

No. 667,666.

Patented Feb. 12, 1901.

D. BESWICK.
CALENDERING MACHINE.

(Application filed Feb. 21, 1900.)

(No Model.)

FIG. 1.

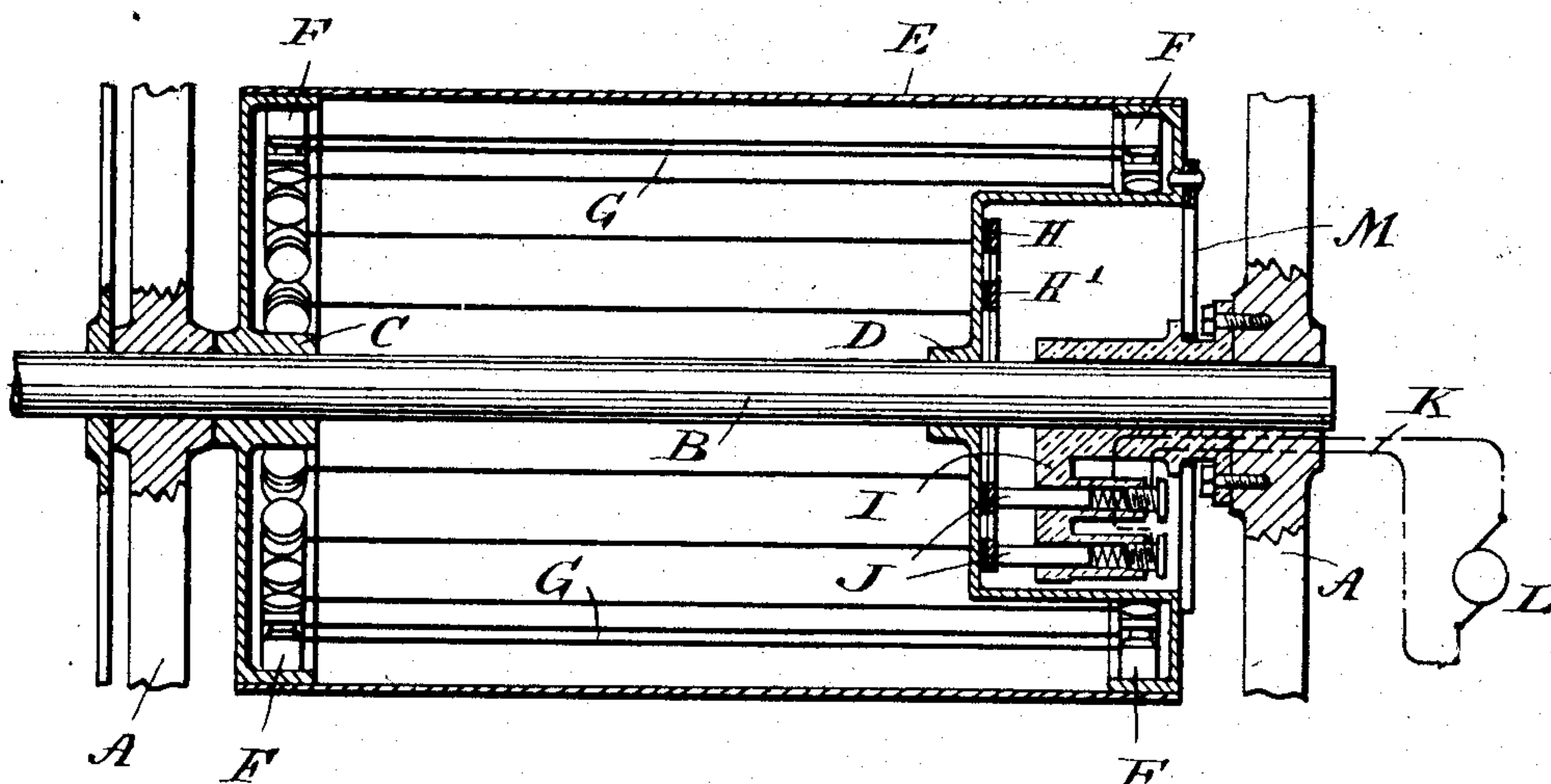


FIG. 2.

