

(Model.)

2 Sheets—Sheet 1.

T. J. REAMY.

FEED MECHANISM FOR SAW MILLS.

No. 257,384.

Patented May 2, 1882.

Fig. 1.

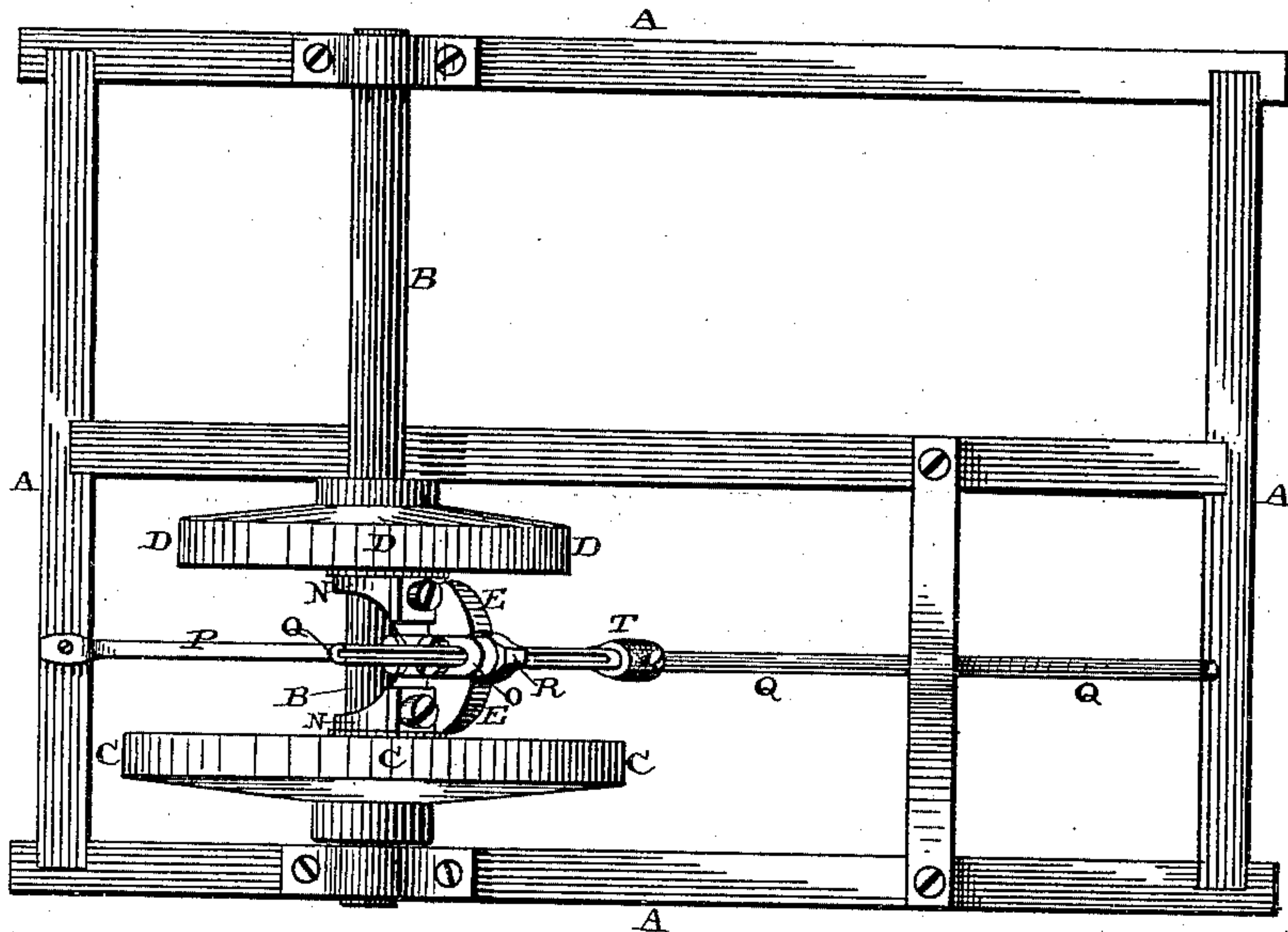


Fig. 2.

