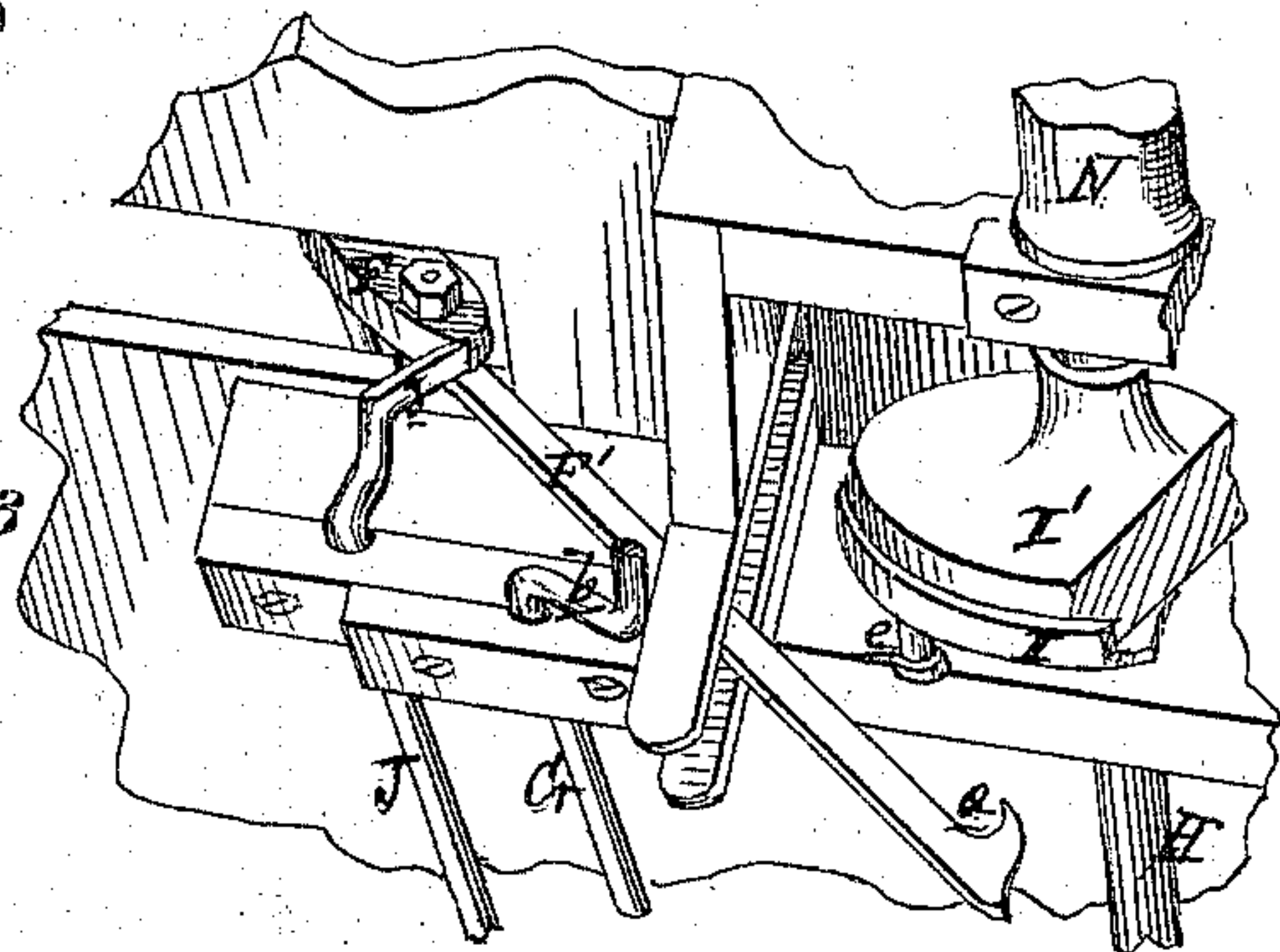
