

No. 878,071.

PATENTED FEB. 4, 1908.

R. LAING.

MACHINE FOR PRESSING LINES OR DESIGNS INTO ROLLERS.

APPLICATION FILED APR. 26, 1907.

2 SHEETS—SHEET 1.

Fig. 1.

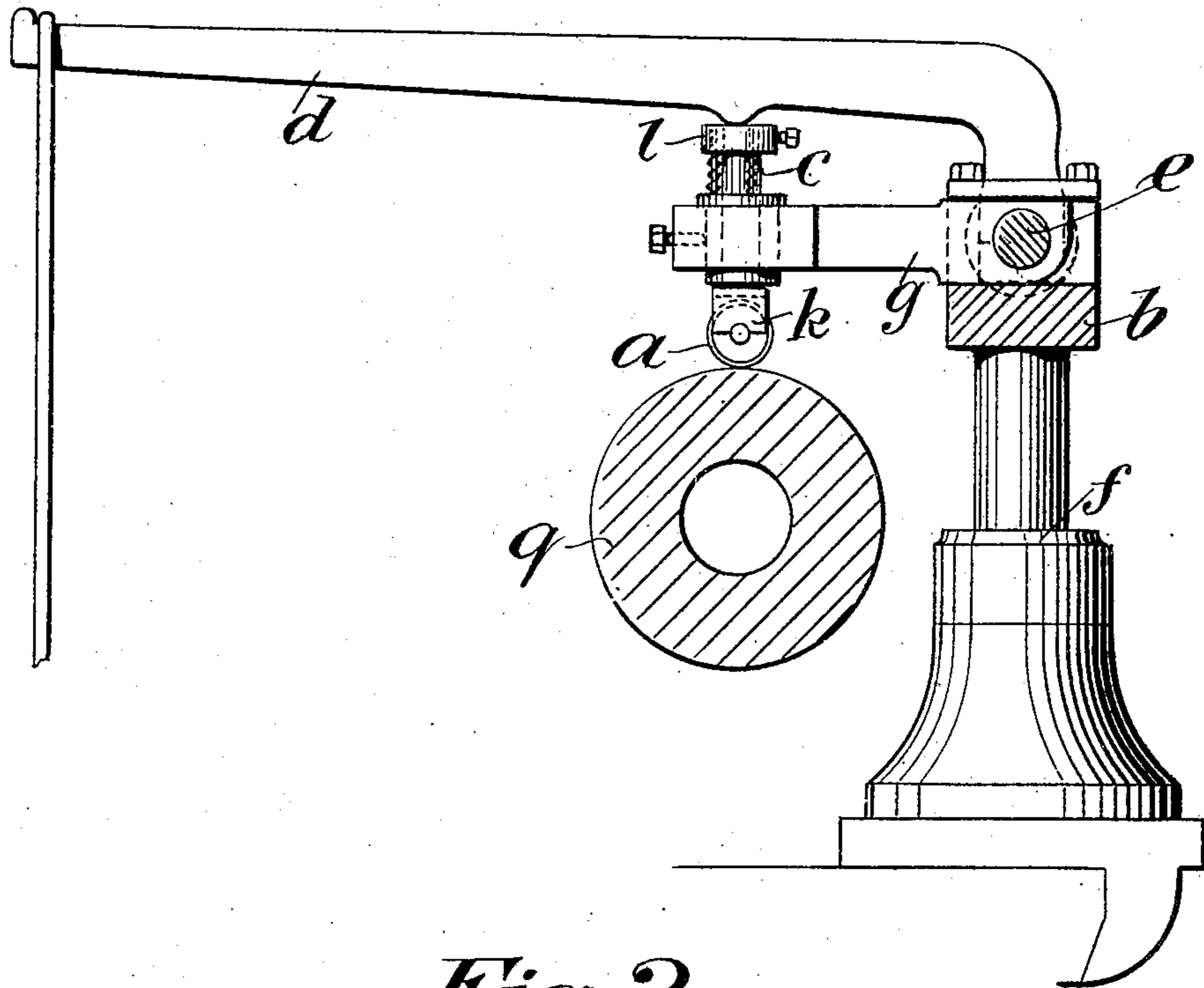
