

W. ZEYSING.
BRAKE FOR DISK TALKING MACHINES.
APPLICATION FILED JUNE 22, 1907.

959,682.

Patented May 31, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

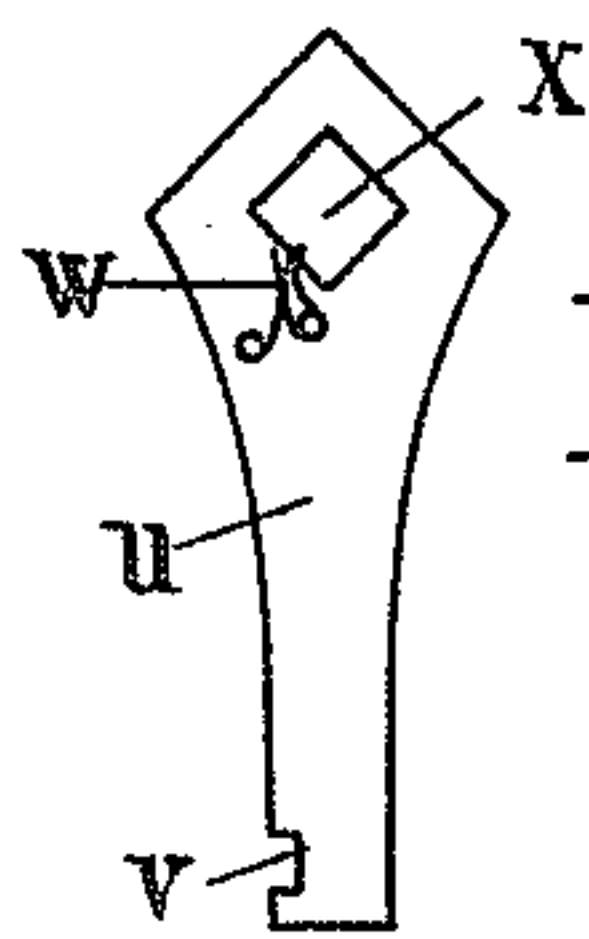
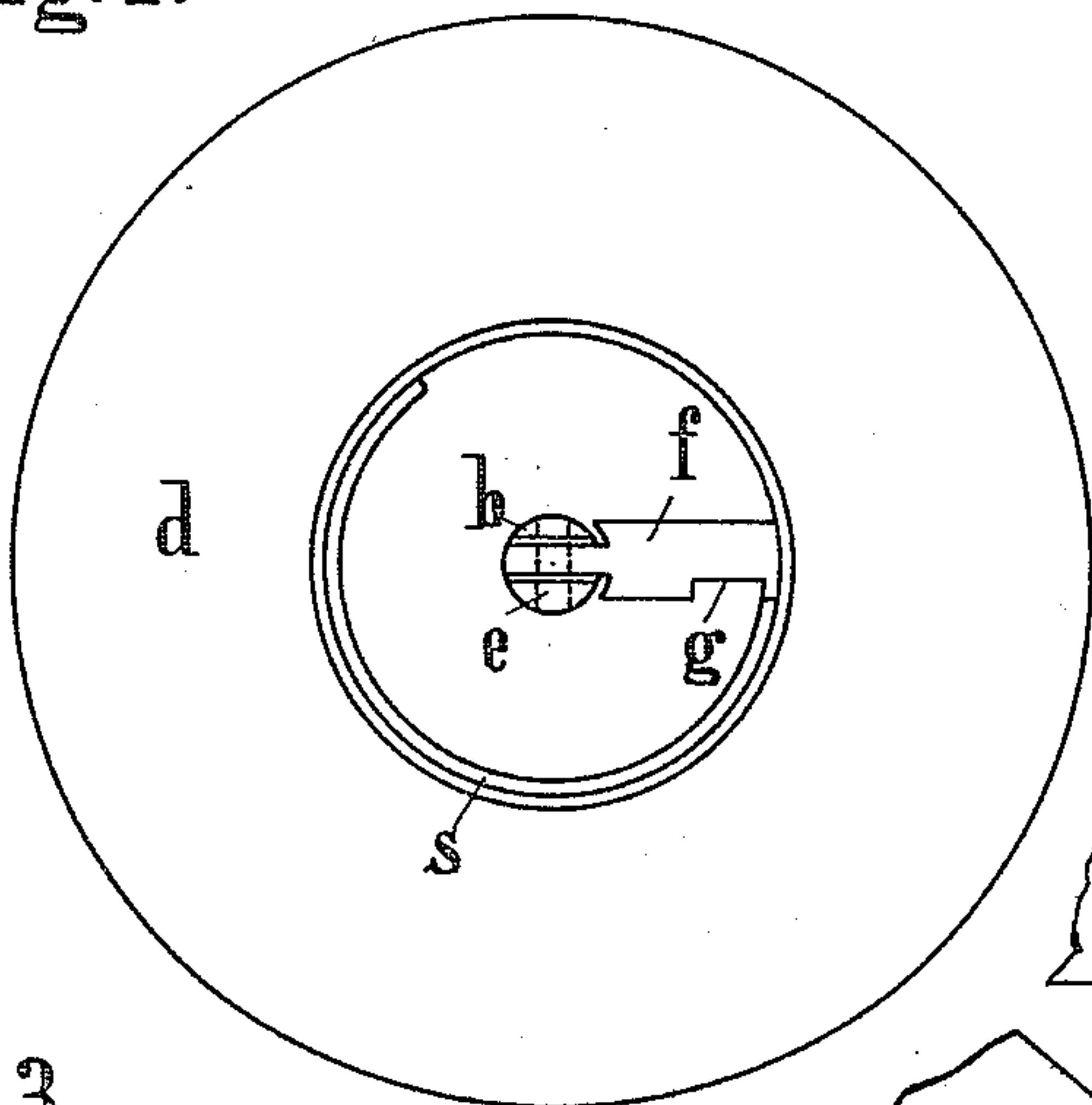


