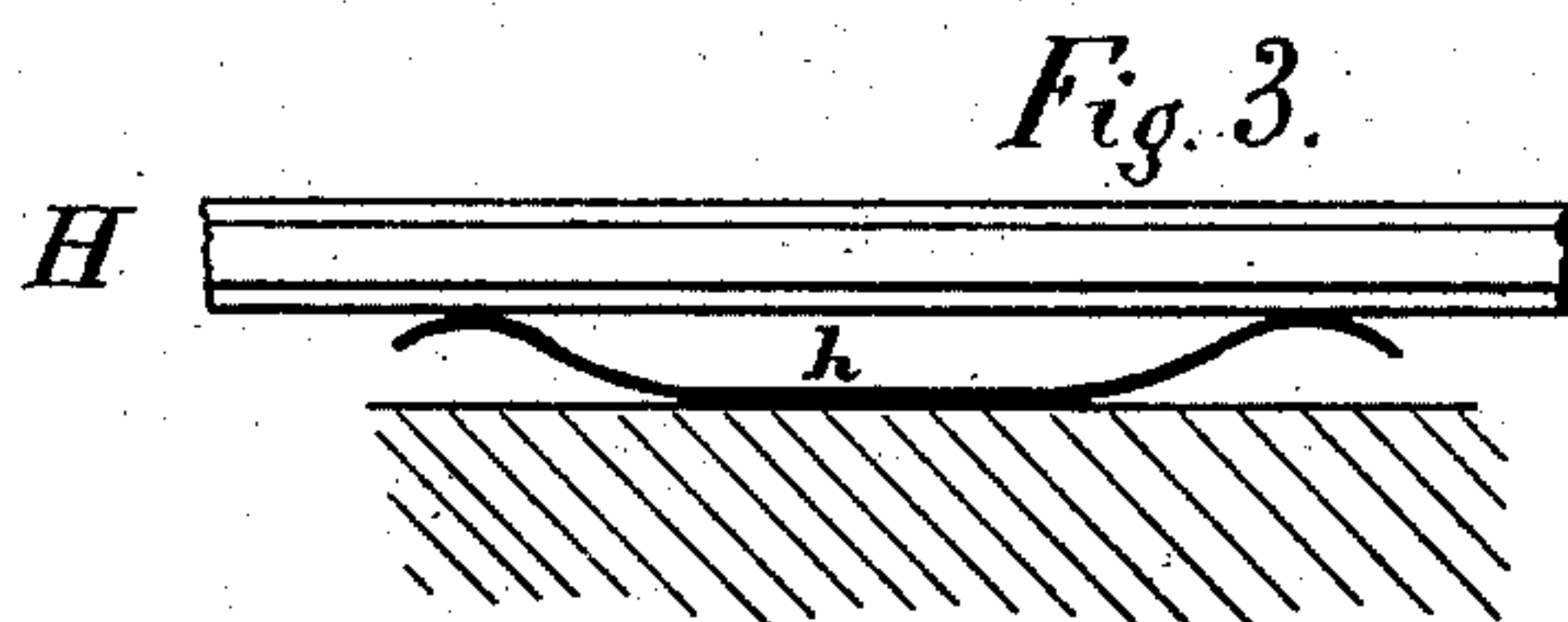
