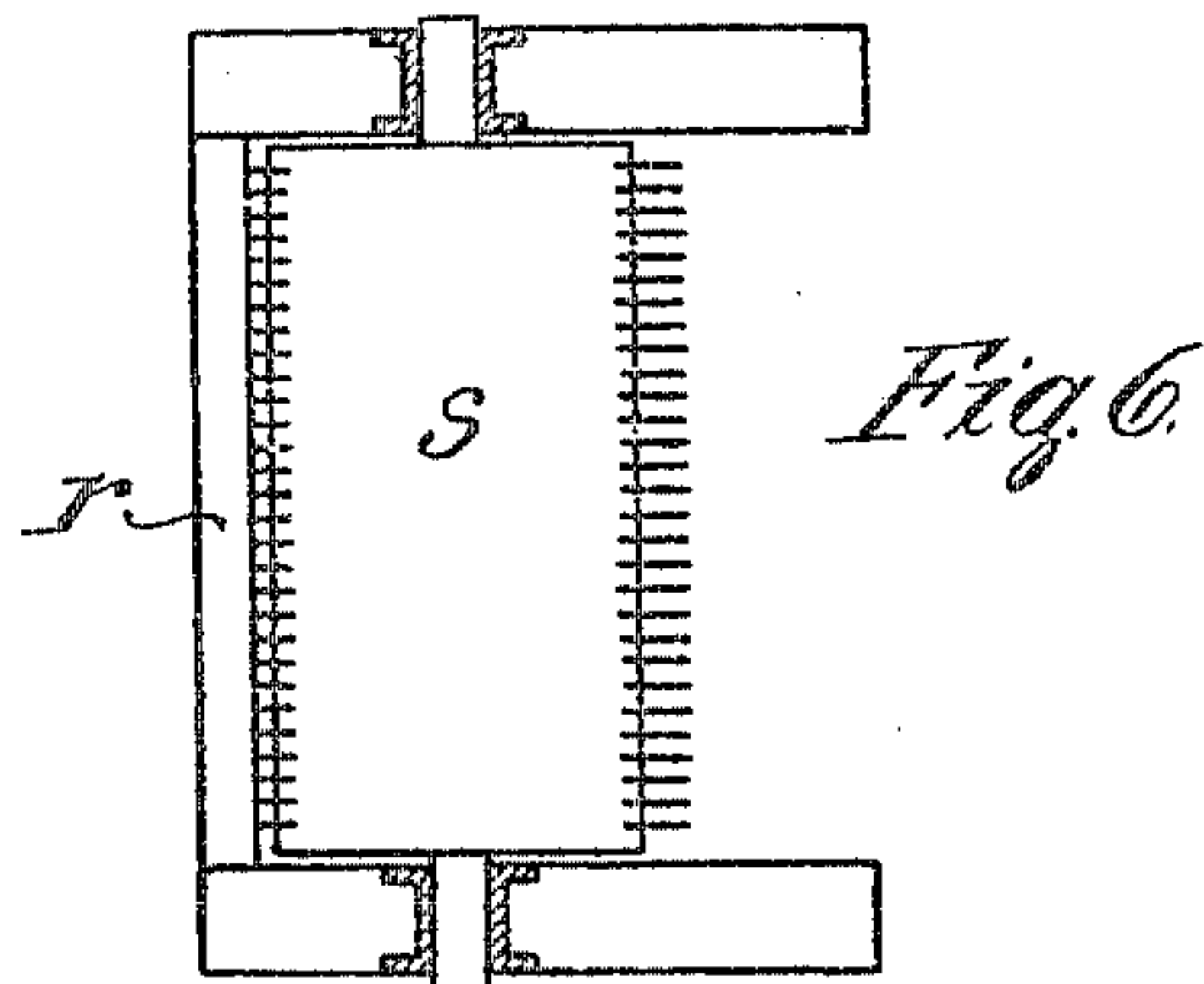