Fig. 5.

Fig. 4.

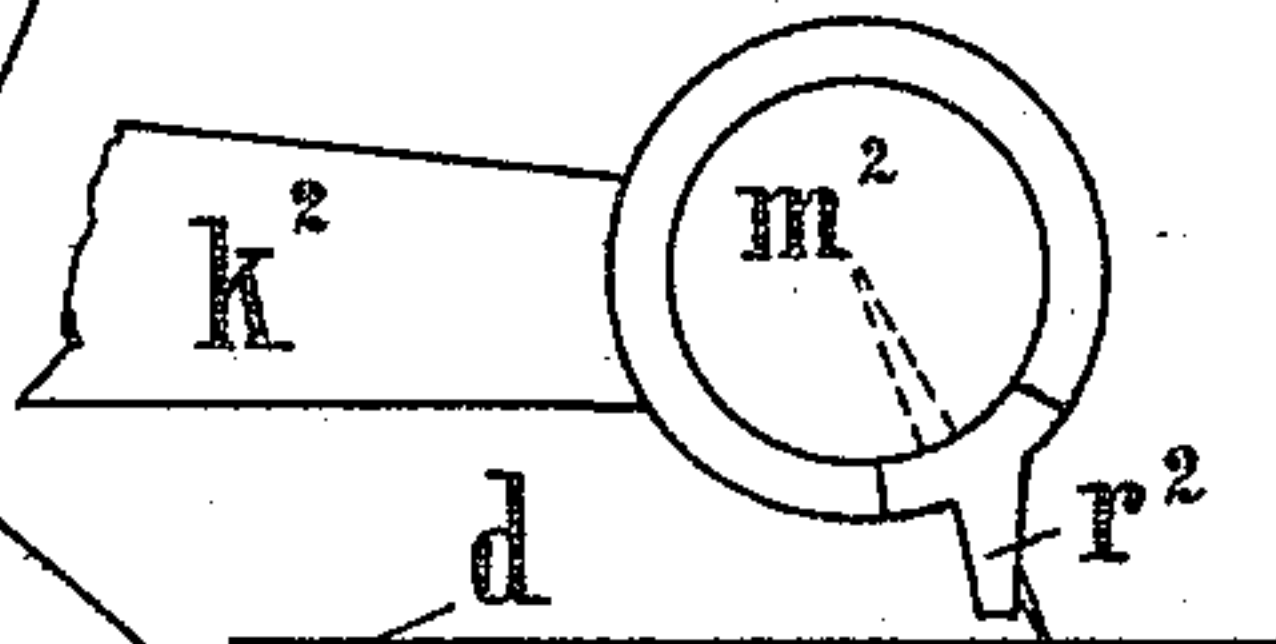


Fig. 3.

