

R. N. HAVERS & R. G. GEACH.
Machine for Cutting Chenille Cloth.

No. 222,273.

Patented Dec. 2, 1879.

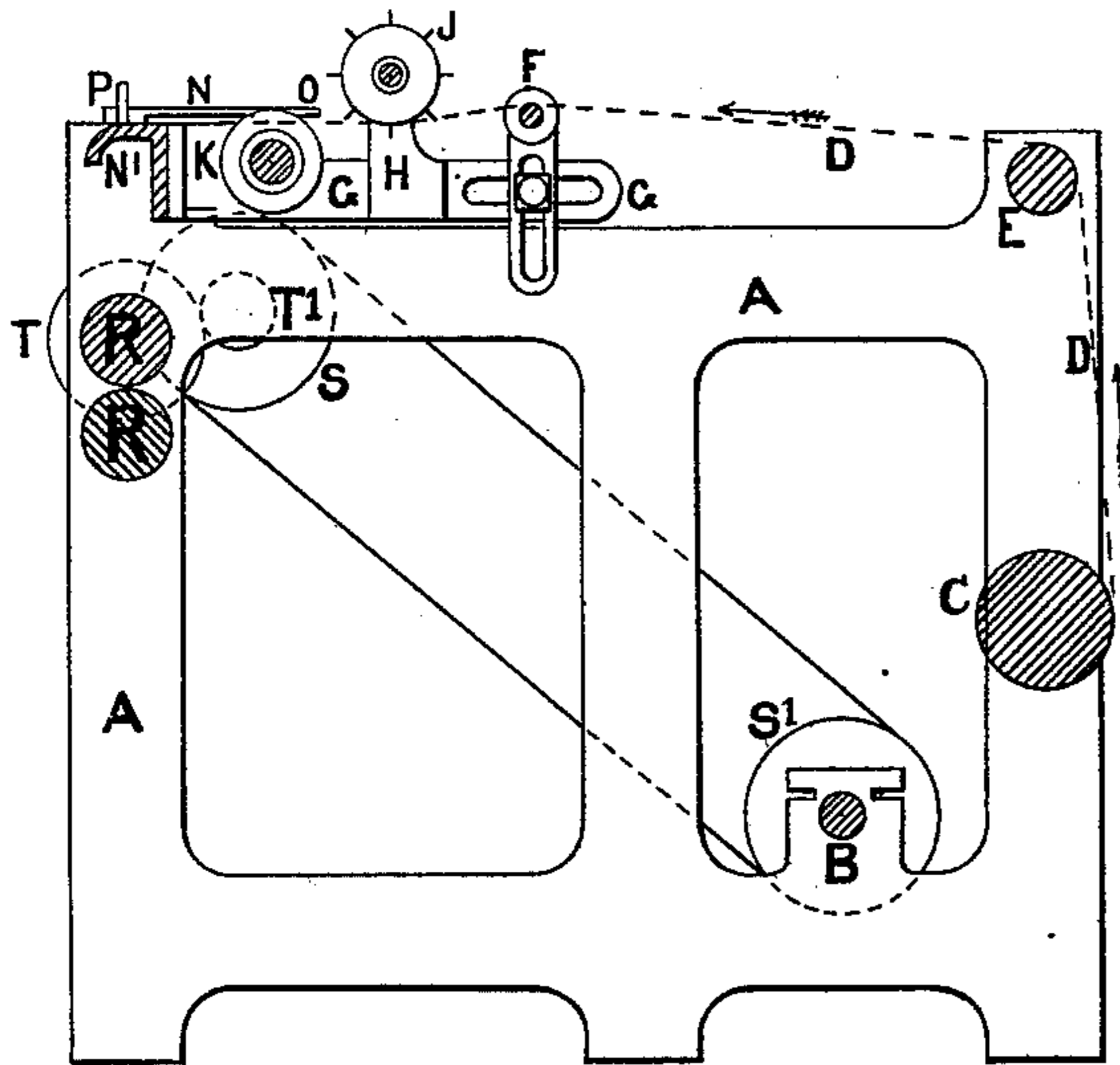


FIG. 1.

