

(No Model.)

3 Sheets—Sheet 1.

R. A. BAUMGARTNER.
DECORTICATING MACHINE.

No. 471,372.

Patented Mar. 22, 1892.

Fig. 1.

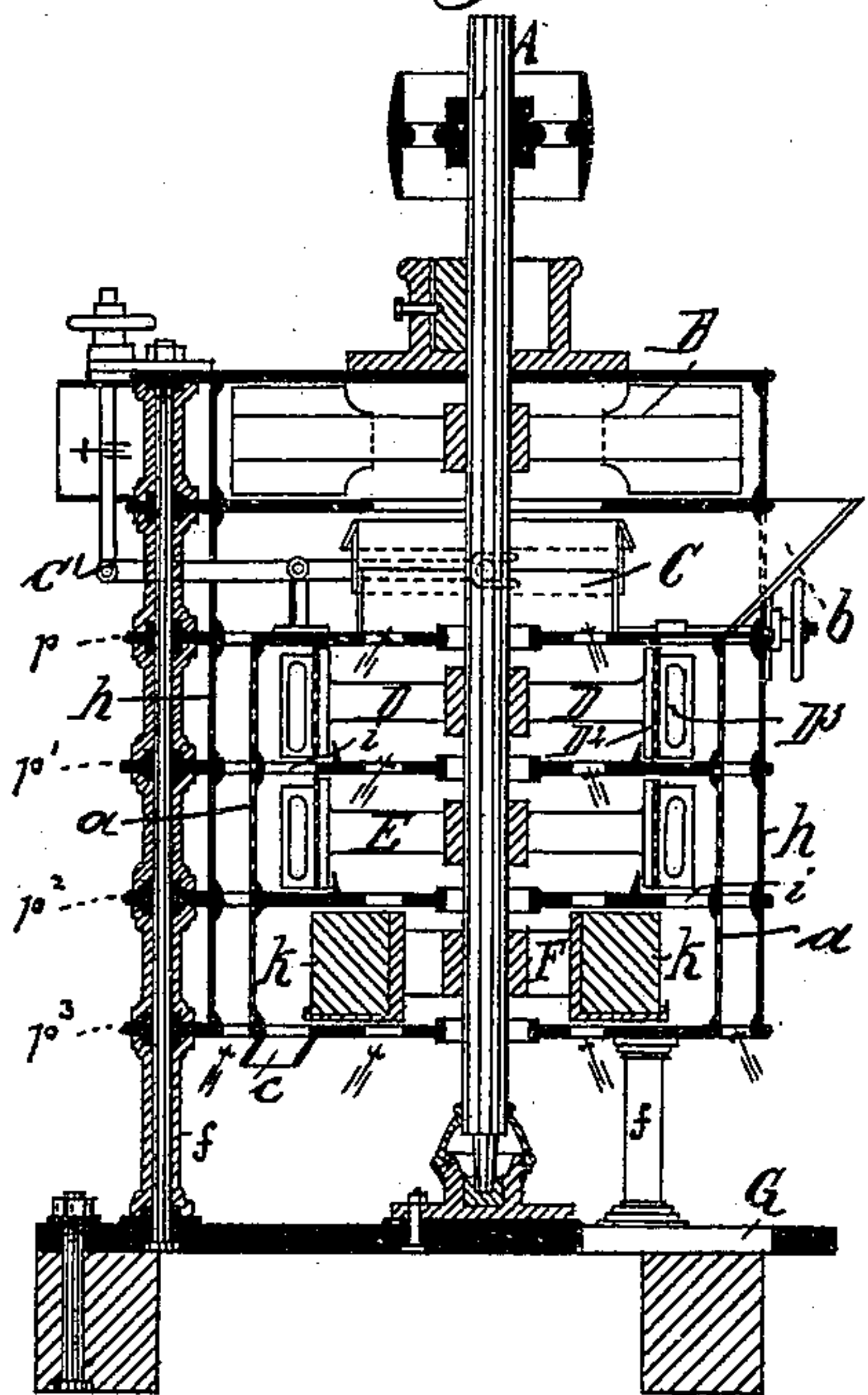


Fig. 2.

