

(No Model.)

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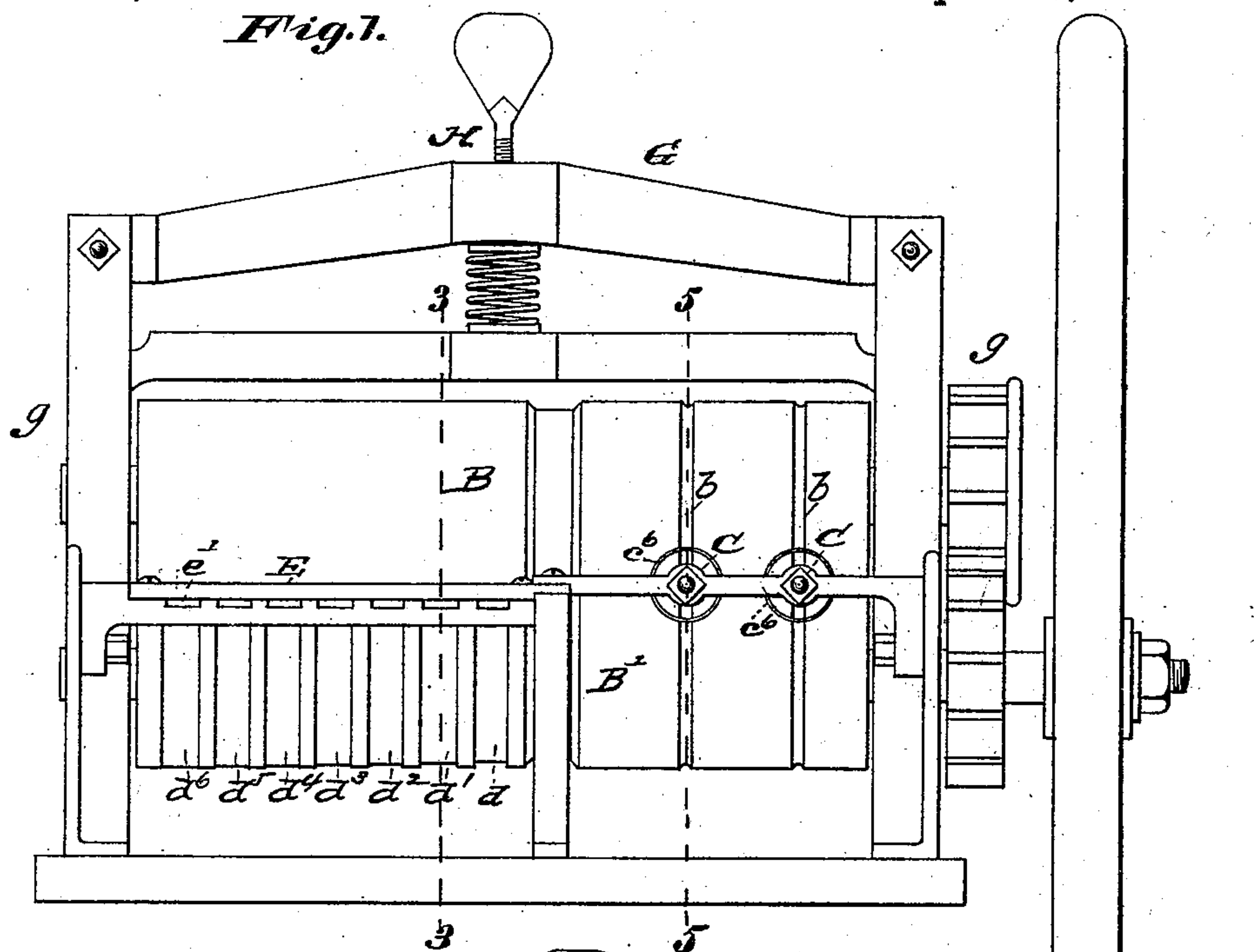
E. L. & J. G. RÜNGERT.

RATTAN WORKING MACHINE.

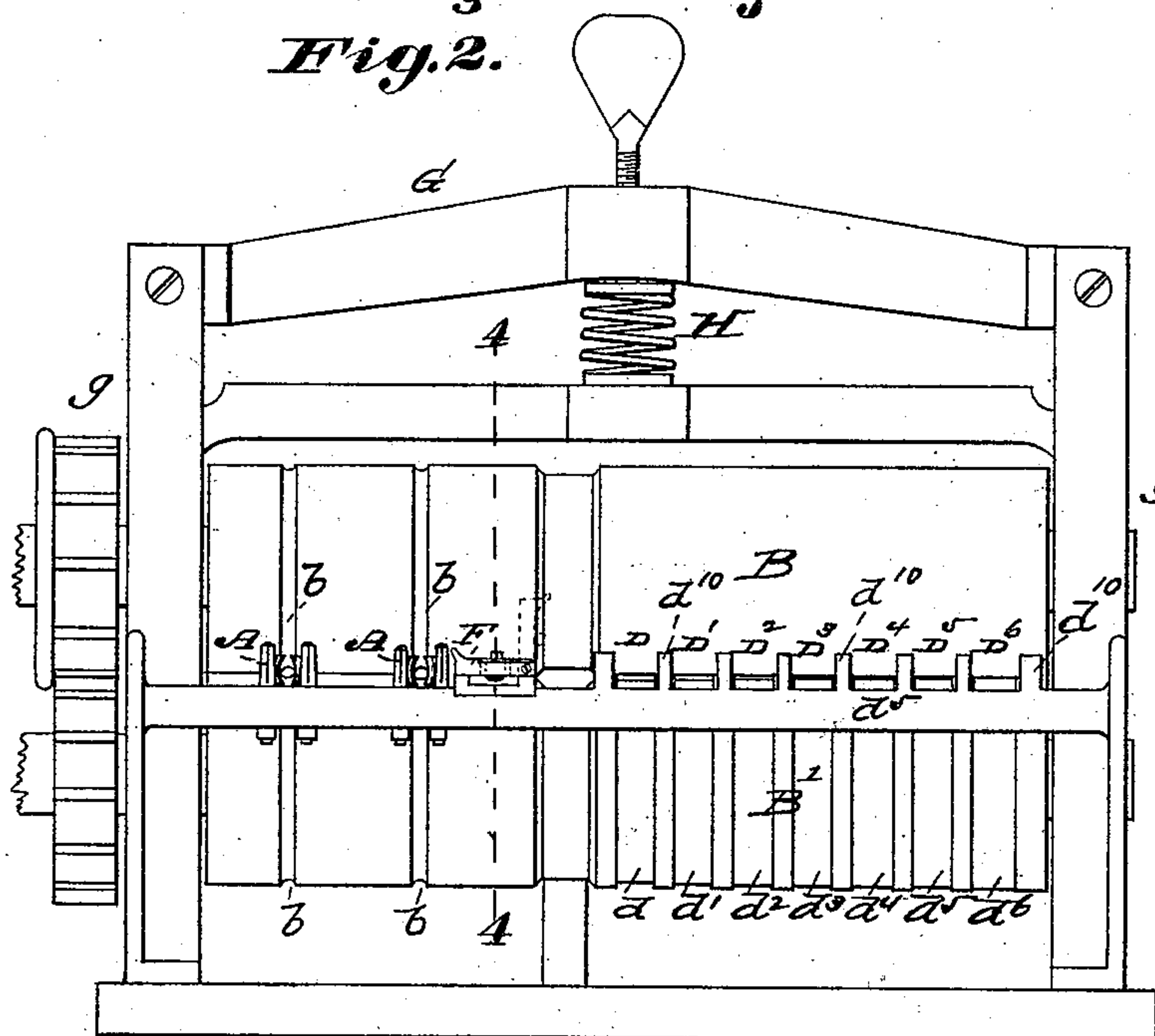
No. 370,355.