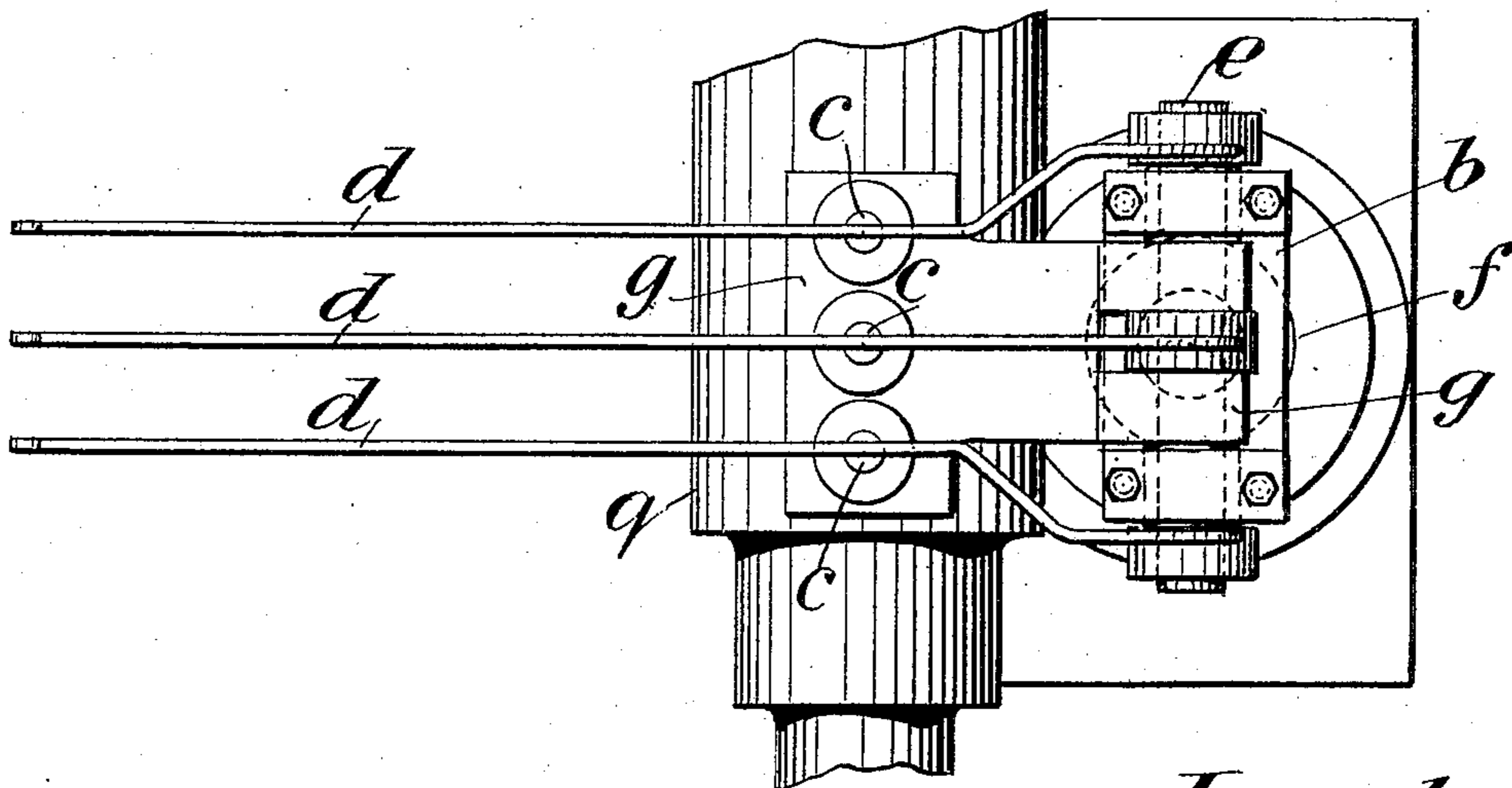


Fig. 2.



Witnesses.

Alfred Bosshardt.
Stanley Bramall.

Inventor.

Robert Laing.
Per J. T. Bosshardt.
Attorney.

No. 878,071.

PATENTED FEB. 4, 1908.