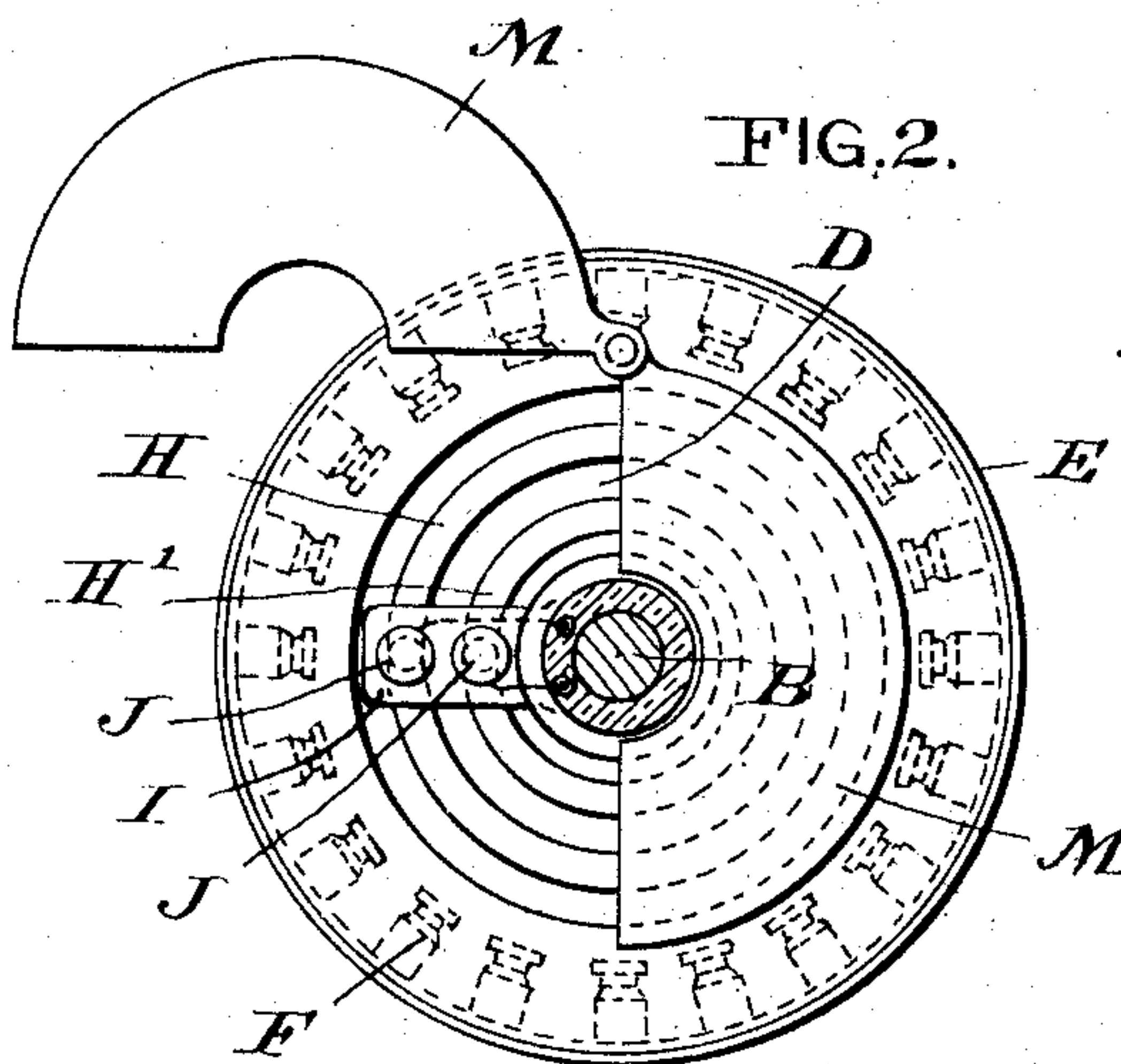
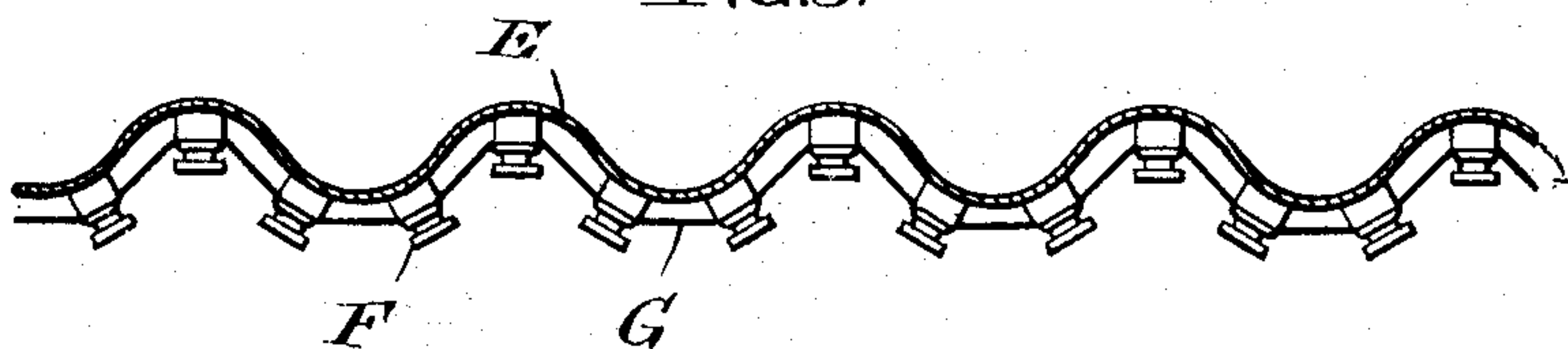


FIG. 3.



