

B. F. & J. B. SMITH.
Saw-Mill Carriages.

Patented April 22, 1873.

No. 38,206.

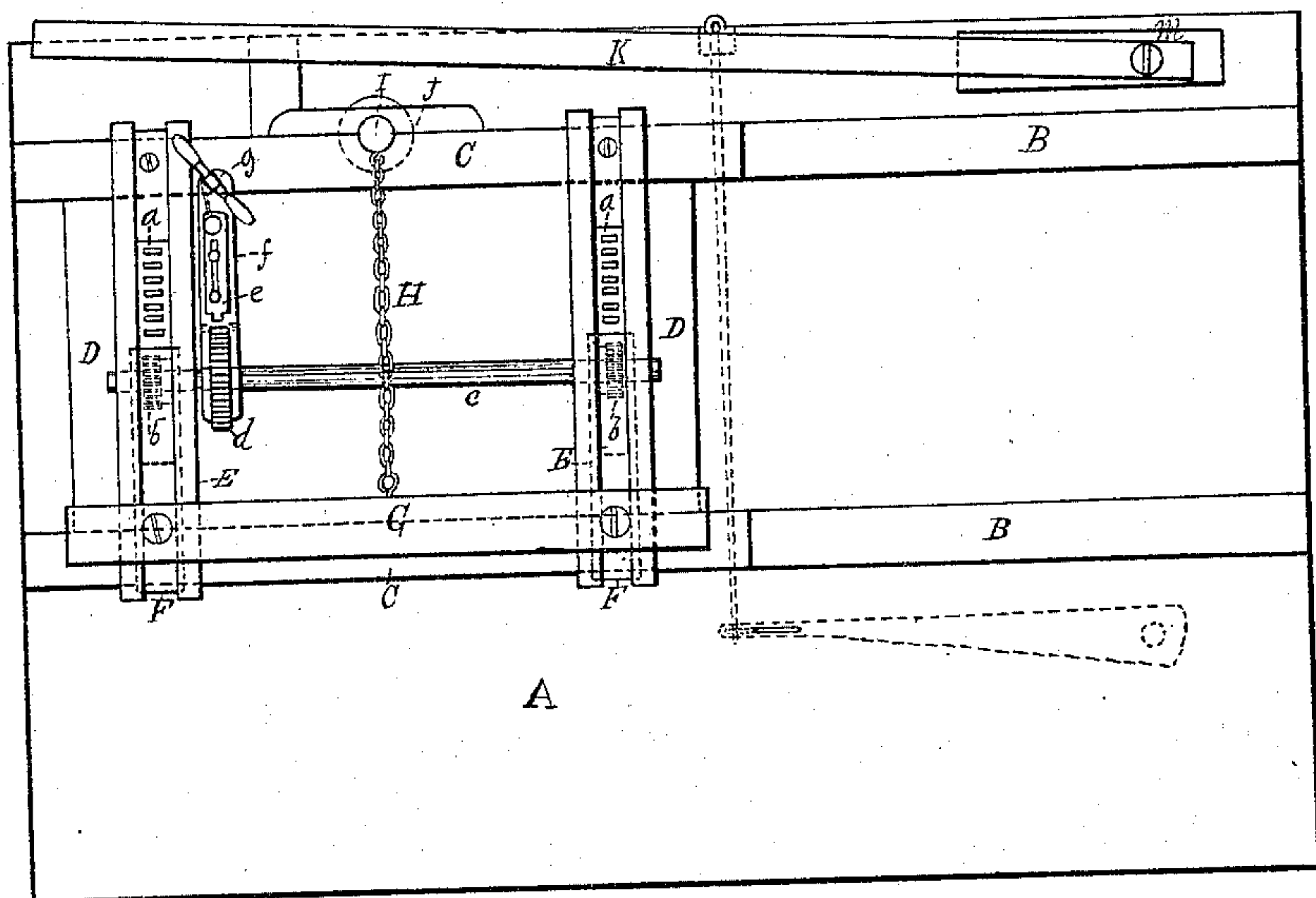


Fig. 1.