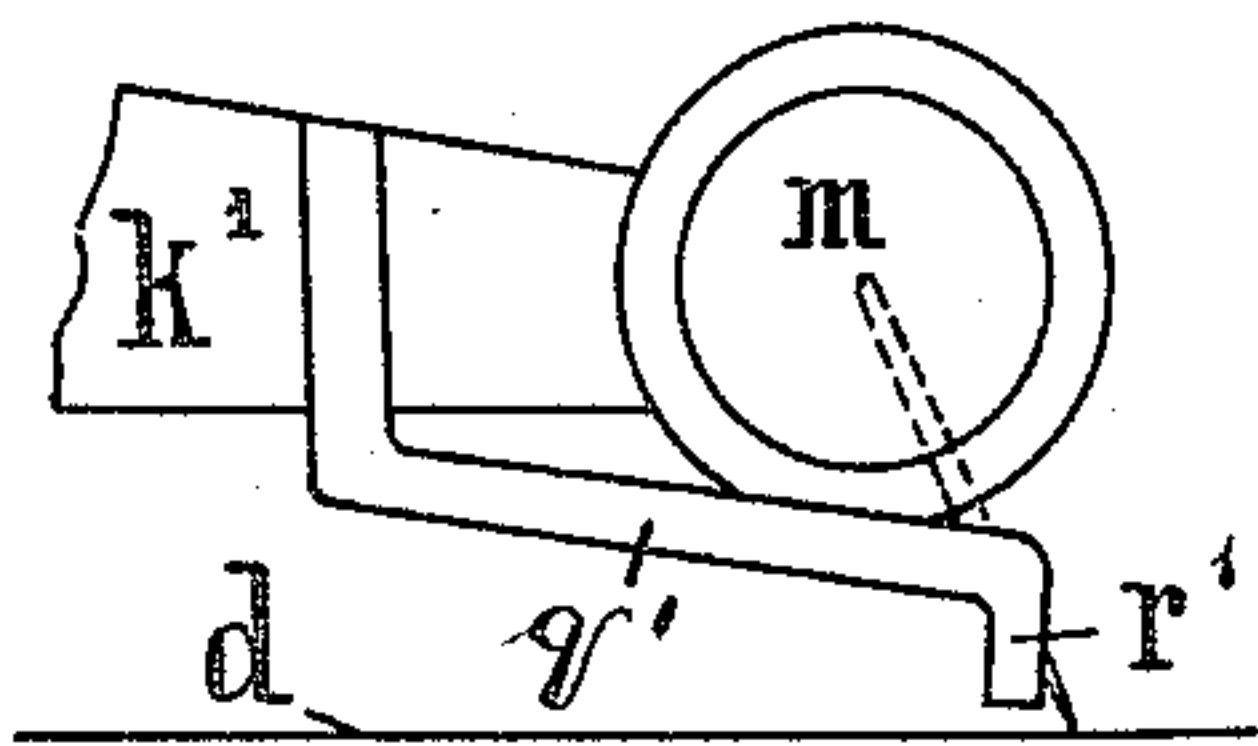
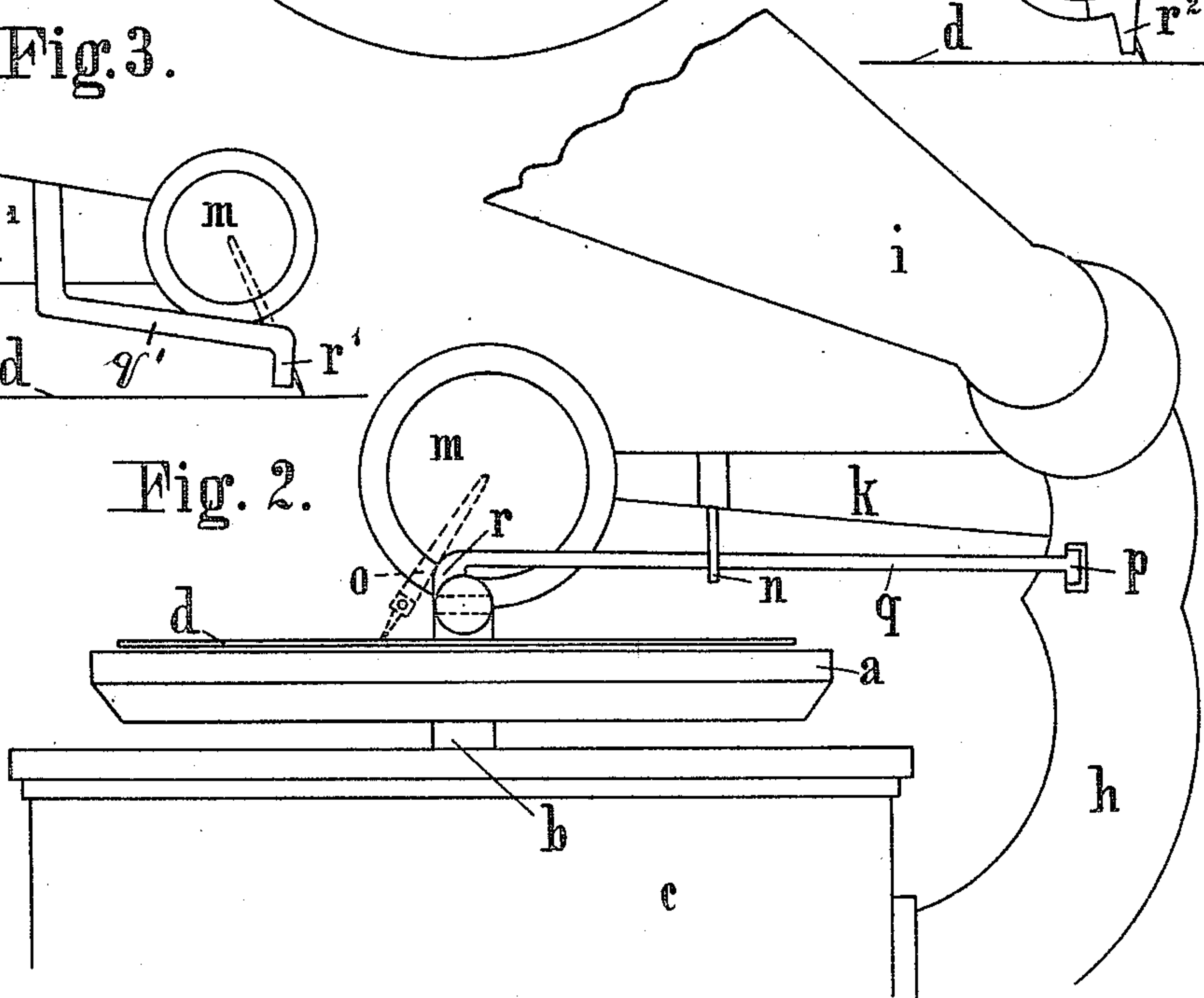


Fig. 2.