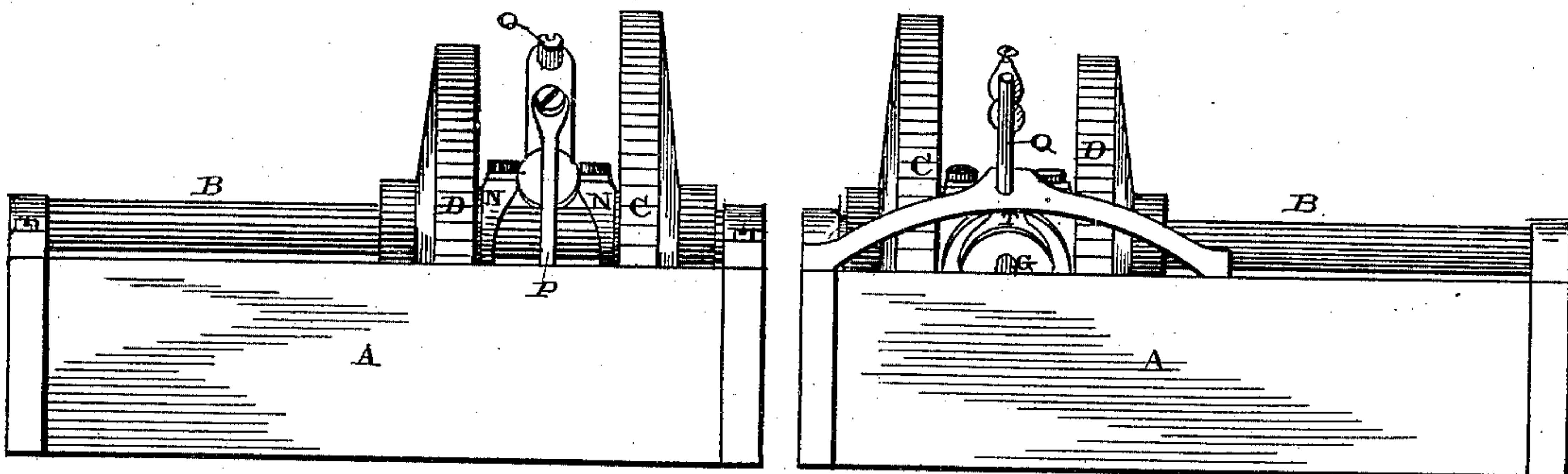


Fig 3

WITNESSES.

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T. J. Reamy
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(Model.)