R. LAING.

MACHINE FOR PRESSING LINES OR DESIGNS INTO ROLLERS.

APPLICATION FILED APR. 26, 1907.

2 SHEETS—SHEET 2.

Fig. 3.

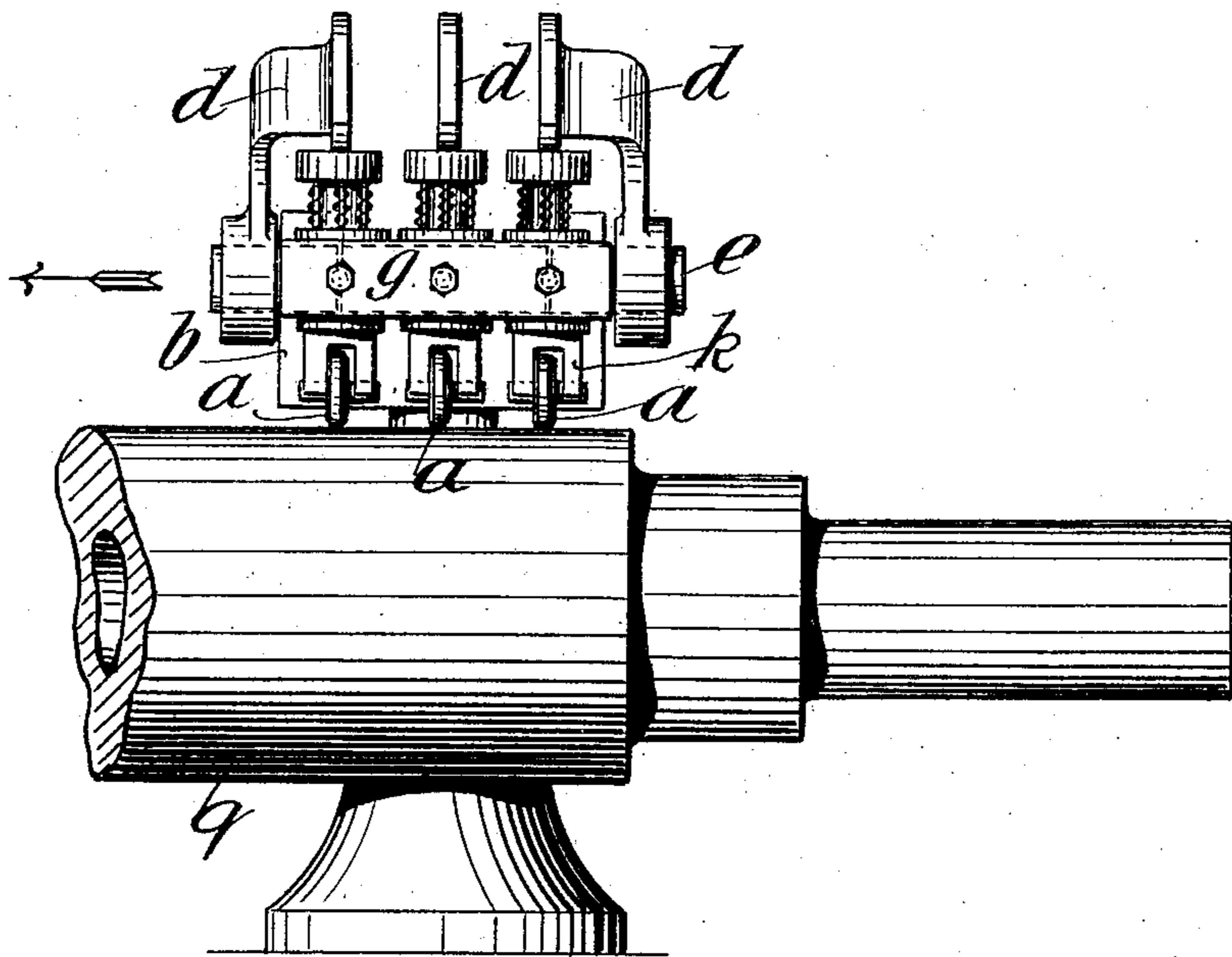


Fig. 4.