Patented Sept. 20, 1887.

*Fig. 1.*



*Fig. 2.*



*Witnesses:*

*N. B. Anderson.*  
*J. W. Hoke.*

*Inventors:*

*Edward Ludwig Rüngert*  
*Julius Gustav Rüngert*  
*by C. D. Moody atty*

(No Model.)

2 Sheets—Sheet 2.

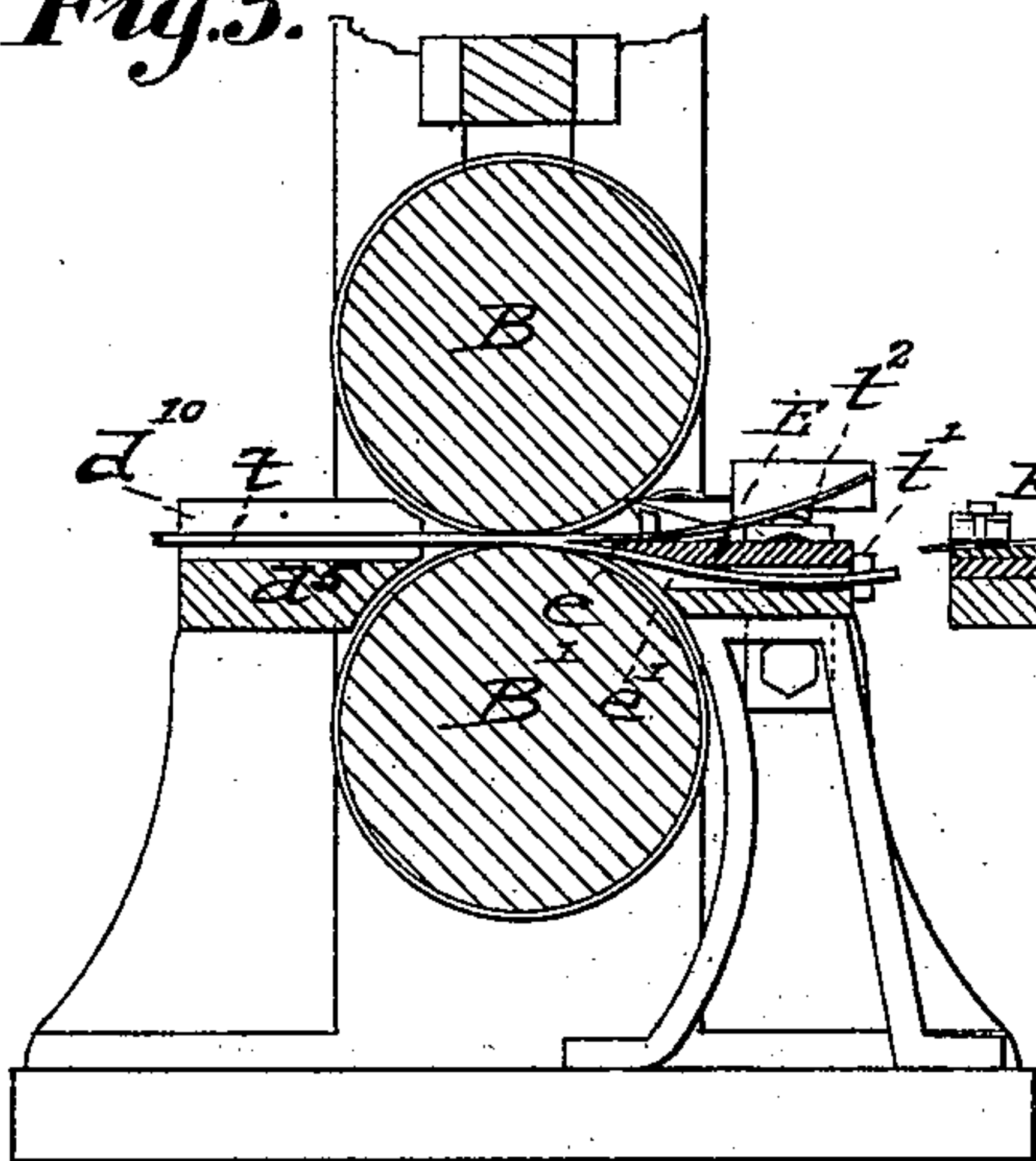
E. L. & J. G. RÜNGERT.

