

No. 618,548.

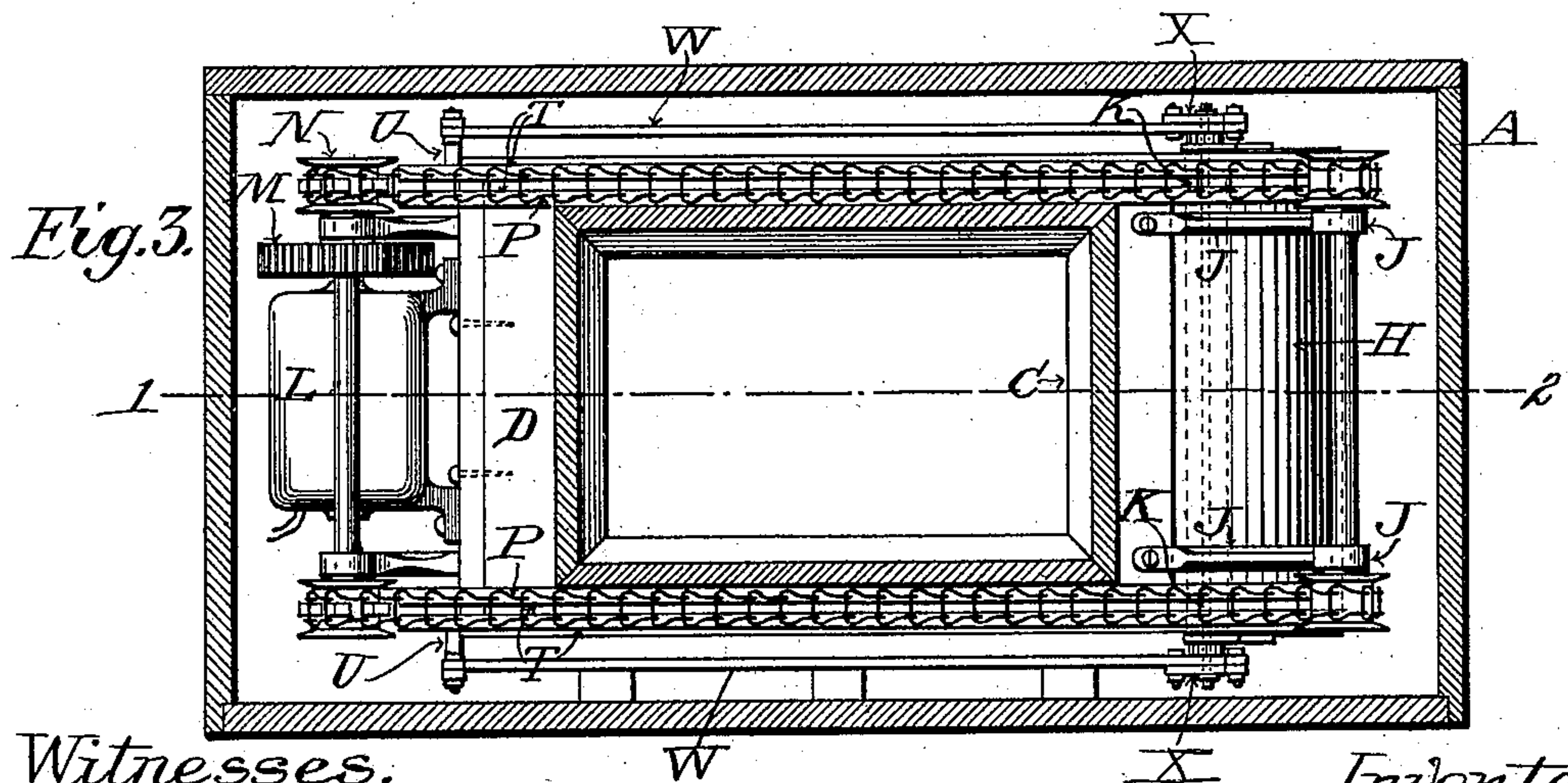
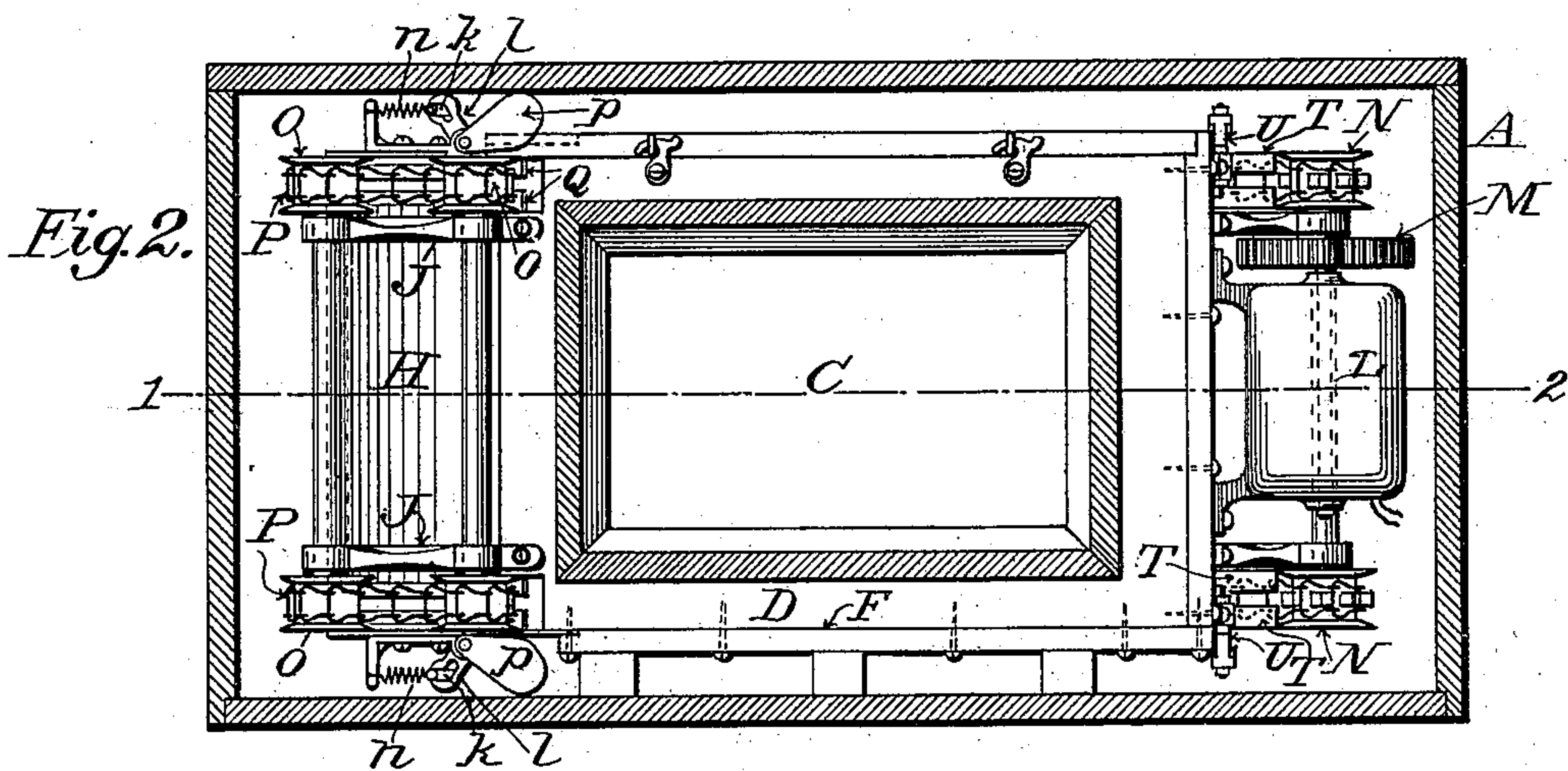