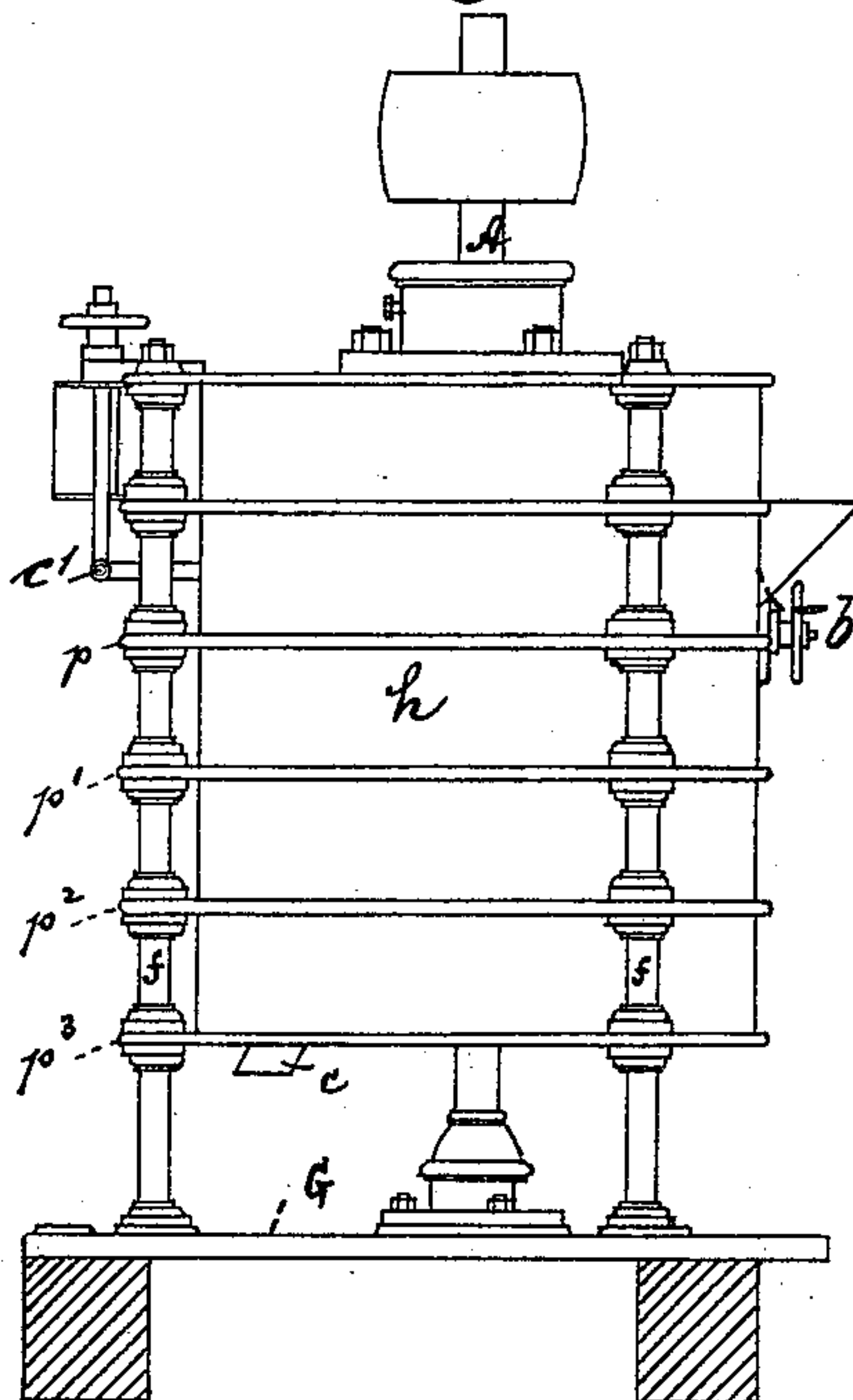


Fig. 3.

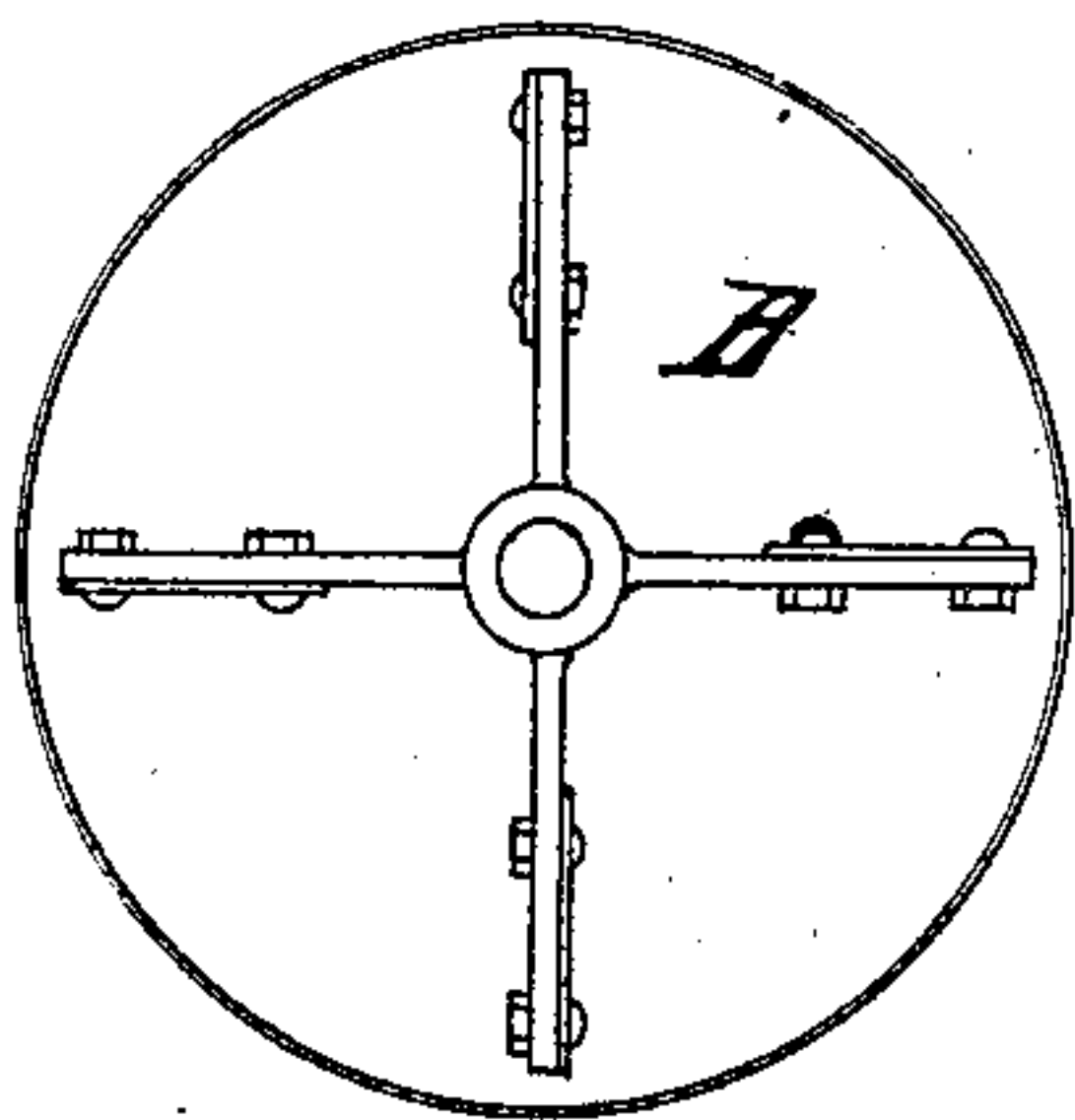


Fig. 4.