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2 SHEETS—SHEET 2.

Fig. 6.

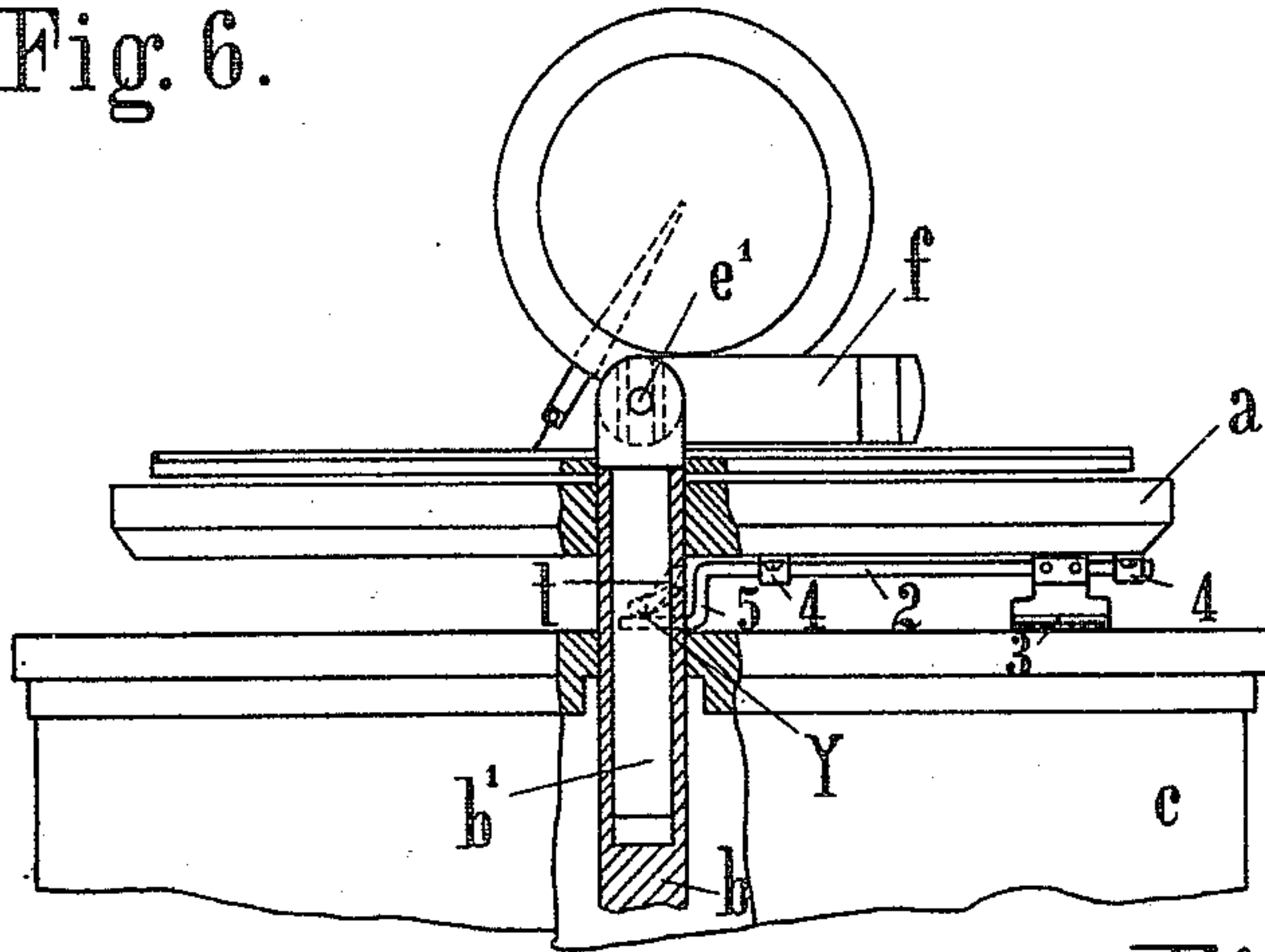


Fig. 7.