2 Sheets—Sheet 2.

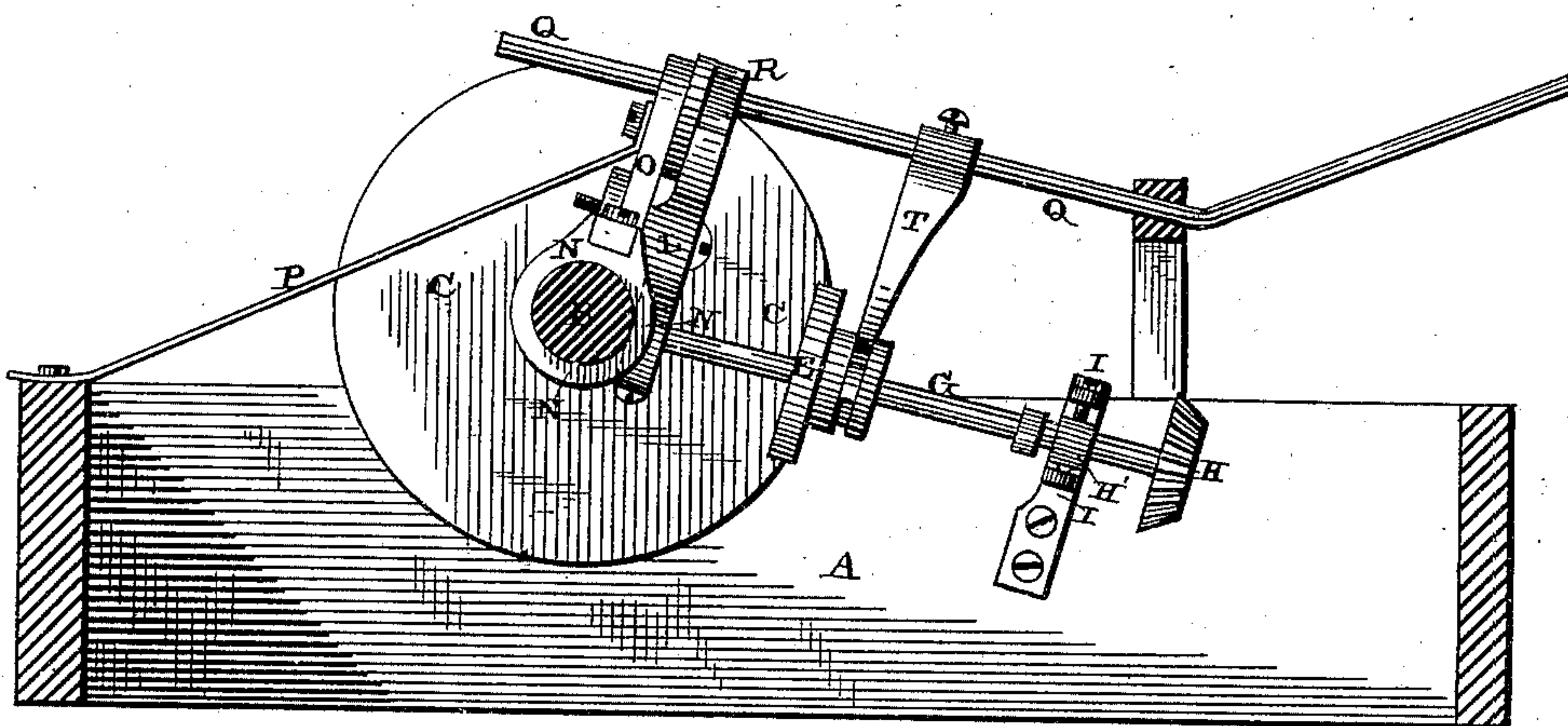
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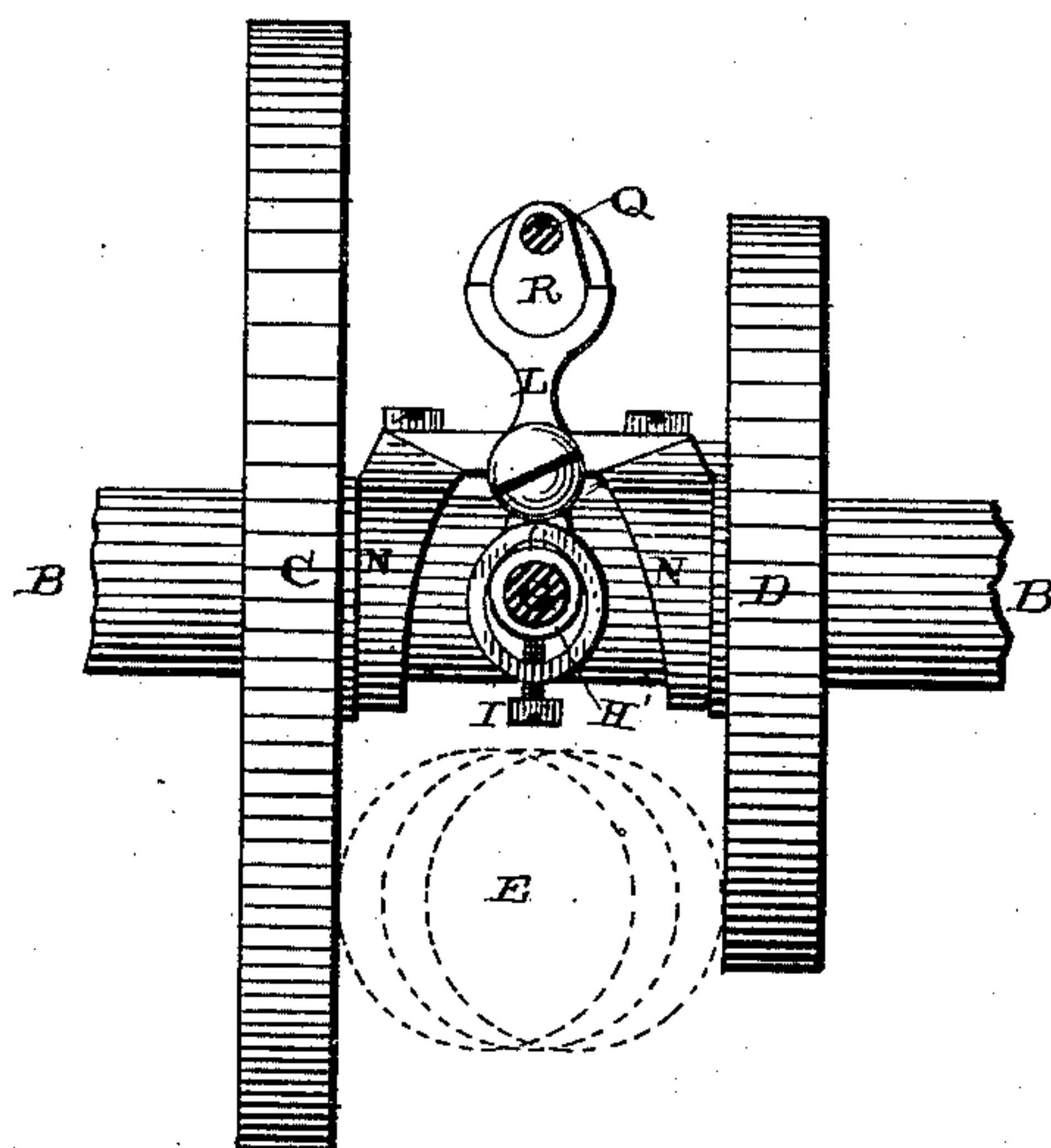
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Feb. 5.