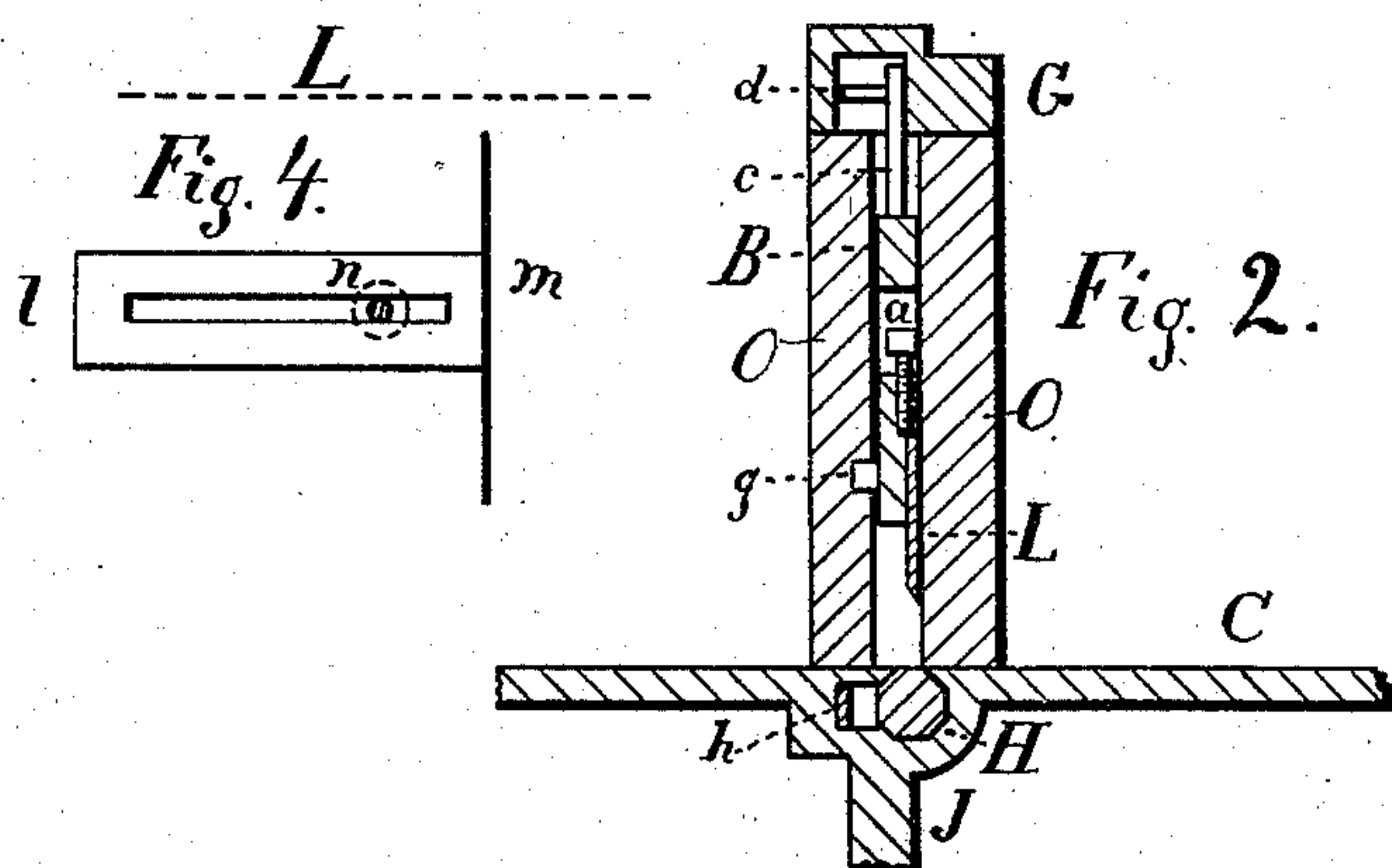