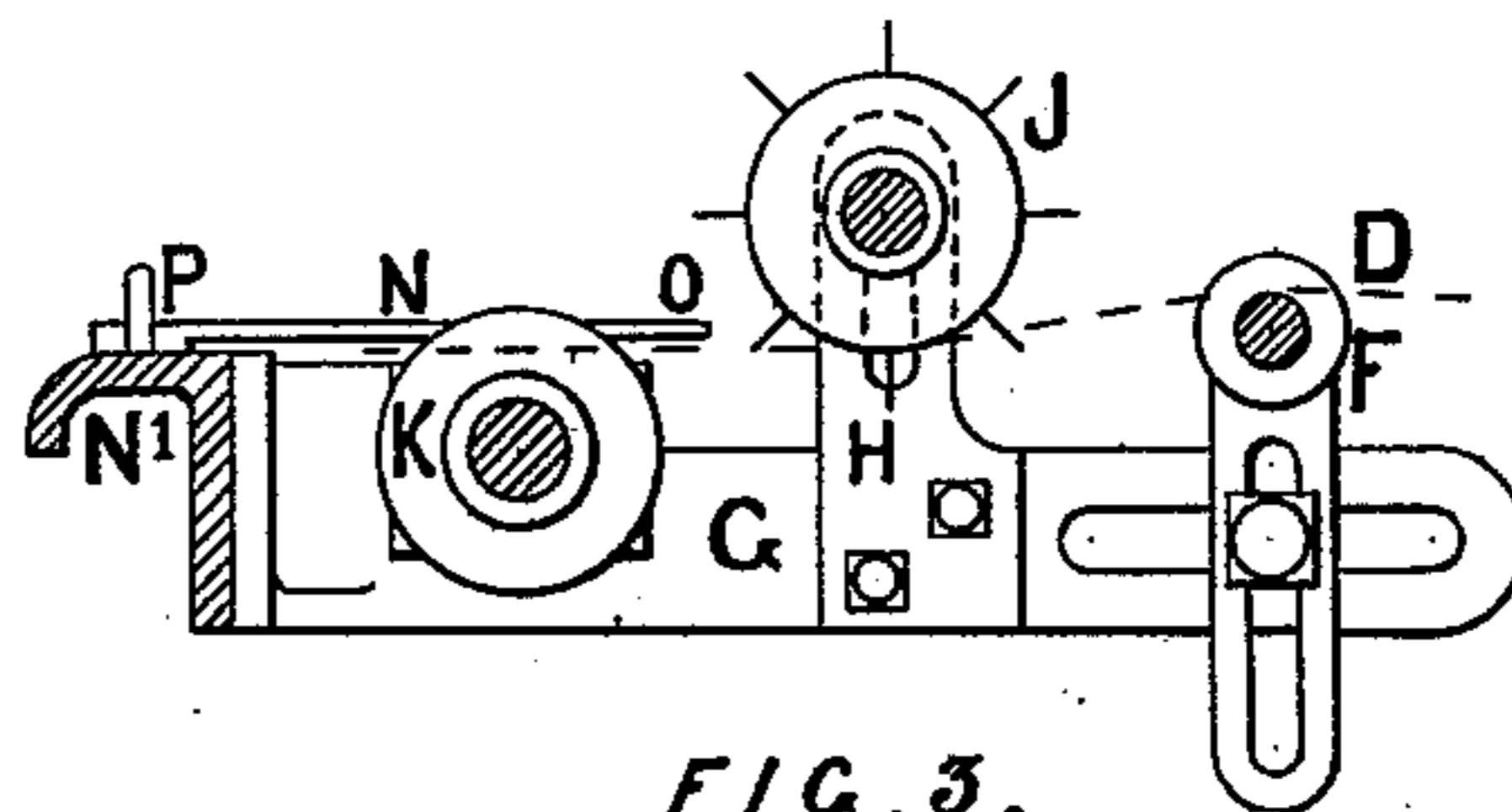


FIG. 3.