WITNESSES:

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UNITED STATES PATENT OFFICE.

THOMAS J. REAMY, OF ROCKY MOUNT, NORTH CAROLINA.

FEED MECHANISM FOR SAW-MILLS.

SPECIFICATION forming part of Letters Patent No. 257,384, dated May 2, 1882.

Application filed February 2, 1882. (Model.)

To all whom it may concern:

Be it known that I, THOMAS J. REAMY, of Rocky Mount, in the county of Nash and State of North Carolina, have invented certain new and useful Improvements in Feed Mechanism for Saw-Mills; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in saw-mills; and it consists in the combination of two face-plates, a laterally-movable shaft which gears with the rack-bar, and which is provided with a friction-disk which can be brought in contact with either one of the face-plates. The object of this part of my invention is to dispense with the usual pulleys and belts which have heretofore been used for the purpose of reversing the carriage and to substitute therefor a much cheaper and simpler mechanism.

My invention further consists in making the friction-disk, which is secured to the shaft which operates the carriage, movable back and forth, so that it can be brought in contact with either one of the face-plates, near their centers or out toward their outer edges, for the purpose of increasing or decreasing the speed at which the carriage is moved, and thus produce a universal feed movement. The object of this part of my invention is to enable the operator to regulate the speed at which the carriage shall be moved back, and thus enable the operator to always keep the carriage under the most perfect control.

My invention still further consists in journaling the shaft which operates the carriage back and forth in pivoted or movable boxes. The object of this part of my invention is to enable the shaft to be moved laterally and to change its boxes at the same time with it, so that they will always be in a direct line, and thus prevent binding.

My invention still further consists in placing the supports for the inner end of the shaft which operates the carriage and for the lever directly upon the mandrel in between the two face-plates. The object of this part of my in-

vention is to enable my apparatus to be applied to any of the saw-mills now in use without having to place any false timbers under the mandrel.

Figure 1 is a plan view of my invention. Figs. 2 and 3 are views taken from opposite ends. Fig. 4 is a vertical section, taken through the mandrel. Fig. 5 shows detail views of the boxing.

A represents a suitable frame-work, which may be of any construction that may be preferred, and B is the mandrel, which is journaled upon its top. To this mandrel are secured the two face-plates C D, of which the one, C, is considerably the larger, and is to be used for the purpose of reversing the carriage and giving a faster motion to it than will be given by the smaller face-plate D, which feeds the lumber forward to the saw. These two face-plates are parallel with each other and separated just sufficiently far apart to enable the friction-disk E, which is secured to the shaft G, to have a slight play back and forth between them, so that the disk can be brought in contact with either one of the face-plates without touching the other, or can be placed midway between the two without touching either one. This shaft G is provided with a feather, and the friction-disk is made adjustable back and forth upon the shaft, so that it can be moved inward toward the mandrel, and then be made to bear against the inner portion of the face-plate D when but a very slow feed is required for the carriage. Upon the outer end of this shaft G is secured the beveled gear or other similar device, H, by which the shaft is made to mesh with the rack which drives the carriage back and forth. As the shaft G must be given a lateral play, so as to shift the friction-disk horizontally back and forth between the two face-plates, both of the boxes H', on which it is journaled, are supported in their bearings by means of the two set-screws I, or a set-screw at one end, and a suitable pointed projection, which will catch in a recess in the bearing at the other. By means of this construction the boxes can turn in their supports at the same time that the shaft is moved laterally, and thus be always kept directly in line with the shaft, whereby binding is prevented.