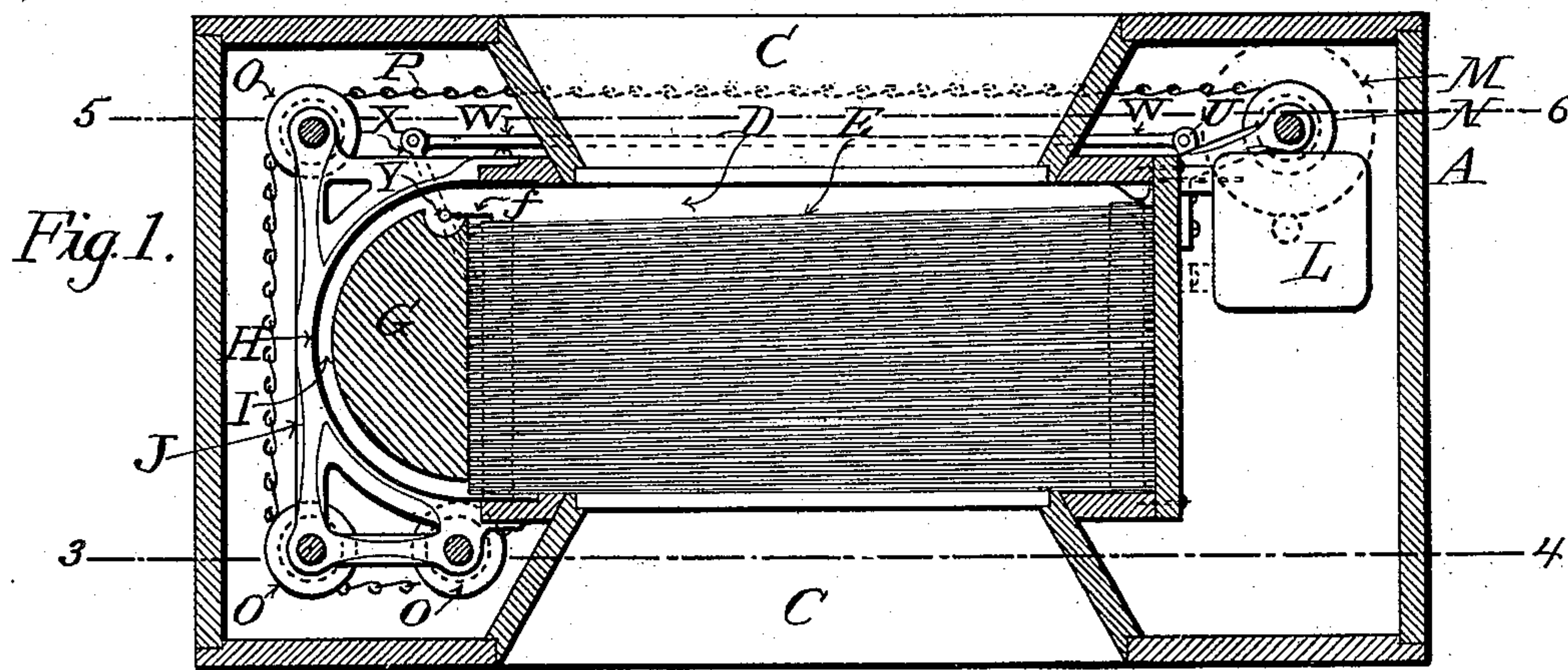
Patented Jan. 31, 1899.