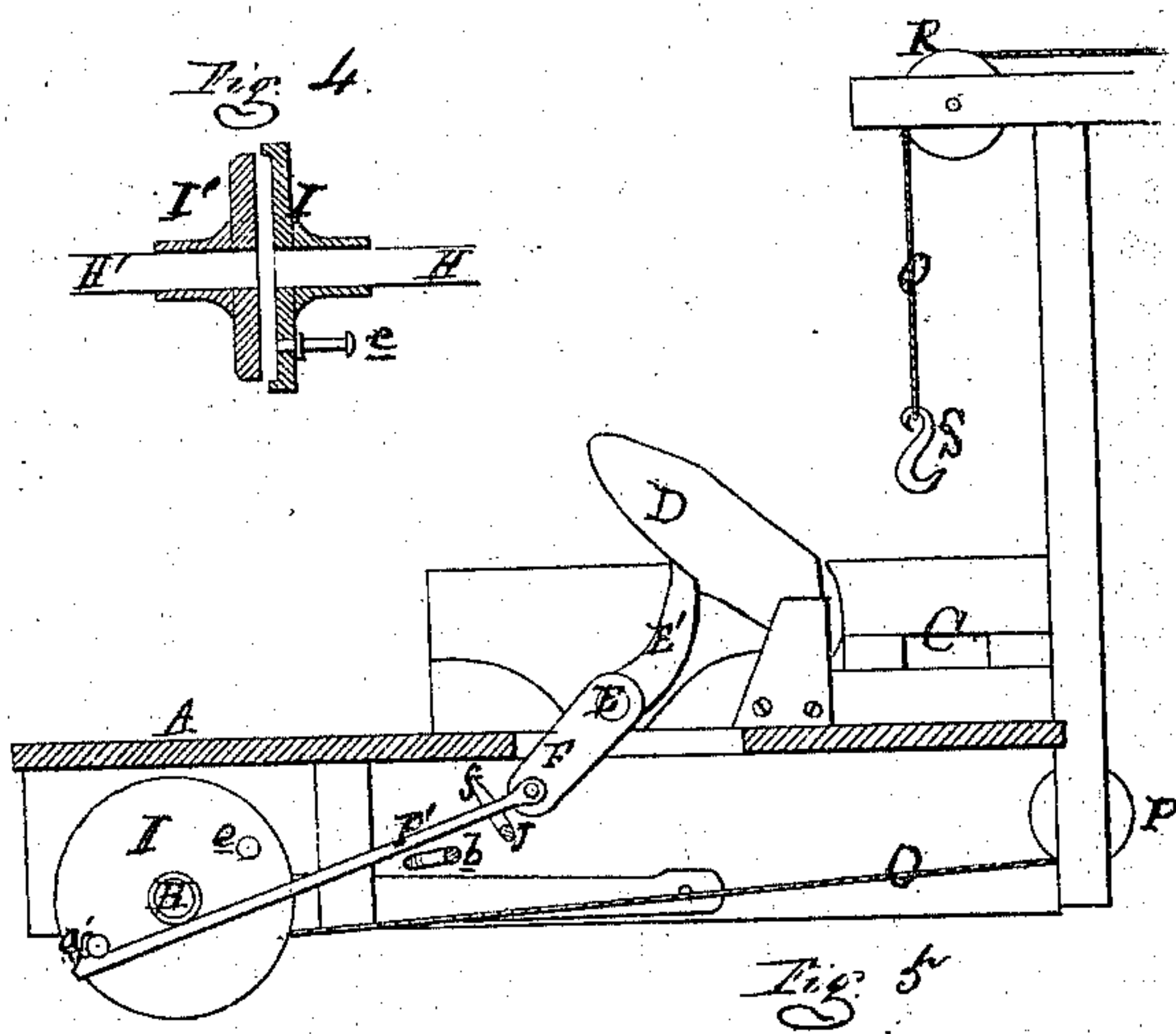
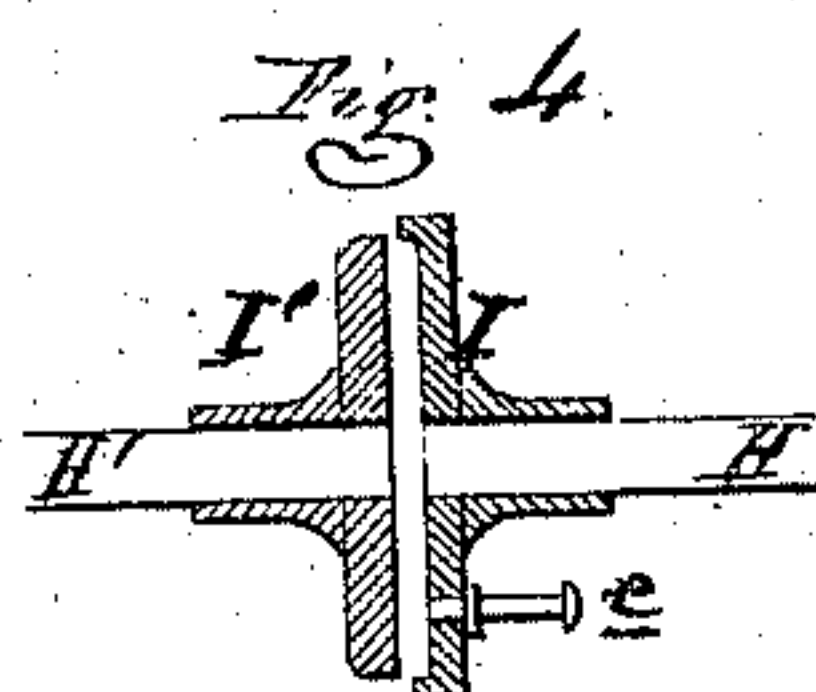