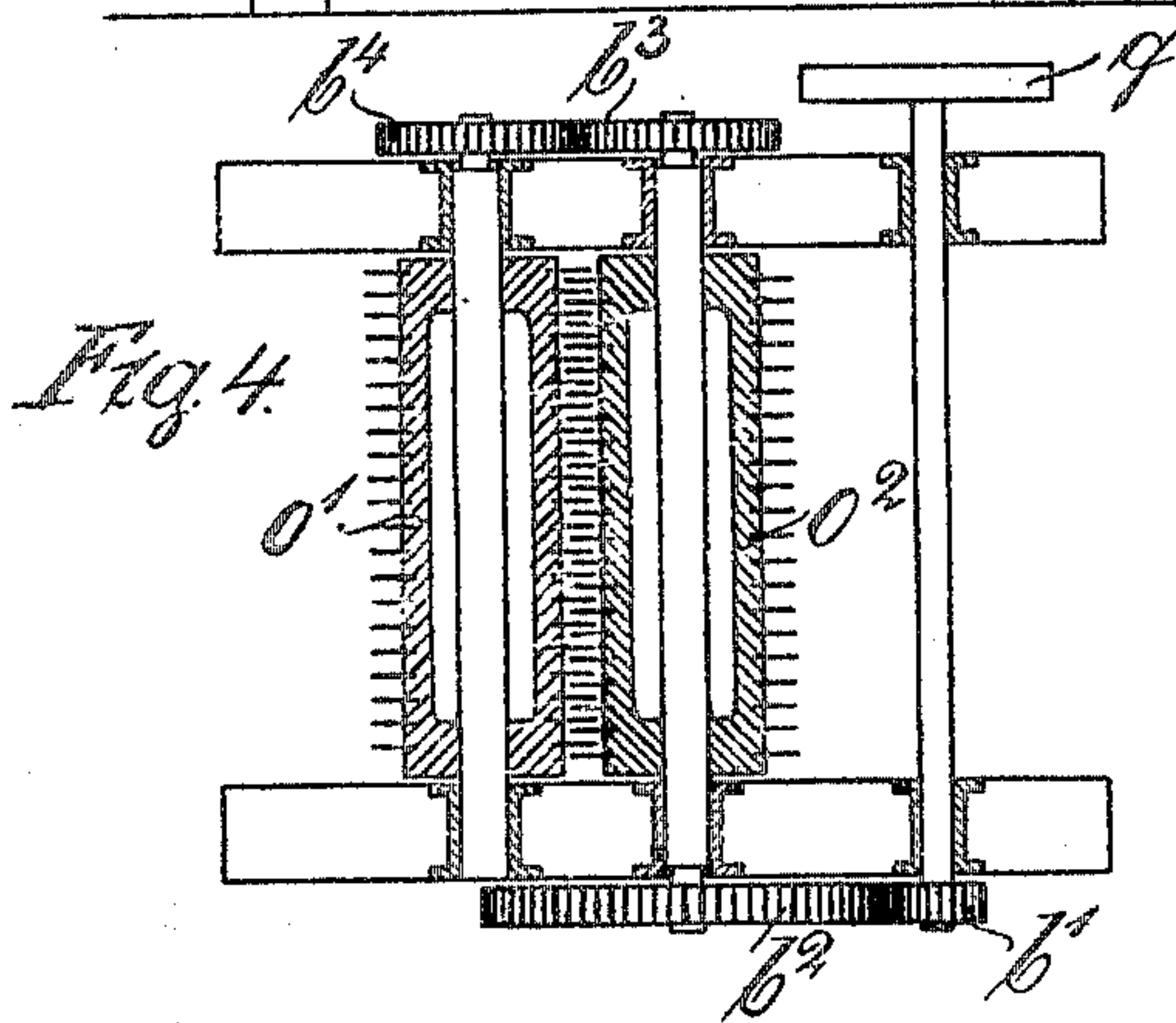
