

J. T. S. Smith.
Paper Cutting.
N^o 67,813. Patented Aug. 13, 1867.

Fig. 1.

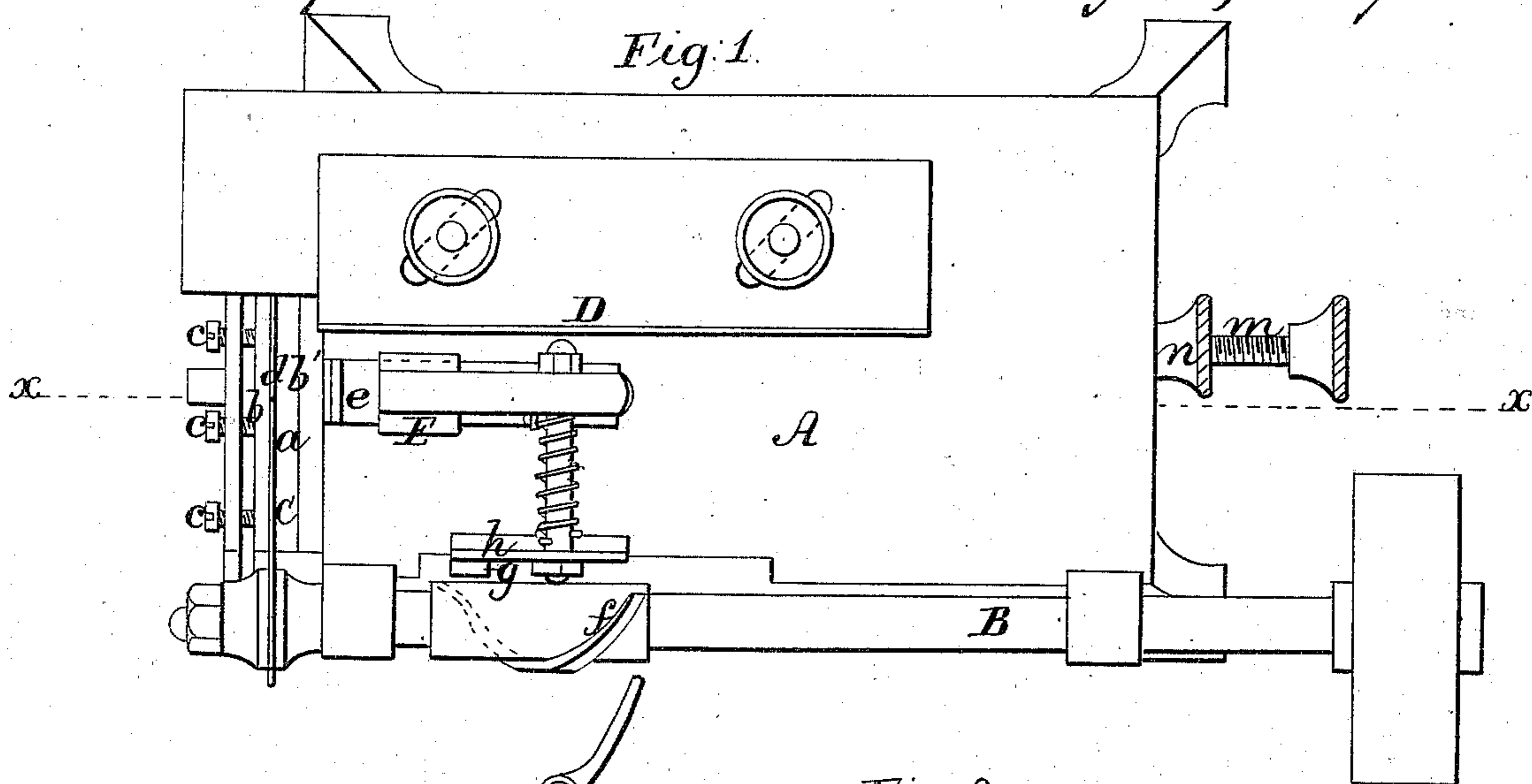


Fig. 2.