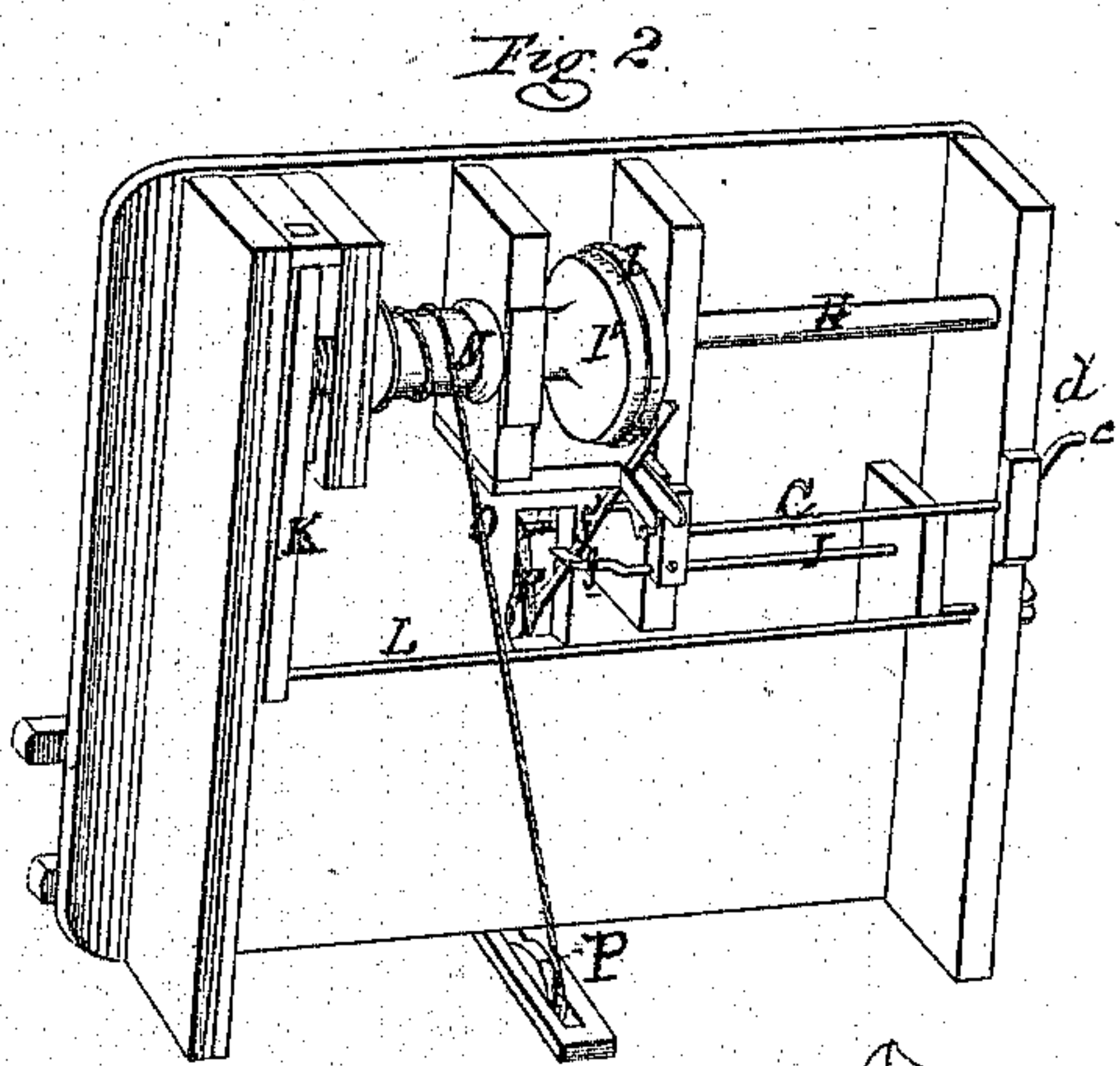