The support for the box at the outer end of the shaft will be secured to one of the main timbers of the frame either as here shown or in any suitable manner that may be preferred.

5 The support for the inner end of the shaft G is formed by the rocking lever L, which is pivoted near its center upon a suitable bearing, which is supported directly upon the mandrel in between the two face-plates by means of the
10 two boxes N. These boxes or journals are made in two pieces, so that they can be bolted around the mandrel, and upon their upper ends is secured the guide and support O. This guide and support has its lower end slotted where
15 the clamping-bolts pass through down into the boxes N, so that the boxes can be adjusted back and forth upon the mandrel, and thus secured any desired distance apart. Passing through the upper end of this guide and
20 support O, which is braced in position by the rod P, is the grooved sliding operating-lever Q, by means of which the friction-disk is shifted back and forth between the two face-plates. This lever Q, which has both a rotary and a
25 sliding movement, has connected to it the cam R, which catches between the upper end of the lever L, and as the lever Q is rocked back and forth the lever L is moved at the same time. As the lower end of this lever has the
30 box for the inner end of the shaft G pivoted in it, whenever the lever is moved by the cam the friction-disk is moved laterally.

The cam for operating the lever L has a feather formed on its inner side, and this feather
35 catches in the groove of the operating-lever for the purpose of allowing the lever to slide back and forth without carrying the cam with it. The cam is secured in place by having a flange formed upon its edge, and this flange
40 catches between the support O and the lever L.

Secured to the operating-lever by means of a set-screw at any suitable point is a clutch, T, which catches in a groove made in the friction-disk, and by which the disk is moved back
45 and forth upon the shaft G when the operating-lever is moved horizontally.

By securing the two boxes N directly to the mandrel, as is here shown, there will be no necessity of having to secure false timbers to the
50 frame to act as a support for the boxing for the shaft G, and hence the apparatus can be applied to any of the saw-mills now in use. By dispensing with the usual cone-pulleys here-

tofore generally used not only is the cost of the machine greatly cheapened, but the use of 55 belts, which are liable to constant breakage, is done away with; and should one of the cones be fuller than the other the shaft is moved horizontally more or less on that end, where-
60 by the saw is caused to stand at a slight angle, and hence will wobble and heat while in operation. By placing the two boxes N between the two face-plates and directly upon the man-
drel, as is here shown, any strain upon the op-
erating-lever is divided directly between the 65 two, so that there will not be the slightest strain upon the mandrel, which will cause the saw to get out of true.

Having thus described my invention, I claim— 70

1. The combination of mandrel B, having se-
cured to it the two face-plates D C, of unequal size, the friction-disk E, and the shaft G, to
which the disk is secured, and upon which the
disk slides back and forth, substantially as 75 shown.

2. The combination of the mandrel B, having secured to it the two face-plates D C, the disk E, the shaft G, and the rod Q, provided with the
clutch T, the disk being adapted to be brought 80 in contact with either one of the face-plates, substantially as described.

3. The combination of the mandrel B, the face-plates C D, the disk E, and shaft G, hav-
ing its ends journaled in pivoted boxes, with 85 the rod Q, by which the disk is moved, substantially as set forth.

4. In a saw-mill, the combination of the man-
drel, the two face-plates, the boxes N, support-
ed directly upon the mandrel, the support P, 90 the lever L, shaft G, provided with the friction-disk, and the endwise-operating lever, where-
by the friction-disk is moved both back and forth upon the shaft and the shaft is moved laterally, substantially as specified. 95

5. The combination of the mandrel B, face-
plates C D, disk E, shaft G, journaled in piv-
oted boxes, lever L, and rod Q provided with
a clutch and cam, substantially as shown.

In testimony whereof I affix my signature 100 in presence of two witnesses.

T. J. REAMY.

Witnesses:

W. H. KERN,

W. W. MORTIMER.