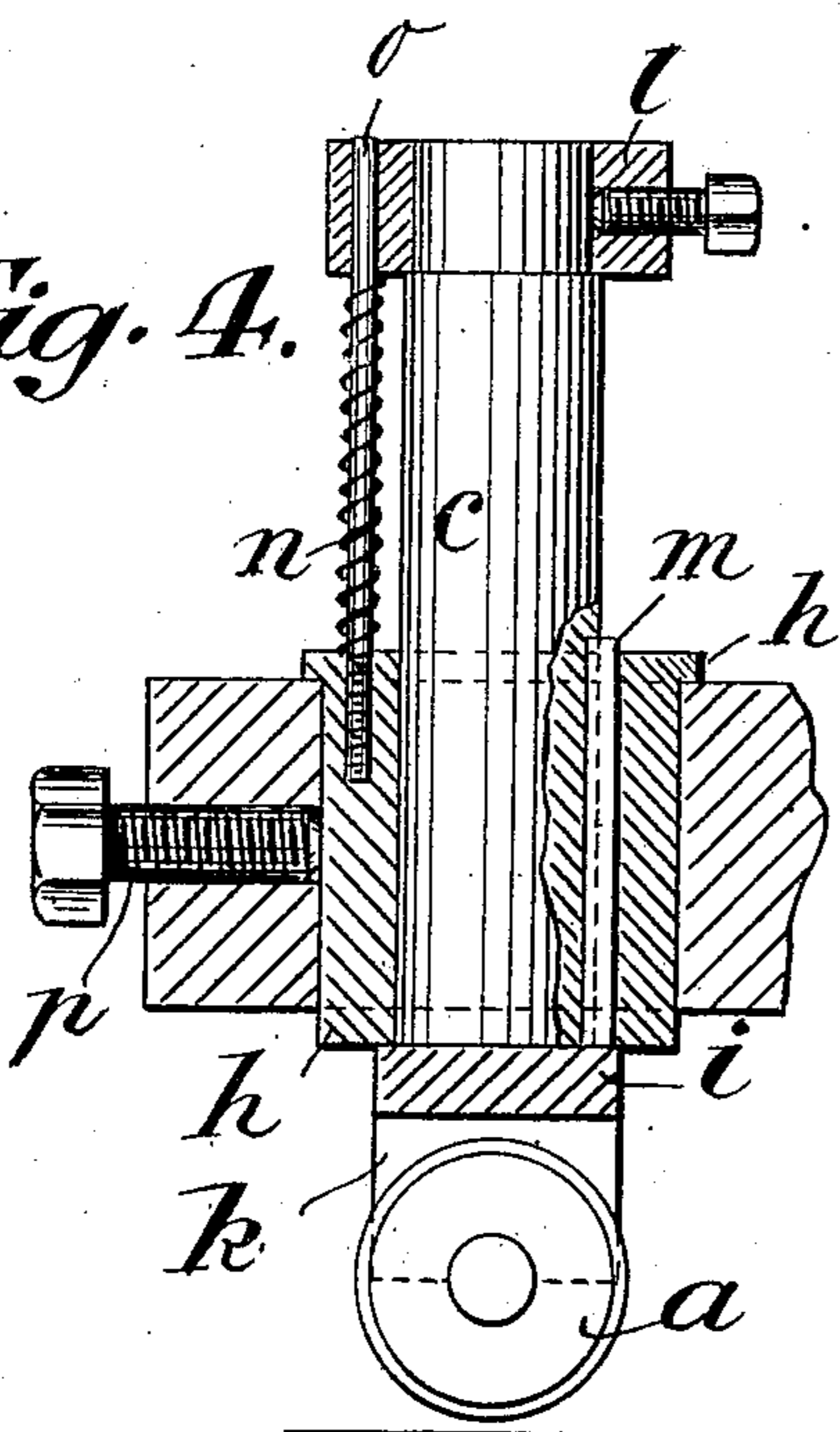