F. C. WATSON.
CARD EXHIBITOR.

(Application filed Mar. 31, 1897.)

(No Model.)

2 Sheets—Sheet 1.



Witnesses.

W. B. Burdine

C. A. Tink.

Inventor,
Frank C. Watson

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2 Sheets—Sheet 2.

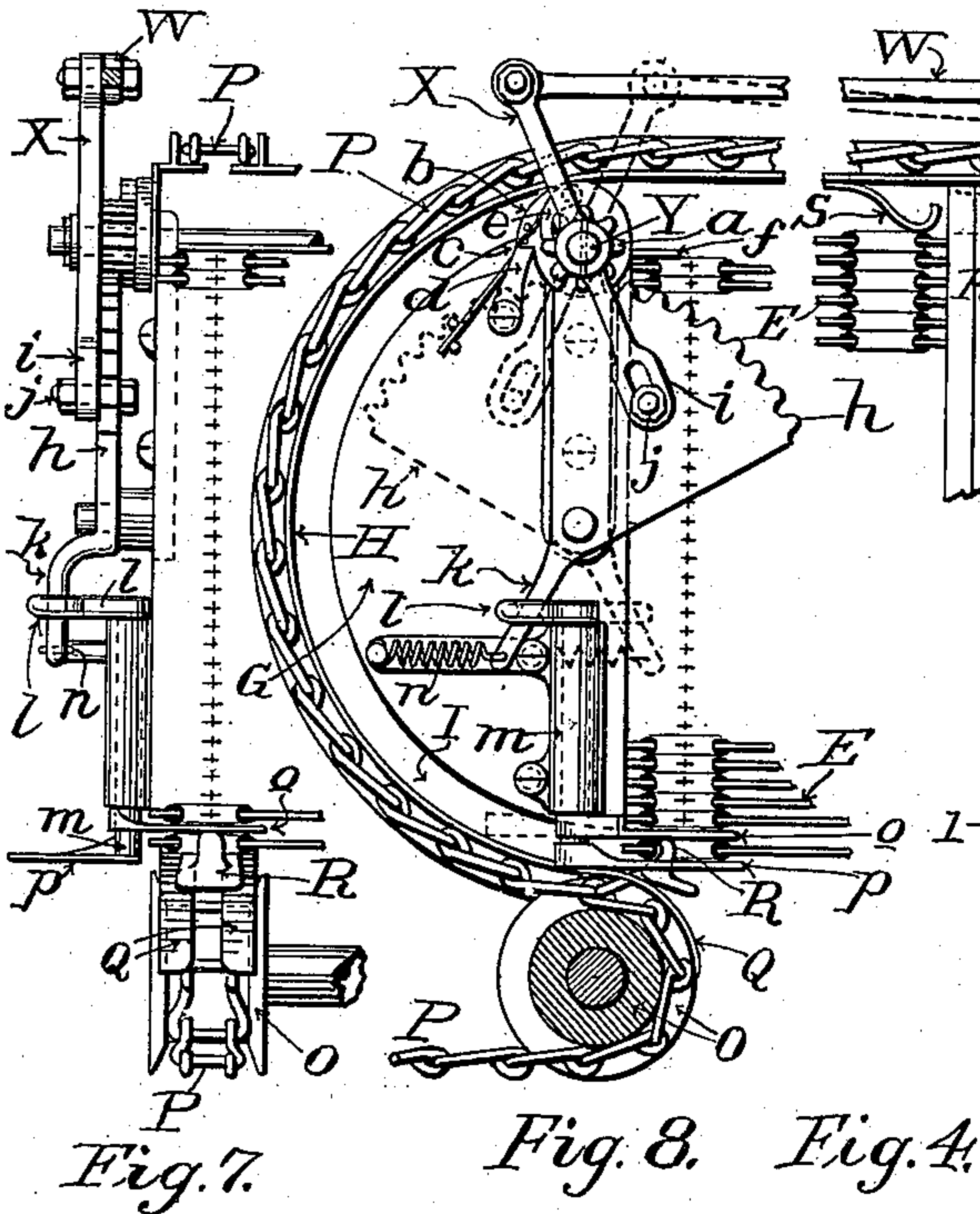
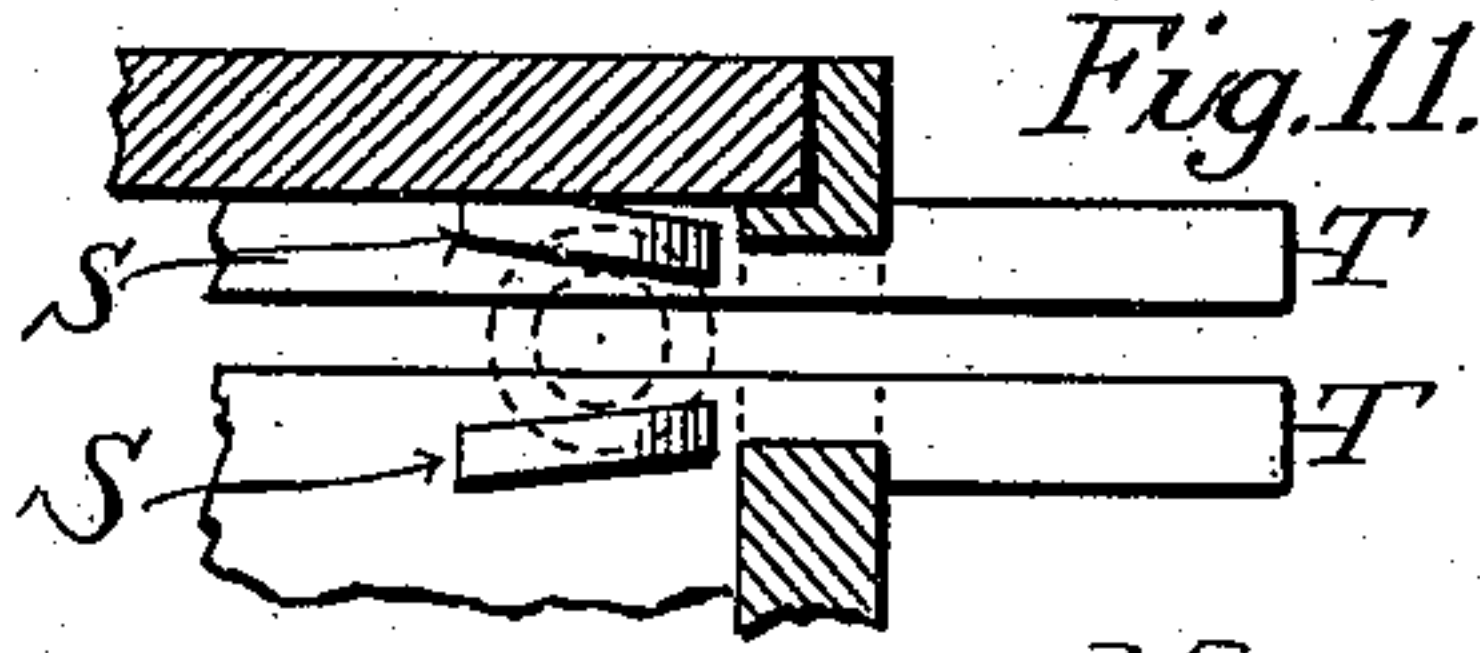
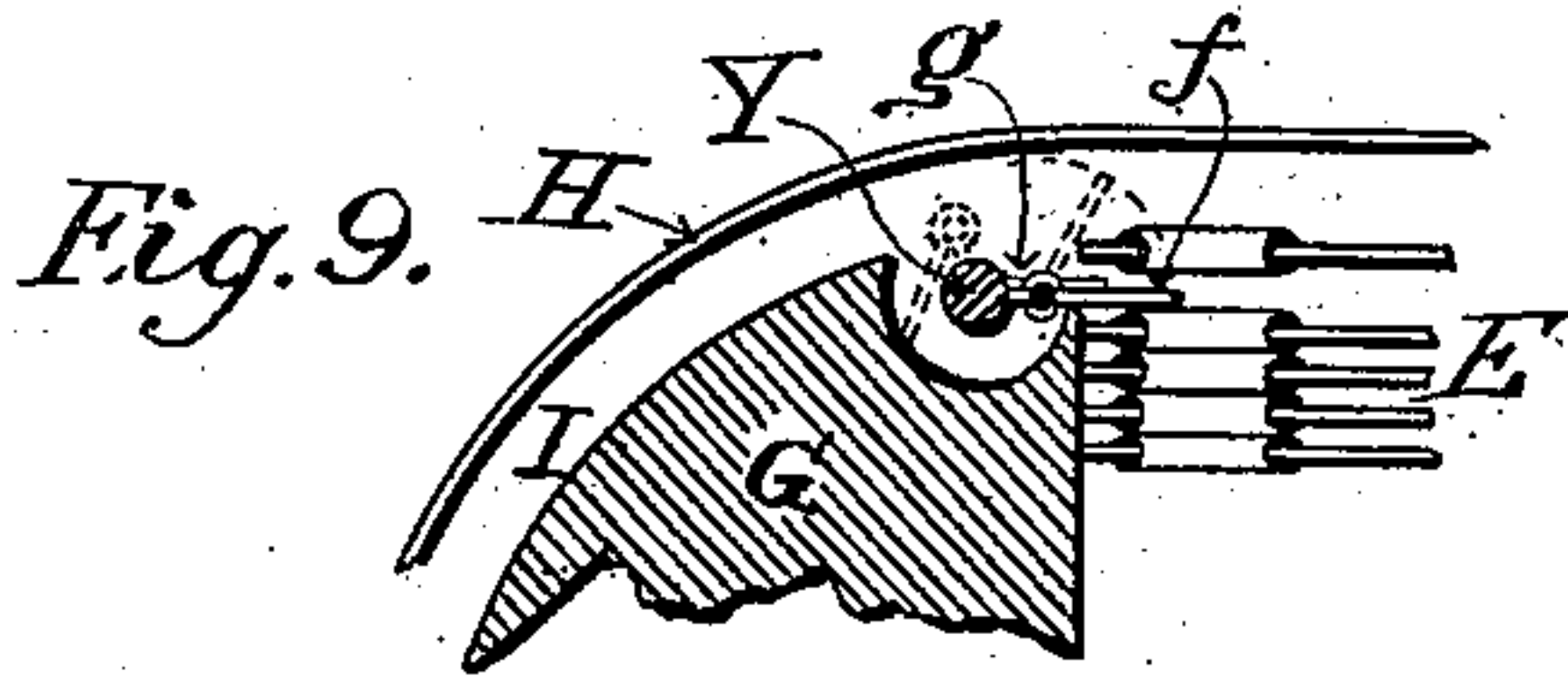


