

S. SCHOLFIELD & C. E. BAKER.

PAPER-FEEDING MACHINE.

No. 183,218.

Patented Oct. 10, 1876.

FIG. 1.

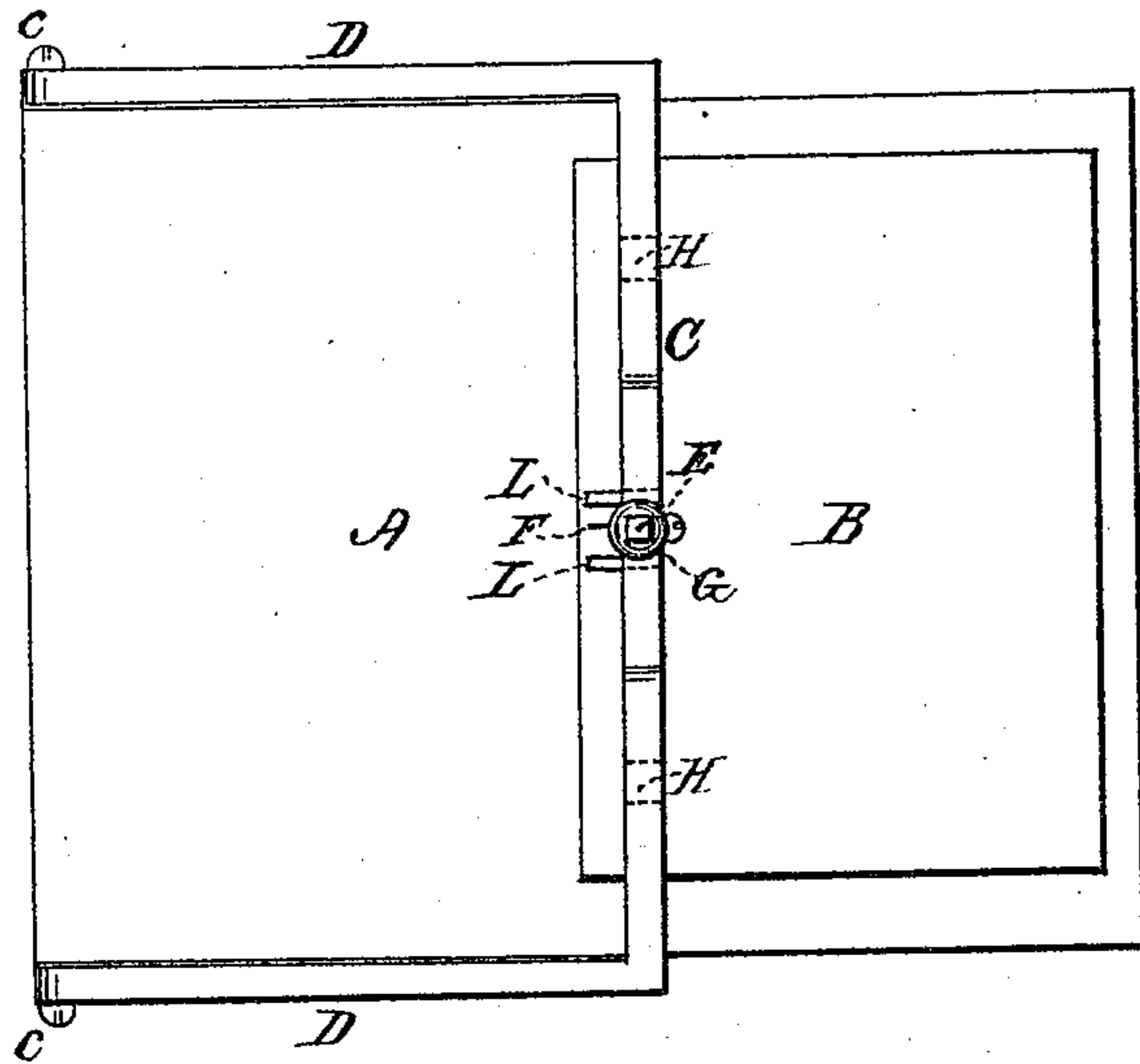


FIG. 3.

