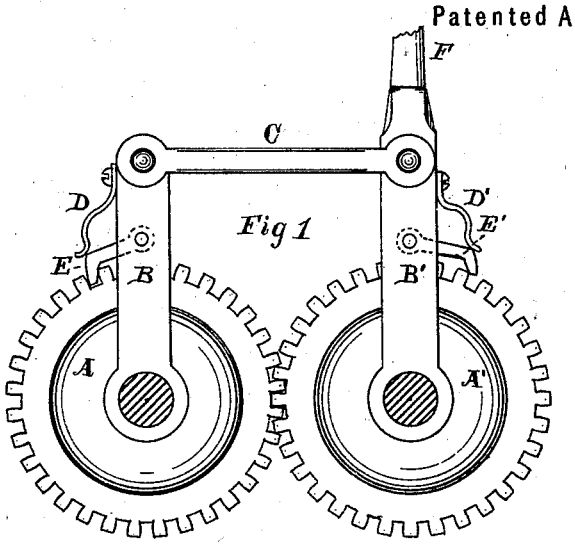
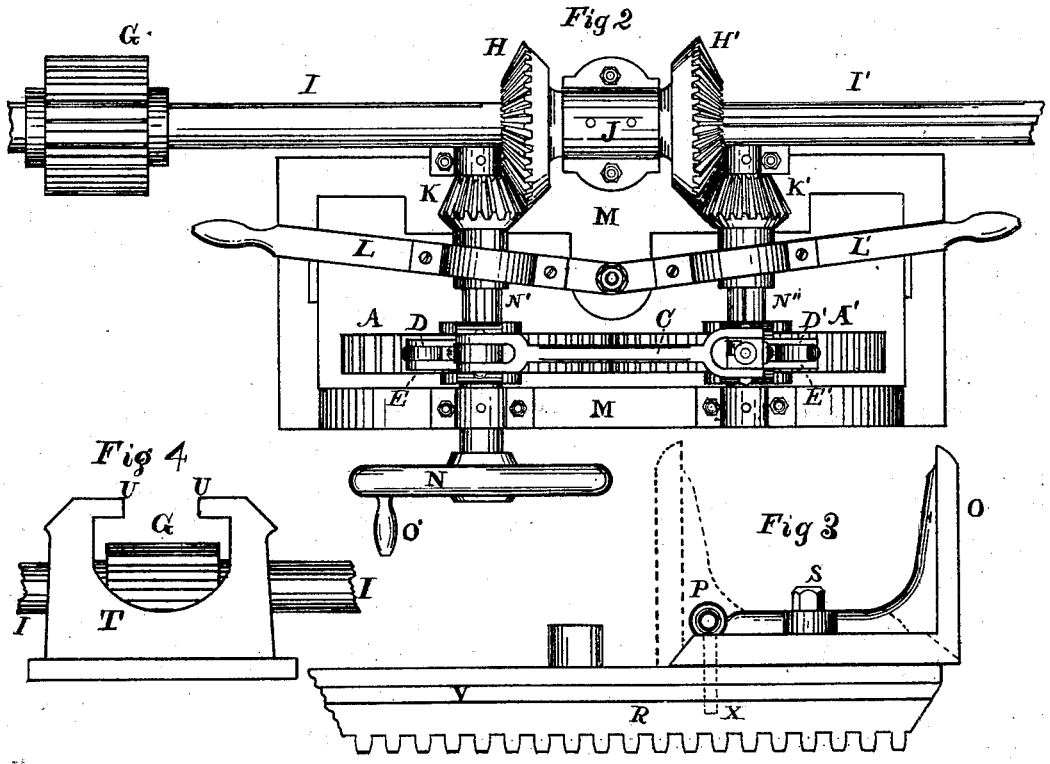


Fig 2



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UNITED STATES PATENT OFFICE.

BENJAMIN P. PERRY AND ORRIN S. MOTE, OF RICHMOND, INDIANA.