Fig. 8. Fig. 4.

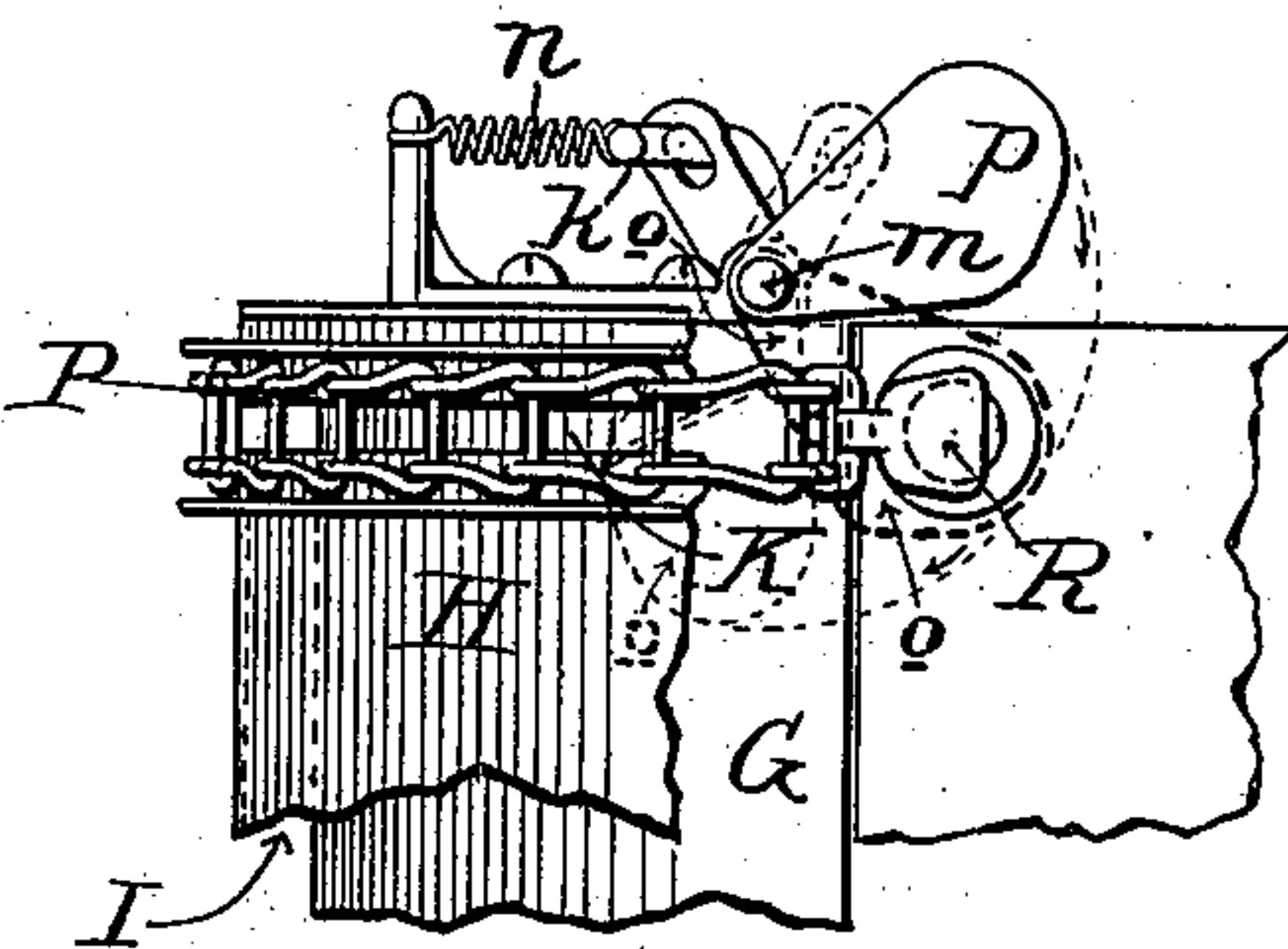
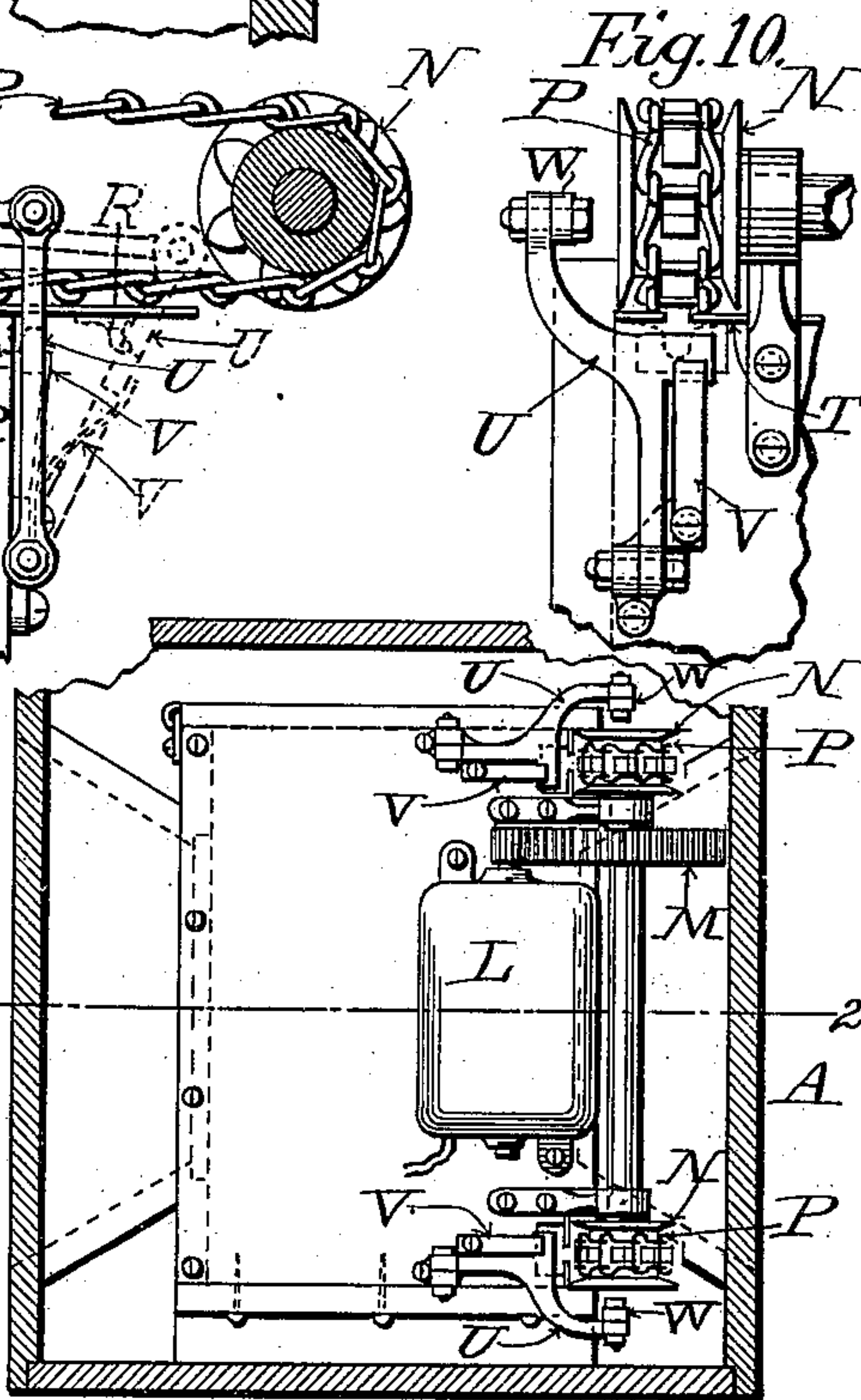


Fig. 6.