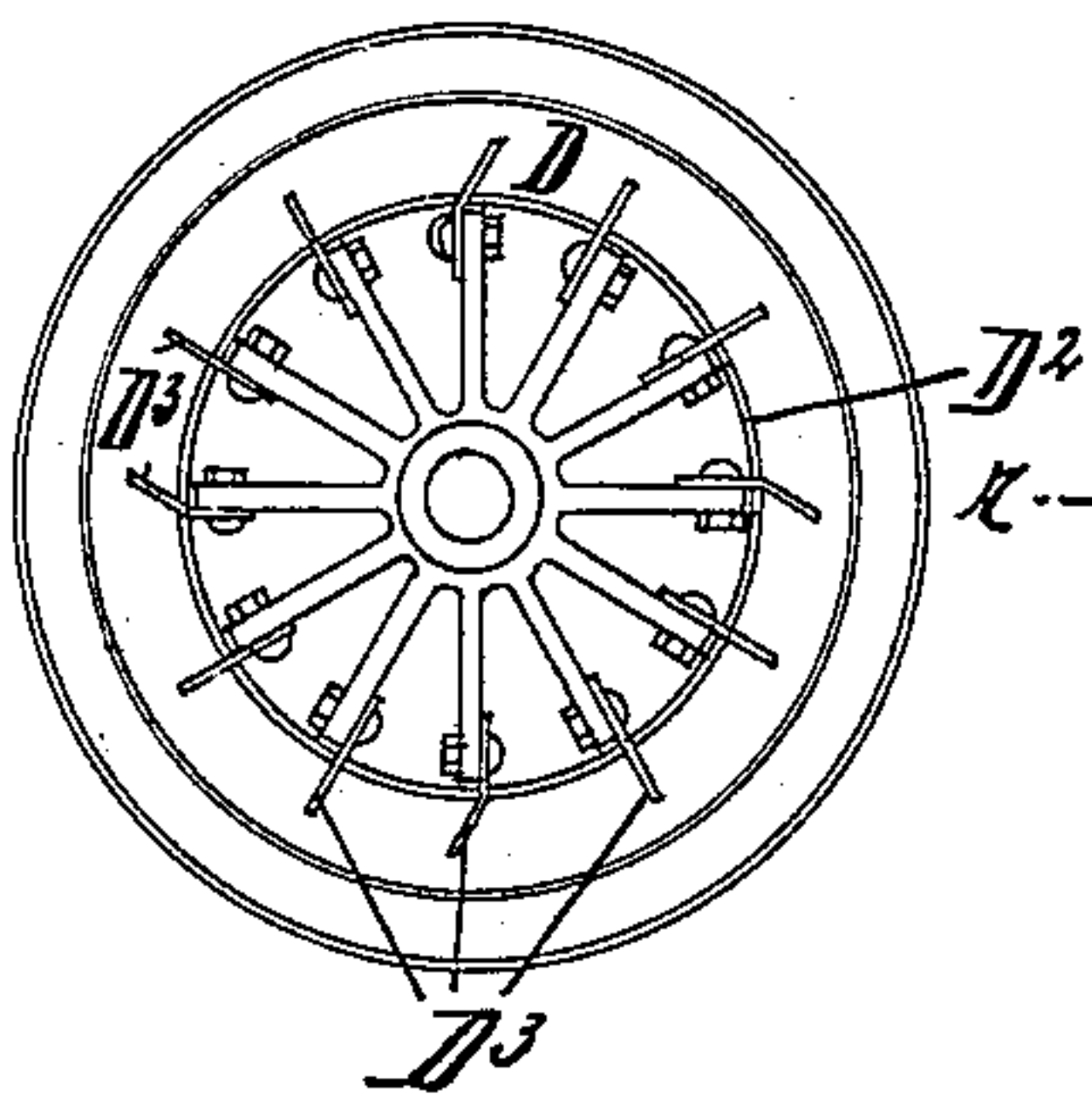
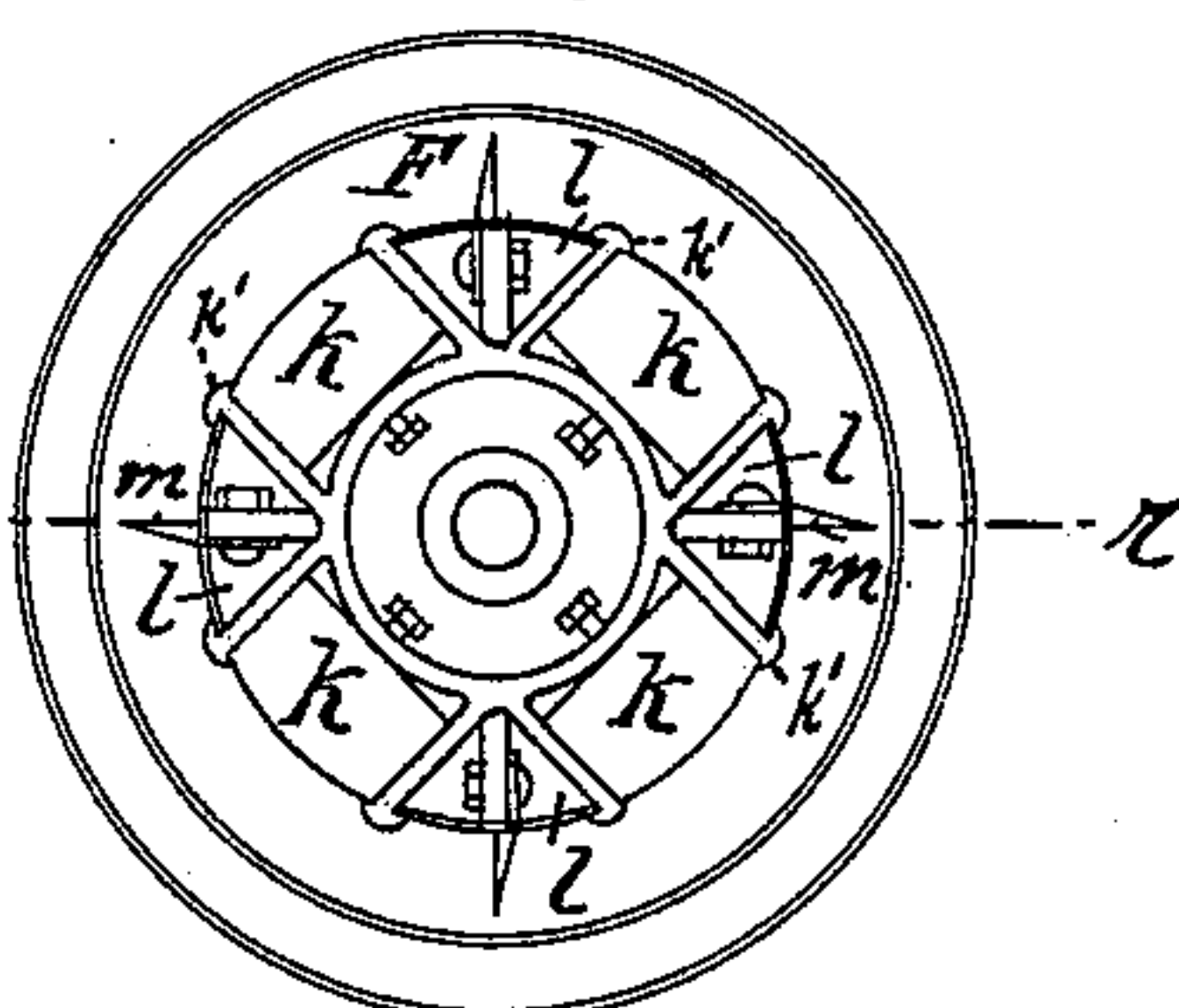


Fig. 5.



