

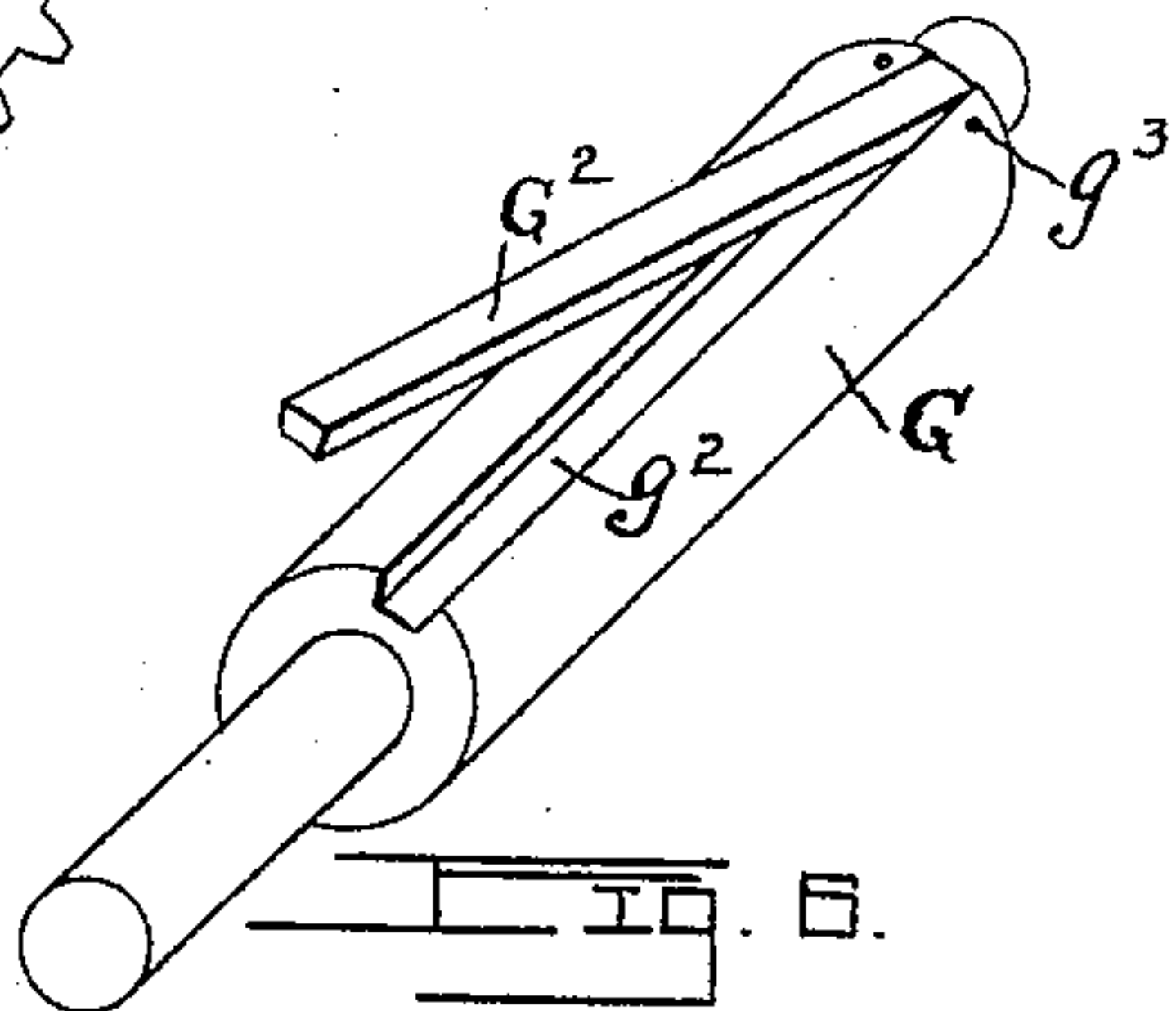