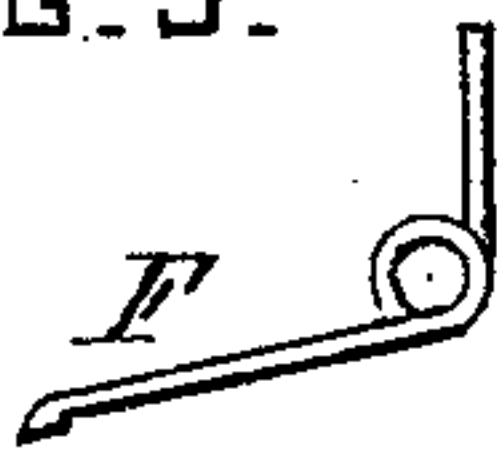


FIG. 4.

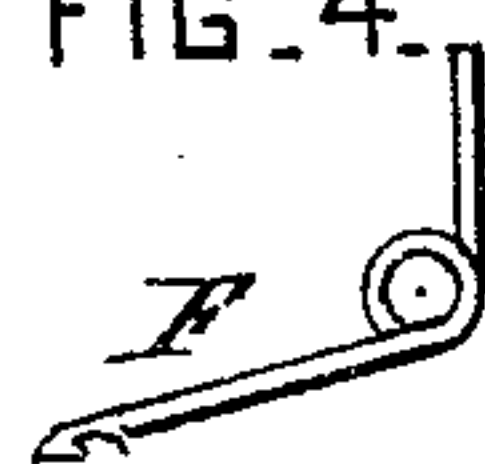


FIG. 2.