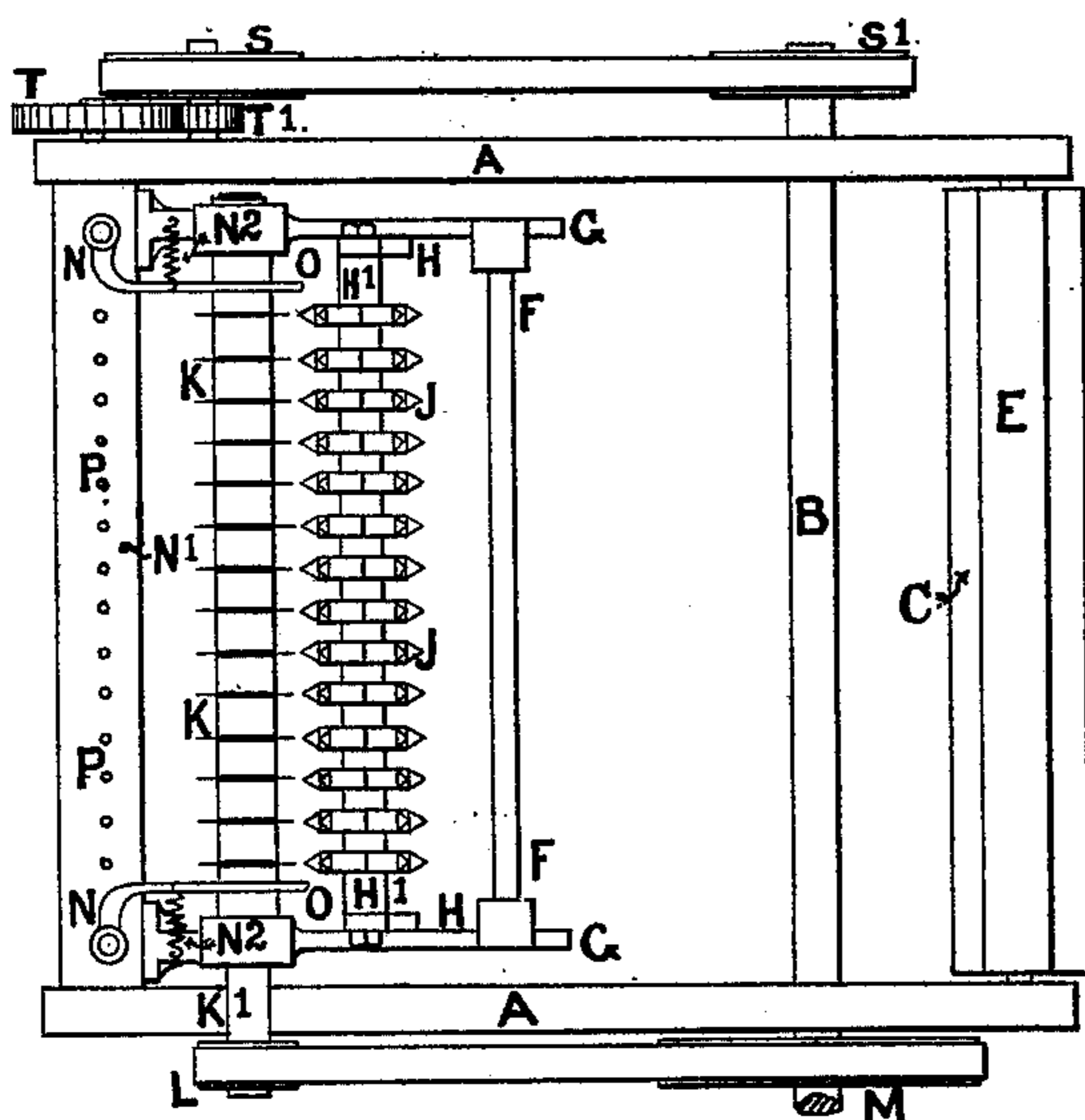


FIG. 2.