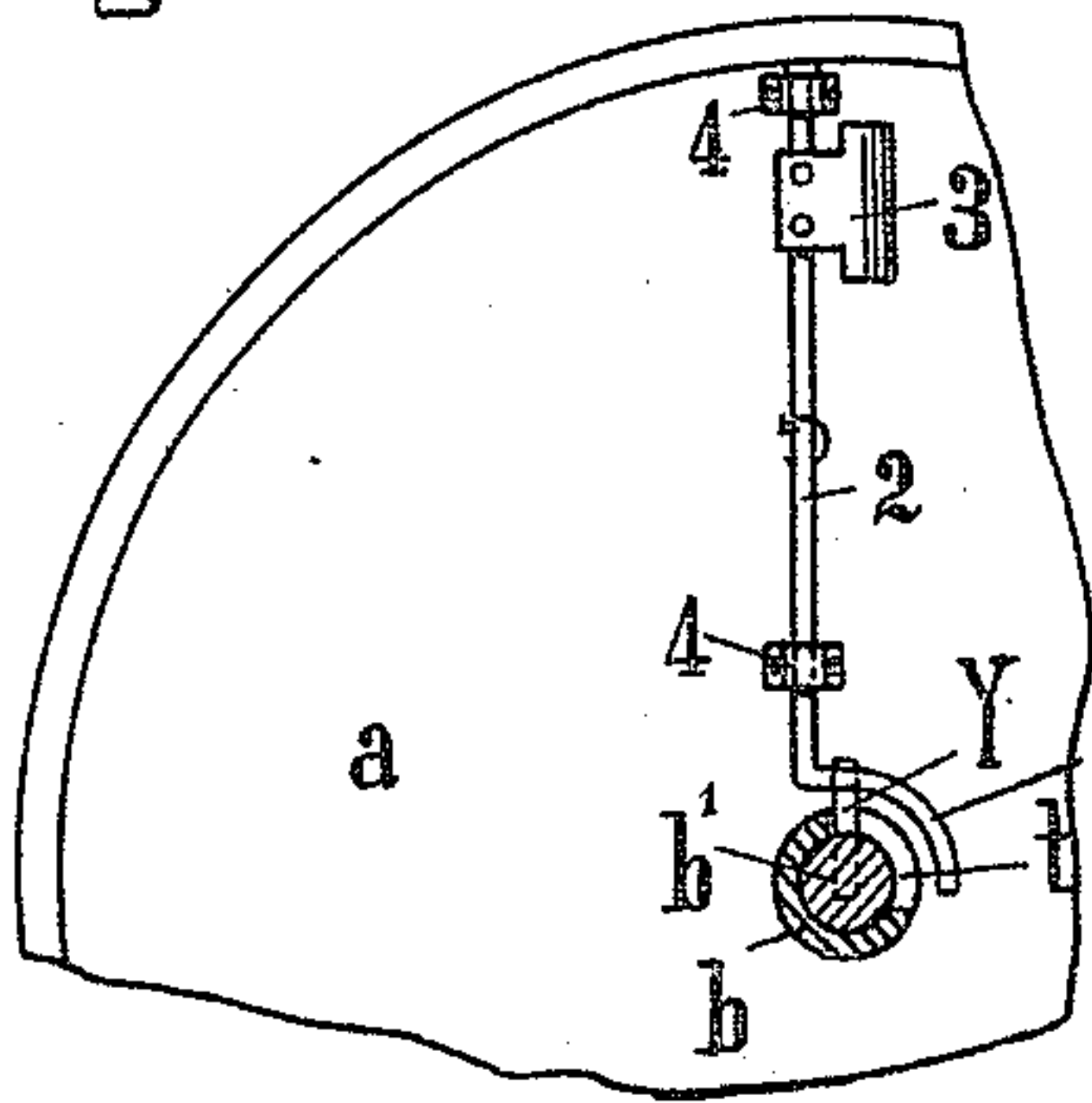


Fig. 8.