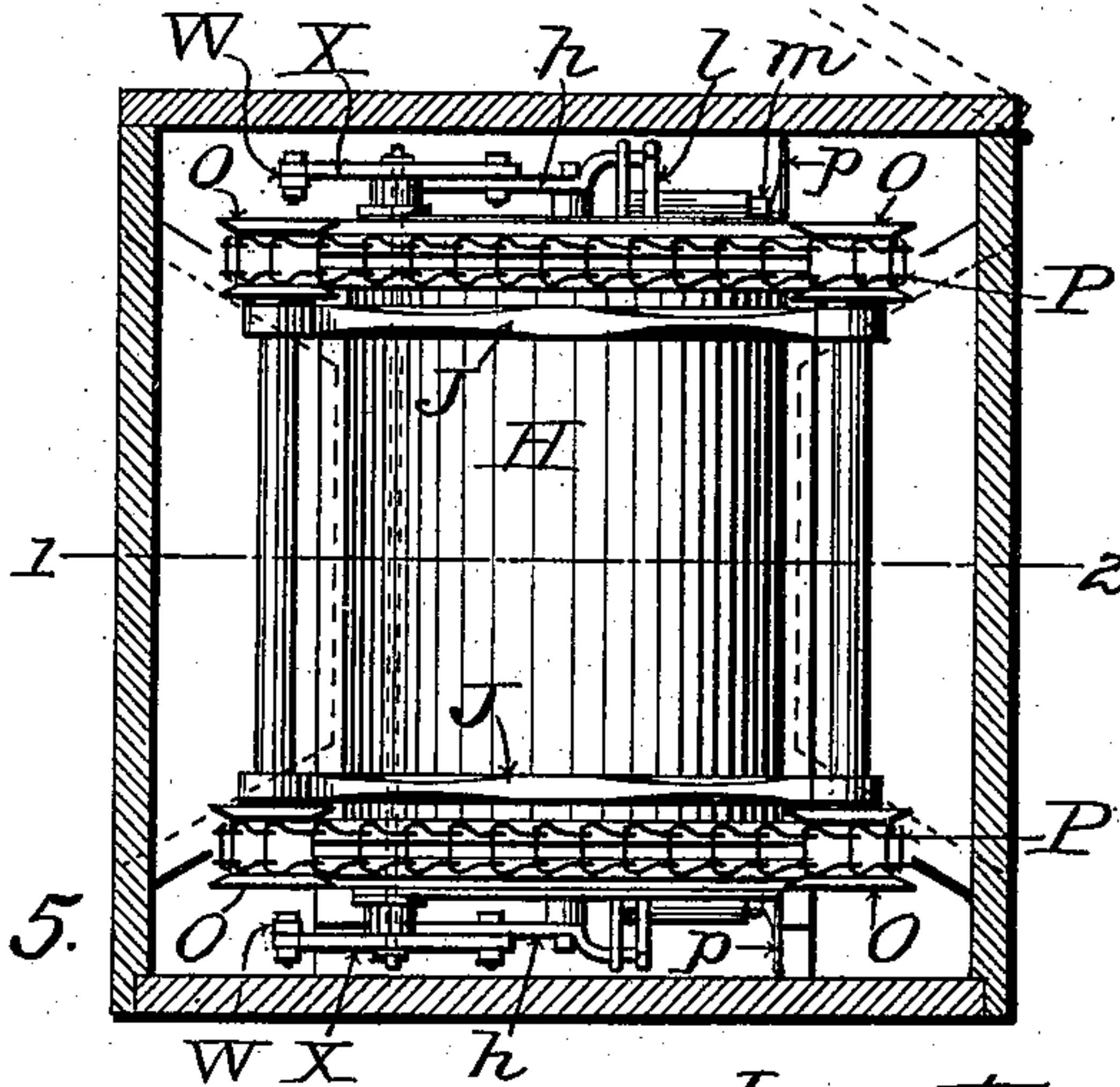


Fig. 5.

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UNITED STATES PATENT OFFICE.

FRANK C. WATSON, OF PHILADELPHIA, PENNSYLVANIA.

CARD-EXHIBITOR.

SPECIFICATION forming part of Letters Patent No. 618,548, dated January 31, 1899.

Application filed March 31, 1897. Serial No. 630,141. (No model.)

To all whom it may concern:

Be it known that I, FRANK C. WATSON, a citizen of the United States, residing at Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain new and useful Improvements in Exhibitors, of which the following is a specification.

My invention pertains to exhibitors for exposing to view a series of cards or slips one after another, said slips being provided with any suitable printed matter, directions, samples, or the like, according to the use to which the exhibitor is applied.

In the annexed drawings, Figure 1 is a horizontal sectional view of the complete machine on the line 1 2, Figs. 2, 3, 4, and 5; Fig. 2, a vertical sectional view on the line 3 4 of Fig. 1; Fig. 3, a similar view on the line 5 6, Fig. 1; Figs. 4 and 5, end elevations, viewing the machine from opposite ends; and Figs. 6, 7, 8, 9, 10, and 11, enlarged detail views of various working parts.

The principal object of my invention is to provide means for automatically presenting to view from opposite sides of the machine a series of slips or cards, both faces of the cards being presented for inspection in turn.

A further object is to provide means whereby the slips or cards may automatically be transferred in regular progression or order from one inspection-opening to the other upon the opposite side of the machine.