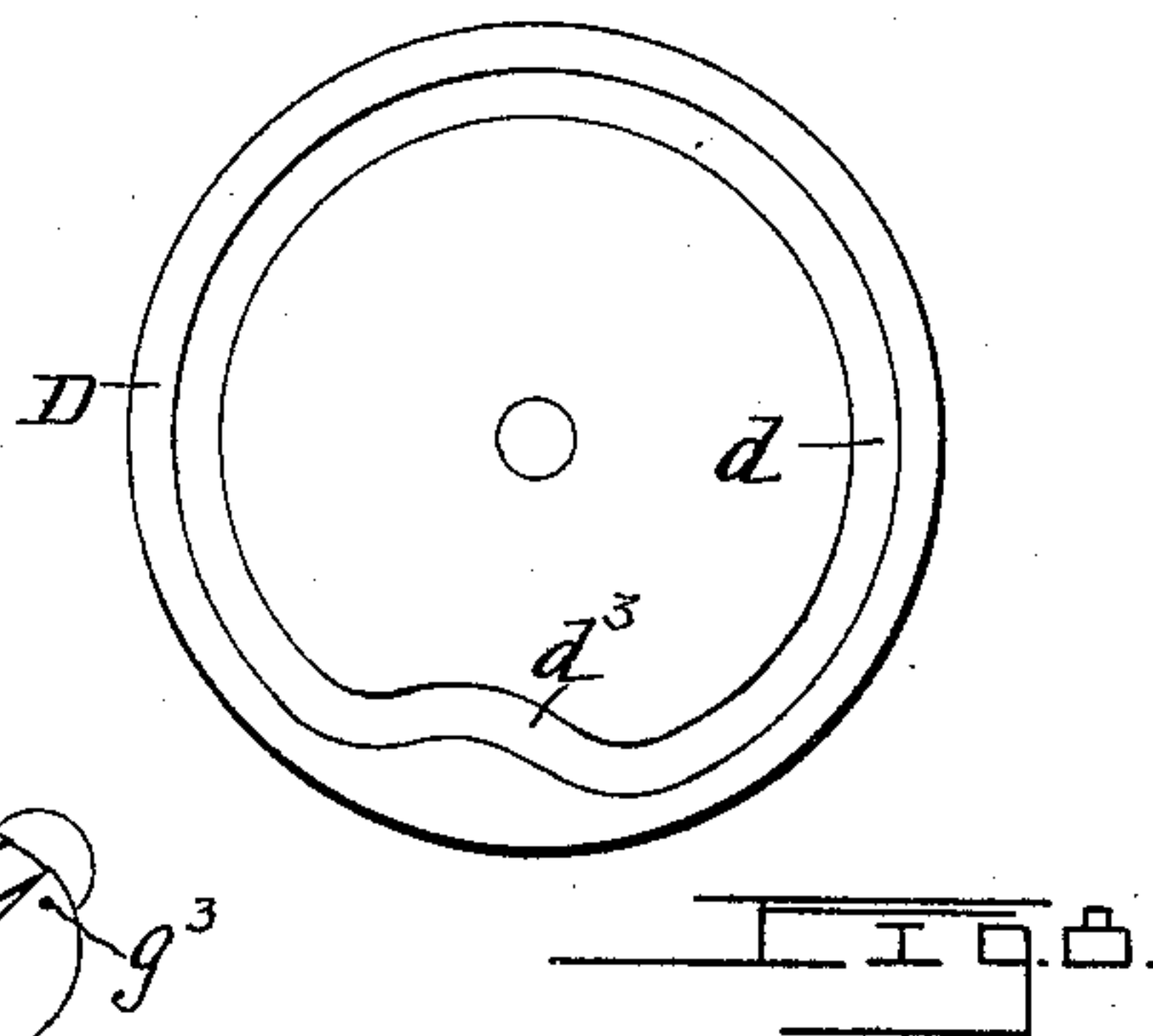
