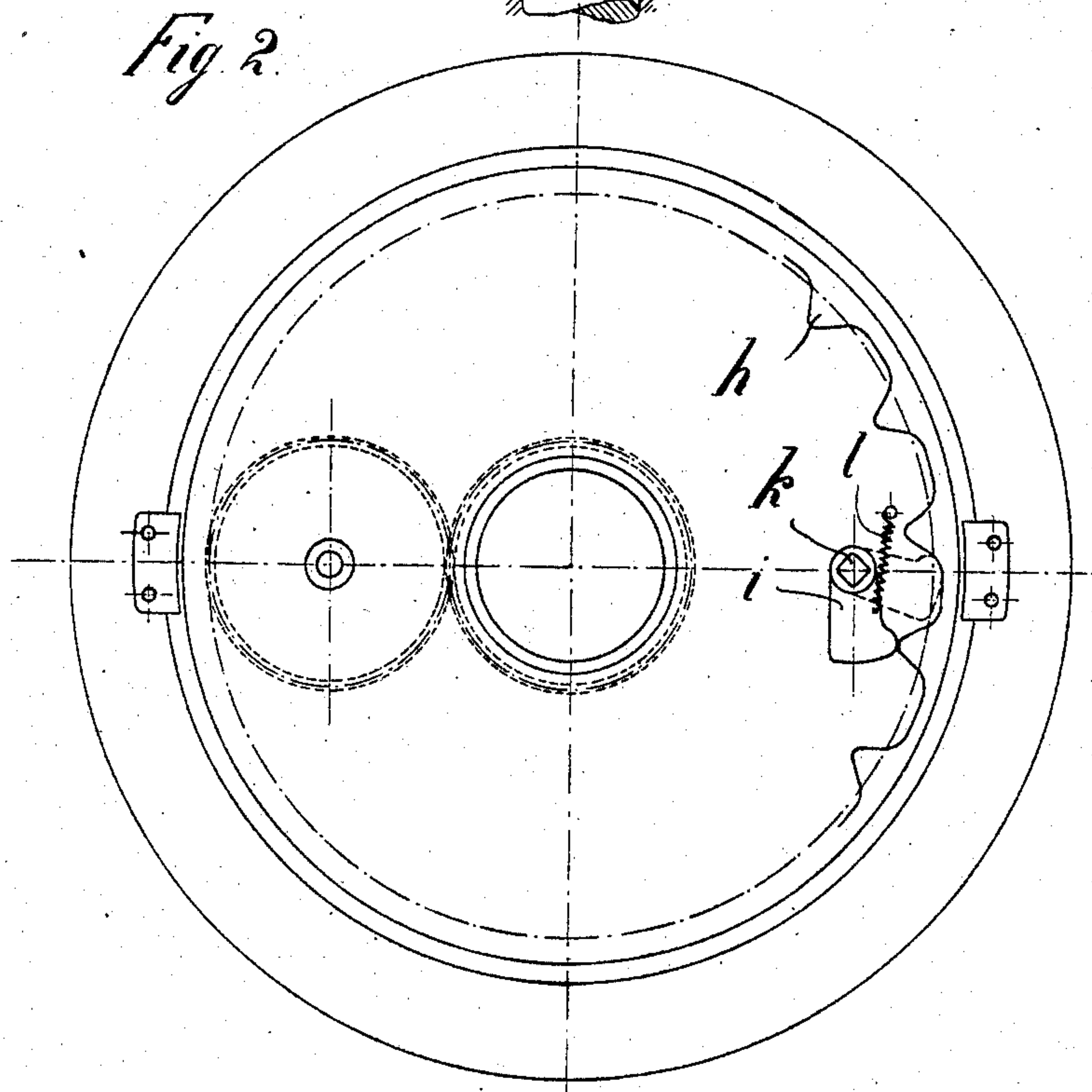
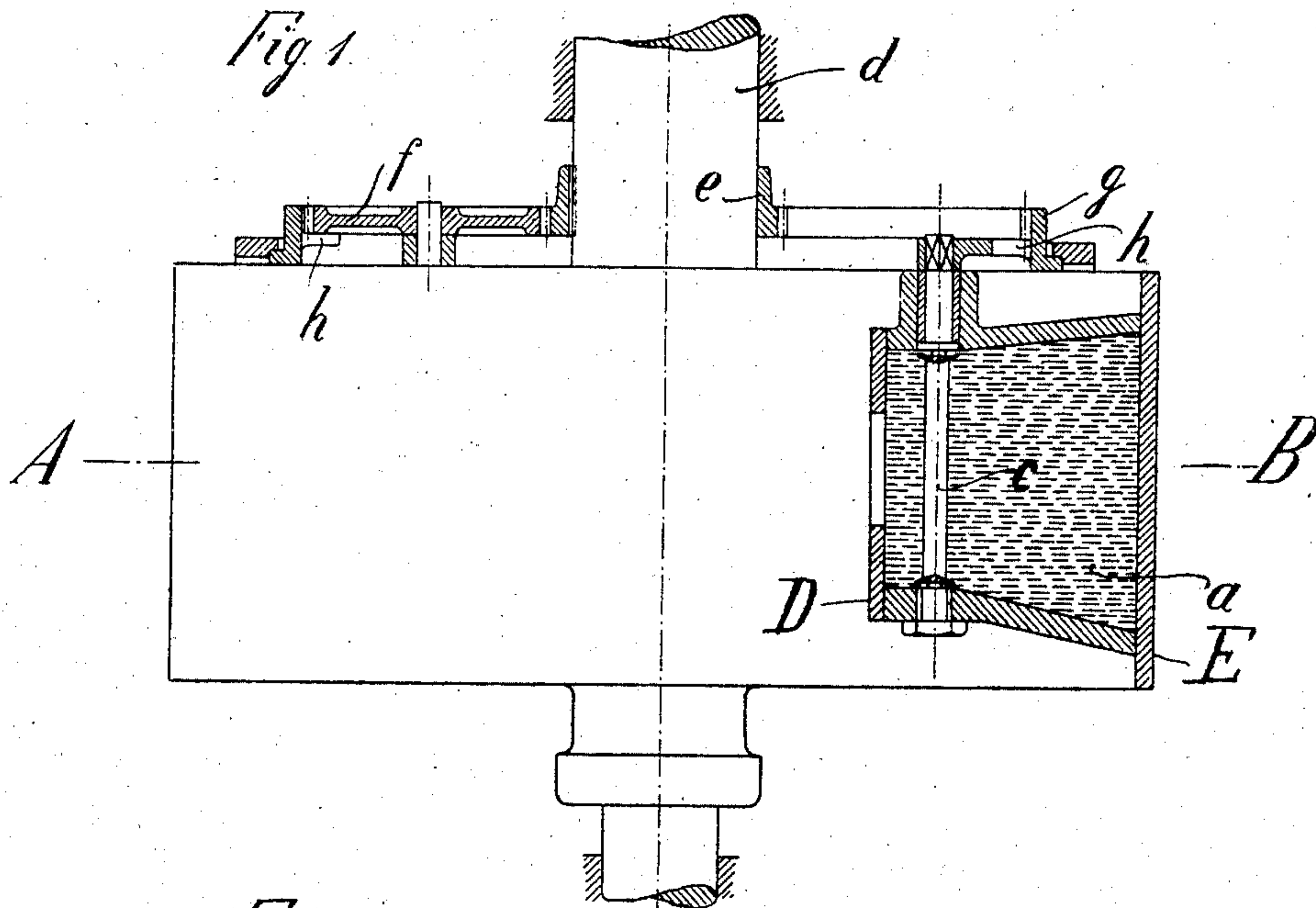