Witnesses:
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A. Joughmans

Inventor:
R. A. Baumgartner
by his attorneys
Roeder & Briesen

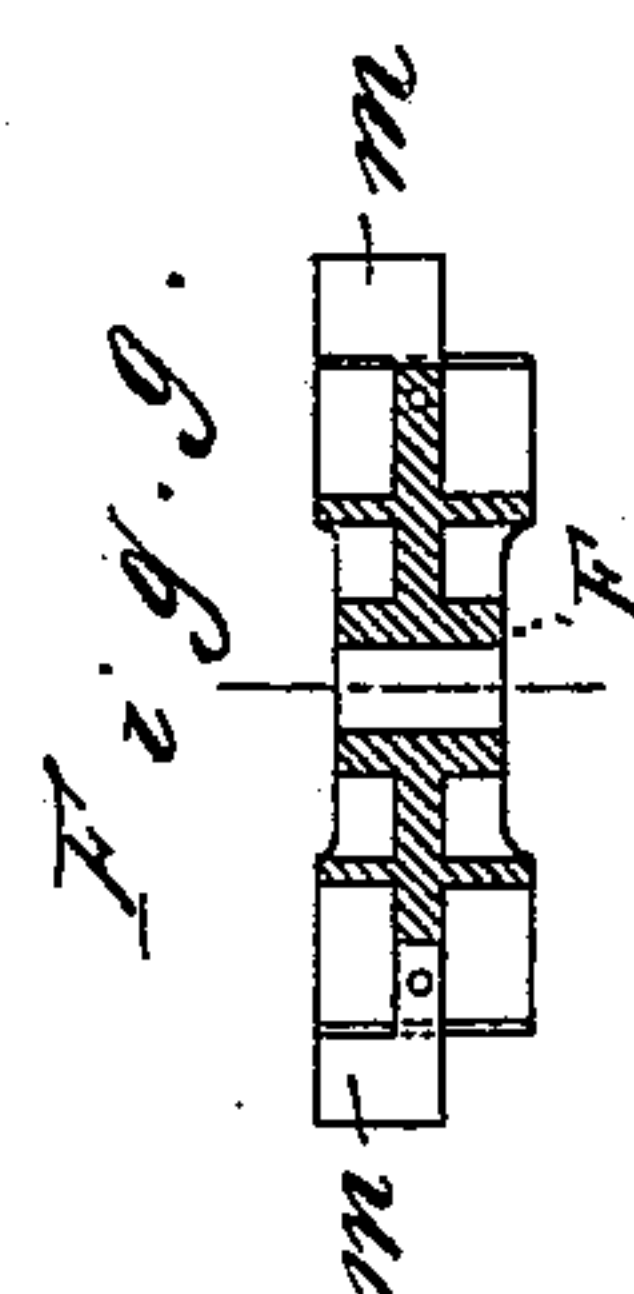