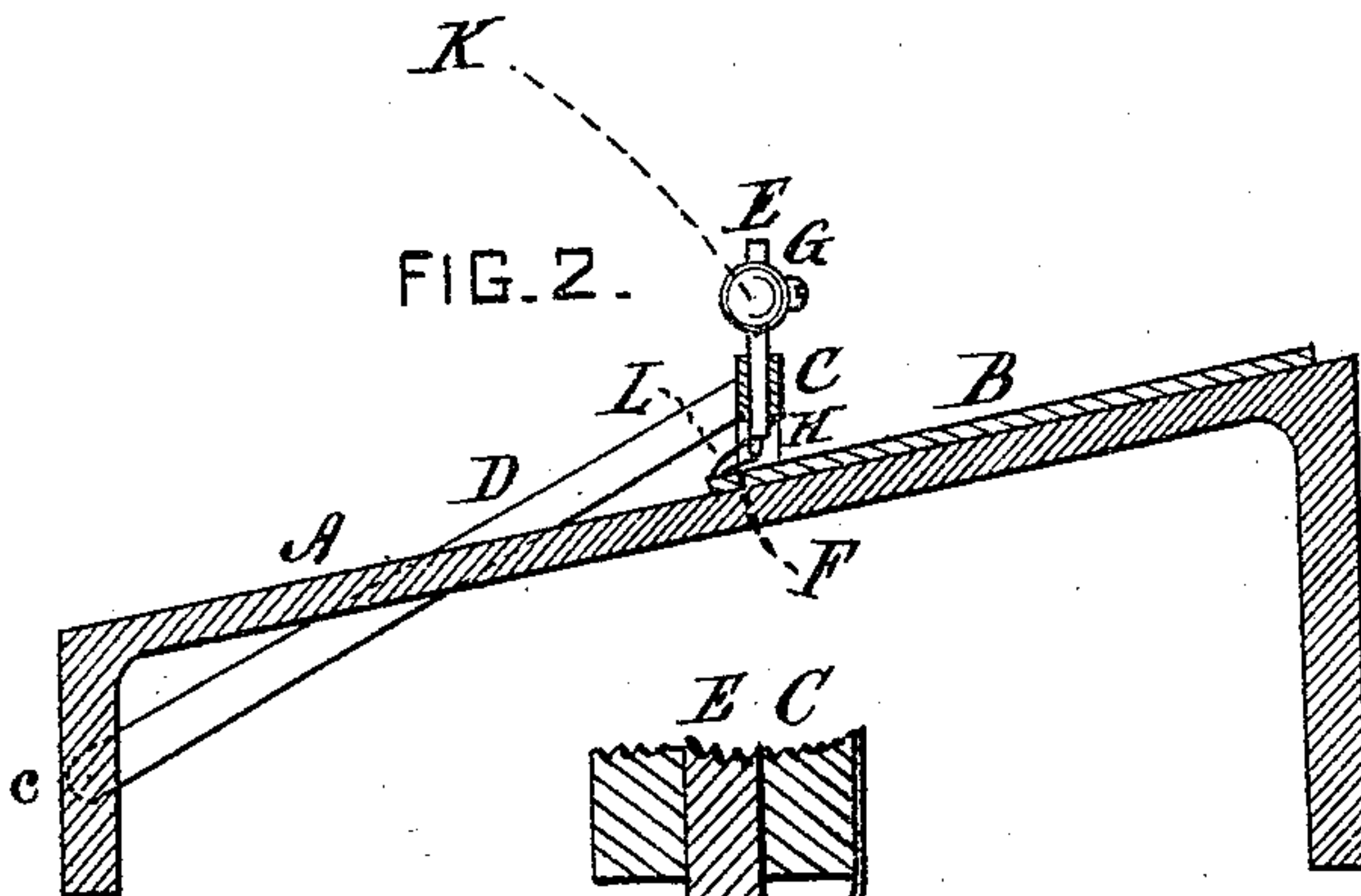
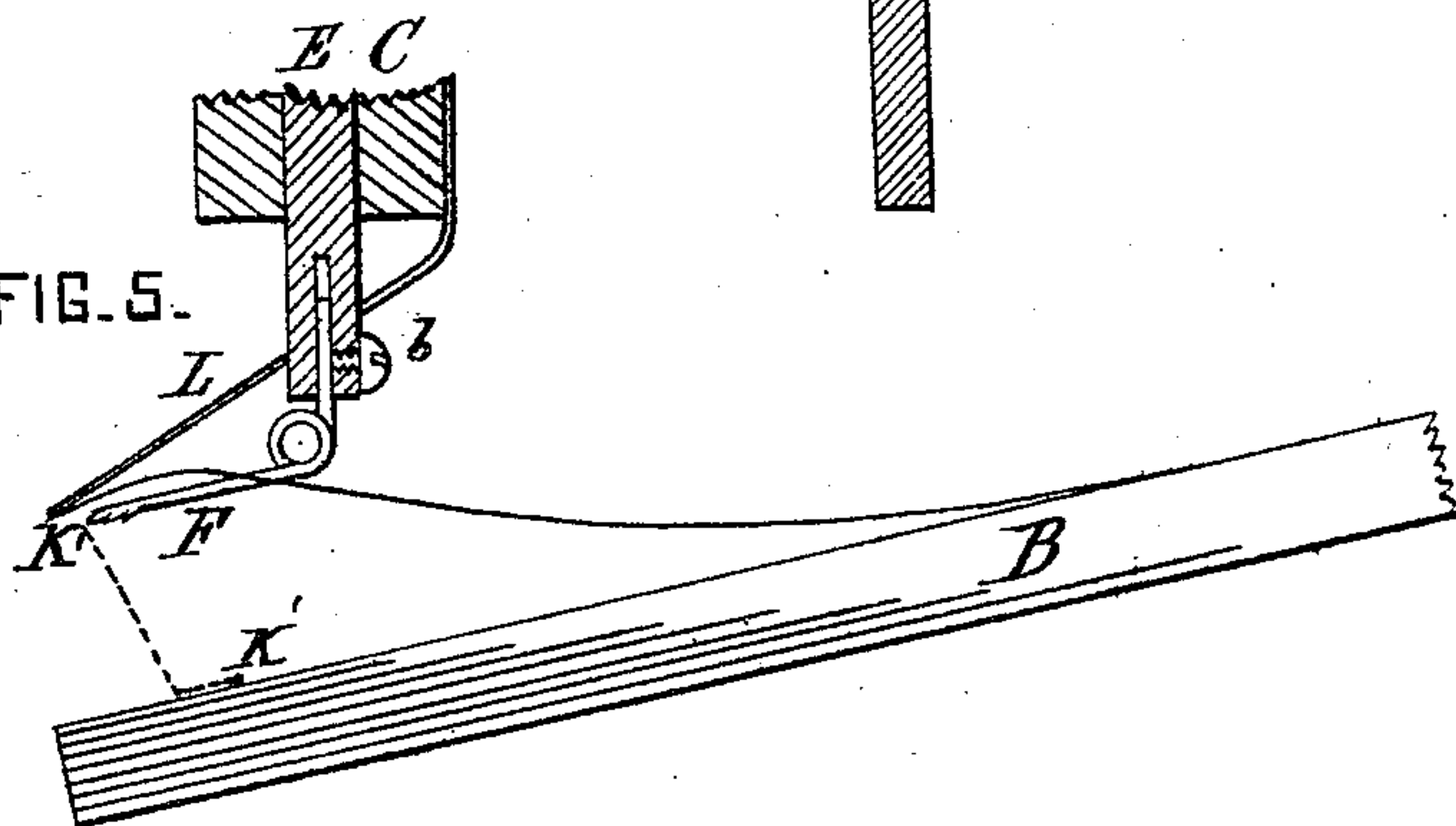


FIG. 5.