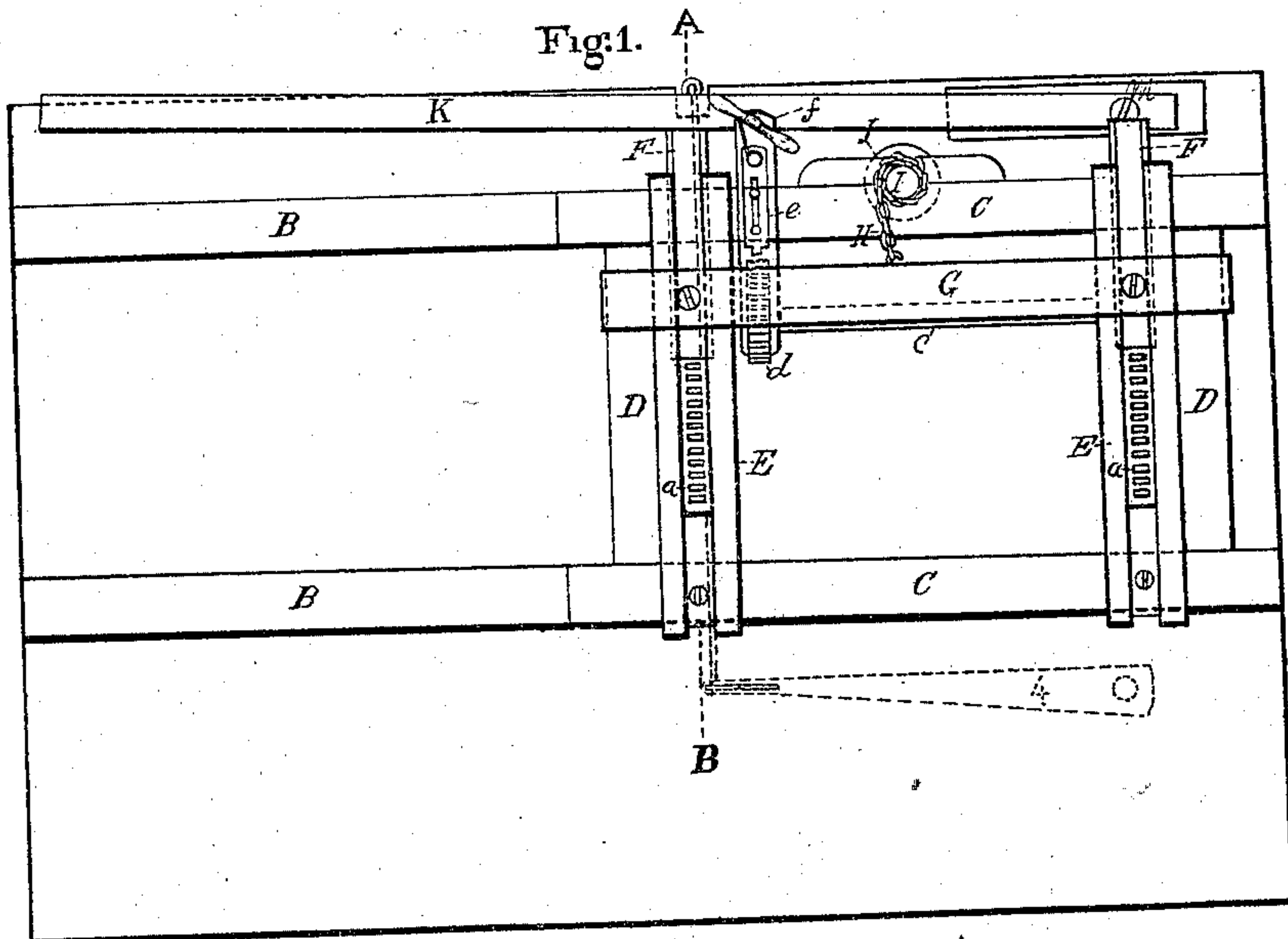


Fig. 2.