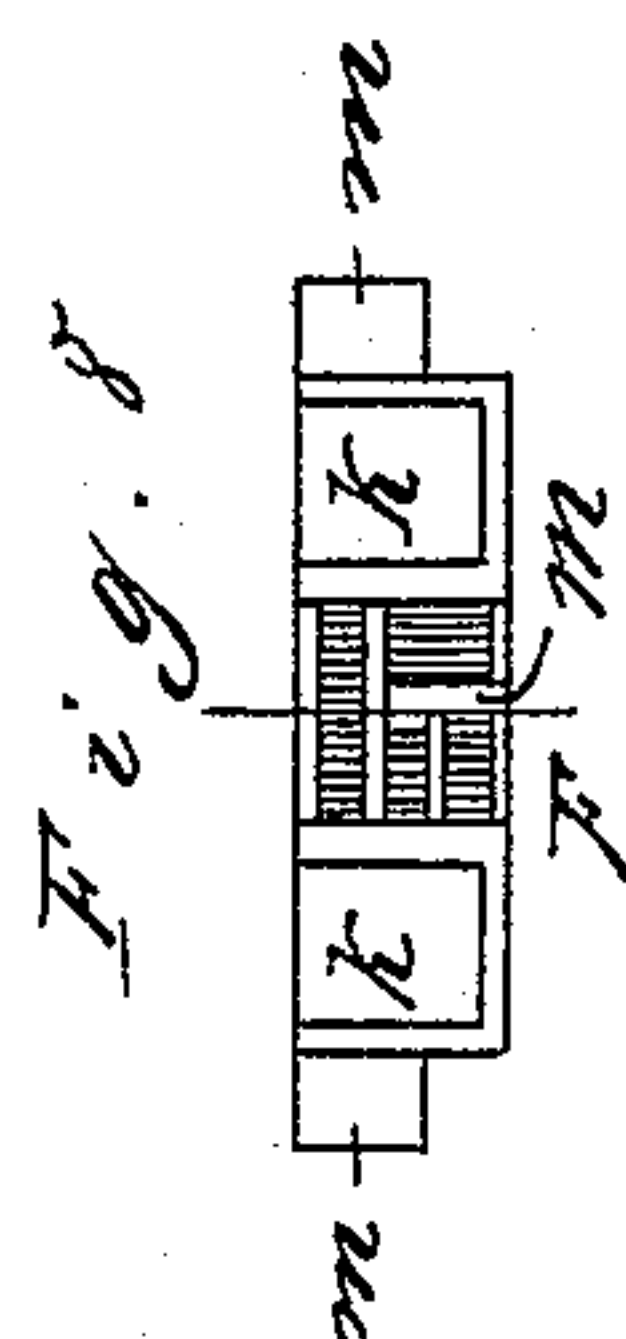
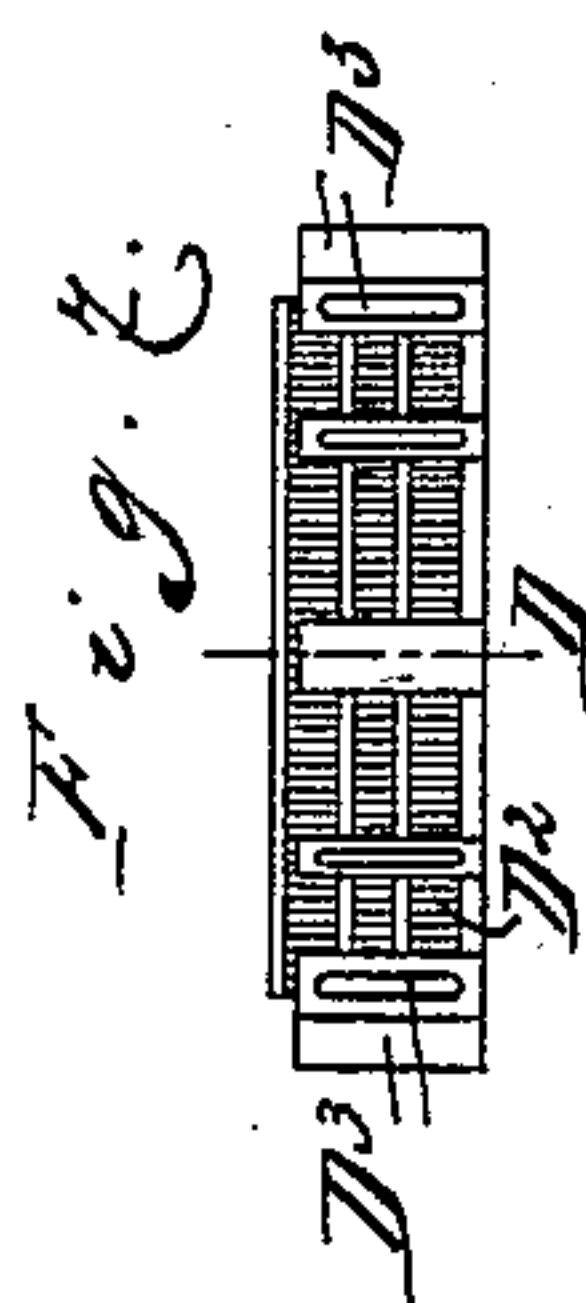
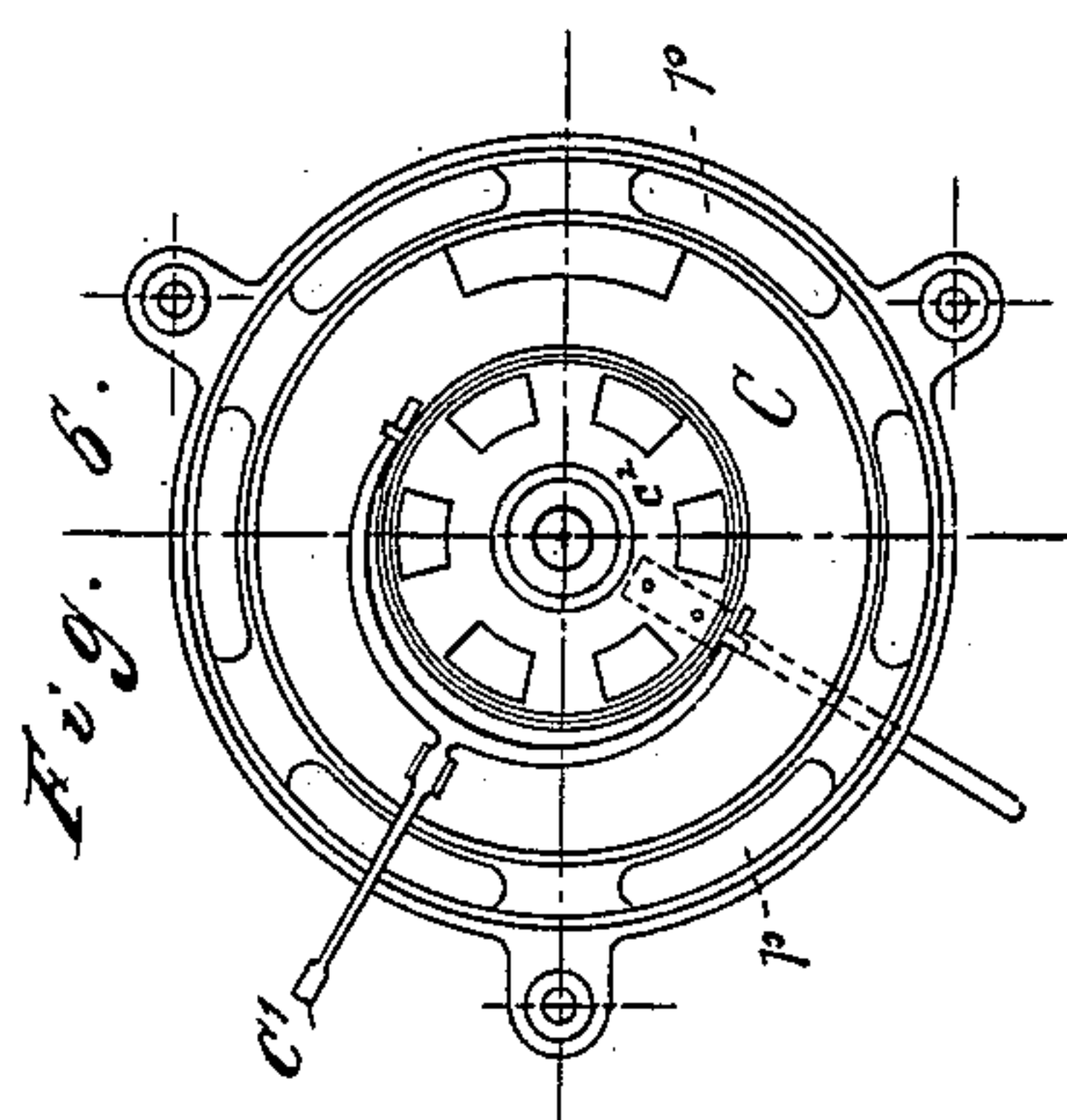
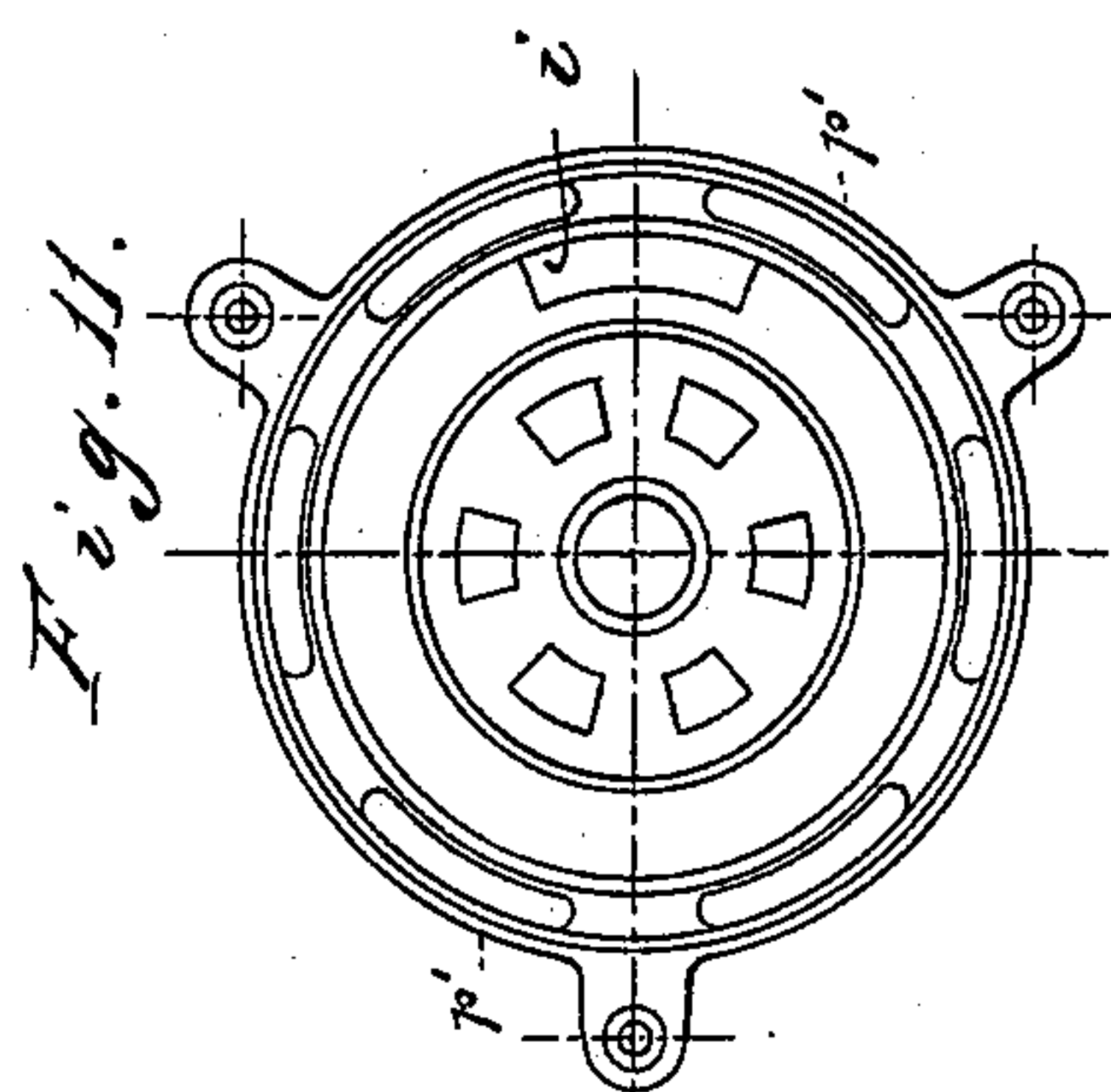
