

*G. Keeble  
Paper Cutter*

*N<sup>o</sup> 58,563.*

*Patented Oct. 2, 1866.*

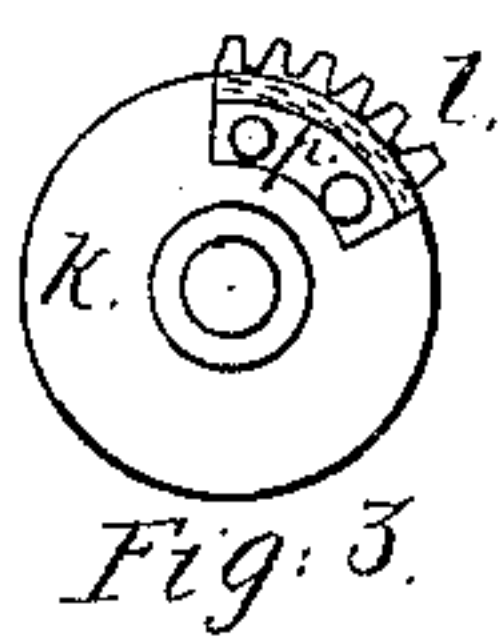
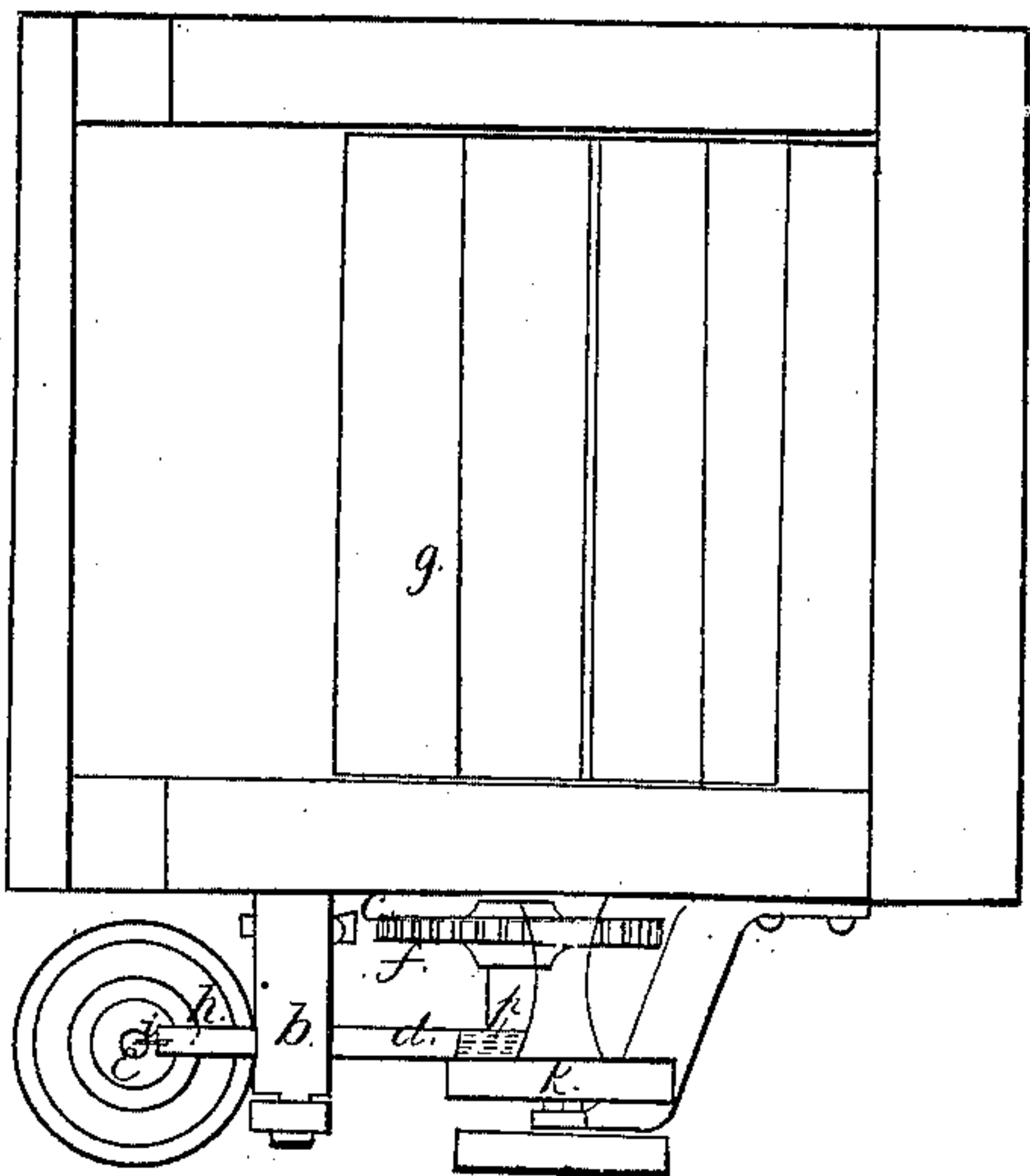