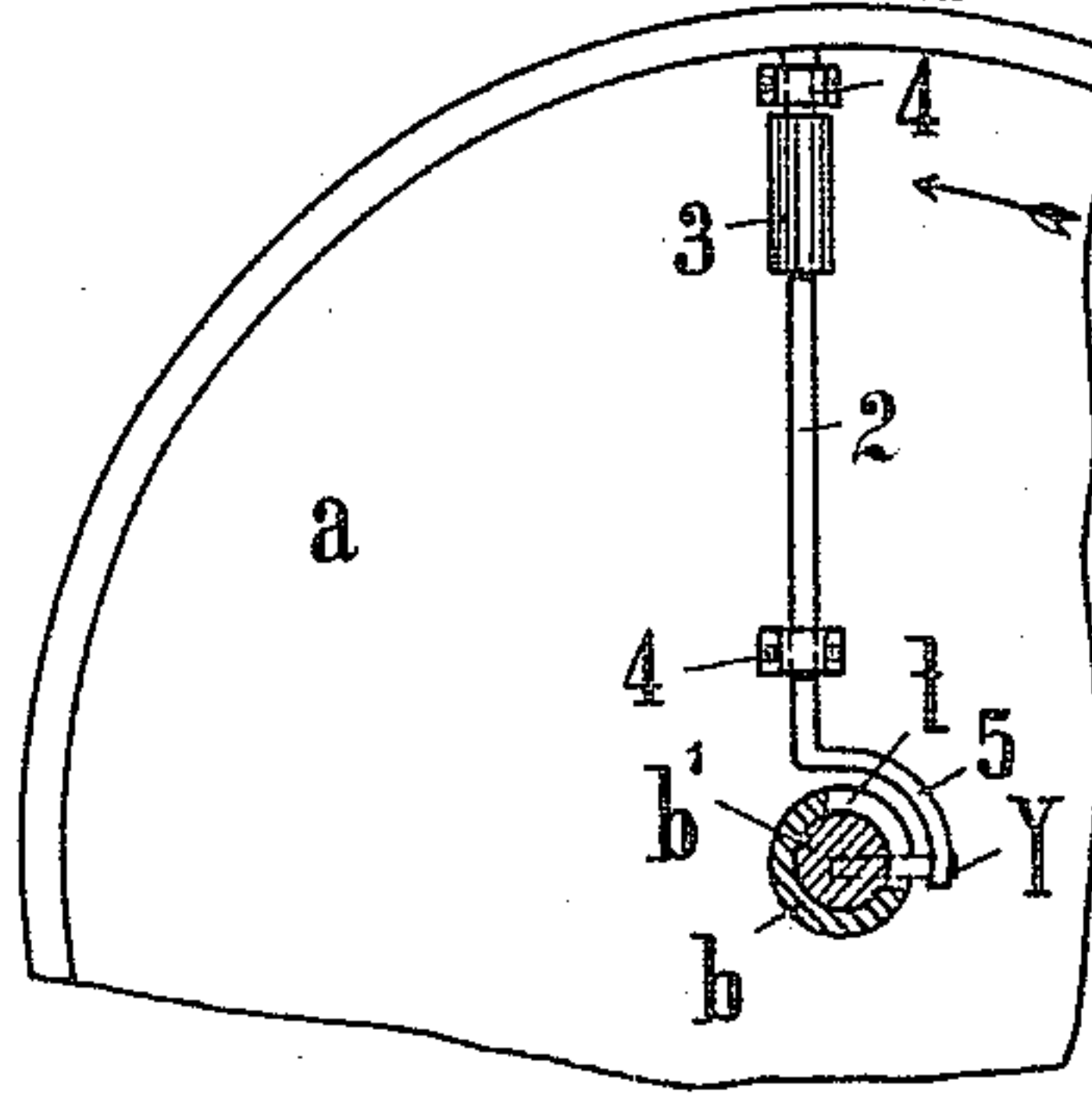


Fig. 9.