RATTAN WORKING MACHINE.

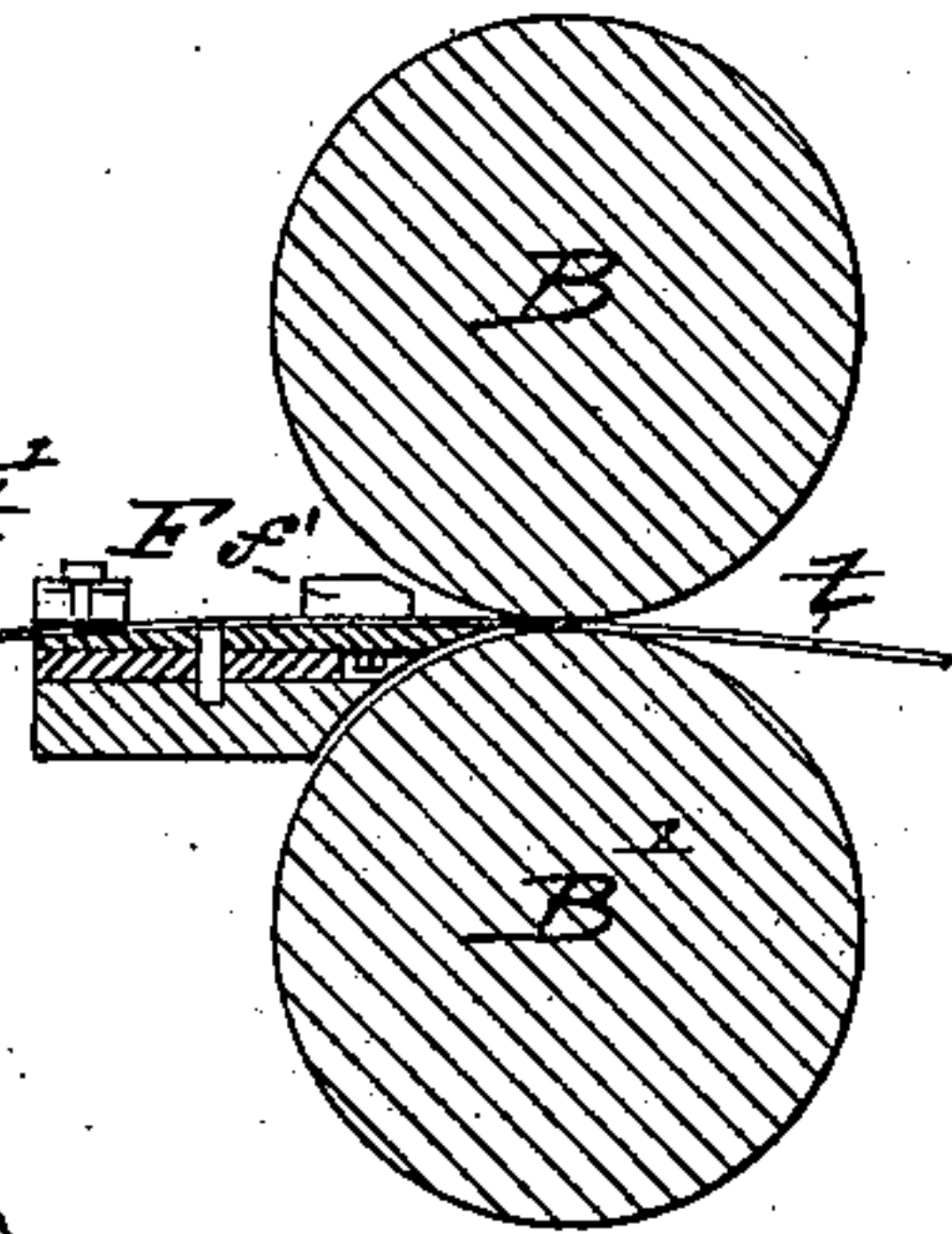
No. 370,355.

