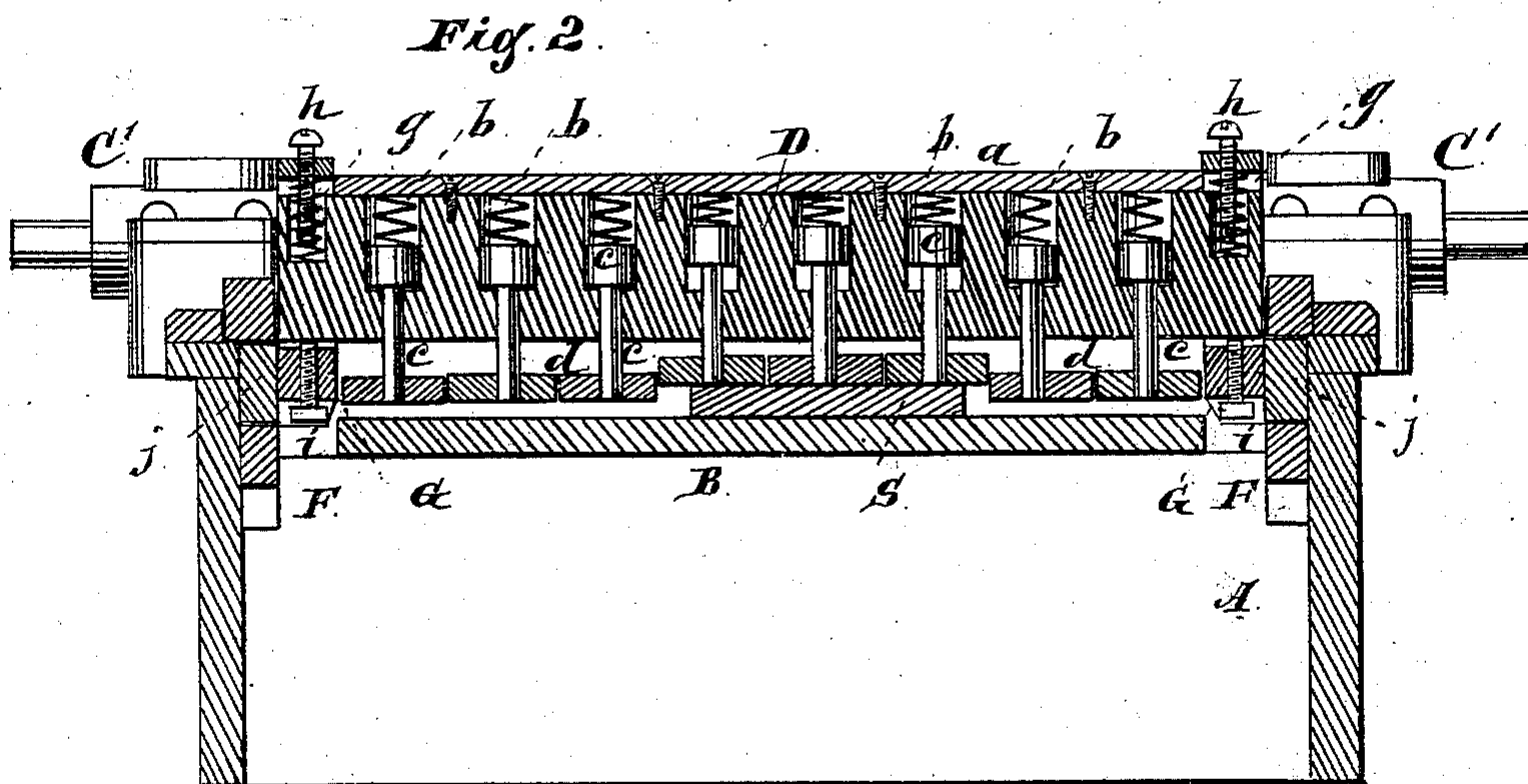
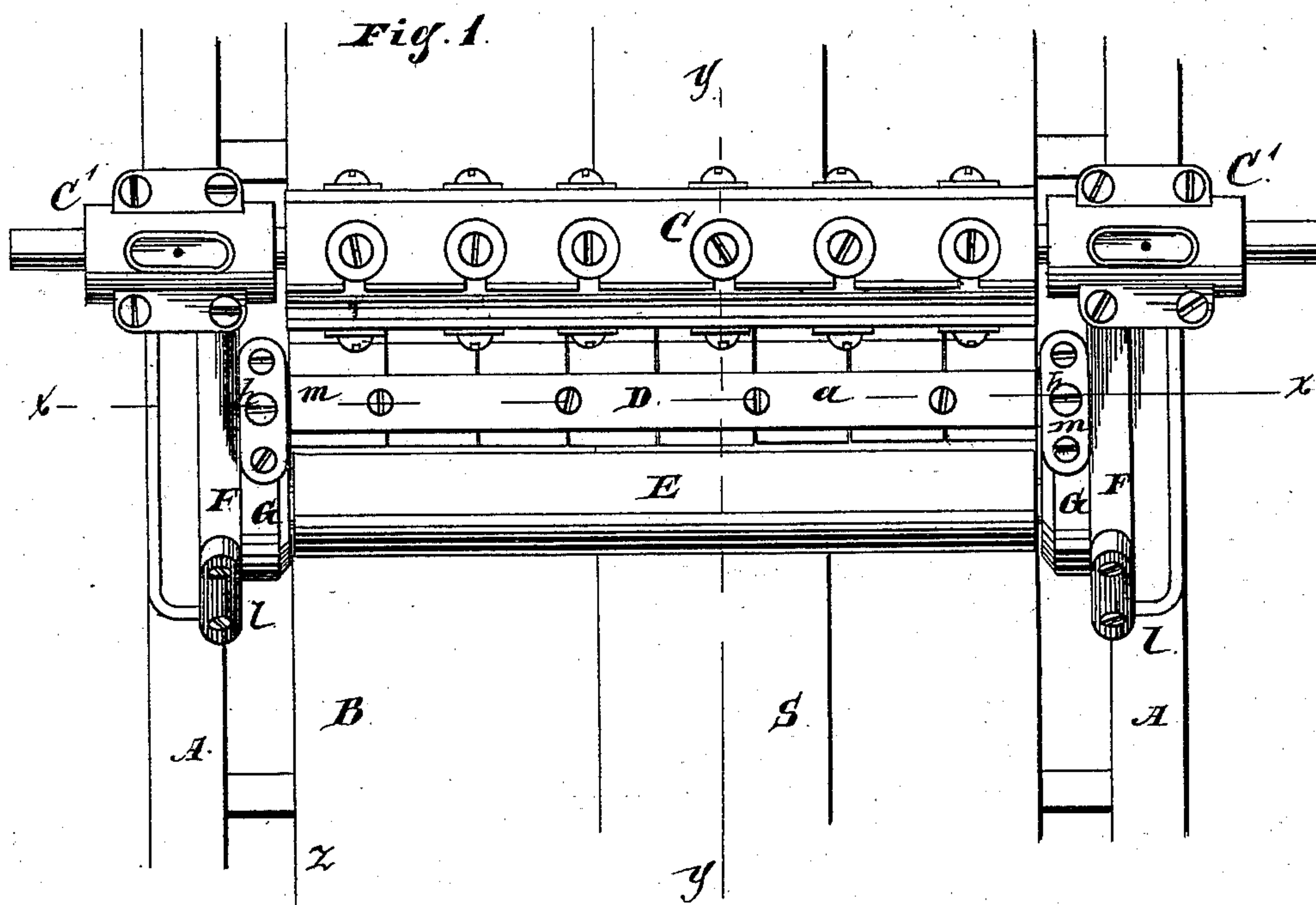