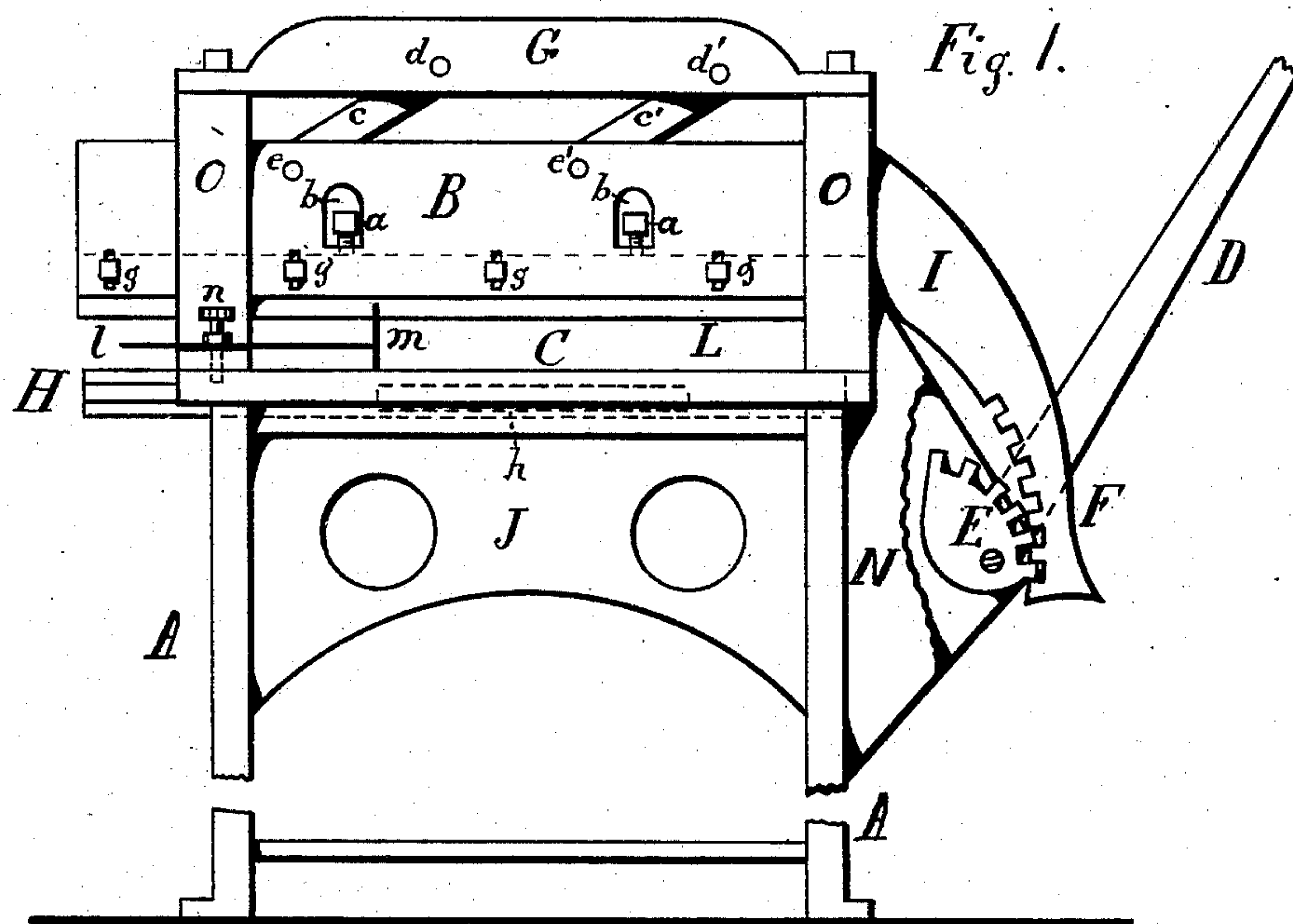