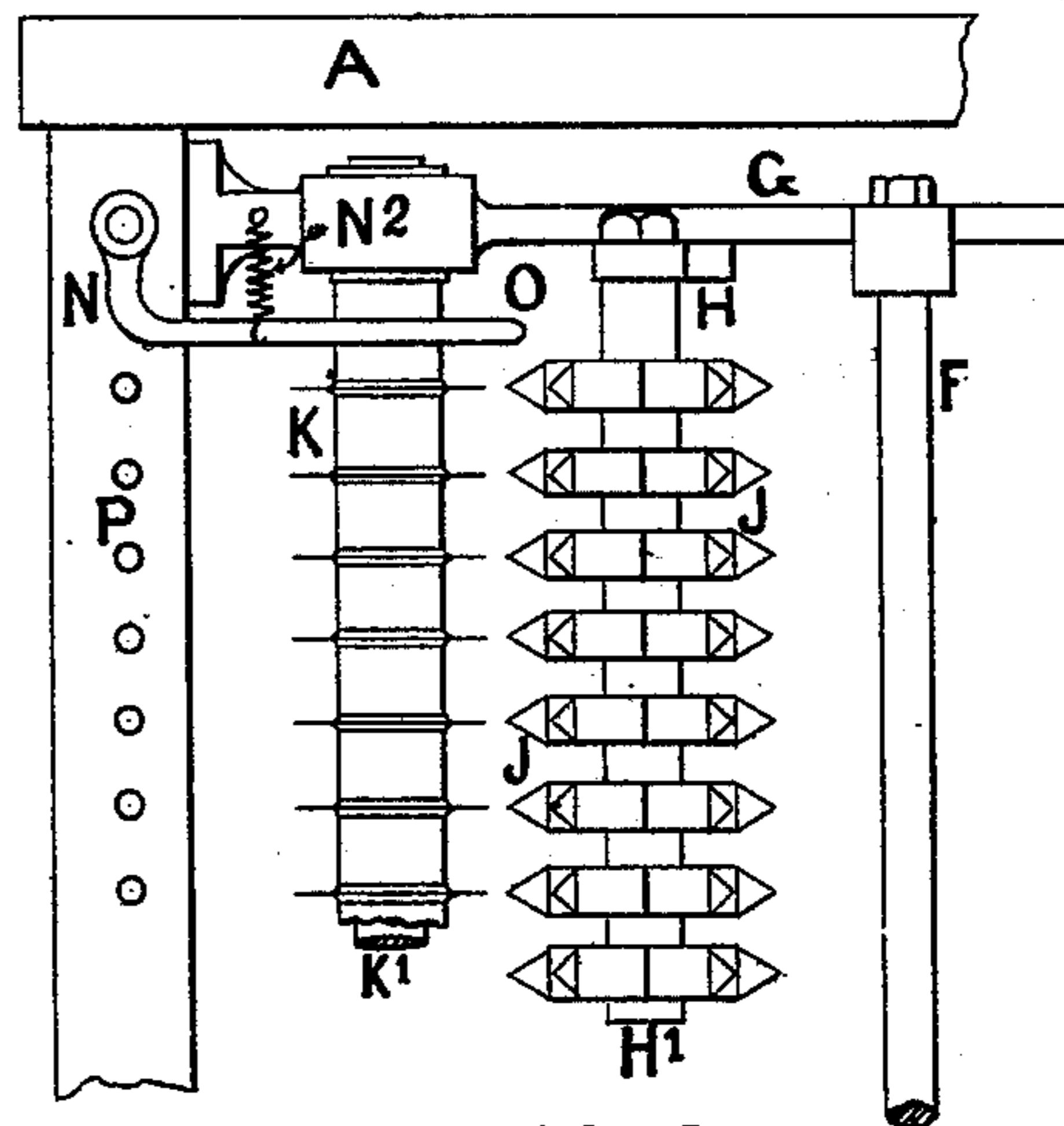


FIG. 4.