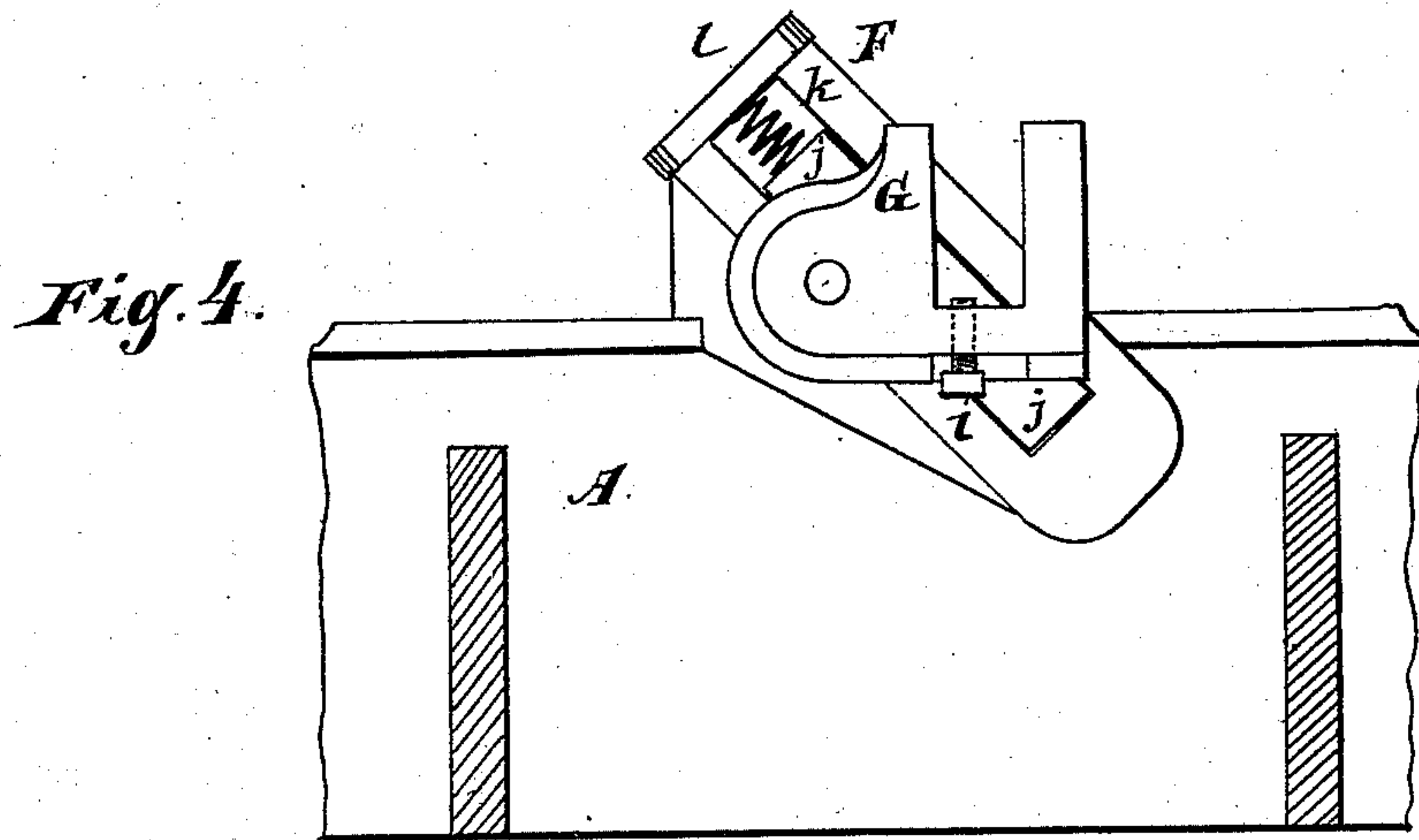
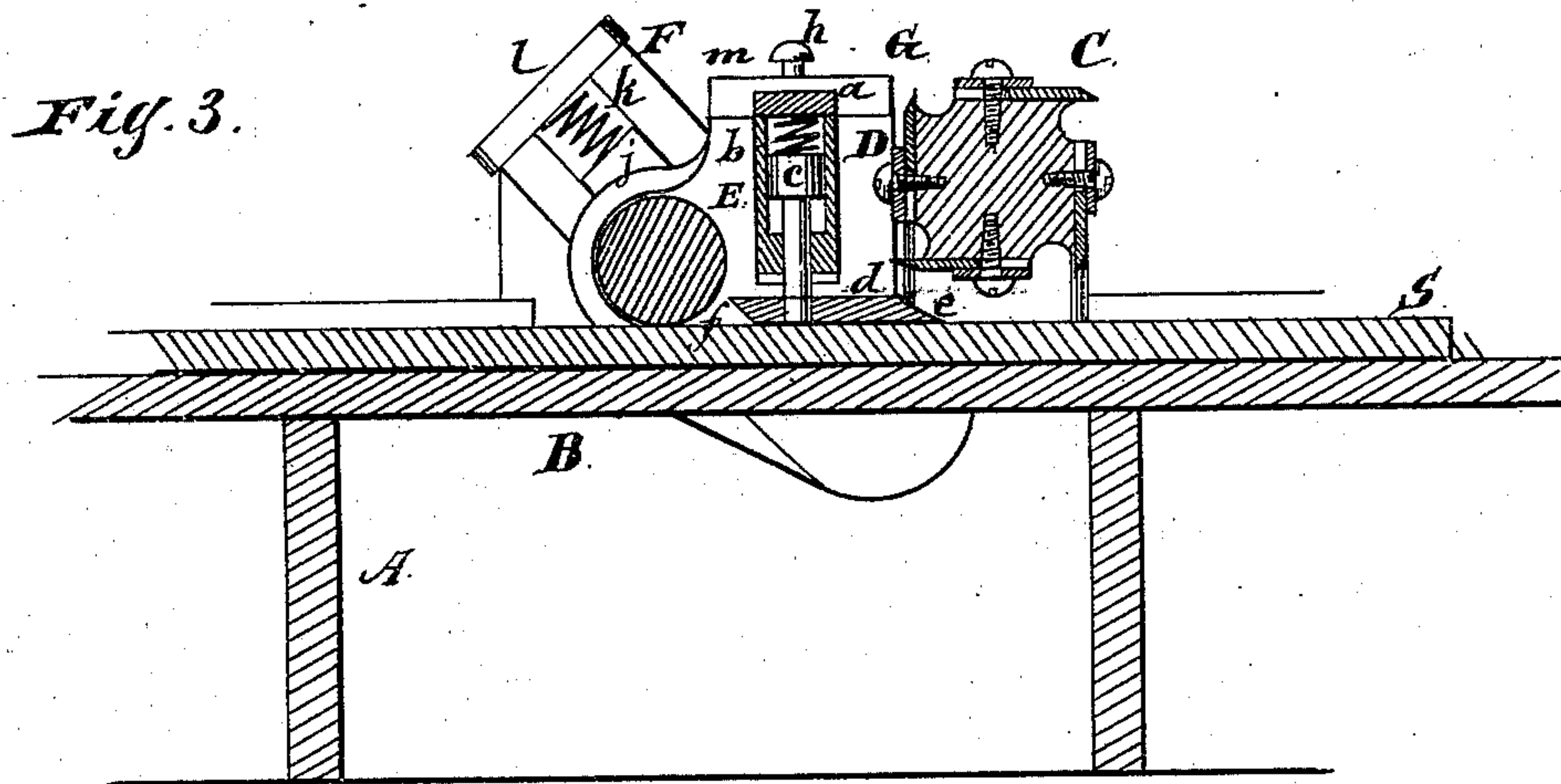
L. P. HOYT.
Wood-Planing Machine.
No. 223,851. Patented Jan. 27, 1880.