J. M. JONES.  
Paper Cutting Machine.

No. 238,125.

Patented Feb. 22, 1881.



Witnesses:

William Gomm,  
Arthur B. Selden.

Inventor:

John M. Jones,  
by G. B. Selden,  
att'y.



# UNITED STATES PATENT OFFICE.

JOHN M. JONES, OF PALMYRA, NEW YORK.

## PAPER-CUTTING MACHINE.

SPECIFICATION forming part of Letters Patent No. 238,125, dated February 22, 1881.

Application filed December 2, 1878.

*To all whom it may concern:*

Be it known that I, JOHN M. JONES, of Palmyra, Wayne county, New York, have invented certain Improvements in Machines for Cutting Paper, of which the following is a specification.

My invention relates to certain improvements in paper-cutting machines; and it consists in an improved method of arranging the wooden rod or cutting-stick, on which the knife descends, by forming the top plate of the machine with a transverse recess extending through the side frame, with overhanging edges, and open at one or both ends, so that the rod may be readily accessible at one end to change its position within or remove it from the recess.

My invention also consists in the combination of the wooden rod, arranged to be removed through an opening in the side frame, and a spring within the recess in the top plate for holding the rod in position.

In the accompanying drawings, Figure 1 is an end elevation of a paper-cutting machine embodying my improvements, and Fig. 2 is a vertical section through the knife-bar. Fig. 3 is a view of a portion of the under side of the table, showing the spring for holding the wooden cutting-rod in position, and Fig. 4 a detail of guide *m*.

In the accompanying drawings, A A are the side frames of the machine, which are connected together by a cross-bar, J, and to which a suitable table for supporting the paper C, Fig. 1, is attached. Slotted supporting-standards O O project upward from the table, are united by a cross-bar, G, at their upper ends, and carry the vibrating knife-bar B. The knife-bar B is hung from the cross-bar G by the links *c c'*, which pass into slots cast in each part, and which are pivoted on pins *e e' d d'*. The knife-bar may be sustained in its upper position by a spring.

In consequence of the greater inclination of the links *c c'* at the commencement of the downward stroke of the knife, the most power is required to operate the machine at that time.

In order to obviate this difficulty I operate the knife-bar by means of the eccentric pinion E, which is connected with the hand-lever D, and pivoted between lugs N attached to the side frame. A curved toothed rack, F, is cast

on one end of the knife-bar B, and meshes into the eccentric pinion E. The rack F is so shaped that as the knife-bar B descends on the swinging links *c c'* the rack will remain all the time properly in mesh with the pinion. By the use of the eccentric pinion I secure the greatest leverage on the knife at the commencement of its stroke, where the greatest power is needed, and the force required on the lever D is uniform throughout its movement.

In order to facilitate the change or removal of the wooden cutting-rod H, on which the knife descends, I form a recess in the table C of a shape corresponding to that of the rod which is designed to be used, and which recess is continued on one or both sides of the machine through the side frame, A. The rod H is fitted into this recess, and may project beyond the side frame a short distance, in which case the rod can be readily changed in position or removed. When the pinion E and rack F allow of the removal of the rod from one side only, a hole drilled (in a slightly-oblique direction, if necessary) into the recess where the lug N joins the side frame admits of forcing out the rod from the recess. A flat spring, *h*, Fig. 3, secured within the recess to one of its sides, holds the rod in position. The ends of the spring *h* are recurved, so as to afford no obstacle to the introduction or removal of the rod. The rod may be round, hexagonal, octagonal, or of any other desired shape.

The knife L is secured to the knife-bar B by means of screws *g* passing through slotted holes in the knife-bar.

In order to adjust the knife and secure its parallelism with the table C, I cast the knife-bar with holes or perforations *b b*, Fig. 1, through it, in which the heads of the adjusting-screws *a a* are placed, where they are readily accessible from both sides of the bar. The screws *a a* bear upon the upper side of the knife, and by them the knife may be adjusted to any desired position.

I place on the paper-table C, on the side of the knife where the operator usually stands, a sliding paper-guide, *m*, Figs. 1 and 4, arranged at right angles with the knife. A slotted arm, *l*, attached to the guide *m*, at right angles thereto, slides on ways parallel to the knife,

and the guide is secured in any desired position by means of the screw *n*. The guide *m* being always at right angles with the knife enables the operator to cut his work square.

5 I am aware that a frame for paper-cutting machines has been provided with an open-ended channel to receive a cutting-stick, and I make no claim, broadly, thereto; but I am not aware that any one has hitherto constructed  
10 such frame with an open-ended channel having overhanging edges, whereby it is adapted to receive a polygonal stick and prevent the same from turning when in use, and also to prevent the stick from rising from its seat.

I claim—

1. In a paper-cutting machine, a frame having an open-ended channel formed in it to receive the cutting-stick, provided with overhanging edges to retain the stick in place, substantially as described. 15

2. The combination of the recessed paper-supporting table C, cutting-rod H, arranged to be removed laterally, and the spring *h*, substantially as set forth. 20

JOHN M. JONES.

Witnesses:

ARTHUR R. SELDEN,  
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