No. 864,179.

PATENTED AUG. 27, 1907.

G. TER MEER.
CENTRIFUGAL MACHINE.
APPLICATION FILED MAY 22, 1906.

4 SHEETS—SHEET 1.



Witnesses:
William Schuly
Adolph Miner.

Inventor:
Gustav Ter Meer
by his attorney
Hank & Buerger

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4 SHEETS—SHEET 2.

Fig. 4.

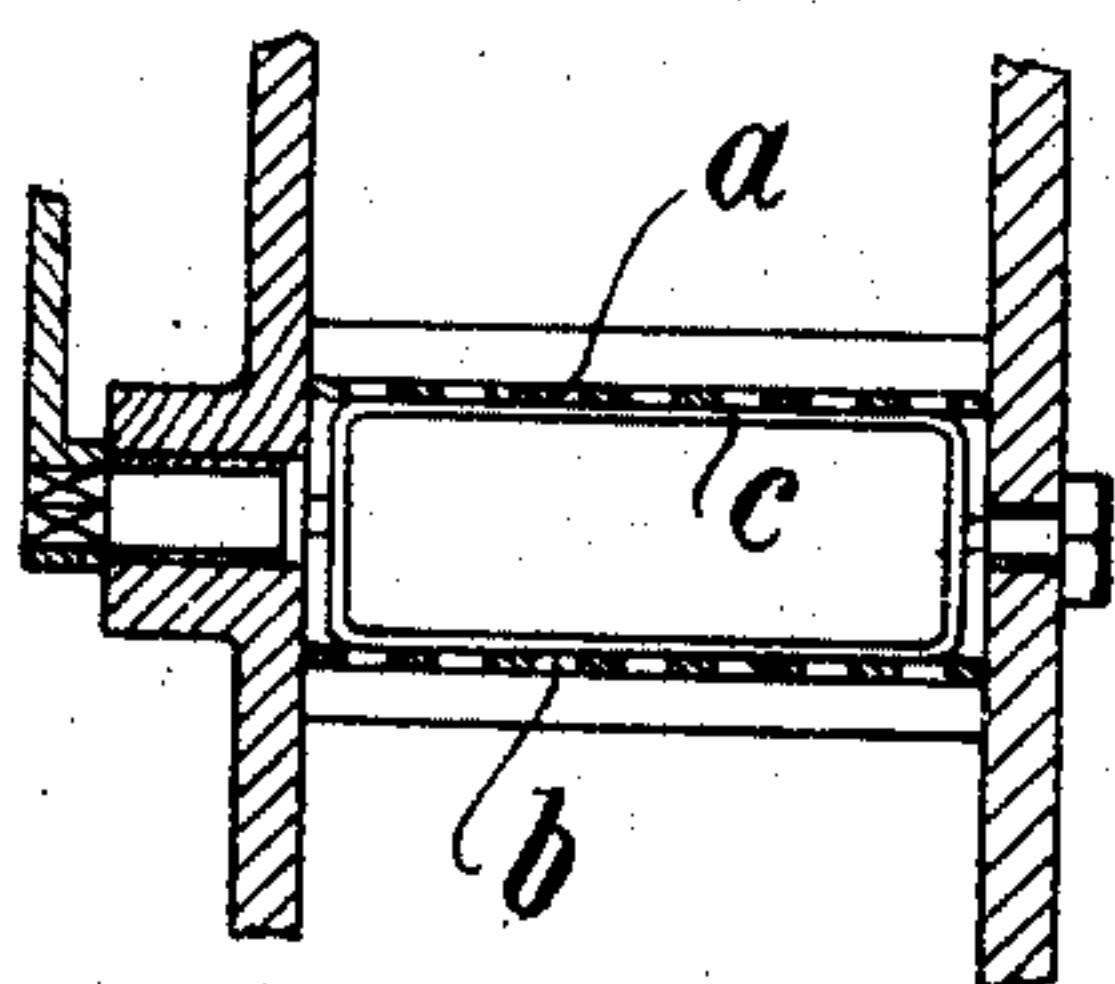


Fig. 3.

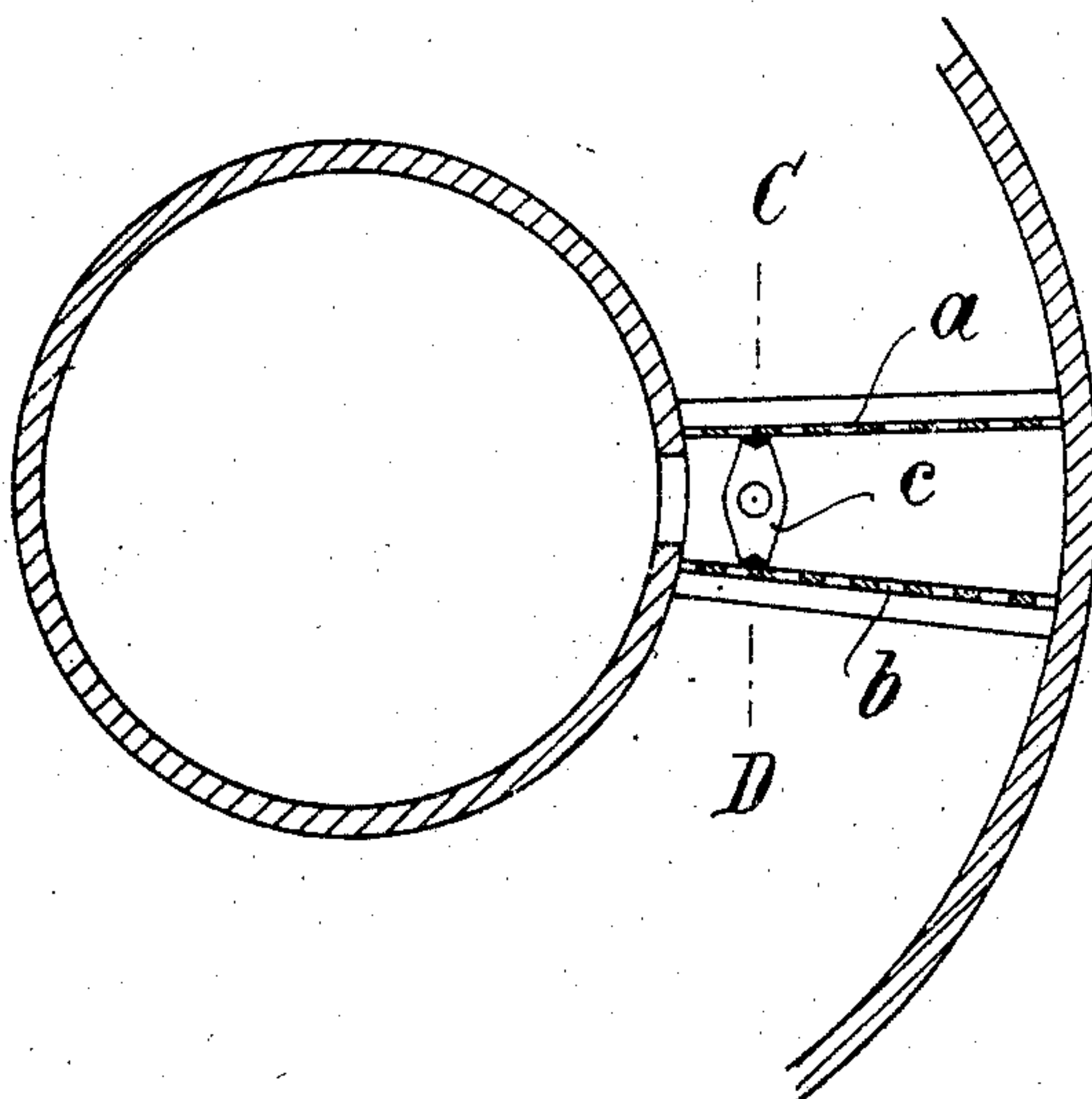
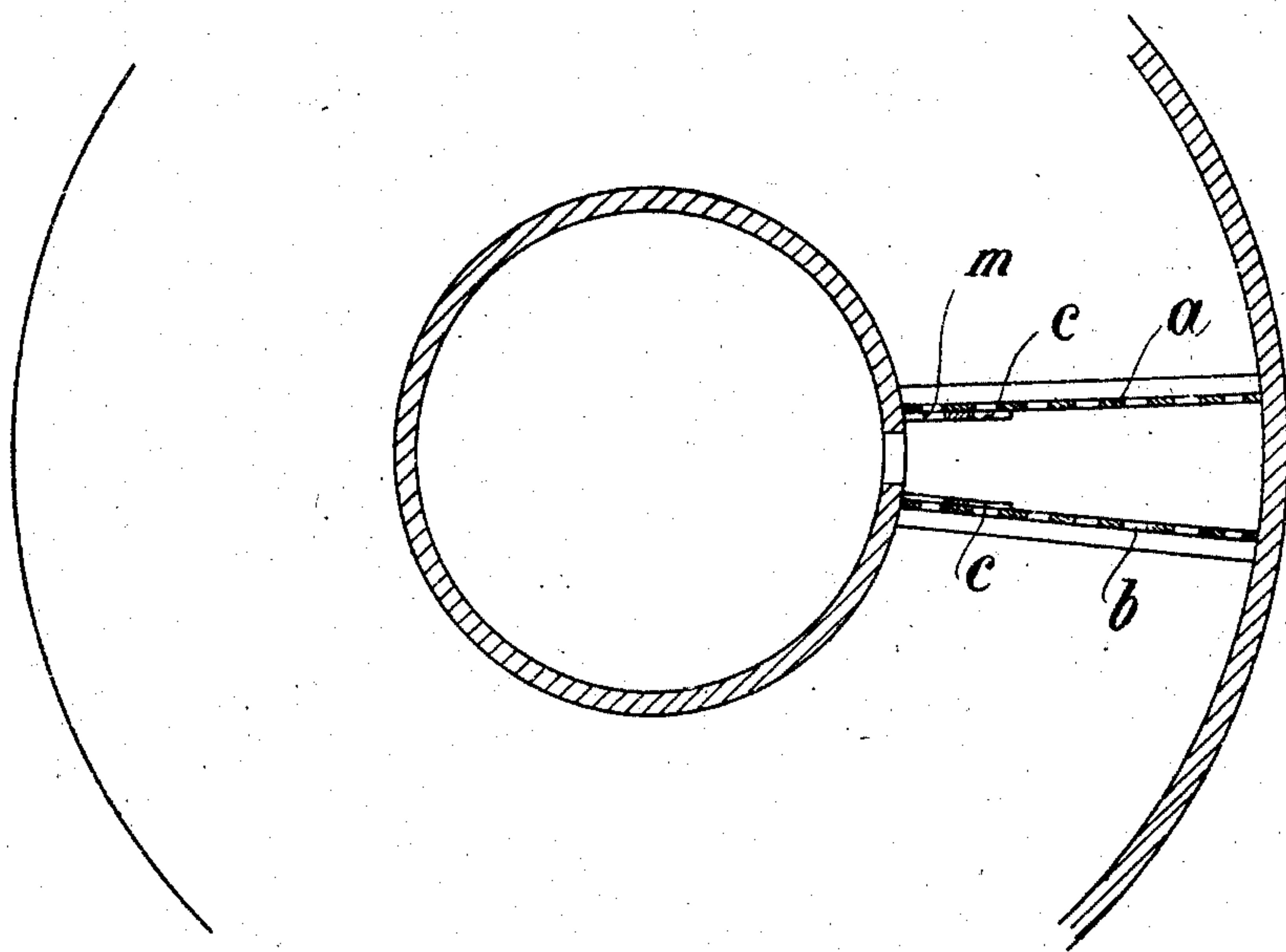