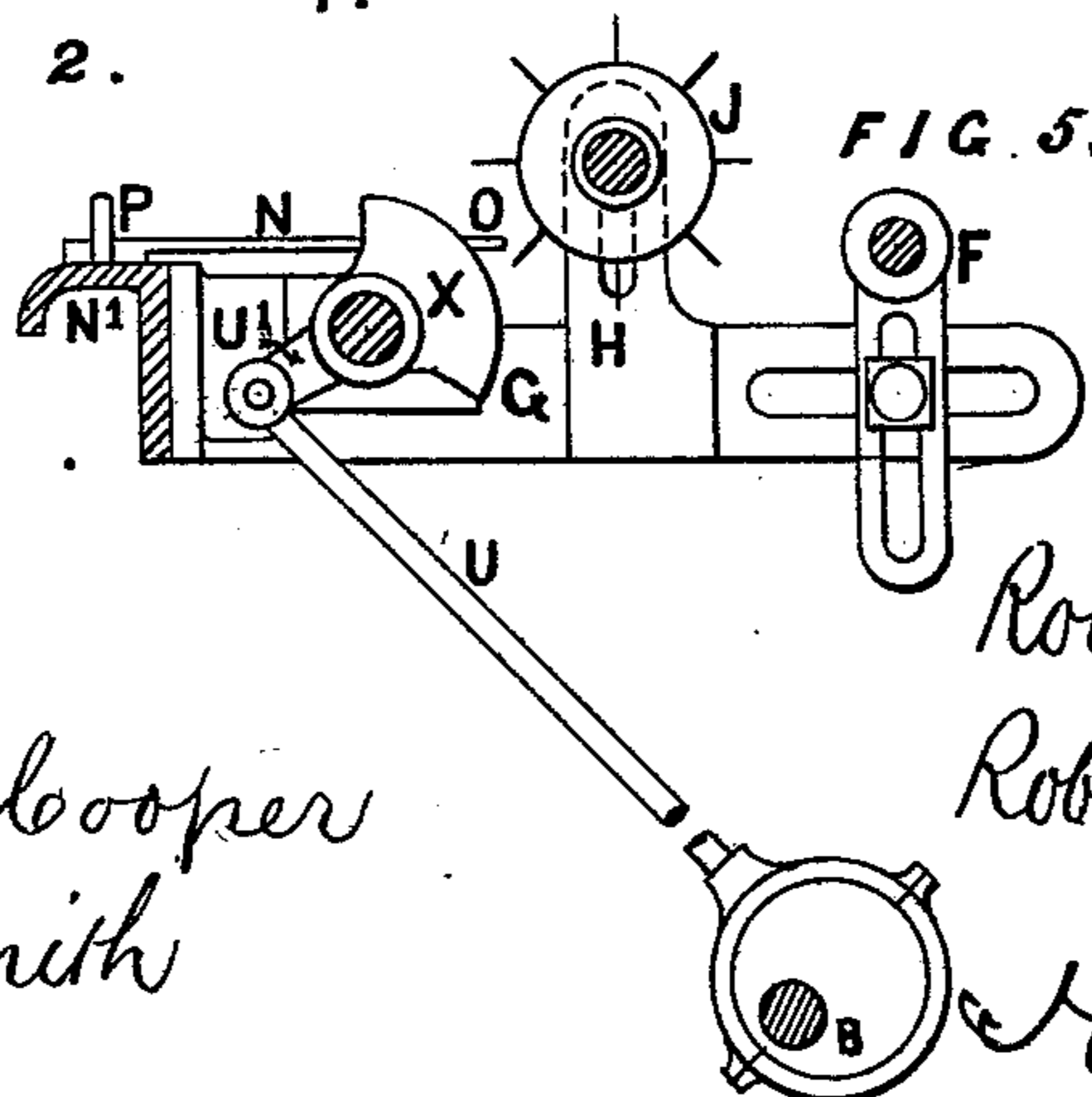


FIG. 5.

Witnesses
William J. Cooper
Harry Smith

Inventors
Robert Nudd Havers
and
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by their Attorneys
Howson and Co

UNITED STATES PATENT OFFICE

ROBERT N. HAVERS, OF BRADFORD, COUNTY OF YORK, AND ROBERT G. GEACH, OF WESTMINSTER, COUNTY OF MIDDLESEX, GREAT BRITAIN.

IMPROVEMENT IN MACHINES FOR CUTTING CHENILLE-CLOTH.