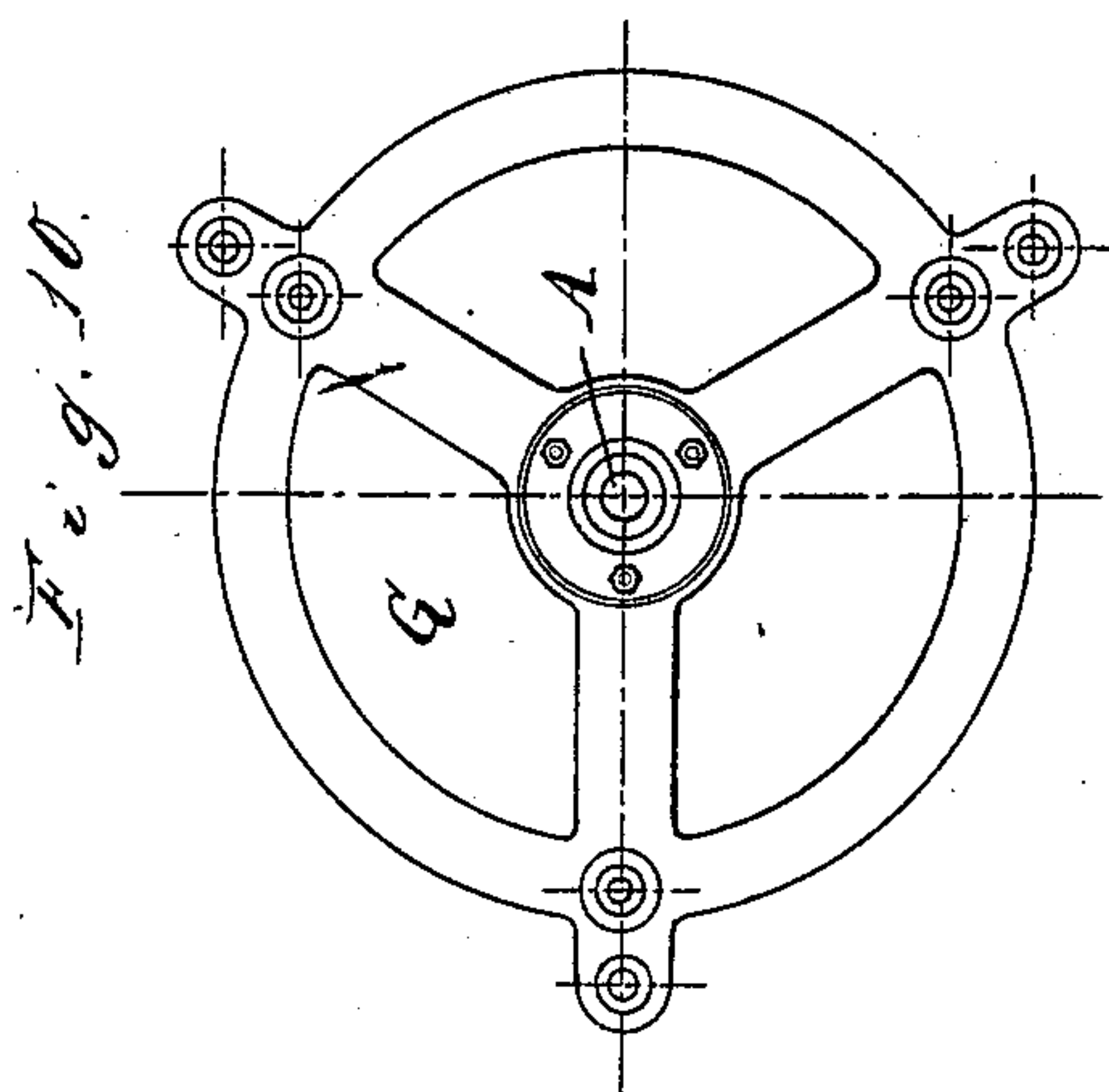
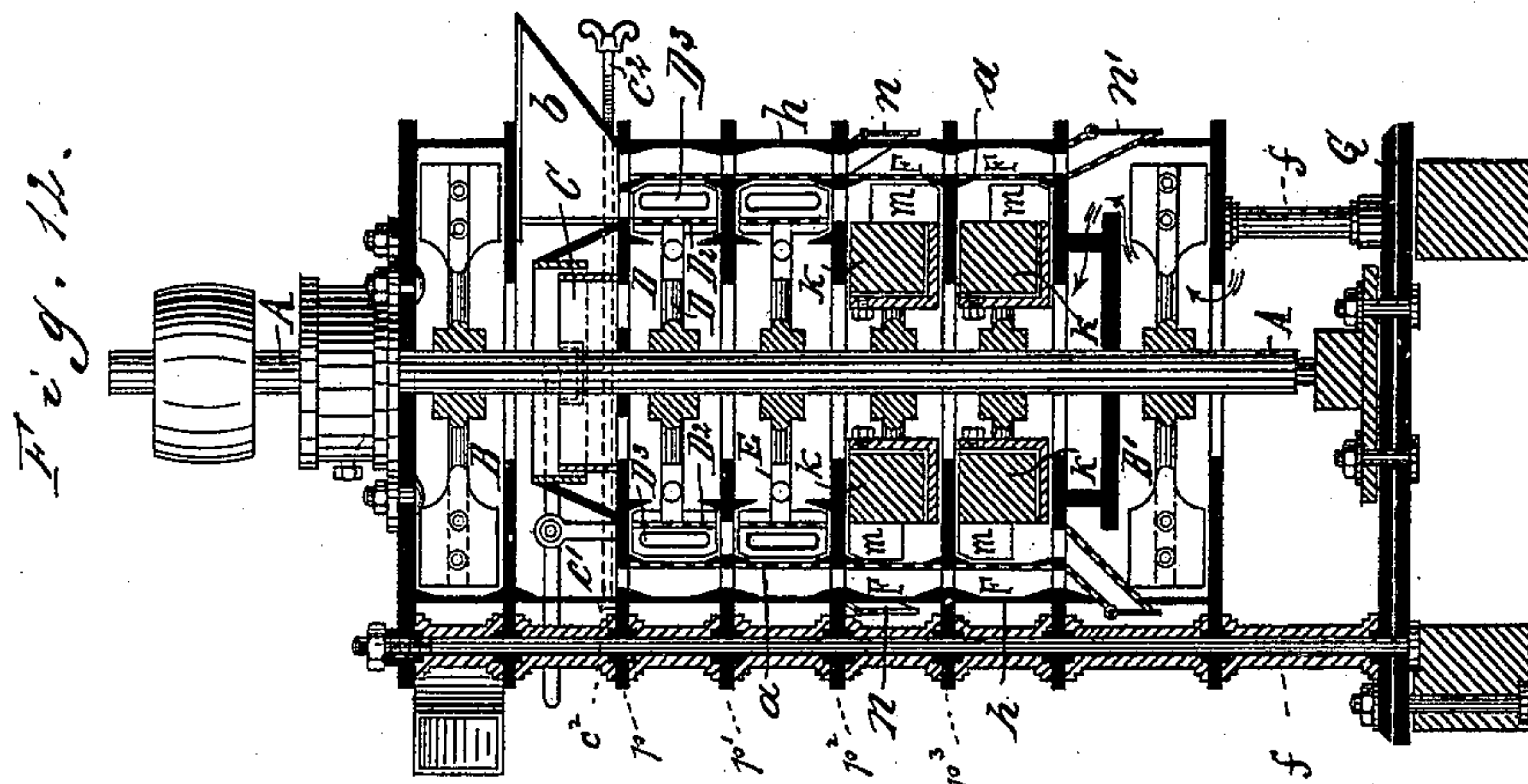
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DECORTICATING MACHINE.