Witnesses:
Hiram F. Burns.
J. C. Polley Jr.

Inventor:
Lucius P. Hoyt
By West & Bond
His atty.

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UNITED STATES PATENT OFFICE.

LUCIUS P. HOYT, OF AURORA, ILLINOIS.

WOOD-PLANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 223,851, dated January 27, 1880.

Application filed September 3, 1879.

To all whom it may concern :

Be it known that I, LUCIUS P. HOYT, of Aurora, Kane county, State of Illinois, have invented certain new and useful Improvements in Wood-Planing Machines, of which the following is a full description, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view; Fig. 2, a cross-section on line *x x* of Fig. 1; Fig. 3, a longitudinal section on line *y y* of Fig. 1; and Fig. 4, a longitudinal section on the border-line *z* of Fig. 1.

The object of this invention is to improve the action of the upper portion of the holding and feeding drivers by making them more yielding, so as to improve the action on uneven boards; and also so that two or more boards may be run through the machine at the same time, and its nature consists in combining a yielding pressure-bar and a yielding roller with sectional or divided and separately-yielding presser-feet, with a traveling feed-bed or feed-roller, and in the several parts hereinafter described and claimed as new.

In the drawings, A indicates any ordinary or suitable supporting-frame; B, the usual traveling feed-bed; C, the cutter-head; D, the presser bar or frame; E, the presser-roller; F, the inclined supporting-frames for pressure roller and bar; G, the end plates or frames of the pressure roller and bar; S, a strip or board placed in the machine, illustrating the action of the presser-feet; *a*, the cap-plate of the presser-bar; *b*, the presser-feet springs; *c*, the presser-feet stems; *d*, the presser-feet; *e*, the front, and *f* the rear, inclines of the presser-feet; *g*, the pressure-bar springs; *h* and *i*, set-screws for adjusting the space within which the pressure-bar D may rise or fall; *j*, guide-block in the frame or inclined guide F, and *l* and *m* cap-plates.