Fig: 3.

Fig: 2.

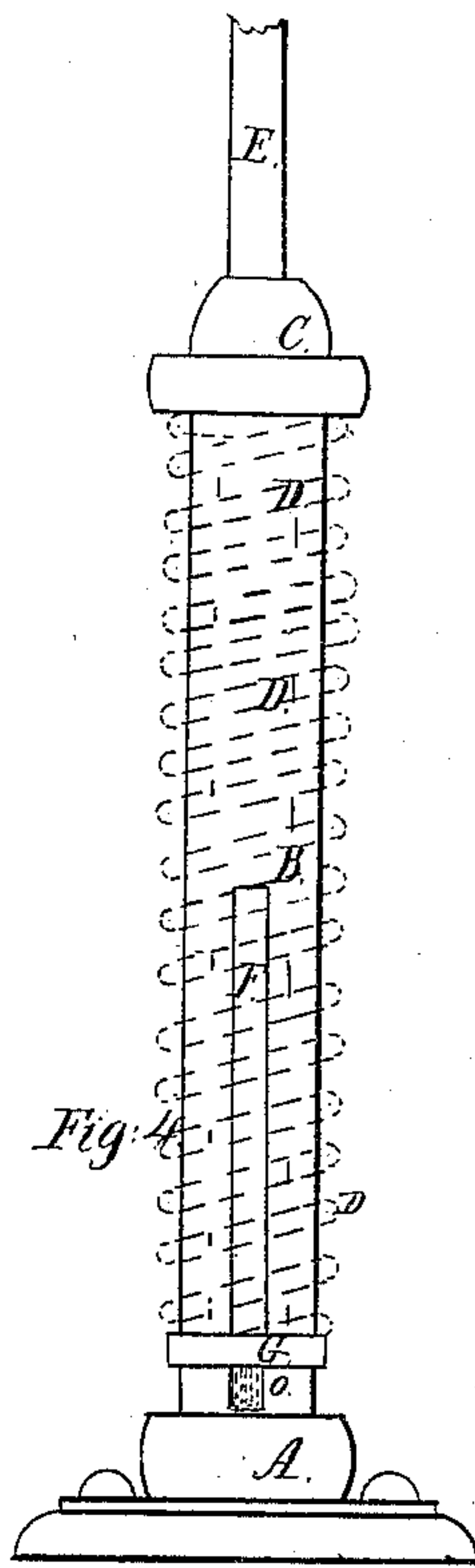
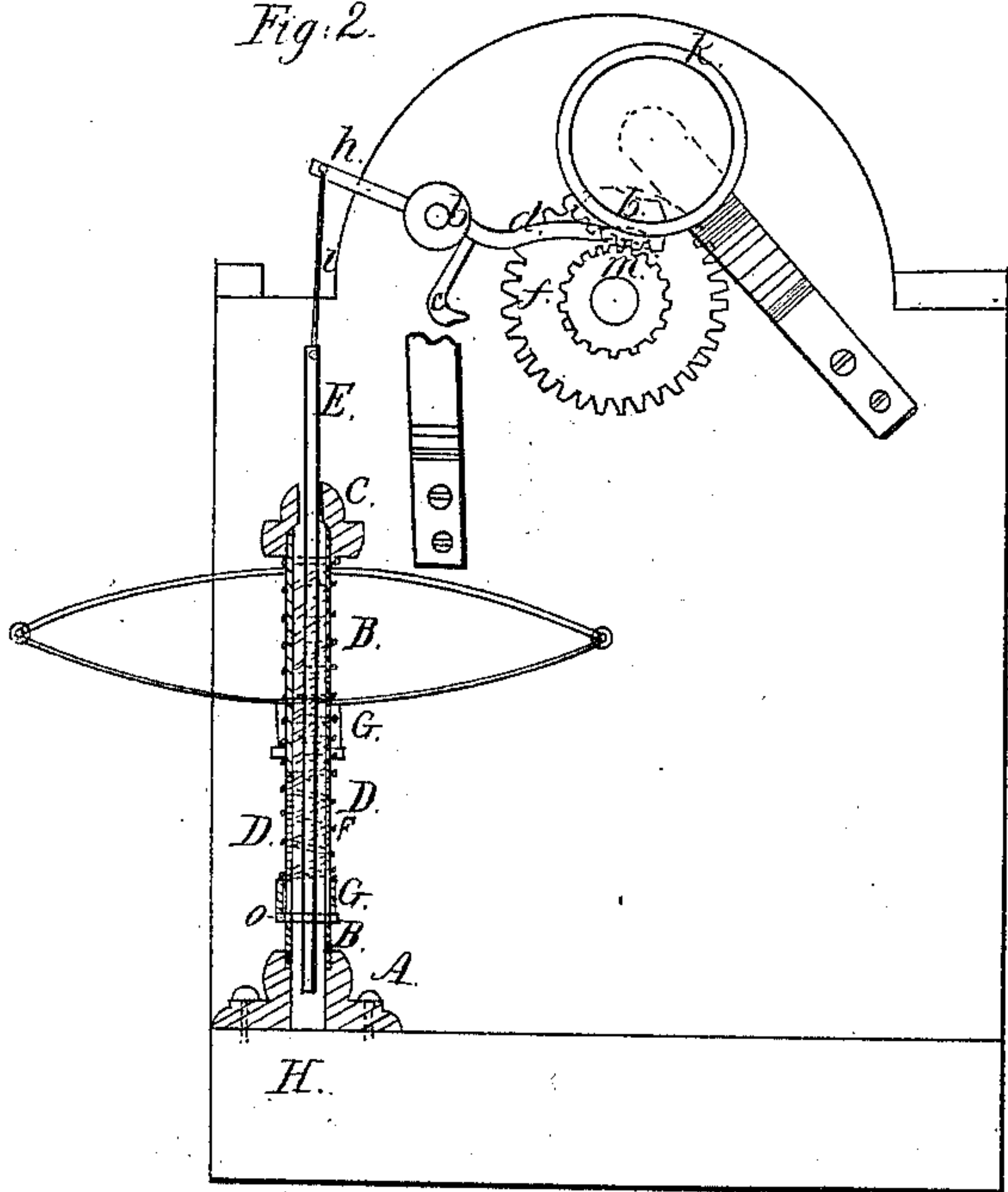


Fig: 4

*Witnesses:*

John Clarke  
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# UNITED STATES PATENT OFFICE.

GEORGE KEEBLE, OF BRUNDISH, COUNTY OF SUFFOLK, GREAT BRITAIN.

IMPROVEMENT IN STOP-CUTTERS FOR CUTTING CONTINUOUS SHEETS OF PAPER INTO SHORTER ONES.