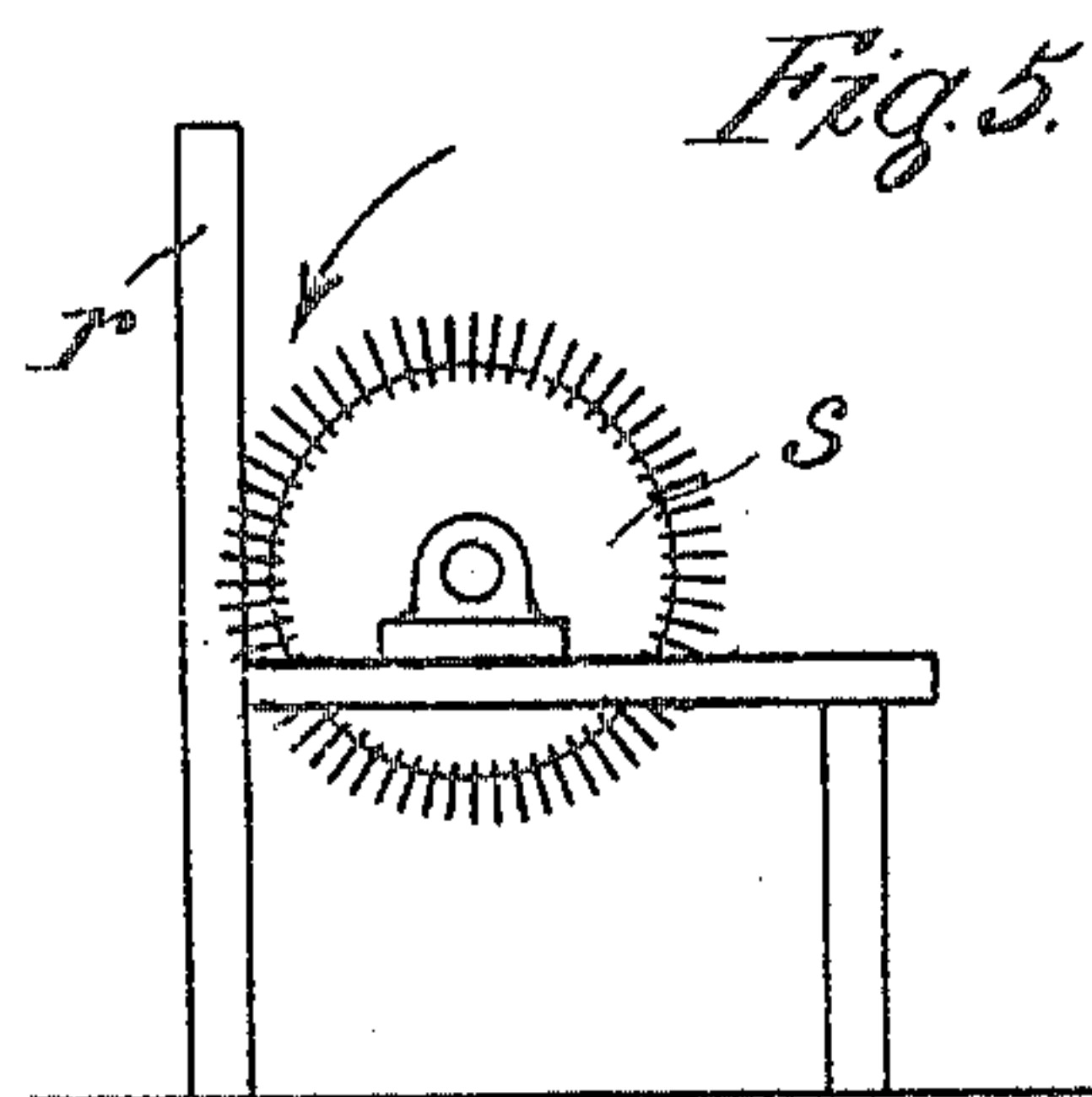
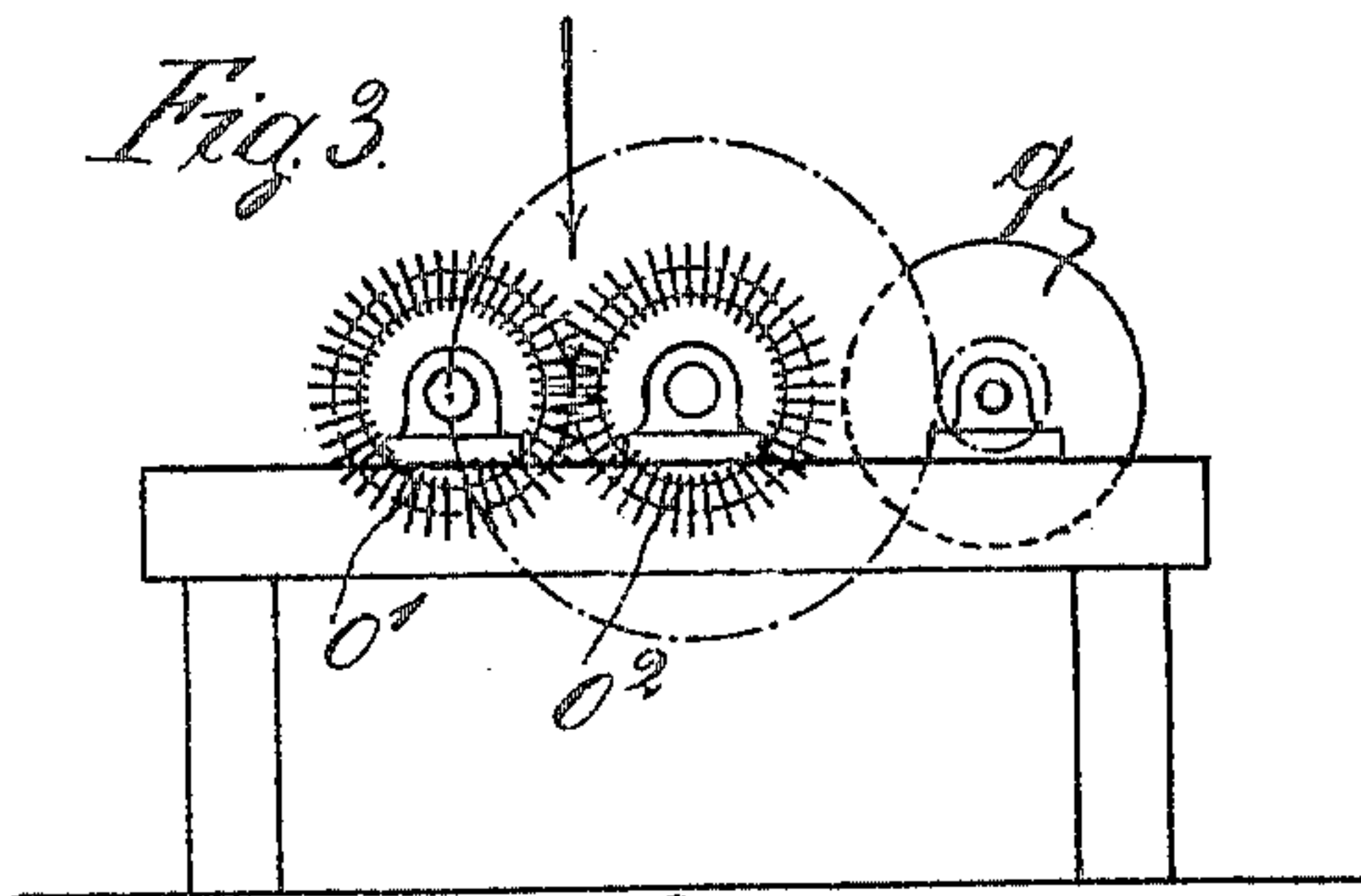