The cutter-head C is made in any of the usual modes or forms, and is supported upon the frame A by the usual journal boxes or bearings C'.

The inclined frames or plates F are firmly attached to the frame A, and are each provided with a close-fitting sliding block, *j*, to which the plates or frames G are attached. These blocks *j* are held down by the springs *k* pressing against their upper ends and the cap-plates

l. The plates or frames G are attached to the blocks *j*, and are provided with openings for the reception of the ends of the bar D, and furnish the journal-bearings of the roller E. By this arrangement of the supports of the pressure bar and roller on the blocks *j* the two rise and fall together when a movement takes place, and the blocks being supported in inclined guides, as they rise they recede from the cutter-head, and as they descend they advance toward it, so that the ends *e* of the presser-feet can be kept close to the cutters and act as chip-breakers without coming in contact with the cutters.

The bar D may be made as shown—that is, a single bar with recesses—or it may be made in parts, constituting a frame when together. It is secured at the ends in the plates G, so as to be free to rise and fall therein, and is held down by the springs *g*, which are located upon or partly within it, and are held down by the caps *m*. The lowest point of descent is regulated by the set-screws *i*, and the rise is limited by the set-screws *h*. By this arrangement the bar D has a yielding action of its own, and can also be adjusted so as not to interfere with the introduction of the boards, and so that it cannot rise high enough to bring the feet *d* against the cutters. The bar or frame D is chambered or recessed along its length for the reception of the legs or stems *c* of the presser-feet. These legs are made with a head and stem, both fitted to their openings, so as to have the least binding action in their movements. They are held down by the springs *b* pressing between their heads and the cap-plate *a*. As shown, the cap *a* is a single piece, extending the length of the bar between the caps *m*; but in actual use it may be made in sections, so that each presser-foot spring may have its separate cap.

The feet *d* are attached to the stems by having the stem pass through them, so as to make a strong connection, which is not liable to be broken or disordered. These feet fit against and support each other laterally, while they are free to rise and fall separately within the limits of travel, and they are pointed or beveled at the ends, as shown at *e* and *f*.

By this arrangement of the feet with the bar D they not only have a separate and inde-

pendent yielding action, but they also have a united action, as they may rise or fall together by the yielding action of the bar or frame D; and by having the roller E journaled in the same end pieces and acting without any rocking movements the heavier pressure is taken by that roller which has a yielding movement under the spring *k*, the pressure from the pressure-bar D and feet *d* is so far relieved that it can be made much lighter, and the entire pressure distributed among the three sets of springs *b*, *g*, and *k*, acting upon separate parts of the presser devices.

I have shown eight presser-feet; but the number may be varied according to the width of the machine or the special use for which it may be designed.

The arrangement of a yielding roller and a yielding presser-bar, both having the same movement, and the pressure-bar having an additional and independent yielding movement, will be found useful even when not used with a sectional or divided set of presser-feet, and I do not thus limit this part of my improvement.

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

1. The combination of the yielding bar D with two or more independently-yielding feet,

d, and the yielding roller E, constructed and operating substantially as specified.

2. The combination of the foot *d*, stem *c*, spring *b*, and cap *a* with the yielding bar D, substantially as described.

3. The combination of the frame or bar D, with the springs *g*, adjusting-screws *h* and *i*, with the plates G, to permit a slight movement of the bar independently of the roller, substantially as set forth.

4. The combination of the plate G and block *j*, roller E, and frame D with the inclined frame F and spring *k*, substantially as specified.

5. The combination of a yielding roller with a yielding pressure-bar connected to yield with the roller, and to have a separate yielding movement by mechanism, substantially as specified.

6. The combination of the frames F, springs *k*, and plates G with the bar D, springs *g*, stems *c*, springs *b*, separate or divided presser-feet *d*, and pressure-roller E, all constructed and operating substantially as described.

LUCIUS P. HOYT.

Witnesses:

J. J. BUDLONG,
L. B. REYNOLDS.