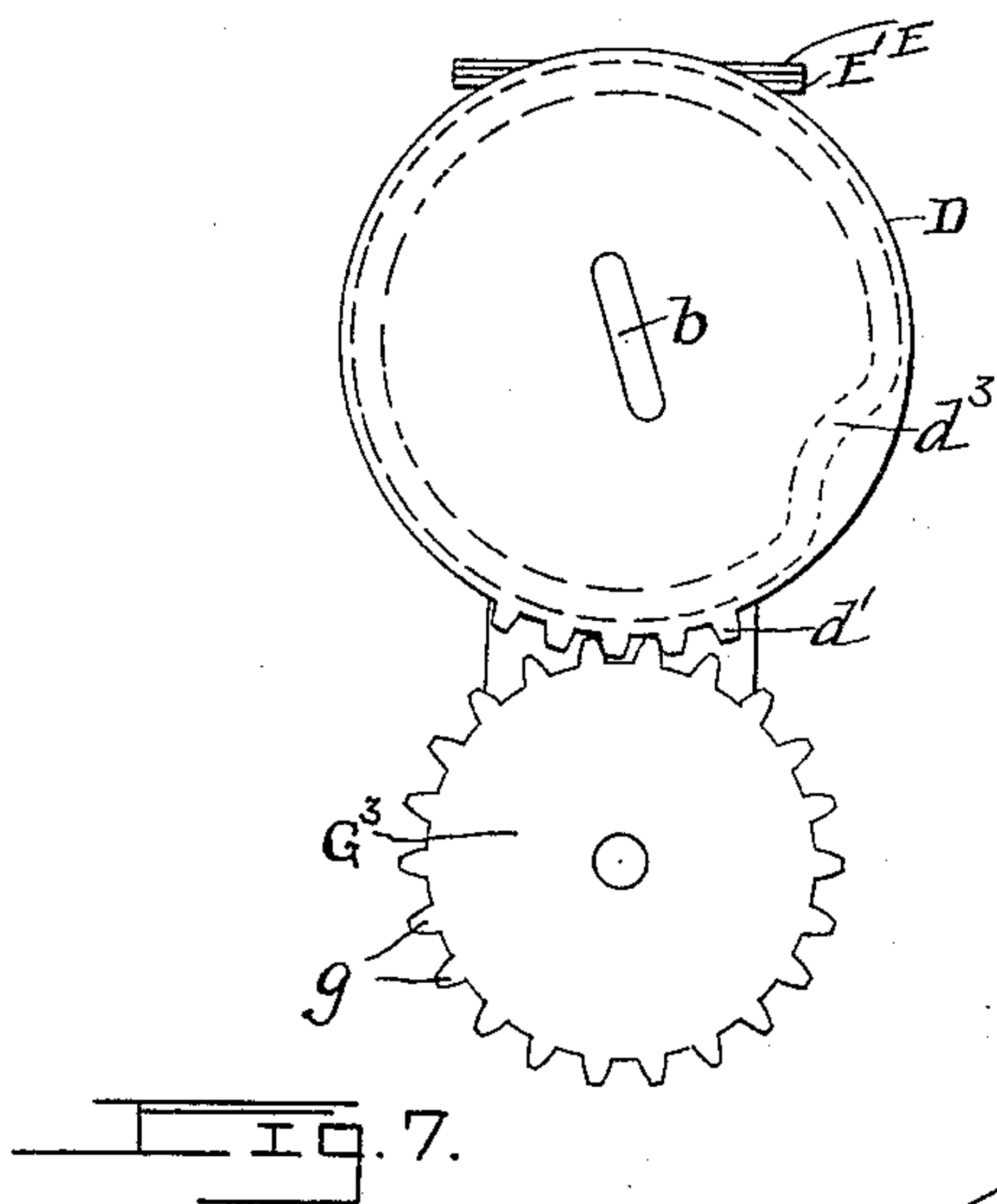