No. 471,372.

Patented Mar. 22, 1892.



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R. A. BAUMGARTNER.
DECORTICATING MACHINE.

3 Sheets—Sheet 3

No. 471,372.

Patented Mar. 22, 1892.

Fig 13

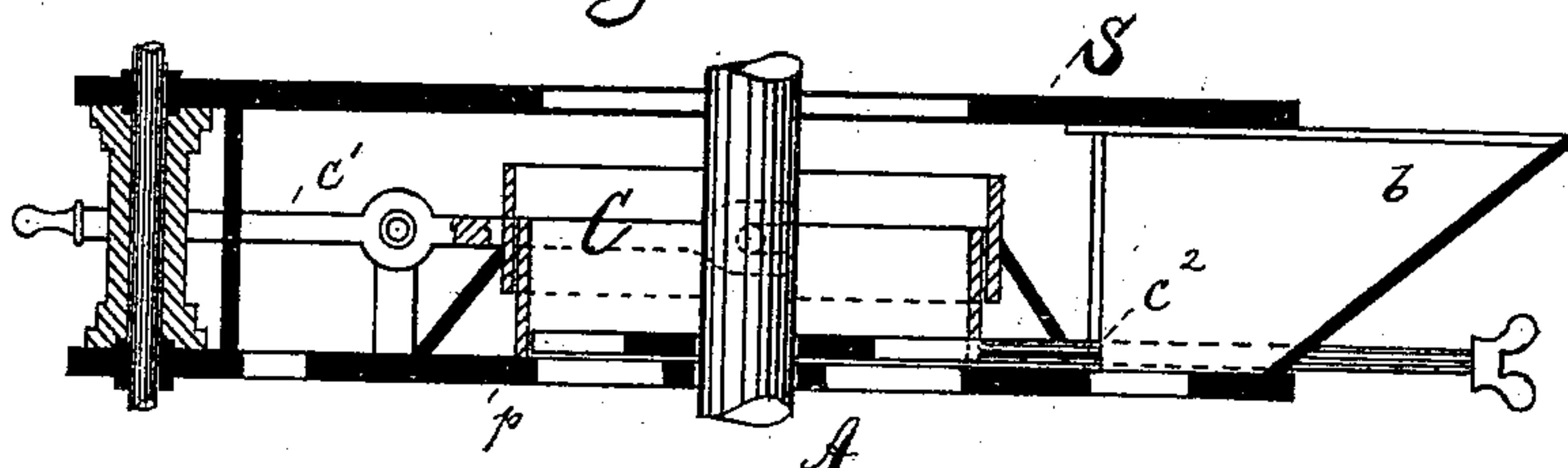
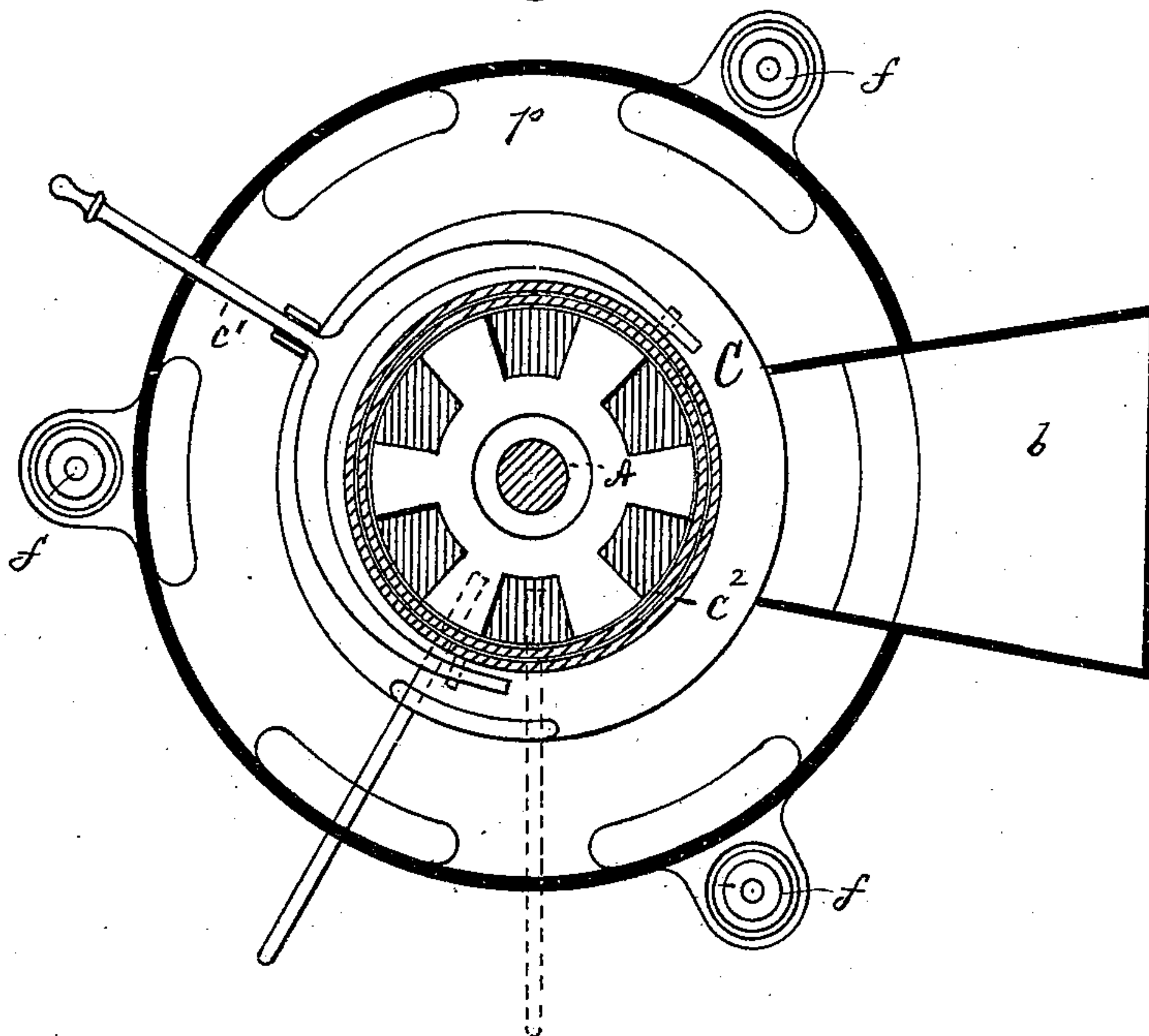