Fig. 8.



Witnesses:
William Schulz
Adolph Winer

Inventor:
Gustav ter Meer
by his attorney
Frank J. Friesen

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4 SHEETS—SHEET 3.

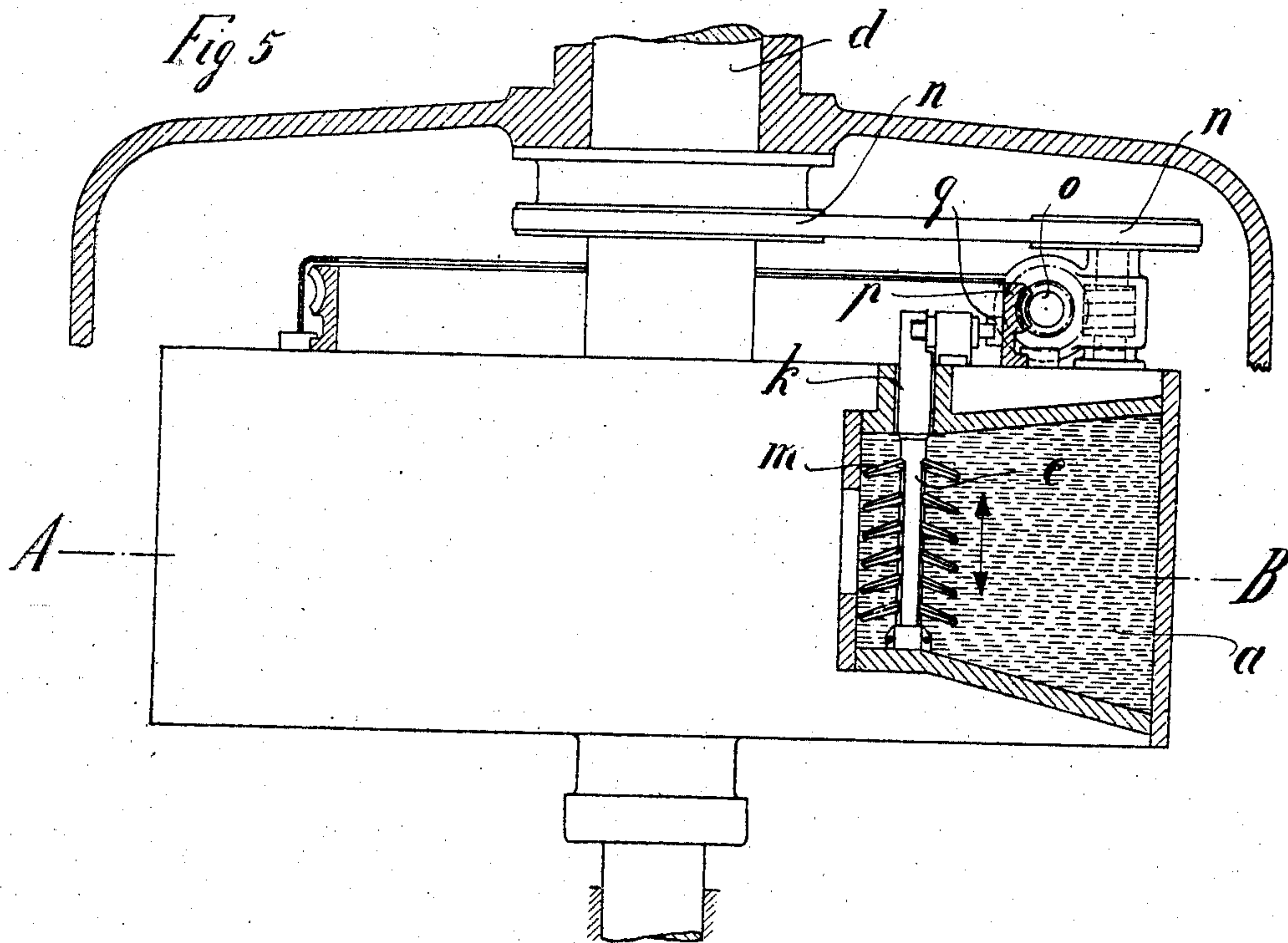


Fig 7

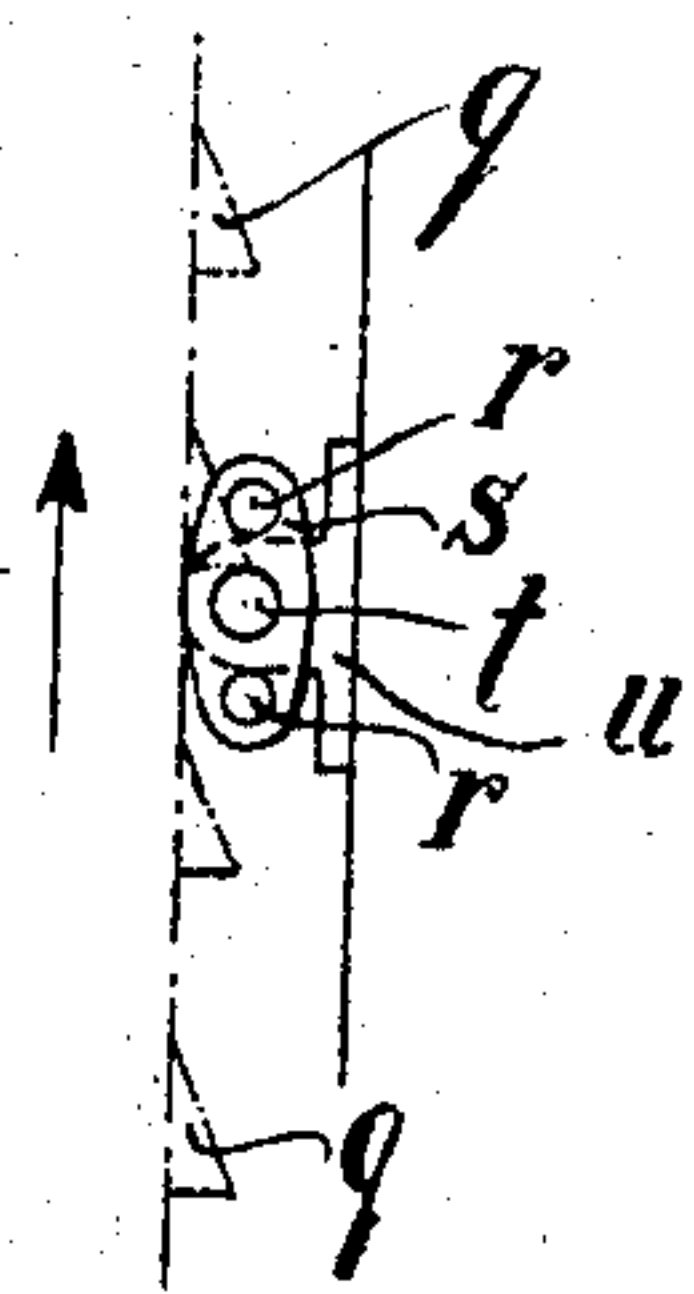
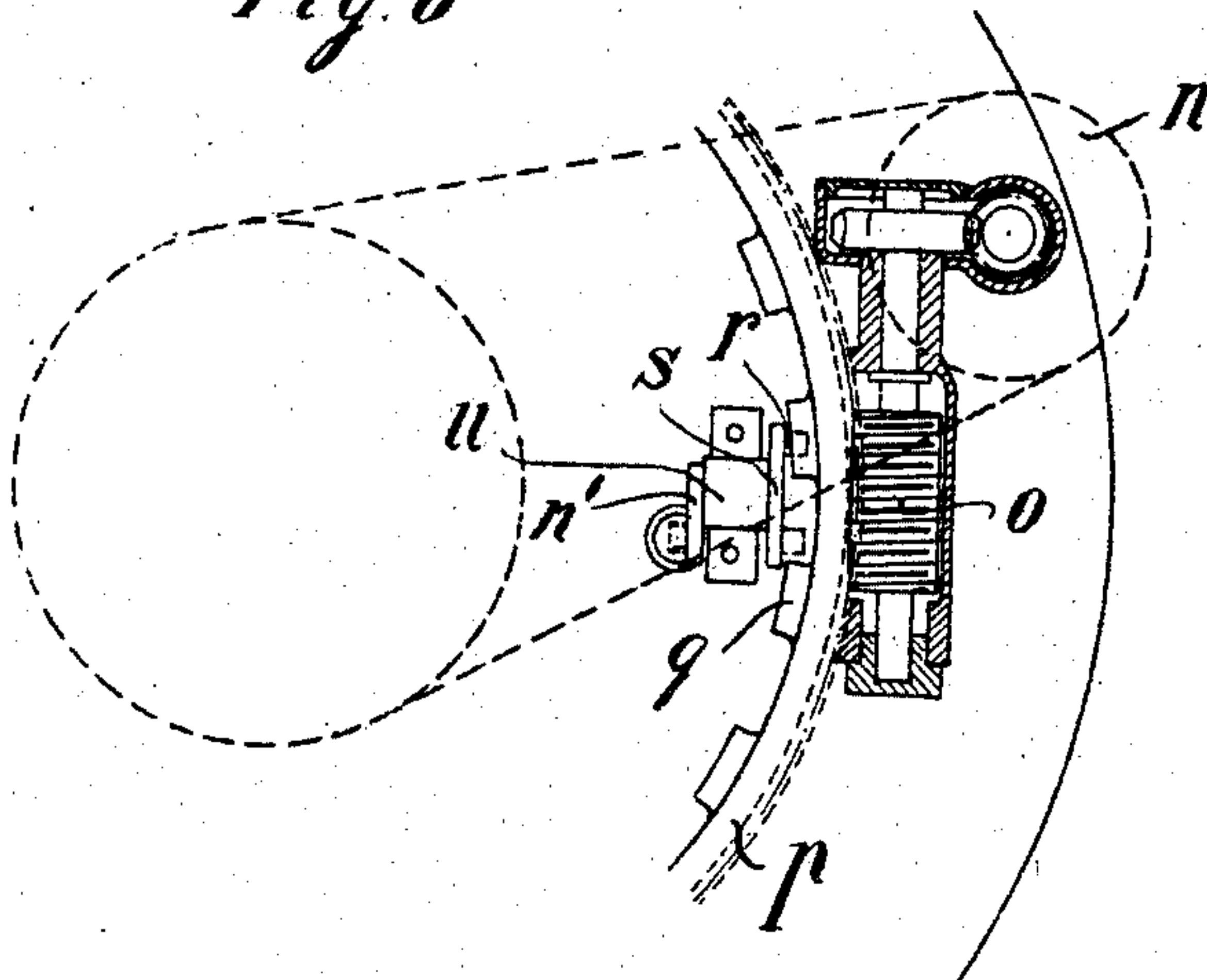


Fig 6



Witnesses:
William Schulz.
Adolph Minor.