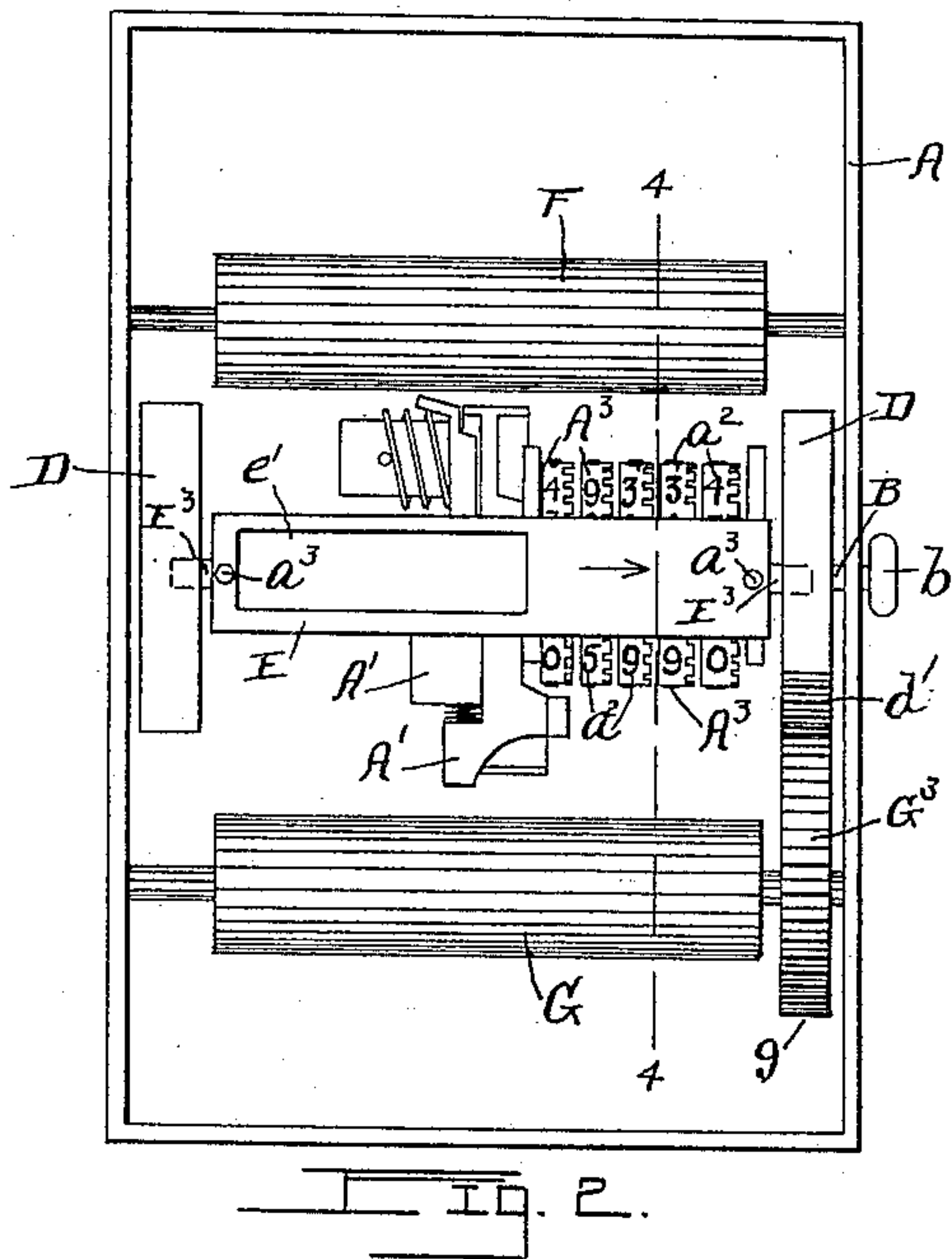