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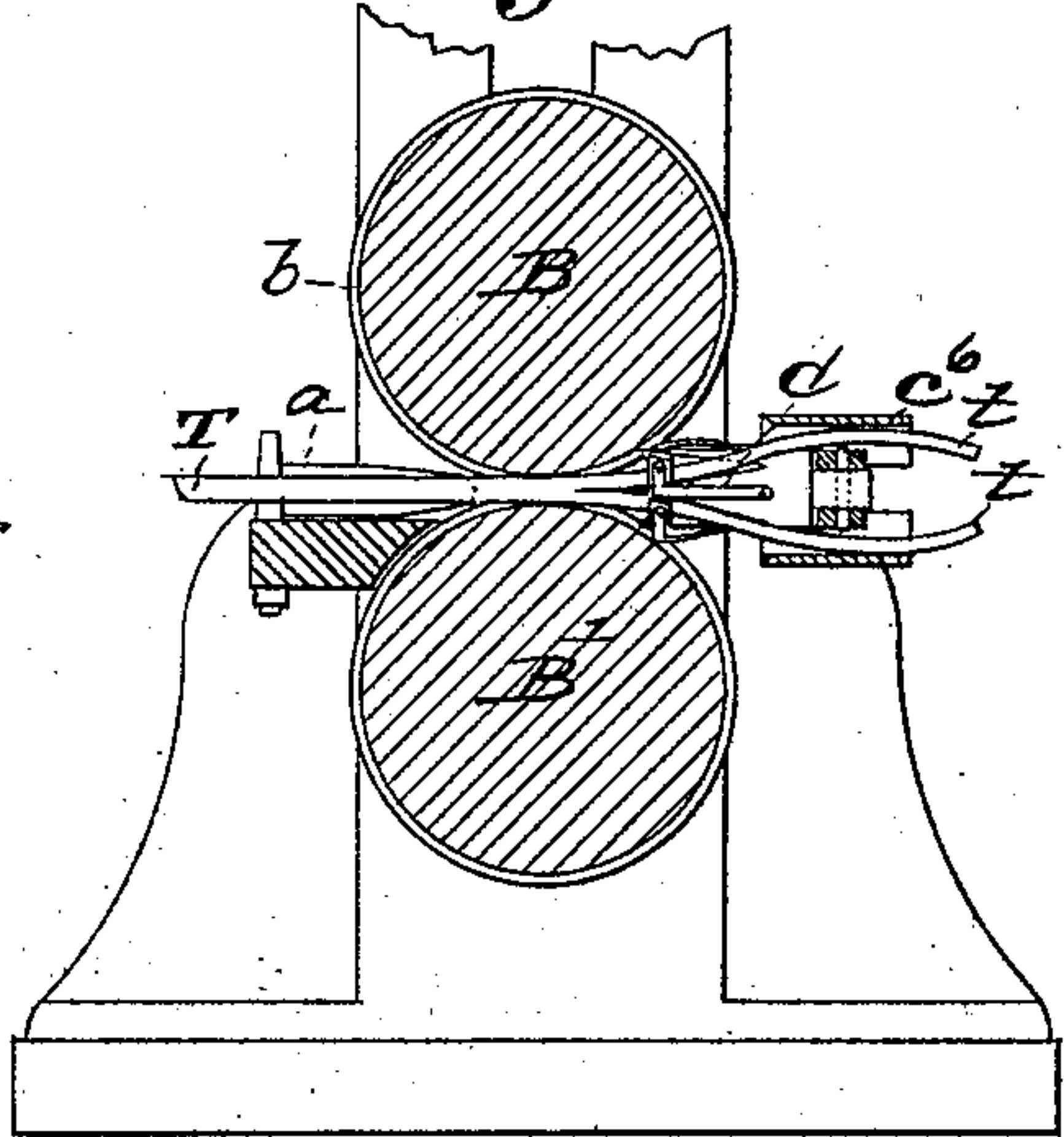
*Fig.3.*