A denotes the casing of the exhibitor, provided with oppositely-disposed inspection-openings C C in the sides thereof. Within the casing, intermediate the inspection-openings, there is formed a chamber D for the reception of the slips or cards E designed to be exposed to view. One side of the casing is made removable and one side of the chamber D is likewise detachable, so that access may be readily had to the operative parts and the slips or cards removed or changed as desired.

The chamber D is of a length and width slightly in excess of the inner end of the inspection-openings, so that the slips or cards once placed therein will be securely retained. Said slips or cards stand upon one edge on the bottom F of the chamber and also abut at their ends against the ends of said chamber. One end of the chamber is formed by a block G, rounded on its rear face, and which, in con-

junction with a curved plate H, forms a channel or way I, extending from one side of the chamber to the opposite side thereof.

Plate H is secured to the casing and to a web or a casting J, likewise secured to the casing. Said plate is also provided with slots or grooves K near its top and bottom for a purpose which will presently appear.

L denotes a motor, preferably an electric motor, which imparts motion to a gear M, mounted upon a shaft carrying sprocket sheave-wheels N N. About these wheels N and sheave-wheels O, mounted on shafts suitably disposed in the casting J, are endless chains P, said chains passing around the curved plate H in line with the slots K formed therein. Upon reference to Figs. 7 and 8 it will be observed that said plate H is extended down and part way around the sheave-wheels O, forming fingers or projections Q.

Secured to the chains at determinate positions thereon are hooks R, said hooks being formed, as shown in Figs. 6, 7, and 8, with an upwardly-projecting nose and a flattened broad base.

Each of the cards or slips E is provided near each of its corners with an eyelet, said eyelets projecting from the surface, so that when the cards are superposed one upon another their faces will not come into contact; but a space will be left between them, as will be clearly seen upon reference to Figs. 1, 8, and 9.

The motor being set in operation, motion is imparted to the chains, and as the hooks R pass in between the fingers or projections Q, as shown in Figs. 6, 7, and 8, the noses engage the eyelets of the forward card or slip and draw it into and through the curved channel or way I, finally depositing it upon the opposite side of the pack or bundle. Releasing strips or arms S are secured at or near the opposite end of the chamber D from the channel I to one side of the chains, so that as the hooks pass between them the arms press down upon the card and release it from the hooks, holding it down at that end upon the pack. The chain continues to travel and the hooks again come into position to withdraw the forward slip, exposing the next one to view and at the same time carrying the withdrawn card around to the opposite side

of the pack. By transferring the cards in this manner both sides are exposed to view at the same opening.

Certain devices are used for compacting the slips or cards down upon the pack after they have been drawn from one side to the other of the pack and released. Also mechanism is employed for preventing more than one card being drawn off at a time, and these devices will now be described.

Extending out into the casing beyond the arms S S are fingers or projections T, against the under face of which the base of the hook bears and passes. This is to cause the nose of the hook to engage with a pivoted arm U, normally held up against the end wall of the chamber by a spring V, as shown in Fig. 8. Said pivoted arm is connected at its outer end by a link W to an arm X, freely mounted on a shaft Y, said shaft being journaled just above a curved recess formed in one side of the block G. The parts just referred to are duplicated at each end of the shaft, as are those which are now to be described. In other words, the parts and mechanism are the same for both chains, as will be seen upon reference to Figs. 2, 3, 4, and 5. Hence a description of one set will suffice. Next to the arm X and also loosely mounted on the shaft is a gear *a*, while affixed to the shaft-bearing against the opposite face of said gear is a plate or disk *b*, provided with a shoulder or stop *c*, designed to be engaged at certain intervals and under certain conditions by a pawl or detent *d*. A pawl *e* is mounted on the disk or plate *b* and engages the gear *a* when said gear turns to the right. Upon the shaft Y and in line with the chains and the eyelets in the corners of the cards is secured a compacting device comprising a stud and a leaf or arm *f*, pivoted thereto and designed to be held normally in alinement with the stud through the agency of a spring *g*, the normal relation of the parts being shown in full lines in Fig. 9.

A segmental rack *h* is pivoted to each end of the block G and is designed to mesh with a gear *a*, the teeth in said rack being so numbered and apportioned that a movement from one side to the other will turn said gear through one complete revolution. Arm X is formed with a slotted extension *i*, which engages a pin *j*, secured upon the face of the segment, so that any movement imparted to the arm through link W and arm U will be transmitted to the segment, which in turn will revolve gear *a* and rotate the shaft Y, for as the detent or pawl *e* engages the teeth of said gear it will necessarily turn disk *b* and consequently shaft Y. These parts are so timed and arranged that this action takes place just as the card or slip has been completely withdrawn from the curved channel I.

In turning the shaft Y carries around with it the compacting-arm *f*, the parts assuming the position in the curved or rounded recess

in block G, as shown in dotted lines in Fig. 9, until the shaft has so far moved that the arm is free to straighten out under the action of the spring and act upon the exposed face of the card, bringing it from the position shown in Fig. 9 to that shown in Fig. 8. As the hook passes off the arm U the springs tend to throw the parts back from the position shown in dotted lines, Fig. 8, to the position shown in full lines in said figure, and in so doing the gear *a* and arm X rotate freely on shaft Y, which is held stationary by disk *b* and detent *d*, thus insuring the compacting device being held in its proper position to be again rotated when a new card or slip has been drawn around.

The segmental rack *h* is formed with a tail or extension *k*, which is slightly offset, Fig. 7, and works in a slot formed in an arm *l*, which projects from a shaft *m*, journaled on the block G. A spring *n* is secured to the lower end of the tail and tends to hold the segment *h* in the position shown in Fig. 8. In other words, it acts in conjunction with spring V.