WITNESSES.

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# UNITED STATES PATENT OFFICE.

SOCRATES SCHOLFIELD, OF PROVIDENCE, RHODE ISLAND, AND CHARLES E. BAKER, OF MONT CLAIR, NEW JERSEY, ASSIGNORS TO THEMSELVES AND CHARLES E. JOHNSON, OF PHILADELPHIA, PENNSYLVANIA.

## IMPROVEMENT IN PAPER-FEEDING MACHINES.

Specification forming part of Letters Patent No. **183,218**, dated October 10, 1876; application filed January 4, 1875.

*To all whom it may concern:*

Be it known that we, SOCRATES SCHOLFIELD, of Providence, in the State of Rhode Island, and CHARLES E. BAKER, of Mont Clair, in the State of New Jersey, have invented an Improvement in Paper-Feeding Machines, of which the following is a specification:

The invention consists in arranging a pin in a paper-feeder, so that it will make a hole on the backward movement, preparatory to entering the same on the forward movement.

It also consists in the application of inclined springs in connection with the pin, as hereinafter described.

Figure 1 is a plan view of the feed-board and picking-up devices of a paper-feeding machine embodying our invention. Fig. 2 is a sectional side view of the same. Figs. 3 and 4 are enlarged views of the paper-penetrating instrument, with a barbed or hooked under surface. Fig. 5 is a view illustrating the specific movement of the penetrating-instrument in picking up a sheet of paper from the pile.

In the drawing, A represents the inclined feed-board of a printing-press or other machine, and B a pile of paper placed thereon. The cross-bar C extends across the feed-board, above the pile of paper, and is pivoted at the points *c c*, below the plane of the surface of the feed-board, by means of the rigidly-attached arms D D. A limited up-and-down movement is to be imparted to the cross-bar C by means of suitable mechanism. Through a square orifice in the middle of the cross-bar C is passed the square sliding bolt E; or the bolt E may be made cylindrical, and be kept from turning on its axis by means of a longitudinal groove and pin, or otherwise. The penetrating-instrument F is made of steel wire bent with a coil, as shown, and the shank inserted in an orifice in the lower end of the bolt E, and firmly held therein by means of the set-screw *b*. Upon the upper end of the sliding bolt E is secured the weight G, which may be made adjustable by means of a set-screw. Upon the under side of the cross-bar C are placed the stops H H, which are to rest upon the pile of paper when the cross-bar is

in its lowest position, as shown in Fig. 2, and in this case the weight G should be elevated above the bar, so that when the cross-bar takes an upward movement the penetrating-instrument will not immediately partake of its upward movement, but will still rest upon the paper, and will only partake of the forward movement of the cross-bar, resulting from the inclination of the arc K, in which it moves, with reference to the surface of the pile and the relative inclination of the sliding bolt E. But when the cross-bar has raised sufficiently to strike the lower part of the weight G, then the penetrating-instrument, which has previously slid forward over the surface of the paper and penetrated the top sheet, will be raised from the pile with the proper direct movement of the cross-bar, and the edge of the sheet will thus be removed to a position from whence it may be taken by means of grippers or otherwise.

In order that the penetrating-instrument may surely penetrate the top sheet and not affect the sheet below it, we barb or roughen the under surface of the instrument, as shown in Figs. 3, 4, and 5, and we prefer to so construct and arrange the penetrating-instrument that it will first scratch through the top sheet on a backward movement, and then enter the hole so formed on its succeeding forward movement, and in this case the instruments shown in Figs. 3 and 4 may be advantageously employed.

The instrument shown in Fig. 5 may be either made to act in a similar manner, or the scratching through and penetration may be entirely performed on the forward movement.

The dotted line K' K' of Fig. 5 shows the specific movement of the point of the instrument F at each vibration of the cross-bar C. The inclined springs L L, attached to the cross-bar C, the lower ends of which extend downward to about the level of the point of the penetrating-instrument, tend to give a forward and backward motion to the pile in an opposite direction to that which the movement of the point tends to produce.

We therefore claim as our invention—

1. The inclined pin F, barbed, hooked, or



roughened subjacently near the point, and combined with a paper-feeder to make a hole in top sheet during the backward movement, preparatory to entering said hole on the forward movement, substantially as and for the purpose described.

2. The combination, in a paper-feeder, with

the pin F, of the springs L, arranged substantially as and for the purpose specified.

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Witnesses:

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