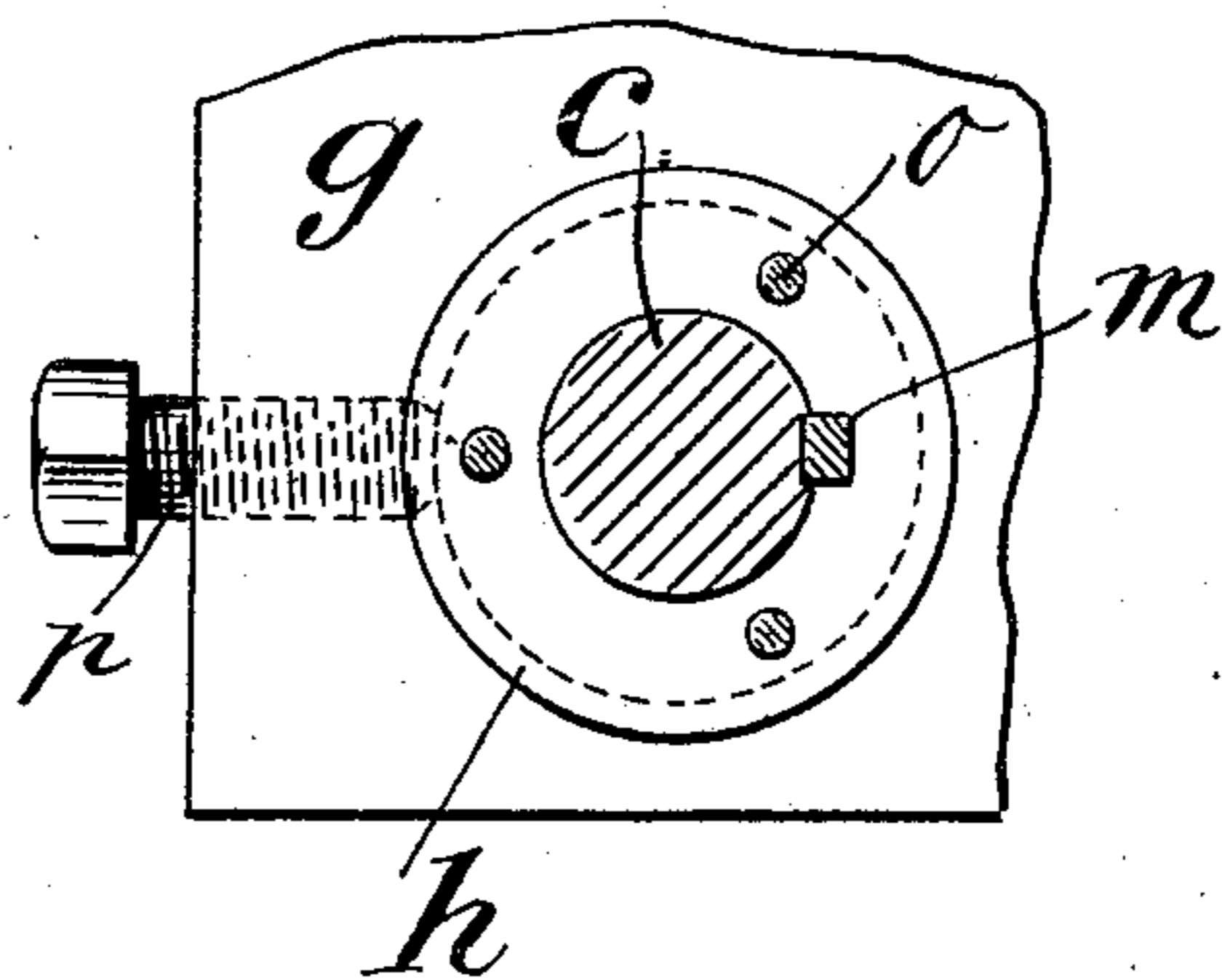