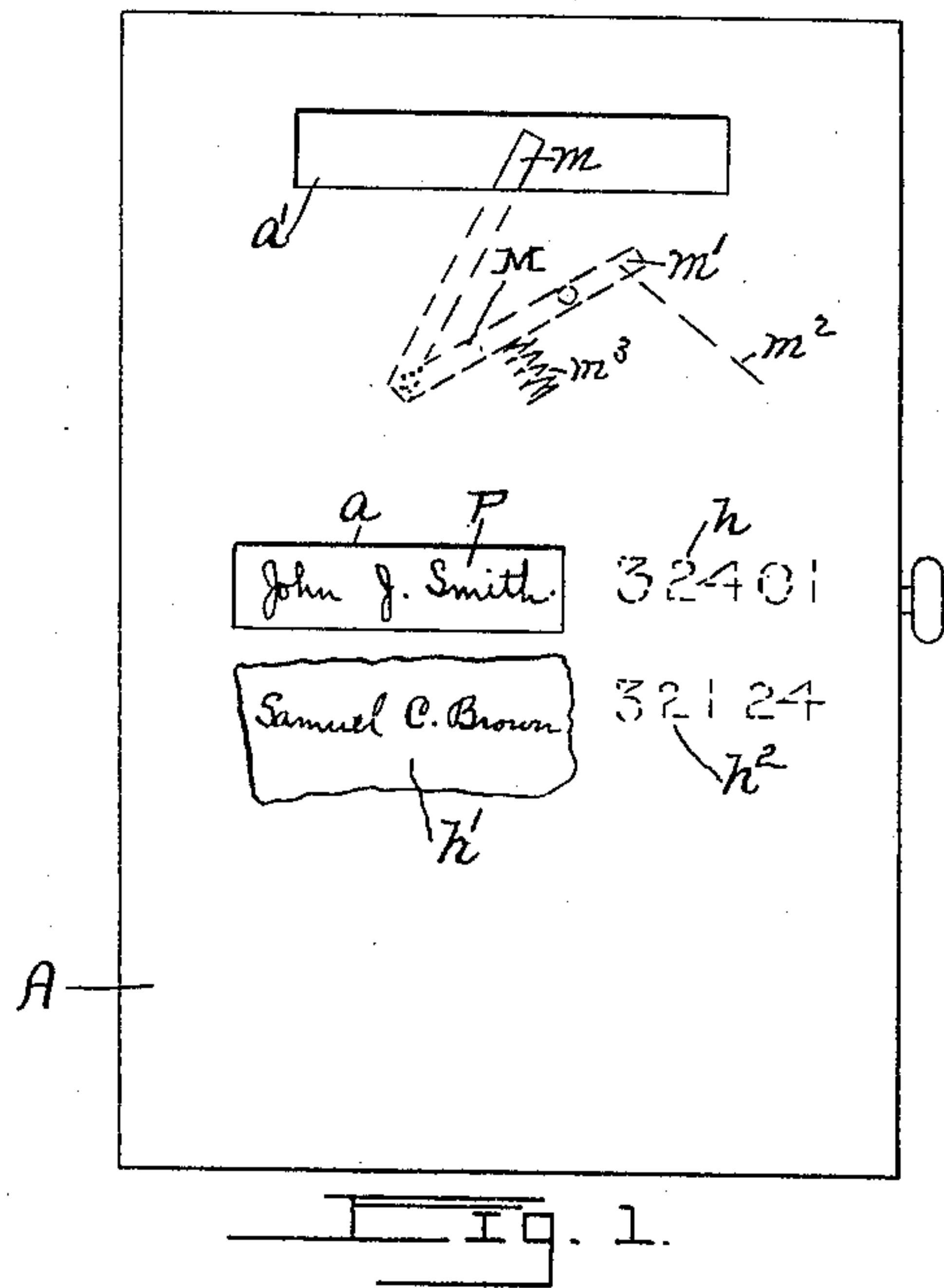
(No Model.)