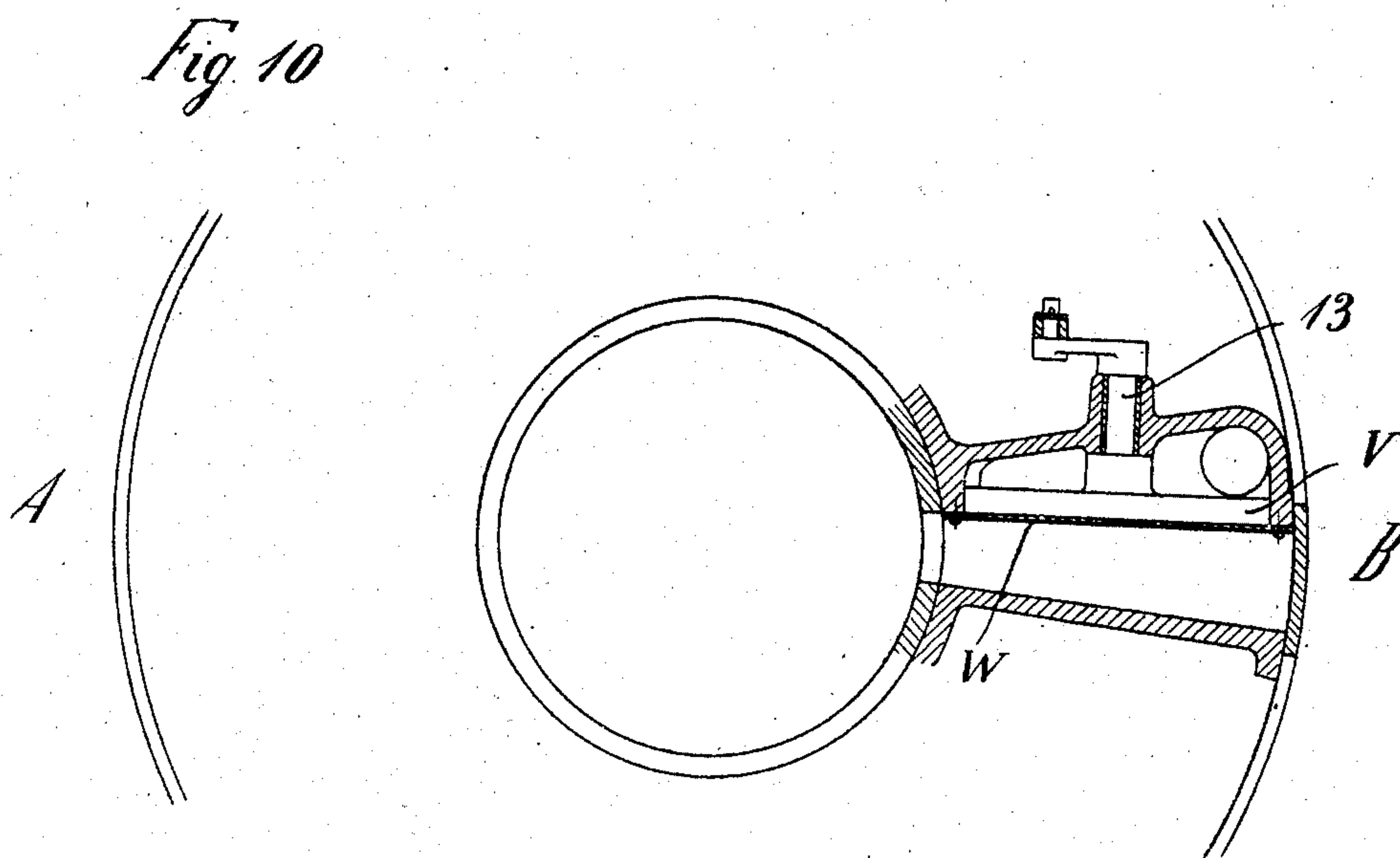
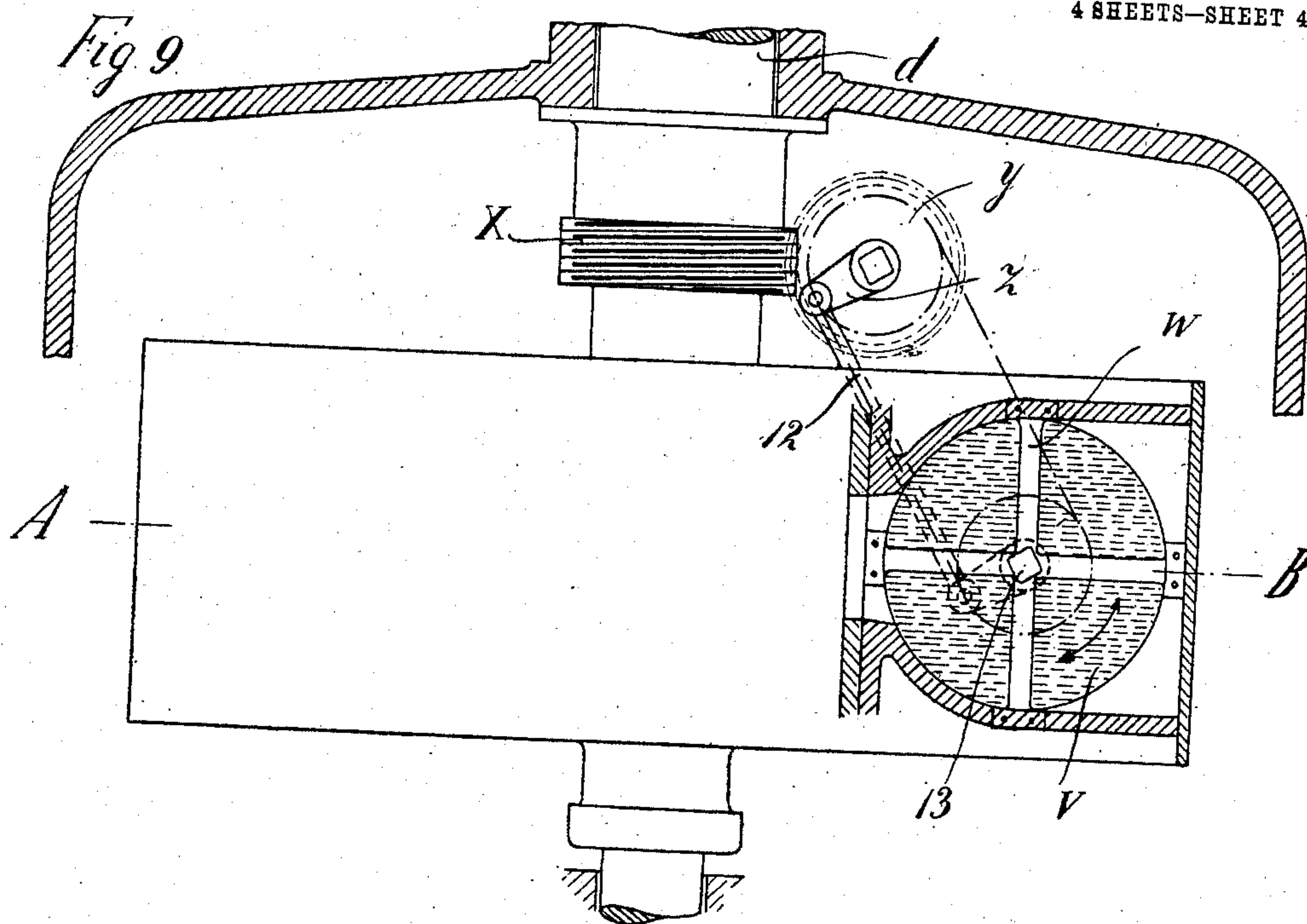
Inventor:
Gustav ter Meer
by his attorney
Frank P. Biese