Fig: 14



Witnesses:
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UNITED STATES PATENT OFFICE.

RUDOLF A. BAUMGARTNER, OF ROSENHEIM, GERMANY.

DECORTICATING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 471,372, dated March 22, 1892.

Application filed February 6, 1890. Serial No. 339,454. (No model.) Patented in Germany May 16, 1889, No. 47,015, and in England May 21, 1889, No. 8,427.

To all whom it may concern:

Be it known that I, RUDOLF A. BAUMGARTNER, of Rosenheim, Bavaria, Germany, have invented an Improved Decortivating-Machine, (for which I have obtained a patent in Germany, No. 47,015, dated May 16, 1889, and in England, No. 8,427, dated May 21, 1889,) of which the following is a specification.

This invention relates to a decortivating-machine which will effectively remove the chaff and germs from the grain without injury to the latter.

It consists in the various features of improvement more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a vertical central section of my improved decortivating-machine. Fig. 2 is an elevation of the same. Fig. 3 is a top view of the vane B; Fig. 4, a top view of the fan D; Fig. 5, a top view of fan F; Fig. 6, a top view of uppermost partition *p*; Fig. 7, a vertical central section of Fig. 4; Fig. 8, an elevation of fan F; Fig. 9, a section on line *r r*, Fig. 5; Fig. 10, a top view of bed-plate G; Fig. 11, a top view of the intermediate partition *p'*, and Fig. 12 a vertical central section of a modification of the decortivating-machine. Fig. 13 is a vertical central section through the wind-chest, and Fig. 14 a horizontal section of the same.

The letter G represents the bed-plate of the machine, from which projects upwardly a set of sectional columns *f*. Between these columns there is formed an annular chamber by an outer cylinder *h* and an inner perforated cylinder *a*. This chamber receives the outwardly-thrown coarse chaff.

The space inclosed by the cylinders is by a series of horizontal partitions *p p' p'' p'''* divided into a series of compartments communicating with each other by openings *i*, placed at opposite sides of the apparatus.

Through the apparatus there extends a vertical shaft A, revolved from a pulley and carrying a wind-vane B at the top of the apparatus and a set of fans or scouring-blades D E F within the chambers formed between the horizontal partitions. The fans D E F have all a perforated body, as hereinafter described, and the working chamber is formed between

the periphery of the fans and the perforated cylinder *a*.

Below the vane B there is a wind-chest C, formed of two telescoping sections. The upper of these sections may be raised or lowered by a lever *c'*, so as to adjust the capacity of the chest. The chest C is separated from the vane B by a perforated partition S, and the more the uppermost section of the chest C is raised by lever *c'* the smaller will be the opening between chest and partition through which the air is drawn up. Thus the chest serves to regulate the degree of draft in the machine. The chest communicates with the outer space between the cylinders *h a* and also with the space inclosed by the fans D E F through additional perforations in the horizontal partitions, Figs. 9 and 11, thus subjecting the grain to suction at the outside and also at the inside. The object of the wind-chest (besides regulating the draft) is to receive the fine particles of dust drawn up from the grain by the suction-vane B. The chest thus acts as a funnel to receive the fine waste at the bottom and discharge it at the top. The first fan D is composed of radial arms connected at their outer ends by a perforated drum D². Outside of this drum the fan carries slotted blades D³, that may be set at various angles. The second fan E is of a similar construction. The third fan F, which I term the "polishing-fan," is composed of porcelain sections *k*, held in place by a set of headed pins *k'*. The sections *k* alternate with fine perforated metal sections *l*, and these sections are provided with outwardly-projecting blades *m*.

*c*² is a register above the uppermost partition *p* and below chest C to regulate the size of the wind-openings in such chest. This register consists of a perforated plate provided with a handle and having a central opening for the admission of shaft A, around which it may be revolved. As the openings in the register are brought more or less in line with the openings in the partition *p*, the size of the wind-openings may be increased or diminished.

In Fig. 12 I have shown two superposed polishing-fans F and an additional wind-vane B' at the bottom, which draws air up or into

the apparatus to co-operate with the exhaust-vane B in carrying the lighter waste upward.

In use the shaft A is revolved to revolve the parts B D E F, and the grain to be cleaned is admitted through hopper *b*. As the grain descends from partition to partition it is agitated and acted upon by the revolving fans and by an outer and an inner air-current. The coarser waste is thrown outward through perforated cylinders *a* and leaves the machine either at the bottom of the apparatus, as in Fig. 1, or through lateral discharge-openings *n n'*, as in Fig. 12. The finer waste is drawn up by vane B and through the chest C, as described. The polishing-fan F has for its object to remove the last particles of dust and to rub off any remaining fibers or chaff. The cleaned grain leaves the machine finally through discharge-opening *c*. The machine may be worked with advantage at six hundred revolutions per minute.

What I claim is—

1. The combination of a series of open partitions with outer cylinder *h*, inner perforated cylinder *a*, a central shaft, a series of scouring-blades secured thereto, a telescoping wind-chest above the blades, and a vane above the wind-chest, substantially as specified. 25

2. The combination of a series of open partitions with cylinders *h a*, shaft A, scouring-blades secured thereto, a telescoping wind-chest above the blades, a revolving register that regulates the wind-openings in the chest, and with a vane B above the chest, substantially as specified. 30

In testimony whereof I have signed this specification in the presence of two subscribing witnesses. 35

RUDOLF A. BAUMGARTNER.

Witnesses:

ALICICK M'OLEY,
WILT. MEYER.