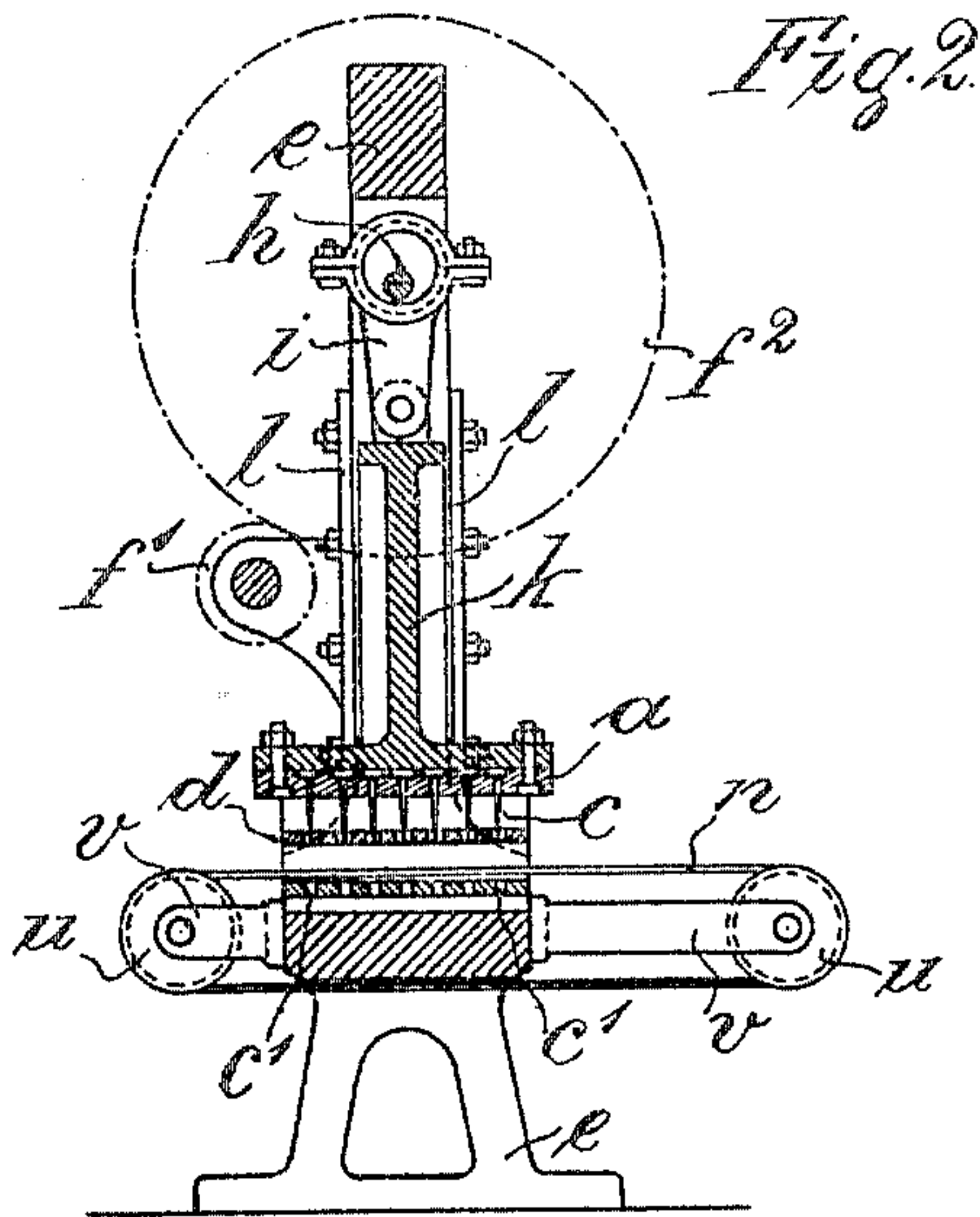