WITNESSES:

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CALENDERING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 667,666, dated February 12, 1901.

Application filed February 21, 1900. Serial No. 6,030. (No model.)

To all whom it may concern:

Be it known that I, DAVID BESWICK, a citizen of the United States, residing at New York city, borough of Brooklyn, county of Kings, State of New York, have invented certain new and useful Improvements in Calendering-Machines, of which the following is a specification.

The rolls of calendering-machines, as well as other fixed or revolving cylinders, shells, or forms, require to be uniformly heated, as otherwise it is necessary to apply some material to the surface of the inclosing body to prevent the materials passing over it or with which it comes in contact from sticking to it.

In order to overcome the objections stated, I have devised a means for heating the inclosing body which will impart the same degree of heat to every portion of its surface.

The accompanying drawings will serve to illustrate my invention, and in which similar letters of reference indicate like parts throughout the several figures.

Figure 1 is a longitudinal section of a calendering-roll with a plain external surface. Fig. 2 is a transparent end view and transverse section of the supporting-shaft, this view showing the position of the insulators for the conducting-wires, support for the brushes, and arrangement of swinging doors for closing the end of the cylinder. Fig. 3 is a longitudinal section of a calendering-roll with a wave-like surface.

In the drawings, A represents a portion of the frame of a calendering-machine. Mounted to rotate in suitable bearings in this frame is a shaft B. Located upon and secured to the shaft B are the disks C and D.

E is the inclosing body of the cylinder, which may have either a plain or wave-like surface.

Secured to the interior of the disks C and D, Fig. 1, or to the interior of the inclosing body, Fig. 3, are the insulators F. Secured to the insulators F are conducting-wires G G'. Those marked G are stretched longitudinally between the insulators F and parallel with the inclosing body. Those marked G' are stretched between the insulators F, which are so located relative to the wave-lined inclosing body that the conductors will substantially follow the interior contour of the body.

The wires are preferably iron wires having such an electrical resistance that by the passage of definite electric current they will be highly heated.

Secured to the outer surface of the disk D and insulated therefrom are the conducting-rings H H', in electrical contact with the ends of the conductors G or G'.

Connected to the frame of the calendering-machine are the insulated brush-holders I, carrying the spring-pressed carbon brushes J. These brushes are connected through suitable electrical conductors K to a source of energy L.

The outer end of the cylinder beyond the disk D is inclosed by the swinging doors M. These doors permit access to the brushes J and also serve to cover the cavity of the cylinder in which the brushes are placed, and thereby prevent flying bodies such as are usual in factories from coming into contact with or ignition by sparks from the brushes J.

I wish it understood that I consider my invention as applicable to the heating of any form of inclosing body and irrespective of its use.

Having thus described my invention, I claim—

1. The combination with a rotatable inclosing cylinder, of a series of spaced radially-disposed insulators, a series of longitudinally-disposed conducting-wires mounted on said insulators, a pair of insulated conducting-rings respectively attached to the ends of said wires, and a pair of insulated brushes bearing on said rings, said rings and brushes located wholly within the casing.

2. The combination with a rotatable inclosing cylinder, of a series of spaced radially-disposed insulators, a series of longitudinally-disposed conducting-wires mounted on said insulators, a pair of insulated conducting-rings respectively attached to the ends of said wires, a pair of insulated brushes bearing on said rings, said rings and brushes located wholly within the casing, and a movable device for closing the end of the cylinder external to said rings and brushes.

3. The combination of the casing E, insulators F, located upon the interior of the casing and equidistant from each other, wires G, secured to such insulators, conducting-rings

H, H', located in the end of the cylinder and respectively connected to the ends of the conducting-wires, brushes J, bearing on the rings H, H', and suitably supported and insulated
5 in the support I, whereby electric current may be carried to the rotatable casing and the casing evenly heated.

In testimony whereof I affix my signature in the presence of two witnesses.

DAVID BESWICK.

Witnesses:

W. H. PUMPHREY,
J. E. PEARSON.