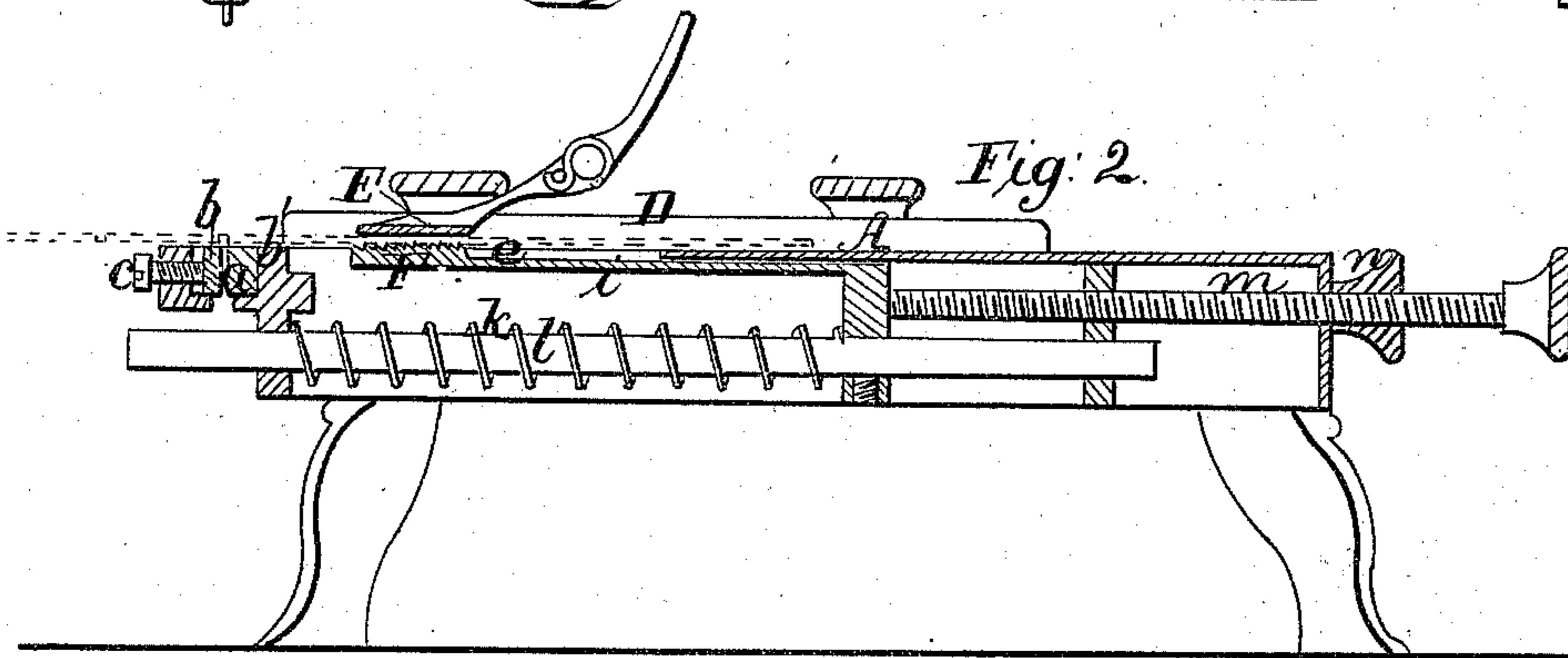


Fig. 3.