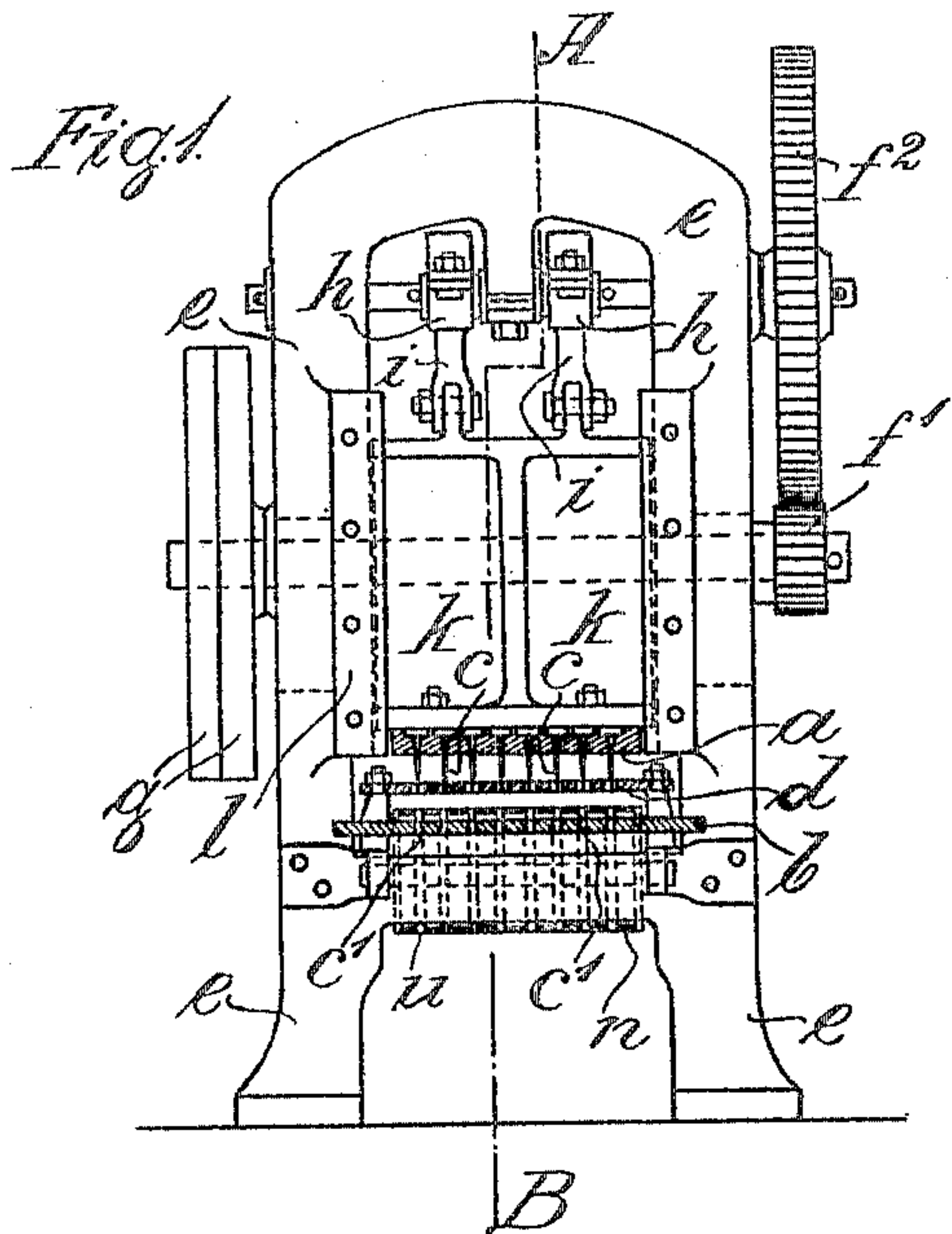