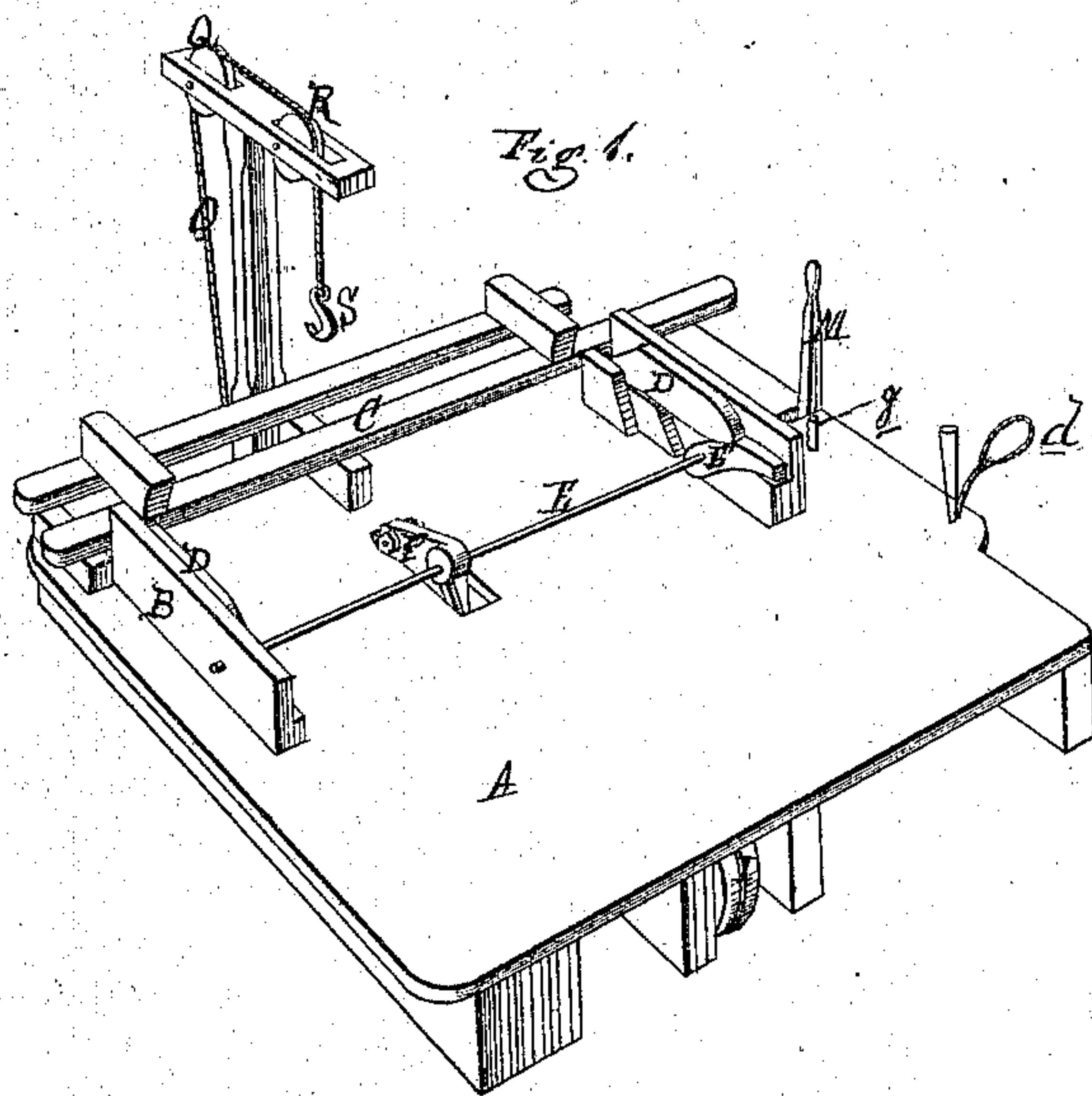