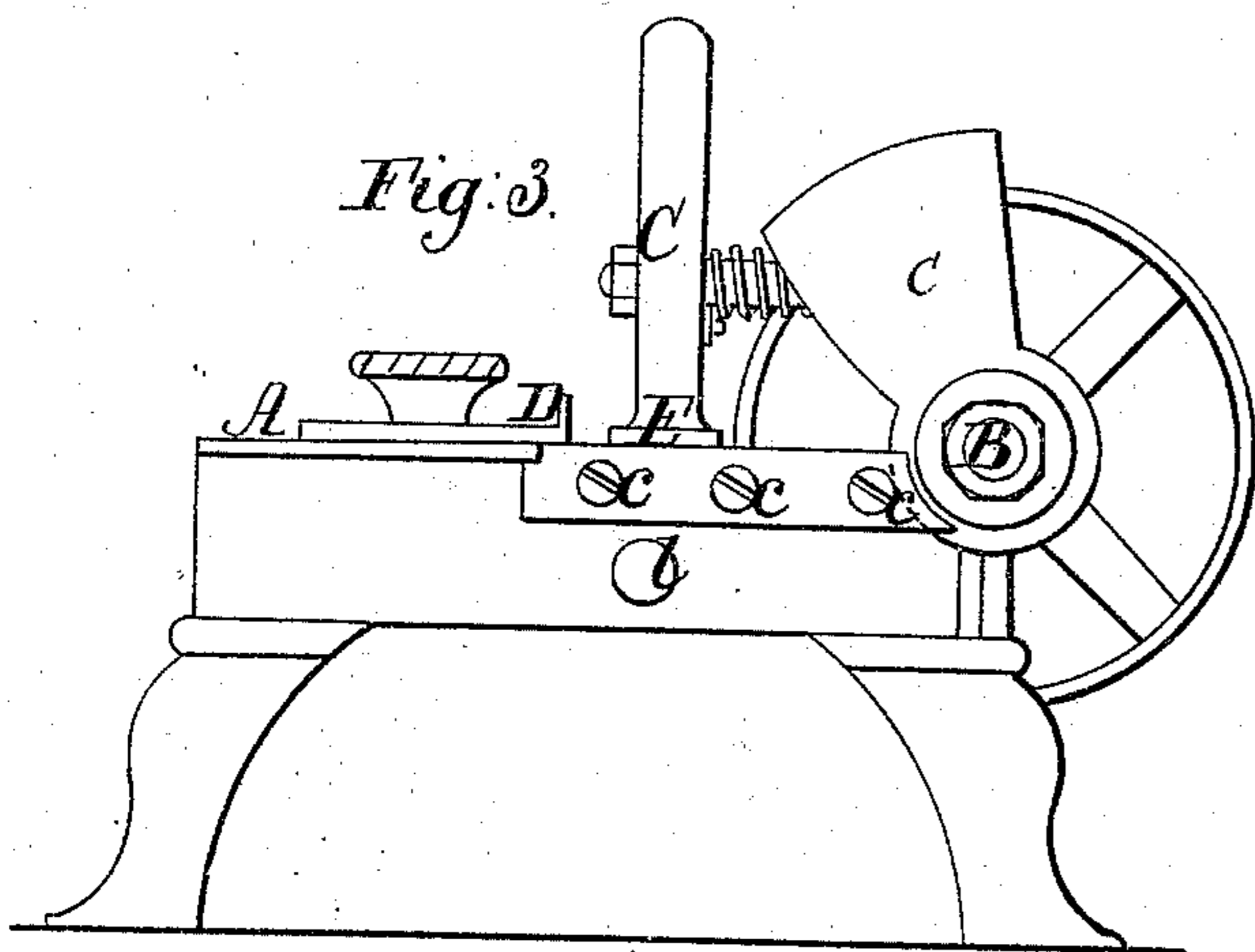
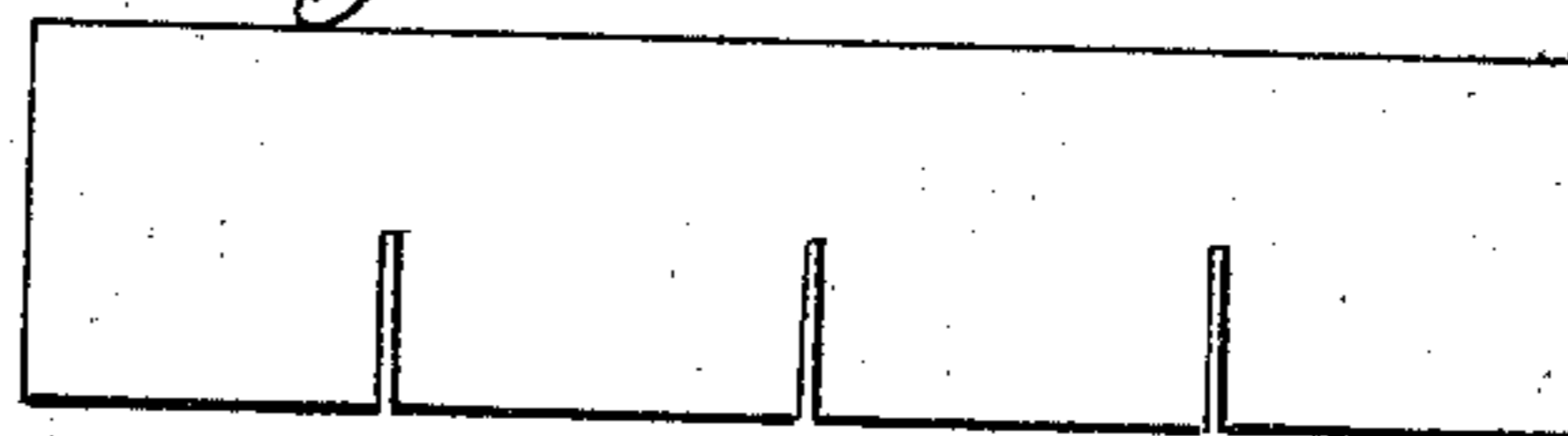


Fig. 4.