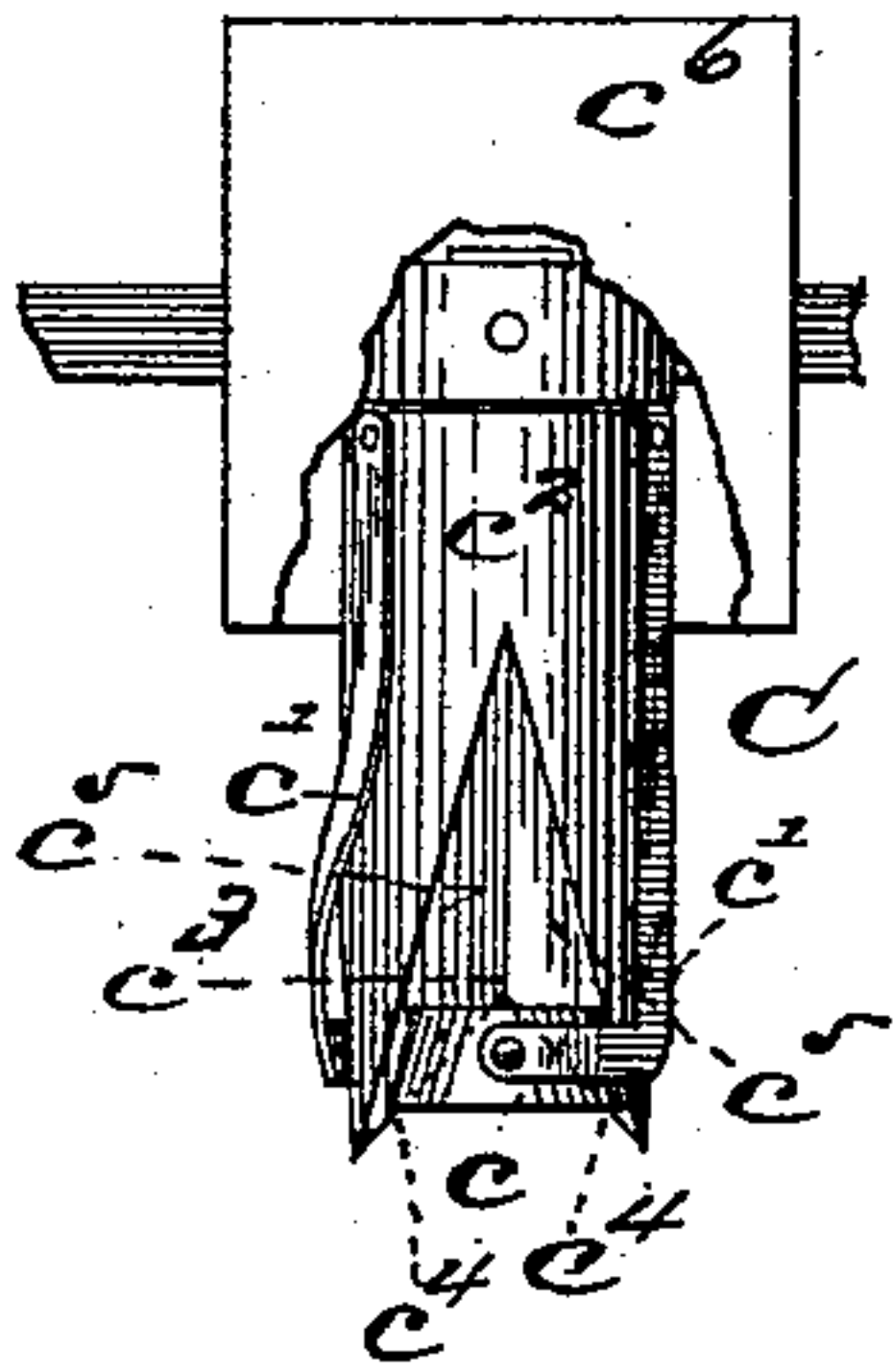
*Fig.4*



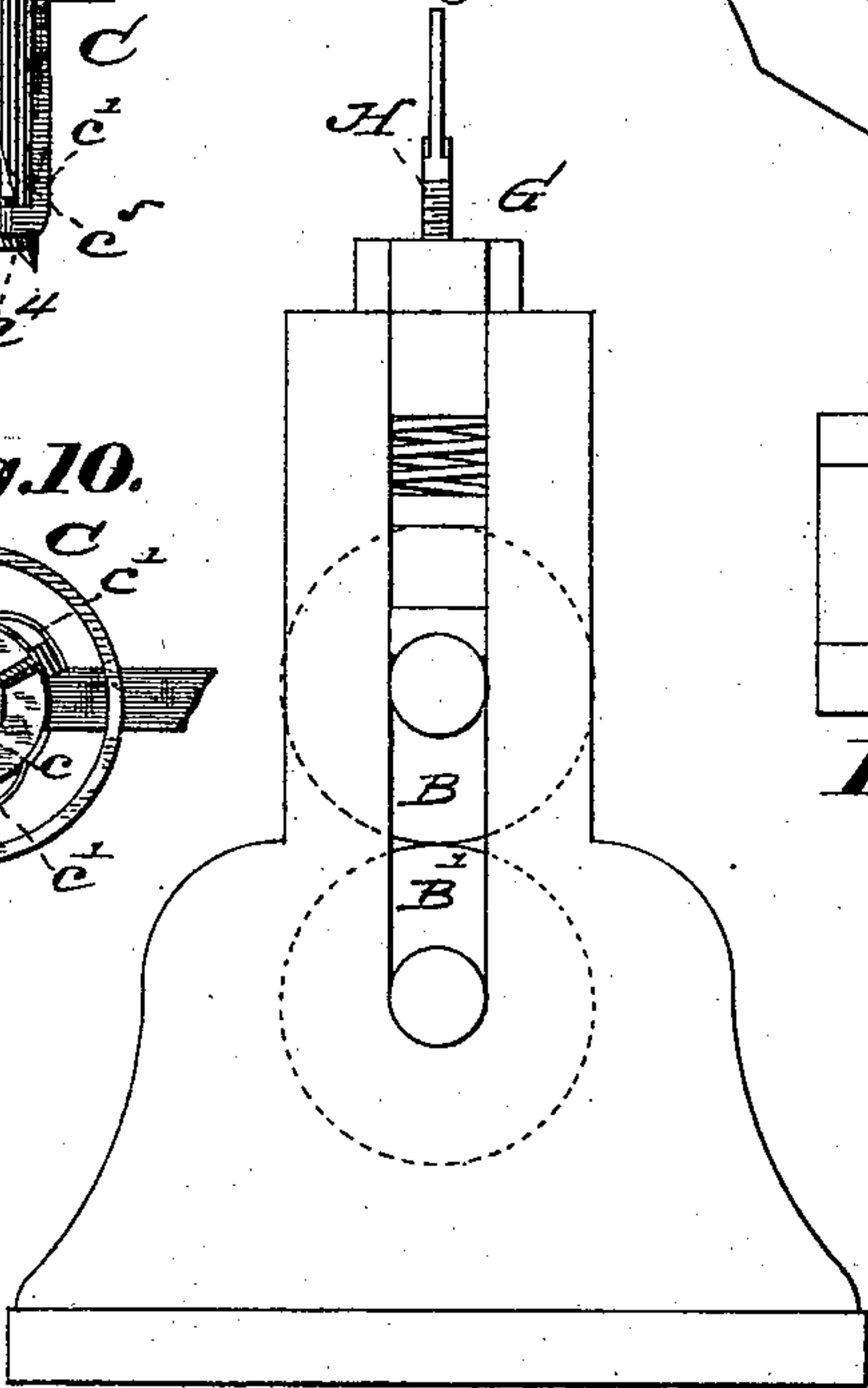
*Fig.5.*



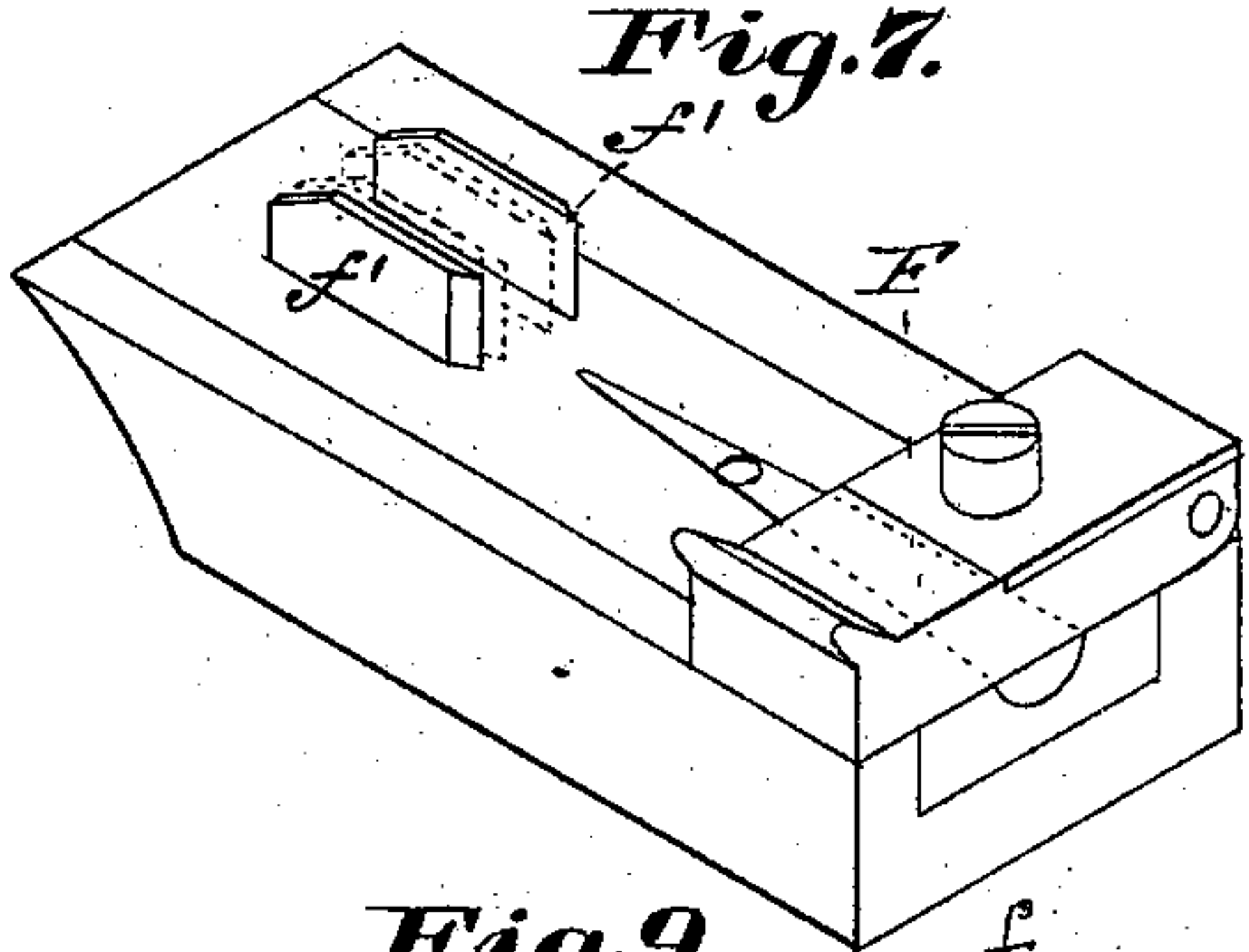
*Fig.6.*



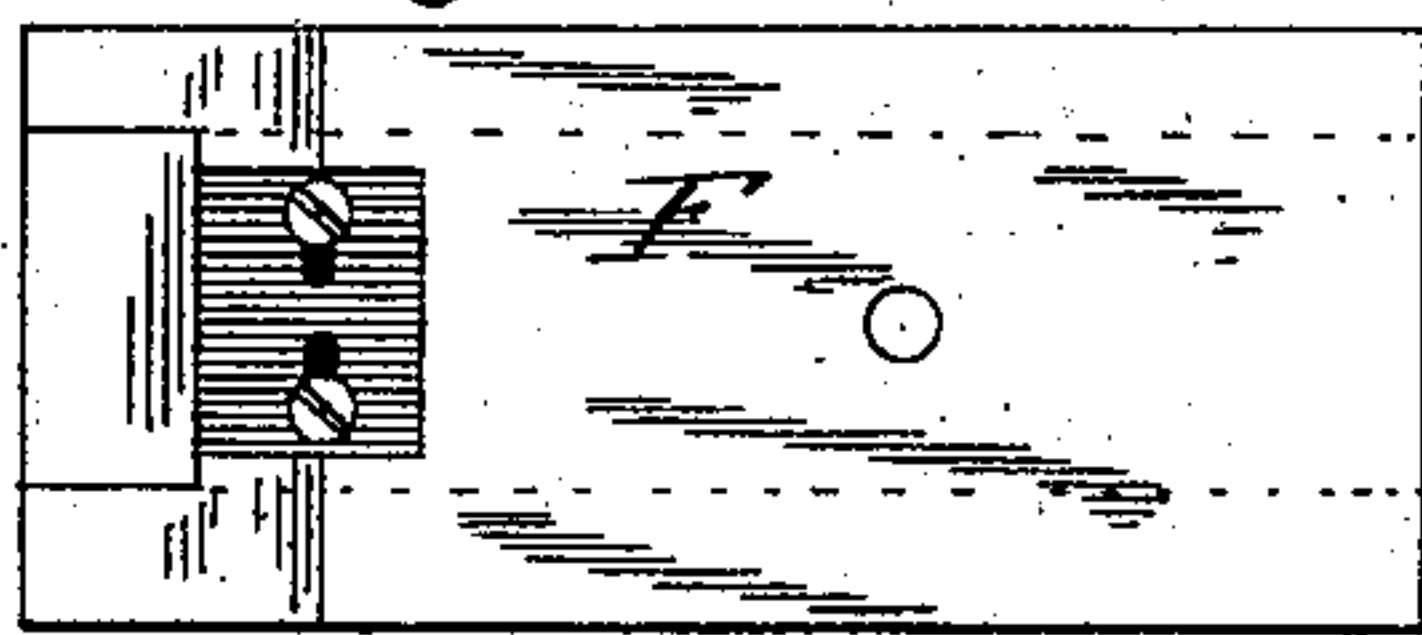
*Fig.8.*



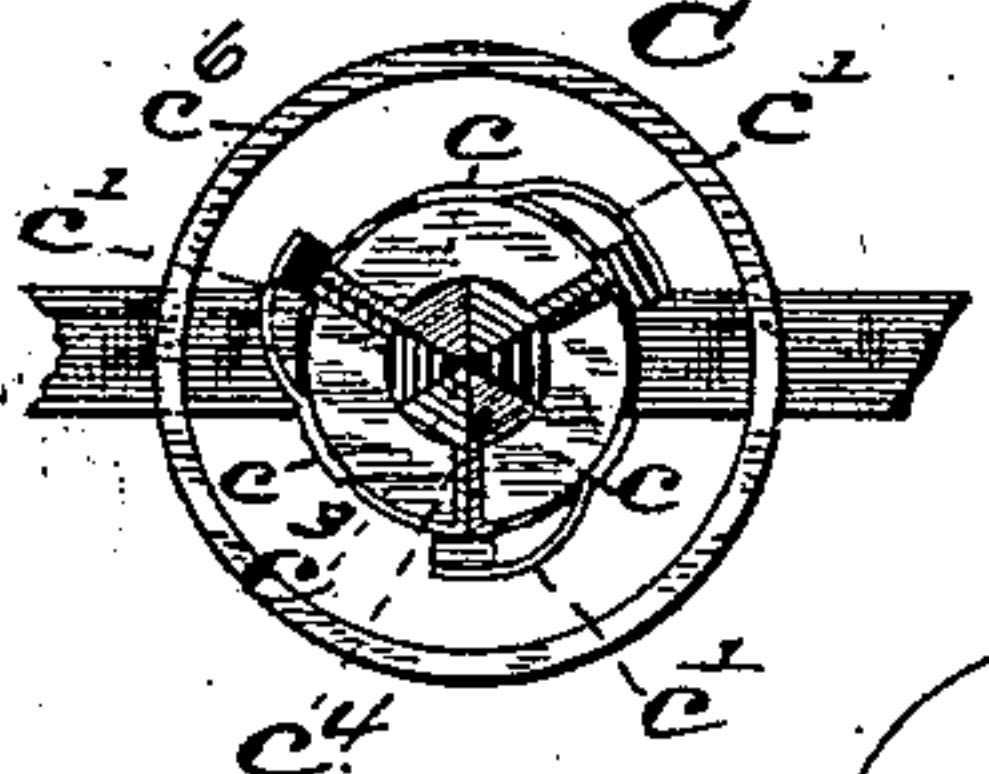
*Fig.7.*



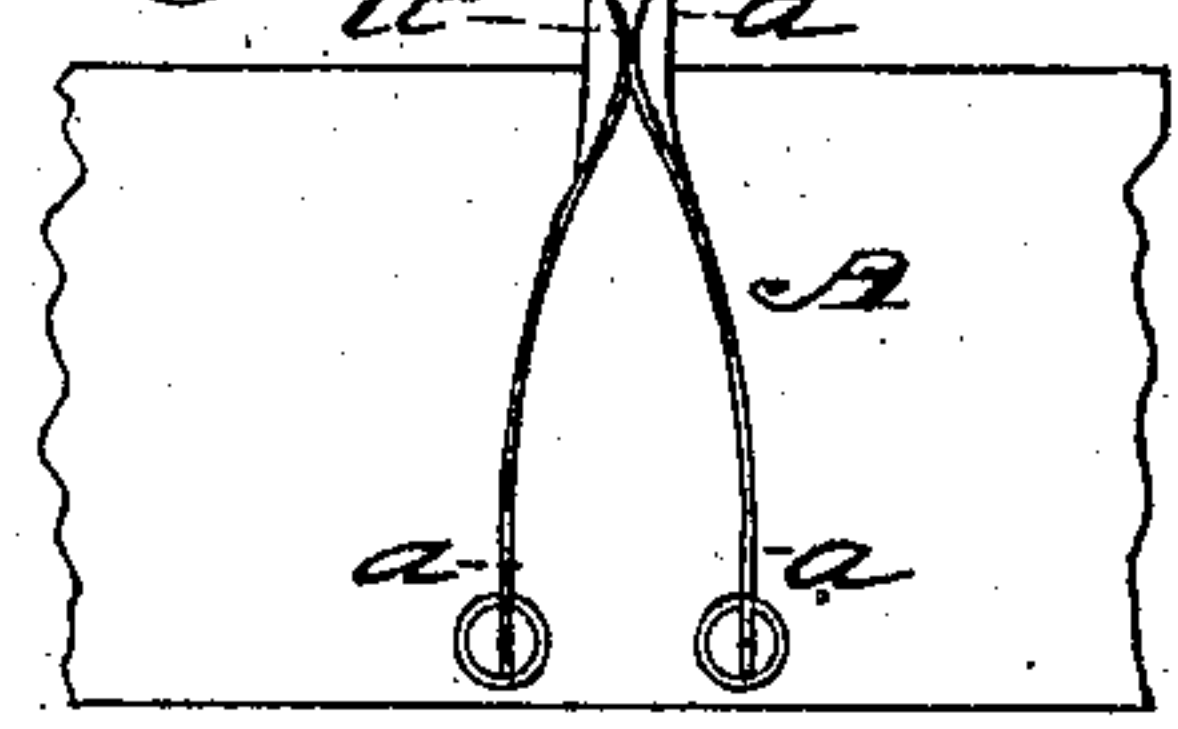
*Fig.9.*



*Fig.10.*



*Fig.11.*



Witnesses:

*N. B. Anderson.*  
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Inventors:

*Edward Ludwig Rüngert*  
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# UNITED STATES PATENT OFFICE.

EDWARD LUDWIG RÜNGERT AND JULIUS GUSTAV RÜNGERT, OF EAST ST. LOUIS, ILLINOIS.