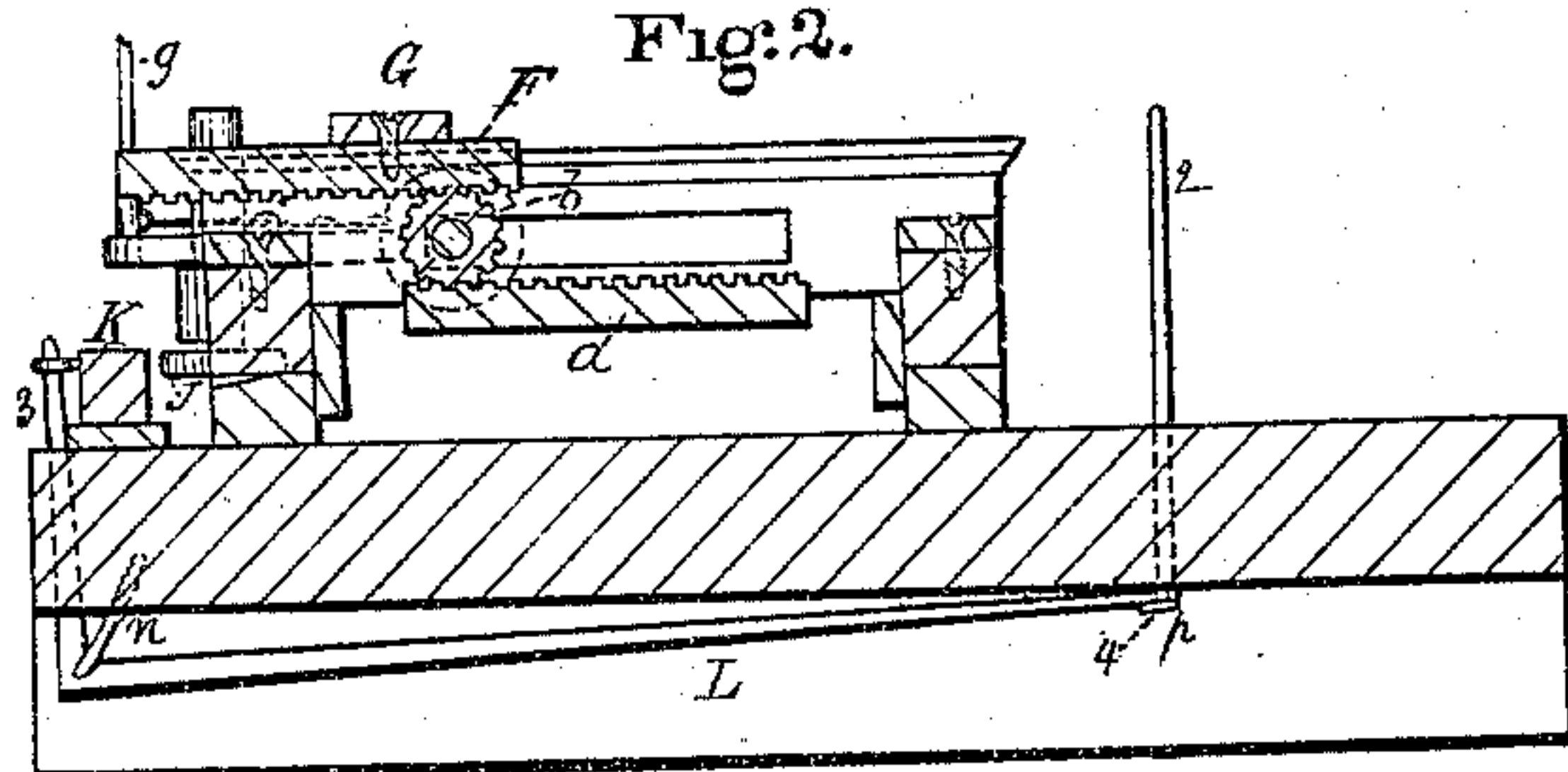


Fig. 3.

WITNESSES:

E. E. Moore
Jerome B. Pissman

INVENTORS:

Benjamin F. Smith
James B. Smith

UNITED STATES PATENT OFFICE.

BENJAMIN F. SMITH AND JAMES B. SMITH, OF WEBSTER, MASSACHUSETTS.

IMPROVEMENT IN SAW-MILL CARRIAGES.

Specification forming part of Letters Patent No. **138,206**, dated April 22, 1873; application filed April 4, 1873.