No. 864,179.

PATENTED AUG. 27, 1907.

G. TER MEER.
CENTRIFUGAL MACHINE.
APPLICATION FILED MAY 22, 1906.

4 SHEETS—SHEET 4.



Witnesses:
William Schuck
Adolph Miner

Inventor:
Gustav ter Meer
by his attorney
Franklin P. H. H.

UNITED STATES PATENT OFFICE.

GUSTAV TER MEER, OF HANOVER, GERMANY.

CENTRIFUGAL MACHINE.

No. 864,179.

Specification of Letters Patent.

Patented Aug. 27, 1907.

Application filed May 22, 1906. Serial No. 318,169.

To all whom it may concern:

Be it known that I, GUSTAV TER MEER, a citizen of Germany, residing at Hanover, Germany, have invented new and useful Improvements in Centrifugal Machines, of which the following is a specification.

This invention relates to a centrifugal machine more particularly designed for separating liquids from solid, fibrous or plastic materials. The machine is provided with perforated walls, and with novel and improved means for preventing the clogging of such walls.

In the accompanying drawings. Figure 1 is a vertical section of the operative part of a centrifugal machine embodying my invention; Fig. 2 a plan; Fig. 3 a section on a reduced scale on line A—B, Fig. 1; Fig. 4 a section on line C—D, Fig. 3; Fig. 5 a vertical section through the operative parts of a modification of the machine; Fig. 6 a bottom view, partly in section, of part of the same on a reduced scale; Fig. 7 a side view of part of Fig. 6; Fig. 8 a section on line A—B, Fig. 5; Fig. 9 a vertical section through the operative parts of a further modification of the machine, and Fig. 10 a partial section on line A—B, Fig. 9.

In Figs. 1—4, the centrifugal chamber is formed by a pair of diverging perforated walls *a*, *b*, an inner cylindrical slide or gate *D*, and an outer cylindrical slide *E*. Between walls *a*, *b*, is mounted a bail-shaped scraper *c*, which is provided with knife-edges opposite the walls, (Fig. 3). The scraper is adapted to oscillate for a certain distance, and during such oscillation, its knife-edges are adapted to move across the walls and thus clean the same of any adhering particles. Motion is imparted to the scraper from the rotating hollow shaft *d*, of the machine, which carries gear wheel *e*. This wheel, by pinion *f*, rotates an internally toothed wheel *g*, having inwardly extending peripheral projections *h*. These projections successively engage a lever *i*, influenced by spring *l*, and mounted upon the shaft *k*, of scraper *c*. By the means described, the wheel *g*, will impart the desired oscillating movement to the scraper.

In use, the material to be dried enters through hollow shaft *d*, and open gate *D*, into the centrifugal chamber. By the rotation of the machine, the liquid is thrown off through perforated walls *a*, *b*, which are kept open by the action of the scrapers *c*. After the material has thus been sufficiently dried, gate *D*, is closed and gate *E*, is opened to discharge the material from the chamber by centrifugal action.

In Figs 5—8, the scraper *c*, has a series of inclined arms *m*, provided with sharpened edges that engage the diverging perforated walls *a*, *b*. Motion is imparted to the scraper from shaft *d*, by belt *n*, that rotates worm *o*. This worm engages worm-wheel *p*, having a series of beveled inwardly extending projections *q*. These projections alternately engage a pair of pins *r*, of a lever *s*, the arbor *t*, of which turns in a bearing *u*. An arm *n'*, of lever *s*, engages a corresponding notch on shaft *k*, of scraper *c*, so that the oscillating movement of the lever produces the desired reciprocating movement of shaft *k*, and consequently of scraper *c*.

In Figs. 9 and 10, the inclined perforated wall *v*, is made in the form of a rotatable disk which is engaged by the fixed cruciform scraper *w*. Motion is imparted to disk *v*, from a worm *x*, fast on rotating shaft *d*, and engaging a worm-wheel *y*. A crank *z*, fast on shaft of wheel *y*, imparts, by link 12 and a crank fast on shaft 13, of disk *v*, the desired rotating movement to the latter.

I claim:

A centrifugal machine provided with a hollow shaft, a communicating chamber having a pair of diverging walls, one of which is perforated, a scraper engaging said wall, an inlet gate intermediate the shaft and chamber, and an exit gate, substantially as specified.

Signed by me at Hanover, Germany, this tenth day of May 1906.

GUSTAV TER MEER.

Witnesses:

ANNA DIPPEL,
HERMINE GÜDECKE.