To the lower end of shaft *m* are secured two blades or paddles *o* and *p*, standing parallel to each other and to the cards or slips, but at right angles, or approximately so, to each other about the shaft, as shown in full lines in Fig. 6. These blades or paddles are comparatively thin and are separated from each other on the shaft by a distance equal to the thickness of one of the eyelets. As the segment *h* is moved back and forth, as above stated, the shaft *m* is caused to turn back and forth, and consequently the blades or paddles *o* and *p* will move from the normal position shown in full lines, Fig. 6, to that indicated in dotted lines in said figure. As the moving card is released from the chain and is being acted upon by the compacting-arm the blades *o* and *p* will be moved, blade *o* being withdrawn from the now outermost card and blade *p* coming in front of the pack and allowing said pack to move in the chamber D toward that side of the machine, but limiting its movement to the distance equal to the thickness of one of the cards and its eyelet. Upon the return stroke the blade *p* will be withdrawn from in front of the pack and blade *o* will enter between the outermost cards. As said blades *o* come directly over and between the eyelets, Fig. 6, the hooks can engage but one card at a time, and hence there is no danger of the machine getting out of order through the wedging of the cards in the slot.

As before stated, the parts are so timed that the operation is automatically carried on without attention from any outside source.

Both faces of all the cards are exposed to view if the pack be passed through the holding chamber or magazine twice, and thus the machine will have twice the capacity for its size of those wherein but one side of the card is exposed to view.

Obviously any matter may be placed upon

the faces of the cards, or the cards themselves may comprise samples designed to be exhibited.

The cards or slips always being held in their proper position and not depending upon gravitation for their movement, as the mechanism acts in a positive manner thereon, the exhibitor may be placed in any position and successfully operated. This being so, the curved slot or channel I may be at either end, at the top or bottom, or wherever it is most convenient to have it, according to circumstances and requirements.

Having thus described my invention, what I claim is—

1. In an exhibitor, the combination of a frame or casing; a chamber formed therein; inspection-openings upon opposite sides of said chamber, a series of flexible cards contained in said chamber; a curved way or channel formed at one side of the chamber and communicating with the opposite sides thereof; and means for drawing the cards from one side of said chamber, carrying them through the curved way and depositing them upon the opposite side of the chamber.

2. In an exhibitor, the combination of a frame or casing; a chamber formed therein; inspection-openings upon opposite sides of said chamber; a curved way or channel formed at one side of the chamber and communicating with the opposite sides thereof; a series of loose, flexible cards contained in said chamber; and means for withdrawing the cards one by one from one side of the chamber and depositing them upon the opposite side.

3. In an exhibitor, the combination of a frame; a chamber formed therein having oppositely-disposed inspection-openings; a series of cards contained in said chamber; a curved way or channel formed at one side of the chamber and communicating with the opposite sides thereof; means for withdrawing the cards from one side of the chamber and depositing them upon the opposite side; and compacting devices for pressing the cards down into position.

4. In an exhibitor, the combination of a frame; a chamber formed therein; a series of cards contained in said chamber; a curved way or channel formed at one side of the chamber and communicating with the opposite sides thereof; means for withdrawing the cards from one side of the chamber and depositing them upon the opposite side; means for separating the cards upon that side from which they are withdrawn; and compacting mechanism upon the opposite side of said card-holding chamber.

5. In an exhibitor, the combination of a card-holding chamber having oppositely-disposed inspection-openings; a series of cards contained therein; means for transferring the cards from one side to the opposite side thereof; and positively-operated separating and compacting devices designed to work in

conjunction therewith, substantially as described.

6. An exhibitor provided with oppositely-disposed inspection-openings in combination with a series of cards contained therein between said openings; and means for directly transferring the cards from one side of the pack to the other and to turn the same, whereby both sides of the cards are exposed to view at the opposite openings successively.

7. An exhibitor provided with oppositely-disposed inspection-openings in combination with a series of cards contained therein between said openings; means for transferring the cards from one side of the pack to the other, whereby both sides of the cards are exposed to view; and separating and compacting devices working in conjunction with said transferring mechanism, substantially as described.

8. In an exhibitor, the combination of a card-holding chamber; a series of cards contained therein; means for transferring said cards from one side of the chamber to the other; and a compacting device, comprising a shaft rotatably mounted above a curved recess at one end of said chamber, an arm pivoted thereto, and a spring tending to normally keep said arm extended over the end of the outermost card.

9. In an exhibitor, the combination of a card-holding chamber; a series of cards contained therein; means for transferring said cards from one side of the chamber to the other; and a card-separating device comprising a shaft mounted near each end of the chamber provided with two arms one above the other standing at right angles to the shaft and designed as the shaft is reciprocated to be successively brought beneath and between the cards, substantially as described.

10. In an exhibitor, the combination of a card-holding chamber; a series of cards contained therein; means for transferring said cards from one side of the chamber to the other; a card-separating device comprising shafts mounted near each end of the chamber provided with two arms one above the other standing at right angles to the shaft, and designed as the shaft is reciprocated to be successively brought beneath and between the cards; and a compacting device comprising a shaft rotatably mounted above a curved recess upon the opposite side of the chamber, an arm pivoted to said shaft, and a spring tending to normally keep said arm extended.

11. In an exhibitor, the combination of a casing; a card-holding chamber located therein; a series of cards contained in said chamber; a curved way or channel communicating with the opposite sides of said chamber; endless chains passing around said channel and over one side of the chamber; hooks secured to said chains designed to engage the cards and to transfer them from one side of the chamber to the other; and means for releas-

ing the hooks from the cards when the transfer has been completed.

12. In an exhibitor, the combination of a frame; a card-holding chamber; a series of
5 cards mounted therein; endless chains provided with hooks for transferring the cards from one side of the chamber to the opposite side; arms T extending from said chamber in line with the hooks; arms U pivoted to the
10 chamber and designed to be engaged by the

hooks; a card-separating device; a compacting device; and connections, substantially as described, between said devices and the arms U as and for the purpose described.

In witness whereof I hereunto set my hand 15
in the presence of two witnesses.

FRANK C. WATSON.

Witnesses:

SAMUEL COLLINS,

E. A. GAFFNEY.