## RATTAN-WORKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 370,355, dated September 20, 1887.

Application filed February 10, 1887. Serial No. 227,212. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD LUDWIG RÜNGERT and JULIUS GUSTAV RÜNGERT, of East St. Louis, Illinois, have jointly made a new and useful Improvement in Rattan-Working Machines, of which the following is a full, clear, and exact description.

By means of the present machine twigs, shoots, cane, and rattan can be split, trimmed, and shaved.

The improvement consists in the shape of the splitter and in the combination of guides, feed-rolls, and splitter, in the means for trimming the split and shaved portions, in the means for shaving the split portions, and in the means for obtaining more readily the proper pressure upon the feed-rolls, all substantially as is hereinafter described and claimed, and illustrated in the annexed drawings, in which—

Figure 1 is a rear elevation of the improved machine. Fig. 2 is a front elevation of the machine. Fig. 3 is a vertical section on the line 3 3 of Fig. 1. Fig. 4 is a vertical section on the line 4 4 of Fig. 2. Fig. 5 is a vertical section on the line 5 5 of Fig. 1. Fig. 6 is a plan of a splitter. Fig. 7 is a view in perspective of the trimmer. Fig. 8 is an end elevation of the machine. Fig. 9 is a bottom view of the trimmer. Fig. 10 is a front end elevation of a splitter, and Fig. 11 is a plan of one of the guides used at the receiving side of the feed-rolls in connection with a splitter. Figs. 6, 7, 9, 10, 11 are upon an enlarged scale.