Fig. 5.



Witnesses.

Alfred Bosshardt,
Stanley Bramall,

Inventor.
Robert Laing.
Per F. Bosshardt,
Attorney.

UNITED STATES PATENT OFFICE.

ROBERT LAING, OF RADCLIFFE, ENGLAND.

MACHINE FOR PRESSING LINES OR DESIGNS INTO ROLLERS.

No. 878,071.

Specification of Letters Patent.

Patented Feb. 4, 1908.

Application filed April 26, 1907. Serial No. 370,414.

To all whom it may concern:

Be it known that I, ROBERT LAING, subject of Great Britain, residing at Radcliffe, Lancashire, England, have invented new and useful Improvements in Machines for Pressing Lines or Designs into Rollers, of which the following is a specification.

This invention relates to improvements in machines for pressing lines or designs into rollers used for imparting a luster or silky appearance to cotton fabrics, known as the "Schreiner" process.

Hitherto this type of machine had only one mill and the said lines or designs being pressed into the roller gradually, that is to say, the required depth or correct form of the impression not being attainable by one run of the mill, the mill had to be run a number of times over the same impression which rendered the operation exceedingly slow and expensive.

The object of my invention is to provide means whereby a number of the said mills can be used simultaneously and the desired lines or designs thereby pressed into the roller in at least half the time than hitherto has been possible, thus saving a great deal of labor and consequently cheapening the operation considerably. I attain these objects by the means illustrated in the accompanying drawings, in which—

Figure 1 is an end view, Fig. 2 a plan, and Fig. 3 a front view of a mill head constructed in accordance with my invention of a machine for pressing lines or designs into rollers. Fig. 4 is a vertical section and Fig. 5 a sectional plan of a portion thereof on an enlarged scale.

Similar letters refer to similar parts throughout the several views.

In carrying out my invention and referring to the figures generally, to permit of employing a number of mills *a* on one head *b*, I form the mill holder *c* and pressure lever *d* of each mill separate from and to act independently of each other. For this purpose I fulcrum to the shaft *e* on the mill head stand *f* which latter travels along the work in the usual way, a frame *g* adapted to rest upon the mill head *b* and capable of being raised. In the free end of this frame I mount vertical bushes *h* in number equal to the number of mills *a* to be employed, say as in the present instance, three. In each of these bushes is mounted the holder *c* having at its lower end a shoulder *i* and an open

bearing *k* to receive the mill *a* and at its upper end is secured a collar *l*, see more particularly Figs. 4 & 5. The said holder is prevented from turning in the bush *h*, say by a key *m* engaging the same, but capable of vertical movement and normally held against the bush *h* by means of a spring or springs *n*. By preference I employ three of these springs between the collar *l* and the bush *h* each around a pin *o* screwed into the top of the bush *h* and its free end passing through a hole in the collar *l*.

The bush *h* has a shoulder at its top to rest upon the frame *g* and by a set screw *p* is rendered rotarily adjustable to permit of setting the mill *a* at any required angle to the work *q*.

On the top of each mill holder *c* rests the pressure lever *d* preferably fulcrumed to the shaft *e*, one in the middle and one at each end thereof, capable of being raised independently of the mill frame *g*, and each other. The frame *g* carrying all the mill holders *c*, all the mills *a* travel together along the work *q*.

In starting the work, the leading mill is brought first into operation. When the second holder has arrived at the beginning of the work, the second mill is brought into operation, that is to say, placed into the impression made by the first mill and in the same manner afterwards the third mill.

It will thus be seen that each mill works entirely independent of the other that is to say, the mill holders *c* being independently of each other vertically movable and each having its own weighted lever, the pressure required for each mill can be successively increased at will which permits of having a number of mills simultaneously working.

It is obvious that in some cases it may be found practical to employ only two or more than three mills *a* which latter can be readily done by correspondingly lengthening the mill head shaft *e* and frame *g*.

I claim:

1. In a machine for pressing lines and designs into rollers of the character described, a mill head, a frame fulcrumed thereto, a number of mills individually vertically movable in the said frame and a pressure lever for each of the said mills, all combined substantially as and for the purpose set forth.

2. In a machine for pressing lines and designs into rollers of the character described, a mill head, a frame fulcrumed thereto, a number of mill holders individually vertically movable in the said frame, a pressure lever

for each of and means for the rotary adjustment of said holders, all combined substantially as and for the purpose set forth.

3. In a machine for pressing lines and designs into rollers of the character described, a mill head, a frame fulcrumed thereto, a number of individually vertically movable mill holders and a bush around each in the said frame, a pressure lever for each of and
5 springs supporting the said holders, means
10 for preventing the rotation of the said holder

in the said bush and means for the rotary adjustment of the said bush in the said frame, all combined substantially as and for the purpose set forth.

15

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT LAING.

Witnesses:

ALFRED BOSSHARDT,
STANLEY V. BRAMALL.