Witnesses
J. Moombs
G. W. Reed

Inventor
John T. Smith

United States Patent Office.

JOHN T. S. SMITH, OF NEW YORK, N. Y.

Letters Patent No. 67,813, dated August 13, 1867.

MACHINES FOR CUTTING AND PUNCHING PAPER.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN T. S. SMITH, of the city, county, and State of New York, have invented a new and useful improvement in Machines for Cutting Paper or other material into equal or graduated lengths, of which the following is a full, clear, and exact description, reference being had to the accompanying drawing, forming part of this specification, and in which—

Figure 1 represents a plan of a machine constructed according to my improvement.

Figure 2, a longitudinal section of the same, taken as indicated by the line *x x* in fig. 1; and

Figure 3 an end view thereof.

Figure 4 is a diagram illustrating the action of the machine to the manufacture of partitions for card or paper boxes.

Similar letters of reference indicate corresponding parts.

The nature of this invention consists in a peculiar combination of devices, including a sector or other equivalently-shaped cutter, holding clamp and feeding-foot, with regulating screw, for cutting paper or other material into equal or graduated lengths.

Referring to the accompanying drawing, *A* represents the bed or table on which the paper in strips, or other material to be cut, is placed. This bed or table, which is supported on suitable pedestals or framework, carries or has connected with it, along one of its sides or edges, a horizontally rotating shaft, *B*, driven by any convenient power, and carrying, at or near its one end, a steel or steel-edged or faced cutter, *C*, that, for making mere straight incisions, such as represented by the diagram in fig. 3, is here shown as of plain or straight sector form, and set, as it is rotated, to work through a slot, *a*, arranged between bars *b b'*, let into the bed, the outer one (*b*) of which may be made adjustable by screws *c*, to allow of any desired thickness of stationary steel-cutter or dividing-strip *d* being placed between them, the same, as also the movable cutter *C*, being shaped or formed according to the cut required to be made, and which may be of angular character, as for cutting saw-teeth, or other suitable configuration, according to the work to be done, or material to be operated upon. It will suffice here, however, by way of illustration, to refer to the same as constructed for making straight incisions in card or paper for forming partitions in boxes such as are used in putting up homœopathic medicines, and as represented by the diagram in fig. 4 of the drawing.

The paper, pasteboard, or card thus to be cut is fed in a strip over the table *A*, along an adjustable gauge, *D*, and under a spring-borne clamp or holder, *E*, arranged over a slot, *e*, in the bed, in or through and along which, for joint reciprocating action at intervals with the holder *E*, is a serrated or other feeding-foot, *F*. These two devices, that is, the holder *E* and foot *F* carry and feed the paper to the cutters, and may be thus operated. On the driving-shaft *B* is a partial spiral or worm-thread, *f*, which acts against an inclined plane or stud, *g*, of or on a frame-piece, *h*, which is connected with the holder *E*, and also with a sliding-bar, *i*, that carries the foot *F*, so that the holder *E* and foot *F* act in unison. The partial spiral *f* serves to give the forward or feeding motion at intervals to the paper held between said holder and foot, up to or in proper position for the cutter *C* to act upon it, the foot and holder, after they have established a feed, being thrown or drawn back, to take a fresh hold or feed, by means of a spring, *k*, on a sliding-rod, *l*, attached to the sliding-bar *i*. In this way a series of comb-like incisions are made in the paper as it is fed past the cutter, the sector-form or other equivalent construction of the cutter *C* insuring a perfect cut, and giving time or free feed of the paper for a fresh or further incision. The distance apart of such or other shaped incisions may be regulated by a screw, *m*, preferably provided with a locking-nut, *n*, and arranged to act upon the sliding-bar *i*, so as to adjust the incline *g* for shorter or longer action on it by the partial spiral *f*. Where the incisions are required so be at irregular distances apart, then the screw *m* may be automatically operated in a correspondingly irregular manner by gear from the driving-shaft *B*.

What is here claimed, and desired to be secured by Letters Patent, is—

The combination, with the continuously-revolving cutter *C*, constructed to cut only at intervals in each rotation, and stationary cutter *d*, with the feeding-foot *F* and holder *E*, having an intermittently reciprocating action, as described, by means of the partial spiral *f*, incline or stud *g*, and spring *k*, with its rod *l*, or equivalents of these devices, and regulating screw *m* to the slide *i* of the holder and feeding-foot, substantially as and for the purpose or purposes herein set forth.

JOHN T. S. SMITH.

Witnesses:

J. W. COOMBS,

G. W. REED.