Specification forming part of Letters Patent No. **222,273**, dated December 2, 1879; application filed July 21, 1879; patented in England December 14, 1877.

To all whom it may concern:

Be it known that we, ROBERT NUDDS HAVERS, of Bradford, in the county of York, and ROBERT GICHARD GEACH, of Westminster, in the county of Middlesex, both in the Kingdom of Great Britain and Ireland, have invented certain new and useful Improvements in Machines for Cutting Chenille-Cloth, for which we have obtained British Letters Patent No. 4,755, dated December 14, 1877, and sealed June 11, 1878, and of which the following is a specification.

The object of our invention is to construct an improved machine for cutting the weft-threads of chenille-cloth, so that the strands thus cut will form what is commonly known as "chenille yarn;" and this object we attain in the manner which we will now proceed to describe, reference being had to the accompanying drawings, in which—

Figure 1 is a vertical section of our improved cloth-cutting machine; Fig. 2, a plan view of the same; Fig. 3, an enlarged sectional view of a portion of the same; Fig. 4, a corresponding plan view; and Fig. 5, a sectional view of a modification.

A A is the framing of the machine. B is the main shaft, to which motion is imparted by means of a strap, in the ordinary manner. C is the back-beam, which contains the cloth D to be cut.

The cloth is conducted in the direction of the arrows over roller E and adjustable guard F, this guard being fixed to projecting brackets G that are secured to the top front rail of the apparatus.

H H are vertical brackets, to which is secured a bar, H', carrying a number of small pulleys, J, which have thin V-shaped or pointed projections on the circumference. These pulleys can be spaced by using different sizes of washers to suit the spacing of the warps in the cloth to be cut into chenille.

The bar carrying the pulleys can also be adjusted vertically in the slots in the brackets in order that the projections may pass through the weft such a distance that the sides of the V shapes may be brought near the warp of the cloth to cause the cloth to

travel in a straight line and to keep the warp at the proper distance from the knives or cutters K, secured on the spindle K'. On the end of this spindle is a pulley, L, which is driven from a pulley, M, on the shaft B.

The bars N are pivoted to the top of front rail, N', and the ends O are placed into the pockets formed in the selvage of the cloth, and to each of these bars is attached a spiral spring, N², for the purpose of keeping the cloth stretched transversely before it is cut by the knives.

When the cloth passes over the knives K and is cut thereby, the severed strands travel between the guides P on the top rail, N', to the front rollers, R, which are actuated from the main shaft B through pulleys S and S', and wheels T and T', so that as the front beams, R, revolve the cloth is drawn from the back roller, C, in the direction of the arrow and cut by the revolving knives into strips or strands ready for use in weaving fancy dress goods.

Fig. 5 shows our modified arrangement for cutting the cloth with oscillating knives, which are actuated by an eccentric on the shaft B. This eccentric is connected by means of a rod, U, to the lever U', which is secured on the spindle K, on which the cutters X are also secured, so that by the action of the revolving eccentric an oscillating motion is imparted to the knives or cutters, which cut the weft of the cloth as it travels from the back roller to the front rollers, as before described.

We claim as our invention—

1. In a machine for cutting chenille-cloth, the combination of a spindle carrying a series of cutting-knives, with a bar carrying a series of corresponding guiding-pulleys J, and mechanism for driving said spindle, substantially as set forth.

2. The combination of the front and back rollers and a spindle carrying a series of cutting-knives with a rail carrying a series of guides, P, and mechanism for driving said spindle and front rollers, substantially as described.

3. The combination of the front and back rollers and rail and a spindle carrying a se-

ries of cutters with the spring-arms N, and mechanism for driving said spindle and front rollers, substantially as and for the purpose specified.

4. The combination of the front and back rollers, and a spindle carrying a series of cutters, with guiding-pulleys J and adjustable guard F, and mechanism for driving said spindle and front rollers, all substantially as set forth.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

ROBERT NUDDS HAVERS.
ROBERT GICHARD GEACH.

Witnesses:

JOHN WAUGH,
JOHN GILL.