

2 Sheets-Sheet 1.
J. M. & S. F. Stanton,

Saw-Mill Head-Block.

N^o 54,432.

Patented May 1, 1866.

Fig 1

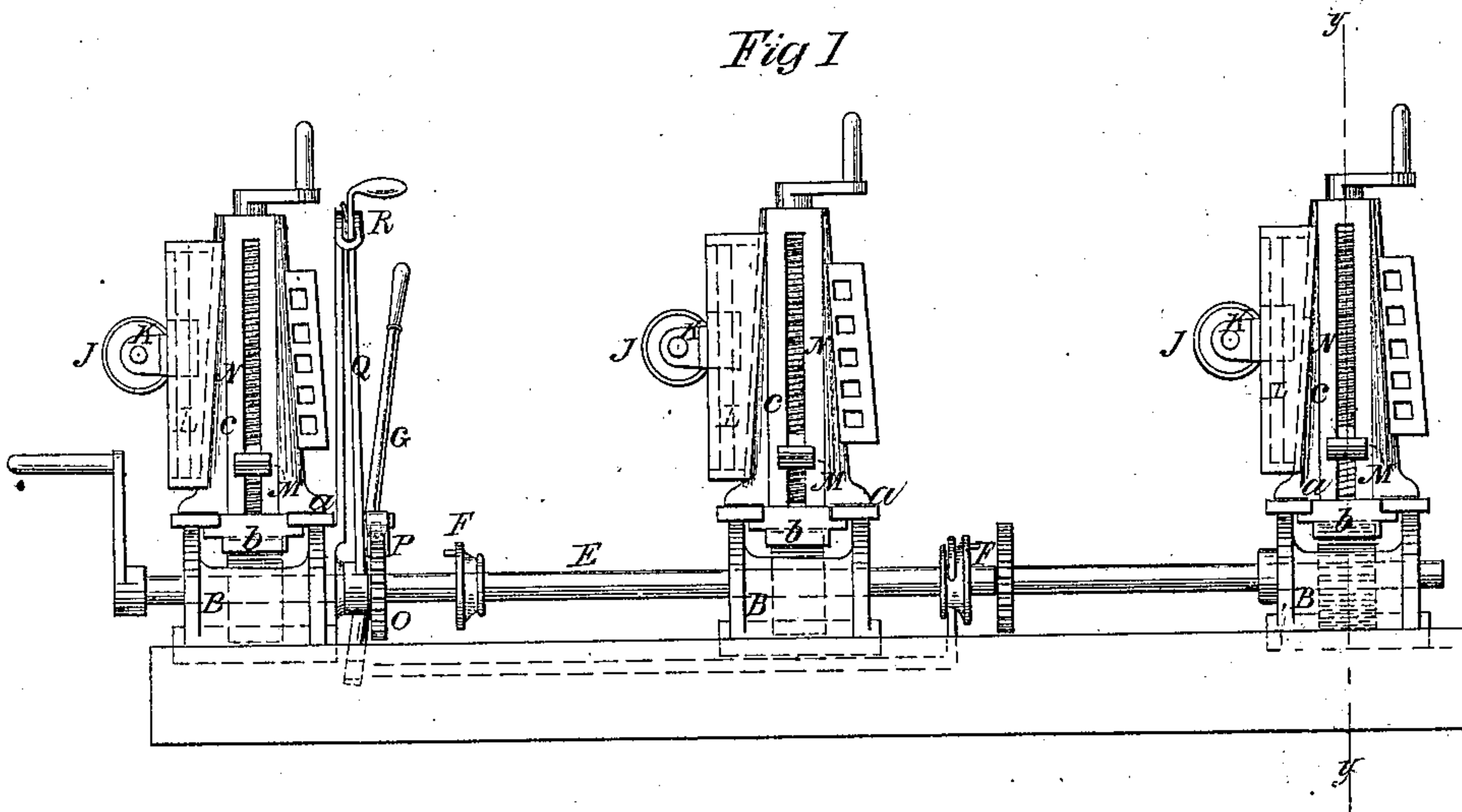
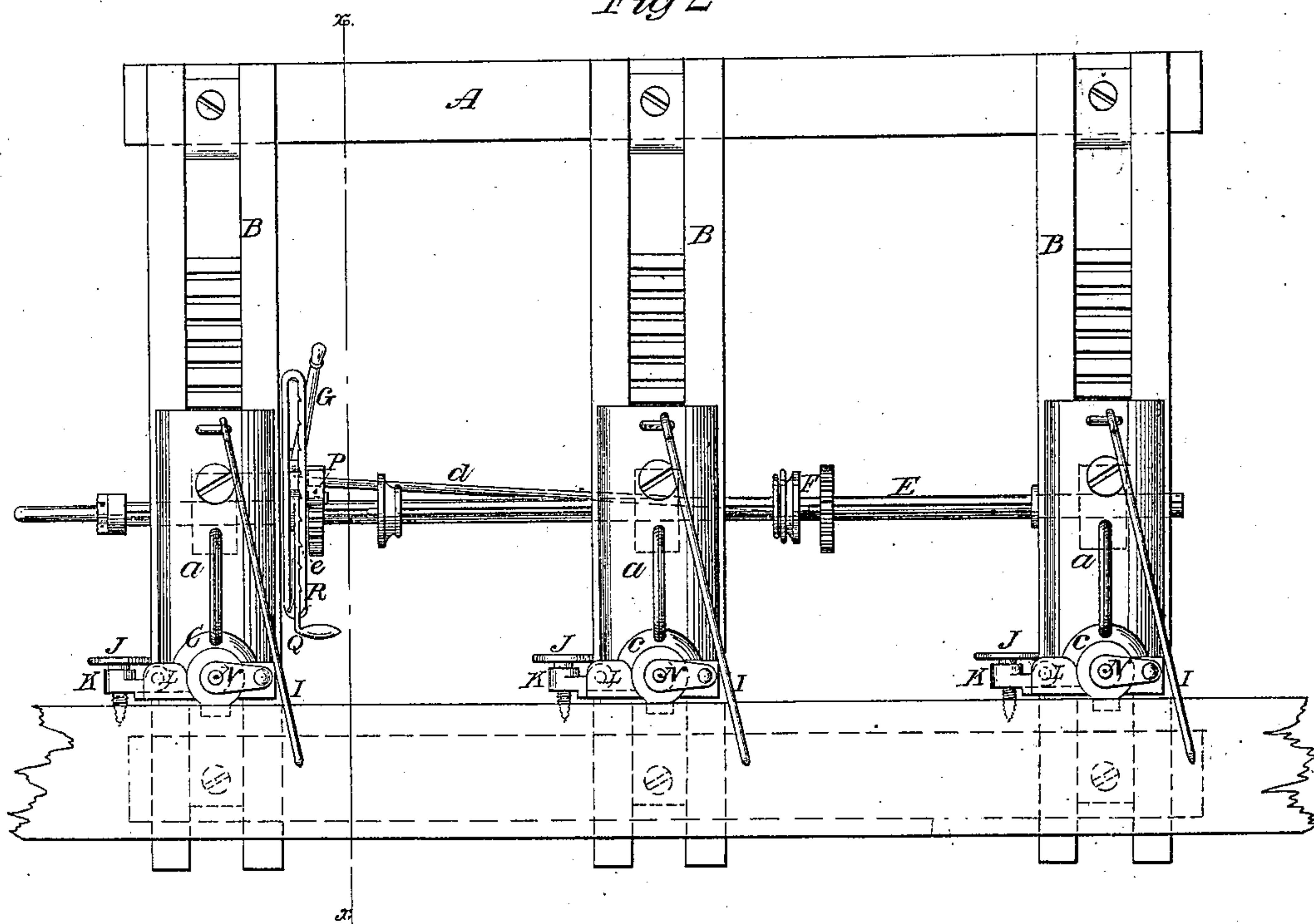