2 Sheets—Sheet 1.

W. J. FORDNEY.
FARE RECORDER.

No. 605,247.

Patented June 7, 1898.



Witnesses:
W. M. Hall.
C. G. Baessler.

Inventor.
Wm. J. Fordney.
By Attorney
Wm. R. Gerhard

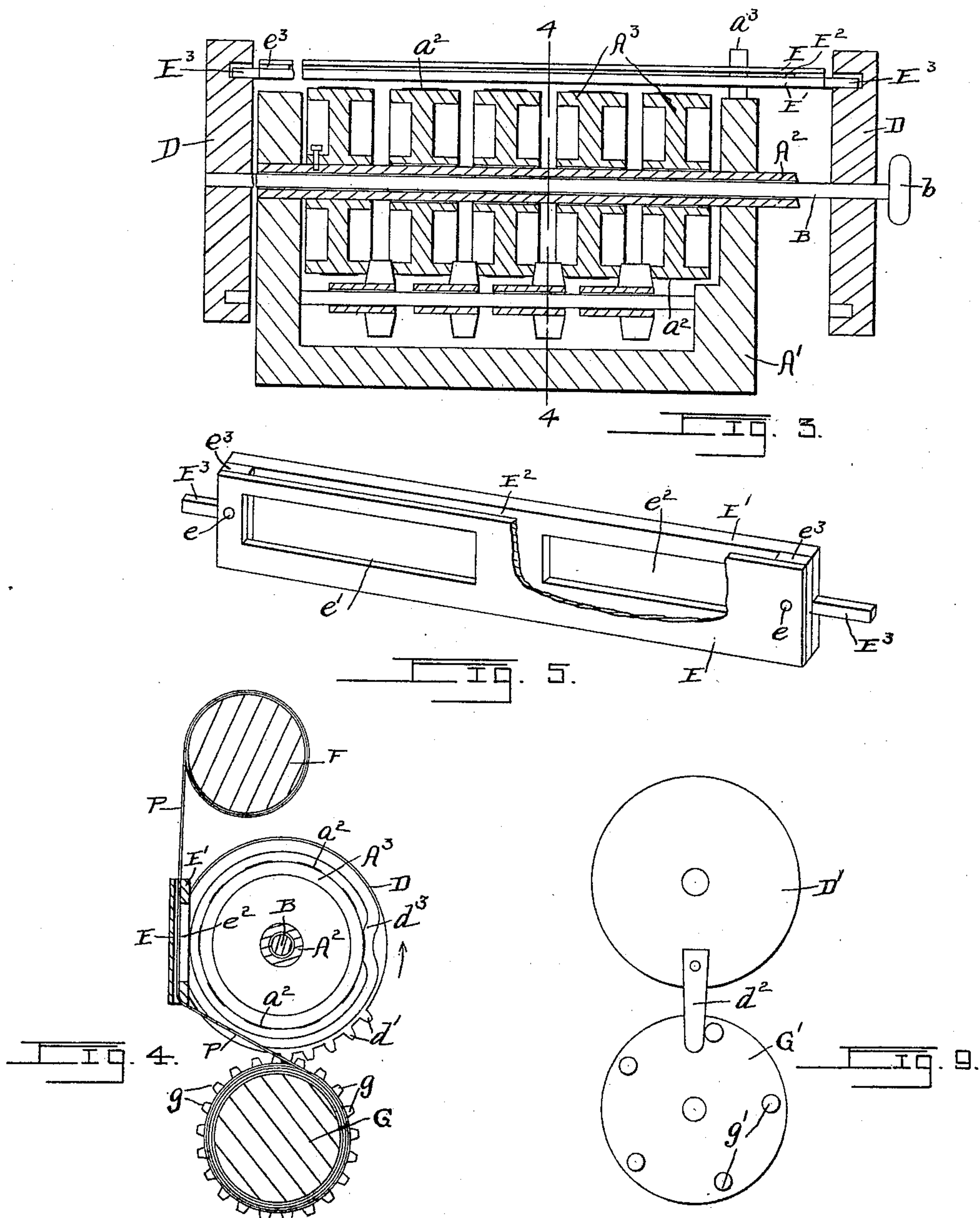
(No Model.)

2 Sheets—Sheet 2.

W. J. FORDNEY.
FARE RECORDER.

No. 605,247.

Patented June 7, 1898.



Witnesses:

N. M. Hall.

C. G. Bassler.

Inventor.

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UNITED STATES PATENT OFFICE.

WILLIAM J. FORDNEY, OF LANCASTER, PENNSYLVANIA.

FARE-RECORDER.

SPECIFICATION forming part of Letters Patent No. 605,247, dated June 7, 1898.

Application filed August 11, 1897. Serial No. 647,795. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM J. FORDNEY, a citizen of the United States, residing at Lancaster, in the county of Lancaster and State of Pennsylvania, have invented certain Improvements in Fare-Recorders, of which the following is a specification.