To all whom it may concern:

Be it known that we, BENJAMIN F. SMITH and JAMES B. SMITH, both of Webster, in the county of Worcester and Commonwealth of Massachusetts, have invented certain new and useful Improvements in Saw-Mill Carriages; and we do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawing which forms a part of this specification, and in which—

Figure 1 represents a plan view of so much of a saw-mill as is necessary to illustrate our present improvements when the carriage is run out to complete the sawing of the log. Fig. 2 represents a similar view when the carriage is run back ready for the reception of another log, and Fig. 3 represents a section on line A B, Fig. 2, to show the device more fully, by means of which the friction-rail is operated, as will be hereafter explained.

To enable those skilled in the art to which our invention belongs to make and use the same, we will proceed to describe it in detail.

In the drawing, the part marked A represents the platform or floor upon which the carriage-ways B B are arranged. C C are the side pieces of the log-carriage; and D D, the end pieces, upon the inside of the latter of which are arranged two slotted metal ways, E E, having racks *a a* at their bottoms, and into which racks cog-gears *b b*, fast upon shaft C, mesh. Upon shaft C is a ratchet-wheel, *d*, which can be operated by means of a sliding pawl, *e*, and upright shaft or hand-lever *g*, both of which are connected to the frame *f*, the outer end of which frame *f* rests on one of the side pieces C, while the other end is slotted to straddle the ratchet-wheel *d*, while shaft C is passed through holes in the slotted ends. Sliding pawl *e* is so connected to the upright hand-lever *g* that it can be thrown into and withdrawn from the ratchet-wheel *d* at the pleasure of the operator, thereby enabling the operator to turn shaft *c* in either direction, and thus run or adjust the log-carriage in or out by hand, when desired. It will be seen that this can be done by taking hold of the upper end of hand-lever *g* and giving frame *f* and its pawl an up-and-down motion, the pawl being allowed to engage the ratchet-wheel when

moving in one direction only. Within the slots in the ways E E are fitted rack-pieces F F, and into the teeth or cogs of which gears *b b* mesh. The ends of the rack-pieces F F are united by a strong piece, G, to which one end of a chain or rope, H, is attached, the other end being attached to the upright shaft I, supported in proper bearings upon the side of the carriage, and having upon its lower end a friction-wheel, J. A friction bar, arm, or lever, K, is hinged at *m*, the free end of which arm extends forward to a point beyond where the friction-wheel J ever passes. Underneath the platform or floor A is arranged an angle-lever, L, and so hinged or connected to the platform or floor at *n* that when the end *p* is depressed by the foot-piece 2, which passes up through the floor or platform, the upright end 3 will be forced in, and thereby press lever or arm K against the face of the friction-wheel J. The friction-lever K can be forced out or away from wheel J by a spring, if found desirable.

The log to be sawed into boards is placed upon the rack-pieces F F, and where it is properly supported and retained in place by the piece G and the dogging devices usually employed for such purposes. After the log has been sawed up into boards, and it is desired to run the carriage back for another, the operator, while the carriage is running back, places his foot upon the piece 2 and presses it down, so as to bring the friction-lever K in contact with the friction-wheel J, which latter is thereby caused to turn and wind up chain H, thus drawing the log supports or frame F F G back into the proper position, shown in Fig. 2, for receiving another log. In case the log or its supports require to be adjusted out or in, such adjustment can be effected by means of the hand-ratchet device before explained.

It will thus be seen that by our invention a great amount of hard labor is avoided, while the work of sawing logs into boards is greatly facilitated, and those skilled in the art cannot fail to appreciate the great practical value of our said improvements.

A spring, 4, is, shown in dotted lines, Figs. 1 and 2, attached to the under side of the floor or framing, with its free end pressing against the long end of angle-lever L, and by means

of which friction-lever K is forced away from friction-wheel J as soon as the operator removes his foot from foot-piece 2. Other devices may be used for the same purposes, however.

We do not claim, broadly, the combination, in a saw-mill carriage, of a friction roller or wheel, friction-lever, and chain, as we are aware the same is shown in the patent of Dennis Lane, of June 30, 1868; but

What we do claim, and desire to secure by Letters Patent, is—

The combination, with angle-lever L and friction-lever K, of foot-piece 2 and spring 4, substantially as and for the purposes set forth.

BENJAMIN F. SMITH.

JAMES B. SMITH.

Witnesses:

E. E. MOORE,

J. A. KINSMAN.