H. GOLDSCHMIDT.
DRESSING TINNED SHEET IRON BOXES.
APPLICATION FILED JAN. 30, 1905.



Witnesses:
Carl Rupp.
2
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Inventor:
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UNITED STATES PATENT OFFICE.

HANS GOLDSCHMIDT, OF ESSEN-ON-THE-RUHR, GERMANY.

DRESSING TINNED SHEET-IRON BOXES.

No. 804,530.

Specification of Letters Patent.

Patented Nov. 14, 1905.

Application filed January 30, 1905. Serial No. 243,403.

To all whom it may concern:

Be it known that I, HANS GOLDSCHMIDT, chemist, a subject of the King of Prussia, German Emperor, and a resident of Essen-on-the-Ruhr, in the German Empire, have invented a new and useful Method of Dressing Tinned Sheet-Iron Boxes, of which the following is an exact specification.

My invention relates to a method of and apparatus for dressing tinned sheet-iron boxes by machines for the purpose of separating the tin and regaining the tin and the iron of the boxes. Hitherto only the tin scraps were utilized for removing the tin and gaining both iron and tin; but the boxes themselves have, however, scarcely been worked off for the above-mentioned purpose, because the boxes could not be used in their original form. It was necessary to compress the boxes by hand or by hammering, and then the form of the boxes was not good for untinning the boxes, because the solving fluid could not enter the surfaces of the boxes in equal manner on all sides. The following conditions must, therefore, be fulfilled for practicing the matter: The boxes must be compressed, so as to occupy a small room only, and, furthermore, the dressing of the boxes must be so effected that the dissolving agent can circulate at both sides of the plates from which the tin is to be taken off. These conditions are fulfilled in my new method of dressing tinned sheet-iron boxes, consisting therein that the boxes are pressed together between mechanically approaching and retiring surfaces and are simultaneously or afterward perforated by suitable means.