Fig 2



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Inventor:

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Attorneys

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Fig 3

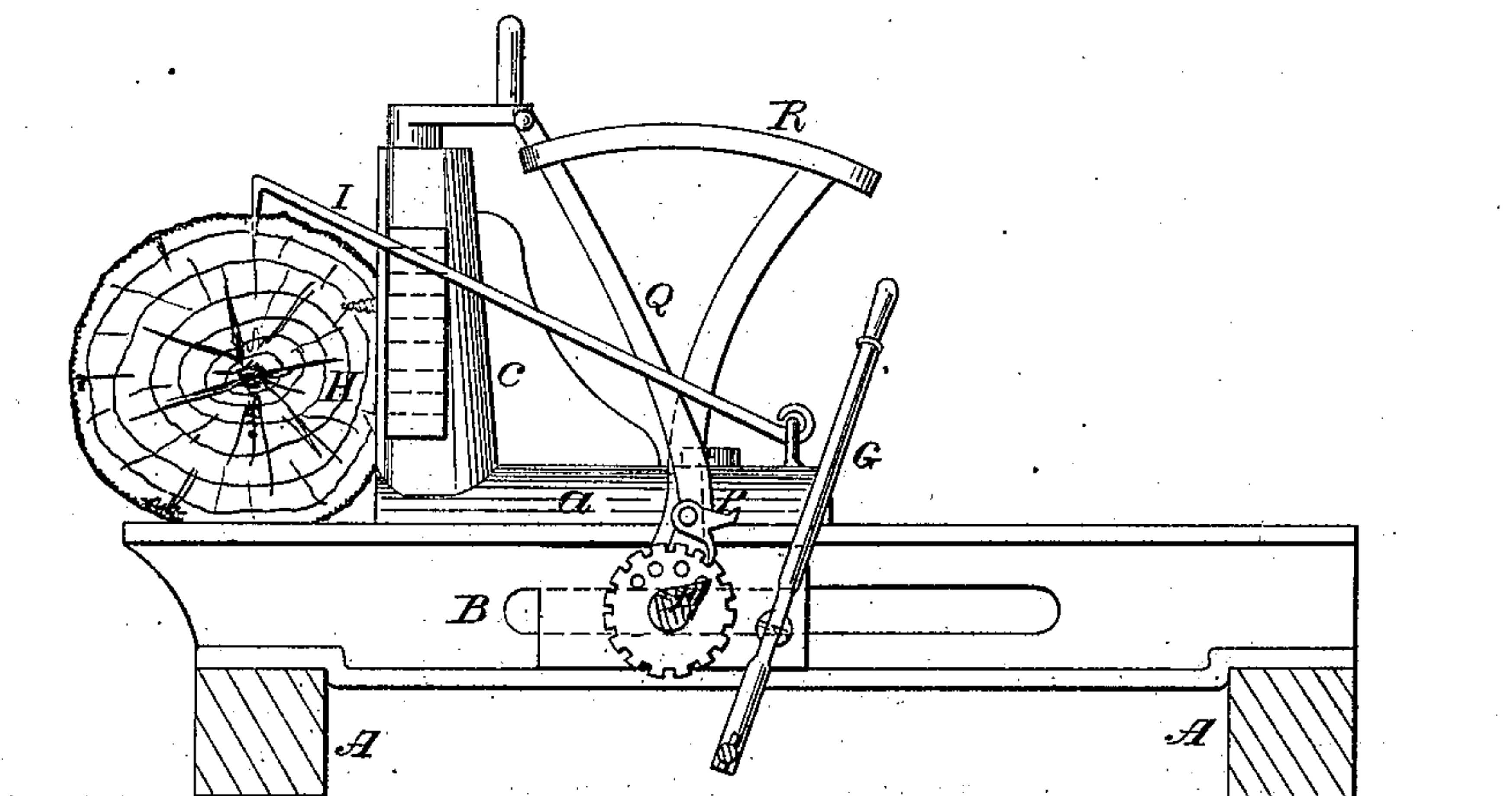
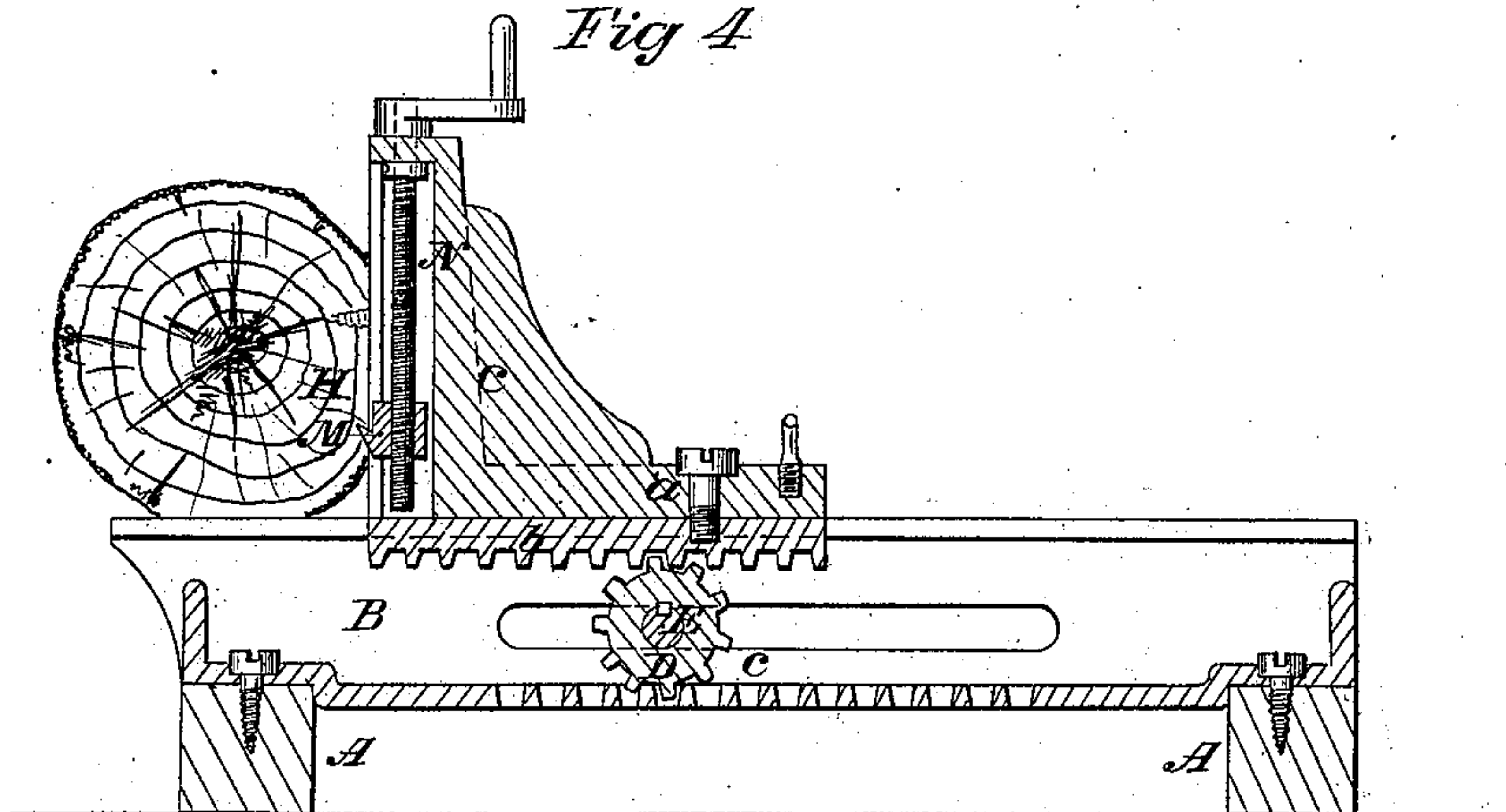