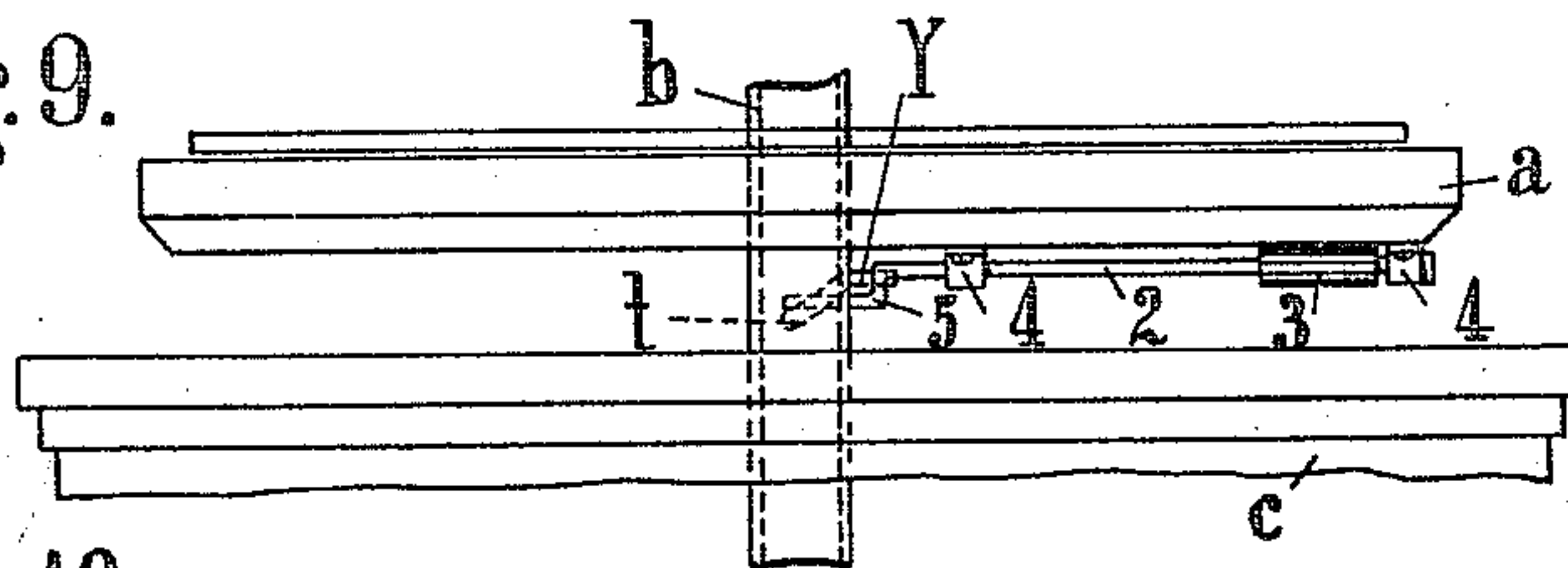
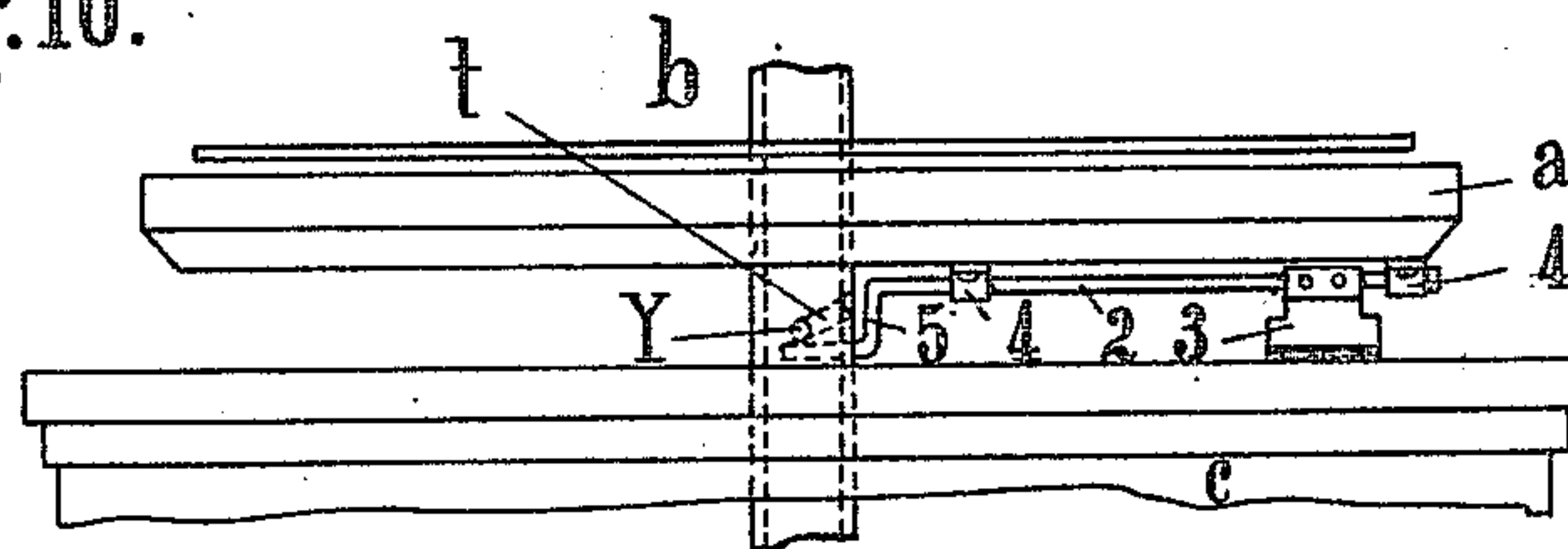


Fig. 10.



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UNITED STATES PATENT OFFICE.

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BRAKE FOR DISK TALKING-MACHINES.

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Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, WALTER ZEYSING, merchant, a subject of the King of Prussia and German Emperor, residing at Stettin, in the county of Pommern and Empire of Germany, have invented certain new and useful Improvements in Brakes for Disk Talking-Machines, of which the following is a specification.

My invention relates to improvements in disk-talking machines of that class, in which the disk-record is automatically stopped at the completion of each reproduction. To accomplish such automatic stopping, the style running in the record-grooves of the disk is made to enter at the proper time into an empty or dead-groove specially provided, whereby the diaphragm-carrier is lowered as it approaches the center of the disk. By lowering the arm of the diaphragm carrier, the revolving motion of the disk-carrier will be stopped through the agency of brake-mechanism actuated from the diaphragm carrier in its lowered position. The disk-carrier may be rotated in any known manner.