In order to make my invention more clear, reference is made to the accompanying drawings, in which—

Figure 1 shows a front view of a convenient apparatus for practicing my method. Fig. 2 is a cross-section on line A B of Fig. 1. Fig. 3 shows another constructional form in side view. Fig. 4 is a horizontal section of the apparatus according to Fig. 3. Fig. 5 is a further constructional form in side view. Fig. 6 is a corresponding plan view.

In the drawings, *e* is the standard of the apparatus.

f' *f*² are tooth-wheels actuated by any convenient means driving the pulley *g*, fastened to the axle of tooth-wheel *f'*.

h *h* are two eccentrics fastened to the axle of wheel *f*² and moving the rods *i* *i* up and down. The rods *i* are fastened at their lower ends to a plate *k*, guided in the frame by the

guide-pieces *l* *l*. Plate *k* carries at its lower end a plate *a*, to which points *c* *c* are detachably secured. *b* is a second plate strongly fixed on the standard *e* parallel to and opposite plate *a* and being provided with holes *c'* *c'*, into which the points *c* *c* enter in passing down. *d* is a second plate between *a* and *b*, with holes in which the points *c* *c* may remain in their utmost position.

n is a belt for feeding the box to be dressed, consisting of single strips and arranged in corresponding grooves of the rollers *u* *u*, mounted in frames *v* *v*. The belt *n* must be formed from single strips in order to be not destroyed by the points *c* *c*.

The working of the apparatus is as follows: The boxes to be dressed are laid down upon band *n* and by conveniently actuating the rollers *m* are brought upon plate *b*. Now the plate *a* is moved down, thereby compressing and perforating the boxes by means of the points *c* *c*. Now the plate or carrier *k* then retires in moving upward, the plate *d* frees the now compressed and perforated box from the upward moving point *c*, the band further advances and carries the dressed box out of the apparatus, the box being now ready for taking off the tin and regaining the iron. For surely freeing the boxes from the upward moving points *c* the plate *d* may also be moved down and approached to the plate *b*.

Fig. 3 shows an arrangement in which two rollers *o'* *o*² are provided with points upon their circumference and are arranged parallel to and near each other, so that in turning both rollers the points enter between each other. *q* is a pulley actuated by any convenient means and driving the gears *b'* *b*² *b*³ *b*⁴, thereby rotating the rollers *o'* *o*². The boxes to be dressed are placed from above in the direction of the arrow, Fig. 3, between both rollers, are seized by the points and drawn in between both rollers and leave the apparatus after being compressed and perforated beneath the rollers.

Figs. 5 and 6 indicate an apparatus consisting of a plate *r*, a roller *s*, fitted out upon its circumference with points. The roller may be rotated in any convenient manner, and in rotating its points enter corresponding holes in the plate *r*. The boxes to be dressed are placed between *r* and roller *s* in the direction of the arrow, Fig. 5, are drawn down, and leave the apparatus after being compressed and perforated.

The apparatus described only illustrates

some of the best devices for practicing my method and may be varied in different ways. For instance, instead of reciprocating the carrier *k* by means of eccentrics means may
5 be devised which only raise the carrier *k*, and thereby the plate *a*, and then release these latter, so that the carrier *k*, with its plate *a*, falls down and acts in the manner of a stamping-hammer. The free falling is, however,
10 limited so that the surfaces of the boxes do not touch each other, so as to allow to circulate afterward the dissolving agent on all sides of the plates.

I am aware that further changes in the form
15 and proportion of parts and details of construction of the devices herein shown and described can be made without departing from the spirit or sacrificing the advantages there-

of, and I therefore reserve the right to make such changes as partly fall within the scope 20 of the same.

Having thus fully described the nature of my invention, what I desire to secure by Letters Patent of the United States is—

Method of dressing tinned boxes, consist- 25 ing in compressing the boxes between mechanically-moved surfaces and perforating the boxes, substantially as described and for the purpose set forth.

In witness whereof I have hereunto set my 30 hand in the presence of two witnesses.

HANS GOLDSCHMIDT.

Witnesses:

WILLIAM ESSENWEIN,
PETER LIEBER.