Fig 4



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UNITED STATES PATENT OFFICE.

J. M. STANTON AND S. F. STANTON, OF MANCHESTER, NEW HAMPSHIRE.

IMPROVEMENT IN HEAD-BLOCKS TO SAW-MILLS.

Specification forming part of Letters Patent No. 54,432, dated May 1, 1866.

To all whom it may concern:

Be it known that we, J. M. STANTON and S. F. STANTON, of Manchester, in the county of Hillsborough and State of New Hampshire, 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 thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1, Sheet No. 1, is a front or face view of our invention. Fig. 2, a plan or top view of the same; Fig. 3, Sheet No. 2, a transverse vertical section of the same, taken in the line *x x*, Fig. 2; Fig. 4, a transverse vertical section of the same, taken in the line *y y*, Fig. 1.

Similar letters of reference indicate like parts.

This invention consists, first, in a novel and improved manner of operating the uprights or knee-pieces of the head-block, whereby the same may be moved a comparatively long distance under a short movement of the operating-lever.

The invention consists, second, in having the shaft by which the uprights or knee-pieces are driven formed in sections and connected by clutches, so that one or more of the uprights or knee-pieces may be moved as occasion may require.

The invention consists, third, in an improved means for graduating the set of the log to the saw; and, fourth, in an improved mode of dogging the log to the uprights or knees, as hereinafter fully shown and described.

A represents the carriage, on which a series of metal ties or blocks, B, are secured transversely. These ties or blocks are hollow or tubular, and may be of rectangular form in their transverse section, and having a longitudinal opening or slot in their upper surfaces extending their whole length.

C represents the uprights or knee-pieces, which are provided with bases *a*, the latter being fitted in the blocks B, and having grooves at their sides to receive the edges of the top plates of the blocks B at each side of their slots or openings. These uprights or knee-pieces are allowed to slide freely in the blocks B, and the under surface of their bases *a* are formed with racks *b* to receive pinions D on a shaft, E, which passes transversely through the

blocks B, the pinions D also gearing into racks *c*, at the bottoms of the blocks B, as shown clearly in Fig. 4. By this arrangement it will be seen that, by turning the shaft E, the latter will be moved in a lateral direction at the same time, in consequence of the pinions D gearing into the racks *c*, while the pinions move the uprights or knee-pieces C, in consequence of the pinions D gearing into the racks *b* of their bases *a*, and in consequence of this double or compound movement of the shaft E the knee-pieces will be moved through a greater space in turning the shaft E a given distance than if the shaft E turned in fixed bearings and its pinions D simply geared into the racks *b*, for in the former instance the movement of the knee-pieces C, caused by the racks *b* and pinions D, has the lateral movement of the shaft, caused by the pinions D gearing with the racks *c* of the blocks B added to it.

The shaft E is composed of sections corresponding in number to the number of knee-pieces C, each section having a pinion, D, upon it. These sections are connected together by clutches F, operated by levers G, at one end of the head-blocks, the levers being connected by rods *d* with the clutches. Only one of these levers, with its rods, is shown in the drawings, that being sufficient, as they are all precisely alike. By this arrangement it will be seen that one, two, or all of the knee-pieces, may be moved simultaneously, or only one moved, as may be desired, and hence the knee-pieces may be adjusted in line with each other, or any one placed more or less in advance of the others, as may be required.

The log H, is placed upon the blocks B and secured to the knee-pieces C by dogs I, of usual construction. In addition to these dogs I, we use screws J, which pass through nuts K, fitted on vertical rods L, at one side of each knee-piece, the rods L passing through the nuts at one side, so that the latter may be turned on said rods or raised and lowered therein, and admit of the screws being adjusted to and screwed into the log H, so that the latter may be completely sawed up without turning it or changing its position; and we further use sliding dogs M, which are fitted in each knee-piece and operated by a screw, N, as shown clearly in Fig. 4. These dogs M are designed to support the log or take the principal portion of its weight off from the blocks

B, thereby diminishing friction and admitting of the log being set to the saw with greater facility than hitherto.

The shaft E is turned in order to set the log to the saw by means of a ratchet, O, into which a pawl, P, gears, said pawl being at the lower end of a lever, Q, the upper end of which is fitted in a guide, R, having notches *e* in one side. These notches *e* are made at different distances apart, and they serve as guides for the movement of the lever Q, in order to saw the log with stuff of different thicknesses. (See Fig. 2)

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

1. The operating of the uprights or knee-pieces C through the medium of pinions D,

gearing into racks *b*, at the under sides of the knee-pieces and into the racks *c* of the blocks B, substantially as and for the purpose specified.

2. The arrangement of the sectional shaft E, clutches F, lever G, rods *d*, constructed and operating in the manner and for the purpose herein described.

3. The combination of the lever Q, notched guide R, pawl P, pinion D, rack *b*, and rack *c*, all arranged in the manner and for the purpose herein specified.

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Witnesses:

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