This invention relates to improvements in that class of registers in which a record is made of the number of fares collected by the conductor of a car; and the object of the improvements is to compel conductors to register all fares collected.

In the majority of registers of this class the figures showing the number of fares collected are exposed to view, so that by making a memorandum of the fares registered when he goes on duty and then deducting the same from the number registered when he is relieved the conductor knows exactly how much he must pay in to the company. My register prevents the conductors from seeing the numbers indicating the fares registered and is so constructed as to indicate to the official opening the case how many fares were registered by each conductor, so that if a conductor wished to hold back any of the fares taken up by him he would have to keep a much closer account of his collections and of the fares he registered than is usually possible.

My invention consists in the construction and combination of the various parts, as hereinafter fully described, and then pointed out in the claims.

In the accompanying drawings, which form a part of this specification, Figure 1 is a front view of the register, part of the front plate of the case being cut away; Fig. 2, a similar view, but showing the front plate of the case and the record-strip removed; Fig. 3, a horizontal section of the operating mechanism; Fig. 4, a vertical section of said mechanism on broken line 4 4 of Figs. 2 and 3, the record-strip being shown in place; Fig. 5, a perspective view of a detached presser, one of the plates being partially cut away; and Fig. 6, a similar view of the roller upon which the record-strip is wound. Fig. 7 is an outer face view of one of the cam-wheels and of the roller beneath it; Fig. 8, an inner face view of one of the cam-wheels, and Fig. 9 a view of a modified construction of the connection

between one of the cam-wheels and the roller beneath it.

Similar letters indicate like parts throughout the several views.

Referring to the details of the drawings, A indicates the case containing the registering mechanism, A^3 the registering-disks, and a^2 the numerals on the disks and which are raised so as to form type.

A' is the frame carrying the registering mechanism and is located in case A, and A^2 is the common axis upon which disks A^3 revolve. Axis A^2 is hollow and is supported by opposite sides of frame A' . The mechanism for operating disks A^3 is not shown, as it forms no part of this invention, and any such mechanism in common use for the purpose may be employed.

B indicates a revoluble shaft which extends through hollow axis A^2 and projects beyond the extremities thereof. One end of shaft B extends through a side wall of case A and has a knob or handle b , by which said shaft is revolved. On shaft B, between the walls of case A and the frame A' , are rigidly secured cam-wheels D, each cam-wheel having in its inner face a cam-slot d , the depressions d^3 in which are located opposite each other.

a^3 a^3 indicate guide-studs projecting forward from portions of frame A' and which engage perforations e in a presser E E'. This presser is formed of a front plate E and a back plate E', separated at the ends by transverse bars e^3 , forming a slot E² between said plates. Guide-studs a^3 are so located as to support presser E E' between the lines of numerals on disks A^3 and the front plate of case A. On the ends of said presser are horizontal outwardly-projecting arms E³, the ends whereof engage the cam-slots d d^3 of cam-wheels D.

Above frame A' and disks A^3 is located a roller F, journaled in the sides of the case, and below the same is a second roller G, also journaled in the sides of the case and having secured on one spindle a gear-wheel G³, the teeth g of which are adapted to be engaged by the small segment of teeth d' , located on the adjacent cam-wheel and just back of the indentation d^3 in the cam-slot d therein.

Around roller F is wound a paper ribbon P, which passes down to and through the slot E² of presser E E' and thence down to roller G,

where its lower end is secured. Roller G has a longitudinal groove g^2 therein, and in one end of this groove is secured a tongue G^2 by means of a hinge-pin g^3 . Tongue G^2 is adapted to be swung upward around hinge-pin g^3 until the end of paper ribbon P is inserted in or passed across groove g^2 , when said tongue is pressed down into place, so as to secure the end of the paper ribbon therein in a manner well known.

In back plate E', opposite the front row of numerals on disks A^3 , is a slot e^2 , so that when presser E E' is forced in toward said disks the front row of numerals thereon pass into said slot and leave their impression upon the corresponding part of ribbon P. In plate E and in the end of the presser opposite slot e^2 is a similar slot e' , located opposite to a slot a in the front of case A.