IMPROVEMENT IN HEAD-BLOCKS FOR SAW-MILLS.

Specification forming part of Letters Patent No. **166,222**, dated August 3, 1875; application filed March 3, 1874.

To all whom it may concern:

Be it known that we, BENJAMIN P. PERRY and ORRIN S. MOTE, of Richmond, county of Wayne and State of Indiana, have invented certain Improvements in Head-Blocks for Saw-Mills, of which the following is a specification:

Our invention relates to an improvement in head-blocks for saw-mills, consisting in certain arrangements of the moving mechanism, whereby the operator can move either or both knees forward or back without leaving his post at his lever, which is located beside the log, as hereinafter more fully described.

Figure 1 is a side elevation of the moving mechanism, showing the lever by which it is moved and its attachments. Fig. 2 is a top view. Fig. 3 is a side elevation of the rack, which carries the knee, with the knee attached. Fig. 4 is an end view of the block, into which the rack R slides, and showing the pinion G, which moves the same.

M is the frame to which the moving mechanism is attached. A and A′ are gears of equal diameter. B and B′ are upright levers attached to the axis of the wheels A A′, respectively, and connected together by the connecting-bar C. The pawls E E′ are attached to the upright levers B B′, and held in the teeth of the wheels by means of the springs D D′, the whole being operated by the handle F of the lever B′. The rack R slides into the block T in the usual way, the grooves V passing over the guides U, the teeth of the pinion G engaging the teeth of the rack R to move it back and forward. The bevel-pinions K K′ slide on feathers upon the shafts N N′, and are moved in and out of gear with the bevel-wheels H H′, according to circumstances. The shafts I and I′ are independent of each other, and their ends meet in the bearing J, so that they may either revolve together, or one revolve and the other remain stationary, as may be desired. The pinions K K′ are operated by means of the levers L L′. When the rack R, carrying the knee O, has been carried forward in sawing the log, and it is desired to run it back, the pawls E E′ are thrown up, and the operator takes hold of the handle O′ of the wheel N, and the whole moves backward; but if it is desired to move one of the knees, and the other remain stationary, the pinion K or K′ is thrown out of gear by means of the lever L or L′, as the case may be, the operator always remaining in one place, and operating the whole mechanism through the means of the handle F of the lever B′ and the handle O′ of the hand-wheel N.

In most, if not all, blocks now in use the operator leaves his post, and goes to the block that he wishes to stop the knee, to throw out catches, &c. In our arrangement the operator never leaves his post, doing the entire work standing in the same position. If he wishes to move the shaft I′ the pinion K′, is thrown in gear by means of the lever L′, and the pinion K is thrown out in the same manner, and the movement of the handle F revolves the shaft I′, while the shaft I remains stationary.

If it is desired to run both the shaft I and I′ backward or forward the pawls E E′ are thrown up and the pinions K K′ placed in gear, and the whole is operated by the hand-wheel N, according to the direction it is desired to move the shafts. Moving the handle F in either direction gives a forward motion to the shafts through the levers B B′ and connecting-bar C. The shafts I and I′ being in two pieces, and moving independently of each other, gives greater stiffness and precision of action than when not so separated; yet they work conjointly with greater precision than a single shaft, being less liable to twist or yield to severe strain, each block being moved by its own shaft independently of the other, yet move simultaneously, with great precision. The reversible knee O is attached to the rack R, and turns upon the pin S; the pin P drops into a hole in the rear end of the knee, and in the rack R at X.

We are aware that devices somewhat similar to ours have been heretofore used for moving simultaneously the screws for operating the knees of head-blocks, and therefore do not claim these, broadly; but

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

The combination of the levers B B′, connecting-bar C, and pawls E E′ with the wheels A A′, whereby a simultaneous and double-acting movement is communicated to the wheels A A′ at both right and left strokes of the handle F, substantially as described.

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