Specification forming part of Letters Patent No. **58,563**, dated October 2, 1866.

*To all whom it may concern:*

Be it known that I, GEORGE KEEBLE, of Brundish, in the county of Suffolk and Kingdom of Great Britain, have invented a new and useful Improvement in the Stop-Cutters which are used in paper-mills for cutting continuous sheets of paper into shorter sheets for reams or bundles, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is a top view, and Fig. 2 is an end elevation, of an ordinary stop-cutter for paper-mills, showing a vertical central section of my improvement as applied thereto. Fig. 3 is a side view of a detached wheel provided with a segmental gear and a cam or flange, which pertain to the ordinary stop-cutter for paper-mills. Fig. 4 is a side elevation of my improvement considerably larger than that shown in section in Fig. 2.

In the ordinary stop-cutter for paper-mills the motion of the driving-drum *g* is controlled or stopped by a dog, *c*, which engages with a toothed wheel, *f*. Said dog is actuated by a flat spring, which is secured to some portion of the frame and extends along beneath and in contact with the arm *d*, and serves to lift the said arm and throw the dog *c* in contact with the toothed wheel *f*, and stop the drum *g* at each revolution of the driving-wheel *k*. As the up-and-down motion of the arm *d* is considerable, being from seven to nine inches, the flat spring is frequently broken, and it is very difficult to obtain a flat spring that will endure so great a strain.

A toothed segment, *l*, on the wheel *k* engages with a gear, *m*, on the shaft of the drum *g* and imparts motion to the drum. Each revolution of the wheel *k* turns the drum *g* a sufficient distance to measure off a sheet of paper of the required length, or in proportion to the number of teeth in the segment *l*.

A cam or flange, *p*, on the side of the segment *l* presses the arm *d* downward to disengage the dog *c* from the wheel *f* and allow the drum *g* to turn.

In carrying out my invention I provide a stand, *A*, into the top end of which I insert a slotted tube, *B*. To the top end of said tube a cap, *C*, is fastened, and a spiral spring, *D*, encircles the tube.

A sliding rod, *E*, passes through the tube *B*, and a key, *o*, inserted through a hole near the lower end of the rod *E*, moves up and down in the slots *F* of the tube *B*.

A washer or collar, *G*, is movable on the outside of the tube *B* and rests on the top of the key *o*. The lower portion of the spring *D* bears on the top of the collar *G*, and the upper portion of said spring bears against the under side of the cap *C*.

In applying my improvement to a stop-cutter for paper-mills, the stand *A* is fastened to the floor *H* directly under the end of a lever, *h*, which I also provide. Said lever is secured to the rocking shaft *b*. The top end of the sliding rod *E* is connected with the end of the lever *h* by means of an adjustable strap or connecting-link, *i*, which may be tightened if the spring *D* should become weak by continuous use.

At each revolution of the wheel *k* the cam or flange *p* forces the arm *d* downward and disengages the dog *c* from the toothed wheel *f* and allows the segment *l*, which acts upon the gear *m*, to turn the drum *g* in proportion to the number of teeth in the segment, which regulates the length of each sheet of paper cut from a continuous sheet by a suitable cutting device; and when the cam *p* and segment *l* have passed their point of action the spring *D* on the tube *B* draws the lever *h* suddenly downward, causing the dog *c* to engage instantly with the toothed wheel *f* and stop the drum *g* while the cutting is performed, one sheet of paper being cut at each revolution of the wheel *k*, segment *l*, and cam *p*.

Instead of a spiral spring, I sometimes use an elliptic spring, which may be applied to the tube *B* and operated in substantially the same manner as the spiral spring, all as shown in Fig. 2.

I claim—

The combination of the lever *h*, connecting-strap *i*, rod *E*, key *o*, collar *G*, tube *B*, stand *A*, cap *C*, and the spring *D*, or its equivalent, the whole arranged substantially as and for the purpose set forth.

GEORGE KEEBLE.

In presence of—

JOHN E. CRANE,  
J. S. WHITNEY.