In operation the conductor leaving the car writes his name on ribbon P where exposed through slot a in the front of the case, and he then makes one complete turn of handle b , whereby, through cam-slots d d^3 of cam-wheels D, presser E E' is forced inward, and the imprint of the numerals on disks A^3 and opposite said presser is taken on ribbon P through slot e^2 . The movement of the cam-wheels continuing after the impress of the numerals upon ribbon P, the toothed segment d' of one of the cams engages the teeth g of gear-wheel G^3 on the spindle of roller G and draws ribbon P downward until there is carried below slot a in the face of the case the part of said ribbon on which is the name of the conductor and the imprint of the numerals which show the number of fares registered up to the time said conductor left the car, as shown in the drawings, where the front of the case is cut away at h' , and by the numerals in broken lines at h^2 . The next conductor repeats the operation, his name being shown in slot a , with the imprint of the numerals in broken lines at h just before the ribbon P is again drawn down by him.

From the preceding description it will be understood that unless the conductor keeps an exact personal account of every fare taken in by him and not registered he cannot hold any fares back without discovery, that it is not possible to keep such an account in the rush and hurry of a crowd, that when there is not a crowd it is exceedingly dangerous to take any fare without registering the same, and that if during a tour of duty the conductor loses account of one single fare he is "gone" and nothing but the most unlikely of chances can save him.

In Fig. 9 is shown a modified construction, the cam-wheel D' having thereon an arm d^2 , the roller G', which takes up the ribbon P, having pins g' on its ends adapted to be engaged by arm d^2 , whereby the movement of cam-wheel D' is intermittently communicated to said roller G'.

In the upper portion of the front of case A, Fig. 1, is shown a slot a' , and through this

slot appears an arm m of a lever M, through which each fare registered by the conductor is indicated to the occupants of the car. This is done through the connection of the other arm m' of the lever with the registering mechanism by a cord m^2 , whereby the registering of each fare is indicated by throwing up said arm m , which is retracted by a spring m^3 . The device communicating the action of the registering mechanism to lever M is not shown, as lever M and said device form no part of this invention, both being old and in common use. The lever M is illustrated and described simply to show that the registering of the fares can be indicated to the passengers, while at the same time concealing the number of fares so registered.

I do not restrict myself to the details of construction and the arrangement of parts herein shown and described, as it is obvious that many changes may be made therein without departing from the principle and scope of my invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. The combination, in a car-fare register, of revoluble dies having figures thereon, a presser supporting a movable ribbon and located opposite the figures, and means for actuating the presser to force the ribbon against said figures, a portion of said ribbon being exposed, whereby a name may be written on the ribbon in position to refer to the figures pressed thereon, for the purpose specified.

2. The combination, in a car-fare register, of revoluble dies having figures thereon, a presser supporting a movable ribbon and located opposite the figures, and means for actuating the presser to force the ribbon against said figures, the case of said register having a slot therein, whereby a name may be written on said ribbon and in line with the part thereof pressed against said figures, for the purpose specified.

3. The combination, in a car-fare register, of revoluble dies having figures thereon, a presser having a movable ribbon passing through the same, said presser having a slot through the back thereof and opposite said figures, guide-studs passing loosely through perforations in the presser, and means for actuating the presser to force the ribbon against said figures, the front plate of the presser having a slot therein, whereby a name may be written on the ribbon, for the purpose specified.

4. The combination, in a car-fare register, of revoluble dies having figures thereon, a presser having a slot in its back plate and opposite a line of said figures and a slot in its front plate in line with the slot in the back plate, pins passing loosely through perforations in the presser, wheels opposite the ends of the presser and provided with cam-slots having depressions formed therein toward the dies, arms on the presser and engaging said

cam-slots, a roller above the dies, a roller below the dies, a ribbon being secured to the two rollers and passing loosely through a slot between the front and back plates of the
5 presser, a gear-wheel on the lower roller, a segment of teeth on one of the cam-wheels and adapted to mesh with the teeth of the gear-wheel, and means for actuating said mechanism, all substantially as and for the purpose specified.

WILLIAM J. FORDNEY.

Witnesses:

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