To make my invention properly understood, I have illustrated the same in the accompanying drawings, in which:

Figure 1 is a plan of the record-disk with its empty or dead groove, the driving spindle and the arm carried at the top of the same. Fig. 2 is a side-elevation of the casing, the disk-carrier and record-disk, the diaphragm and diaphragm-holder, the horn with its supporting bracket, and an arm attached to the diaphragm-holder, said arm being destined to engage the arm on top of the disk-spindle. Fig. 3 is a view showing another modification of the means for holding the arm carried by the diaphragm holder. Fig. 4 is a view showing the diaphragm carrying an arm for engaging the arm on the disk-spindle. Fig. 5 is a plan of another modification of the arm secured to the top of the disk-spindle. Fig. 6 is a side-elevation, partly in section, of a portion of the casing, the disk-carrier and record-disk with the driving spindle and brake-mechanism actuated by the same. Fig. 7 is an underside view of a portion of the disk-carrier, with the brake-lever attached thereto, the brake-arm being shown in the raised or inoperative position. Fig. 8 is an under-

side view similar to Fig. 7, with the brake-arm shown in the operative position. Figs. 9, and 10, are, respectively, a side elevation of Figs. 7, and 8.

Referring to Figs. 1, and 2, an arm *f*, is hinged to the upper end of the spindle *b*, of the disk-carrier *a*; the said arm, normally, extends at right angles to the said spindle *b*, but it may be raised in line with said spindle in order to strip the disk *d*, off and put another disk on. The mode of securing the said arm *f*, to the spindle *b*, is not essential; it might be removably placed with a square hole on to a square portion at the top of spindle *b*, and held engaged there against accidental shifting by a spring-pawl *w*, *x*, as shown in Fig. 5. The said arm, in Fig. 5, is designated by the reference-letter *u*. Any other means for securing the said arm to the spindle *b*, might be employed, to make said arm follow the rotary motion of the spindle and for allowing the disk *d* to be stripped off the spindle.

The means for imparting rotary motion to the spindle *d*, and to the disk-carrier *a*, mounted on said spindle, are contained in the casing *c*, in the usual manner. To the said casing *c*, is secured the bracket *h*, carrying the horn *i*, and to said horn is attached the diaphragm-lever *k*, in the usual manner. The said arm *f* has a recess *g*, adapted to be engaged by the hook *r* of a lever *q*, which has a sliding engagement as at *p*, with the bracket *h*, and is supported by a fork or yoke *n*, carried by the diaphragm-lever *k*, the said fork or yoke making the said arm *q* follow the motions of said diaphragm-lever *k*, with sufficient play in the vertical direction for allowing the hook-shaped end *r*, to descend into the recess *g*, of the arm *f*.

In the modification illustrated by Fig. 5, *u*, is the arm to be secured by a square hole on a square top of the spindle *b*, and to be held there by a pawl *x*, under the pressure of a spring *w*; *v*, is the notch or recess to be engaged by the hook *r* of lever *q*.

According to the modification shown in Fig. 3, the hook *r*, is replaced by a hook *r*¹ formed at the end of an arm *q*¹, rigidly secured to the diaphragm-carrier *k*¹, and according to another modification illustrated by Fig. 4, the said hook to enter the recess of the arm is formed by the projecting pin

or finger r^2 secured or formed to the periphery of the diaphragm m^2 , carried by the supporting arm k^2 .

As soon as the hook-shaped end r of arm g , engages the recess g of arm f , on spindle b , it will stop the rotary motion of said spindle b . But stopping motion by such engagement alone would put a very heavy strain upon the arm f , and spindle b , and the driving mechanism imparting motion to said spindle. I, therefore, prefer to employ a brake-mechanism for gradually and smoothly stopping the motion. To obtain such braking, the upper portion of the spindle b is made hollow and within the bore is lodged a central stem b^1 , the upper end of which projects from the hollow spindle b , and carries the arm f hinged or removably secured to it, as before described. The said stem b^1 has a pin y , fixed to it and projecting laterally through a spiral slot t , in the side of the hollow spindle b , thereby coupling the stem to the spindle, as the latter is being rotated by the driving gear in the casing c . The said spiral slot extends to about a quarter of the periphery of the spindle b . It will be seen, then, that, as the hook r engages the recess g of the arm f , motion will not be entirely stopped at once, but the pin y , of the stem b^1 will slide down in the slot t , and in its way down it will bear against an arm 5, or crank, of a shaft 2, carried in bearings 4 secured to the lower side of the disk-carrier a . To the said shaft 2, is mounted an eccentric lever or brake

arm 3, which, as the said shaft 2 is made to perform a partial turn, will come to act against the upper surface of the casing c .

I claim as my invention:

1. A talking-machine-brake mechanism comprising a disk record support, an axial support for said record support, upon which said record support rotates, a brake member for stopping the movement of said record support, a reproducer movable across said record support toward said axial support, a brake controlling member associated with said axial support, and means movable across said record support with said reproducer for causing the actuation of said brake member through said brake controlling member.

2. In a talking machine, the combination, with the disk-carrier, of a hollow central spindle to rotate the same, a spiral slot provided in said hollow spindle, a central stem located within the hollow spindle, a pin projecting from said central stem through the spiral slot, a brake lever under control of said projecting pin, an arm mounted to the said central stem, and an arm connected to the diaphragm-carrier and adapted to engage the said arm on the central stem, substantially as and for the purpose set forth.

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

WALTER ZEYSING.

Witnesses:

FRIEDA ZEYSING,
HANS HILDEBRAND.