DAVID S. GRIFFES.

Improvement in Devices for Turning and Canting Logs.

No. 115,194.

Patented May 23, 1871.



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DAVID S. GRIFFES, OF FLINT, MICHIGAN.

IMPROVEMENT IN DEVICES FOR TURNING AND CANTING LOGS.

Specification forming part of Letters Patent No. 115,194, dated May 23, 1871.

To whom it may concern:

Be it known that I, DAVID S. GRIFFES, of Flint, in the county of Genesee and State of Michigan, have invented a new and useful Improvement in a Log-Turning and Canting Device; and I do declare that the following is a true and accurate description thereof, reference being had to the accompanying drawing and to the letters of reference marked thereon and being a part of this specification, in which—

Figure 1 is a perspective view, showing the parts of my improvement which are above the mill-floor. Fig. 2 is a similar view, showing the parts below the floor. Fig. 3 is a detached perspective view, showing the operation of the tripping device. Fig. 4 is a vertical section of the friction-clutch, and Fig. 5 is a cross-section on the line *x x* in Fig. 1.

Similar letters of reference indicate like parts each figure.

The nature of this invention relates to an improvement in the construction of a log-turning and canting device used in lumber-mills; and it consists in a peculiar mechanism for sliding or rolling the log from the ways to the saw-carriage, and in a novel mechanism for operating the same; also, in the peculiar construction of and method of operating a canting device through a friction-clutch, as more fully hereinafter set forth.

In the drawing, A represents a section of the mill-floor; B, the log-ways; and C, the carriage, of ordinary construction. D is a tilting-lever pivoted at the end next the carriage to each of the log-ways. E is a rock-shaft journaled in the log-ways, and having keyed thereto a pair of lifting-cams, E', under the free ends of the tilting-levers E. F is a rocker-arm secured to the rock-shaft, projecting in a nearly opposite direction to the lifting-cams. F' is a rod coupled to the end of the rocker-arm, and is provided with a hook, *a*, at its free end, which is supported by the crank *b* at the inner end of the shaft G, whose outer end has also a crank, *c*, turned in the same direction at its outer end, from which a cord, *d*, is led up through the floor. By pulling up the cord the hooked end of the rod F' is raised; the shaft G may be kept from turning too far by a support or stop under the crank at either end. H is a shaft under the floor, continu-

ously rotating, and having rigidly secured to its inner end a flanged or cupped disk, I, forming one-half of a friction clutch or coupling. On the outer side of this disk is a pair of wrist-pins, *e*, disposed opposite each other. J is a rock-shaft, also journaled below the floor, carrying at its inner end a tripping-cam, *f*, and at the other a crank, not shown, from the wrist of which a foot-lever, *g*, projects up through the floor.

The foregoing comprise the parts by means of which the log is transferred from the log-ways to the carriage in the manner which I shall now describe. The parts being in the position shown in Fig. 1, and the log on the ways, an attendant pulls up on the cord *d*, which will raise the hooked end of the rod F', when in the rotation of the disk I one of its wrist-pins will engage with the hook *a*. The attendant then releases the cord; the wrist-pin carries back the rod, partially rotating the rock-shaft E, whose cams raise the tilting-levers D to the position shown in Fig. 5, when the log will roll or slide onto the carriage. As soon as the wrist-pin has drawn the rod back to the point shown in the said figure, the pin becomes tangent to the hook and passes out of engagement with it. The attendant now returns the tilting-levers to their horizontal position by pressing his foot on the rod *g*, which partially rotates the rock-shaft J, and, pressing the cam *f* against the rocker-arm F, throws the latter forward, when the levers will drop.

In squaring the log to a cant it is necessary to turn or "cant" it several times on the carriage. I will now describe the construction of the mechanism I have designed to accomplish that purpose: I journal a shaft, H', an extension of the shaft H, in such a manner that it may have a little lateral play in its boxes. On its inner end is rigidly keyed a disk, I', forming the remaining half of the friction-clutch, in connection with the disk I on the shaft H. The other end of the shaft H' engages with a lever, K, pivoted at one end to the frame-work, and having pivoted to its other end a rod, L, in turn coupled to the upright hand-lever M, by means of which the sawyer may move the shaft H' laterally, so as to bring the disks of the clutch together and thereby cause the shaft H' to rotate until drawn away again. On this shaft is a drum,

N, on which is secured one end of a rope, O, the other end of which is led around the guide-pulleys P Q R, journaled in the frame-work of the mill, the last directly over the inner edge of the carriage, between the log-ways, and terminating in a hook, S. When the sawyer desires to turn the cant he hooks the point of the hook S under the edge thereof, and, throwing the clutches together by the lever M, the rope O is wound upon the drum, and the log or cant quickly turned a quarter or half around, as may be desired.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The construction and arrangement of the rock-shaft E, lifting-cams E', rocker-arm F, hooked rod F', disk I provided with wrist pin or pins *e*, and the cranked shaft G, with relation to the shaft H and tilting-levers D, substantially as and for the purpose set forth.

2. The arrangement, with relation to the rocker-arm F, of the shaft J, cam *f*, and foot-lever *g*, as and for the purpose set forth.

DAVID S. GRIFFES.

Witnesses:

MARTHA STEWART,
FREDERICK EBERTS.