The same letters of reference denote the same parts.

In operating the machine the twig is first passed through the splitting mechanism. It is introduced between the spring-arms *a*, whose inner free ends, *a'*, are shaped to inclose and bear upon the twig *T* and form a guide, *A*, Figs. 2, 5, 11, on the receiving side of the machine. The twig passes through the guide and enters one, *b*, of the passes in the feed-rolls *B B'*, Figs. 1, 2, 3, 4, 5, 8, which operate to deliver the twig to and through the splitter *C*, Figs. 1, 5, 6, 10, which is arranged in rear of the feed-rolls. The principle features of the splitter are the recessed face of the splitter and the expansible guide just within the splitter, substantially as shown more dis-

tinctly in Figs. 6, 10. The twig enters the guide, which is composed of the parts *c c c*, held in position by means of the spring-arms *c' c' c'*, which in turn are fastened to the body *c<sup>2</sup>* of the splitter, substantially as shown. The guide operates to direct the twig to the center *c<sup>3</sup>* of the splitter whose cutting-edges *c<sup>4</sup>* flare regularly outward from the center *c<sup>3</sup>*, substantially as shown, by which means a shearing-cut is provided for and the twig properly centered in the splitter, so that it shall be evenly split.

The splitter may have two, three, four, or more cutting-edges.

The portions *t* into which the twig is split are, by means of the bevels *c<sup>5</sup>*, spread apart to pass on past the splitter-body *c<sup>2</sup>*, and within the encircling band *c<sup>6</sup>*, which serves to confine the portions, so that they can be conveniently handled by the operator at the delivery side of the machine. The machine may be adapted to split the twig into two, three, or more parts, *t*, to which end there may be as many splitters. Two are shown in the drawings. After being split, the various portions are shaved to the desired thicknesses, and as follows: The feed-rolls toward the opposite end where the shaving is done are made the upper one smooth and the lower one grooved, the grooves *d', d<sup>2</sup>*, &c., diminishing in depth according as the portions *t* of the twig are thicker or thinner. Opposite that end, and on the receiving side of the machine, is a system of guides, *D, D', D<sup>2</sup>*, &c., formed by means of the base *d<sup>5</sup>*, provided with the upwardly-extended projections *d<sup>10</sup>*, Figs. 2, 3. The twig portion *t* is dropped into the desired guide *D* and entered between the feed-rolls, which operate to force the twig portion past the knife *E*, whose edge *e* is adjusted to shave the twig portion to the desired thickness. There is a passage, *e'*, beneath the knife for the main part *t'* to pass, and the shaving *t<sup>2</sup>* escapes over the knife, substantially as shown.

When it is desired to trim the side edges of the shaved withe, it is passed through the trimmer *F*, Figs. 2, 4, 7, 9, the withe is entered in the guide *f*, from which it passes between the upright knives *f'*, which, by the means substantially as shown in Fig. 9, are made adjustable toward and from each other, so that the withe can be trimmed wider or narrower, as



desired. The feed-rolls serve to draw the trimmed withes through the machine, as shown in Fig. 4. The trimmer is located between the splitting and the shaving mechanisms.

- 5 It is desirable in machines such as the present to be able to readily adjust the upper feed-roll with reference to the lower feed-roll. To this end the practice has been to apply pressure at both ends of the rolls, and by means  
10 of screws and springs at the two ends *g g* of the machine *G*. We have ascertained that it is better to employ but a single screw and spring, *H*, and that at the middle of the machine, substantially as shown in Figs. 1, 2, 8, as  
15 thereby the feed-rolls can be at once adjusted, and in such a manner as to facilitate the varied operations carried on with the machine.

We claim—

- 20 1. In a cane or twig machine, the splitter *C*, having the recessed face and flaring cutting-edges *c<sup>4</sup>*, and the expansible guide composed of parts *c*, held in position by the spring-arm *c'*, just within the splitter, substantially as described.
- 25 2. In a splitter, *C*, the combination of the guide composed of the parts *c*, the spring-arm *c'*, and the body *c<sup>2</sup>*, to which the spring-arm is secured, substantially as described.
- 30 3. The splitter *C*, having the guide composed of the parts *c*, the spring-arm *c'*, the body *c<sup>2</sup>*, the flaring cutting-edges *c<sup>4</sup>*, and the bevels *c<sup>5</sup>*, as described.
4. The combination of the splitter *C*, having the splitter body *c<sup>2</sup>*, the recessed face, the ex-  
35 pansible guide, and the cutting-edges with

the encircling - bands, substantially as described.

5. In the splitter *C*, the combination of the guide members or parts *c*, the spring-arms *c'*, the body *c<sup>2</sup>*, having the said arms attached thereto, 40 and the cutting-edges *c<sup>4</sup>*, flaring outwardly from the center, and bevels *c<sup>5</sup>*, and the encircling-band *c<sup>6</sup>*, substantially as described.

6. The combination of the guide *A*, having spring-arms *a* and free ends *a'*, the feed-rolls 45 *B B'*, and the splitter *C*, having the guide composed of the parts *c*, held in position by the spring-arm *c'*, and the body *c<sup>2</sup>*, substantially as described.

7. The combination, in a rattan working ma- 50 chine, of the feed-rolls, grooved as described, the splitter *C*, the shaving-knife *E*, and the trimmer *F*, having guide *f*, and upright knives *f'*, substantially as described.

8. The combination of the guides *A*, having 55 the spring-arms *a*, provided with free ends *a'*, the grooved feed-rolls, the splitter *C*, having the expansible guide just within it and constructed as described, the guides *D D' D<sup>2</sup>*, &c., the knife *E*, the trimmer *F*, having guides *f* 60 and upright knives *f'*, and the spring and screw *H*, the several parts arranged and operating substantially as described.

Witness our hands this 29th day of January, 1887.

EDWARD LUDWIG RÜNGERT.  
JULIUS GUSTAV RÜNGERT.

Witnesses:

C. D. MOODY,  
WILLIAM LIPS.