

Fig. 1.

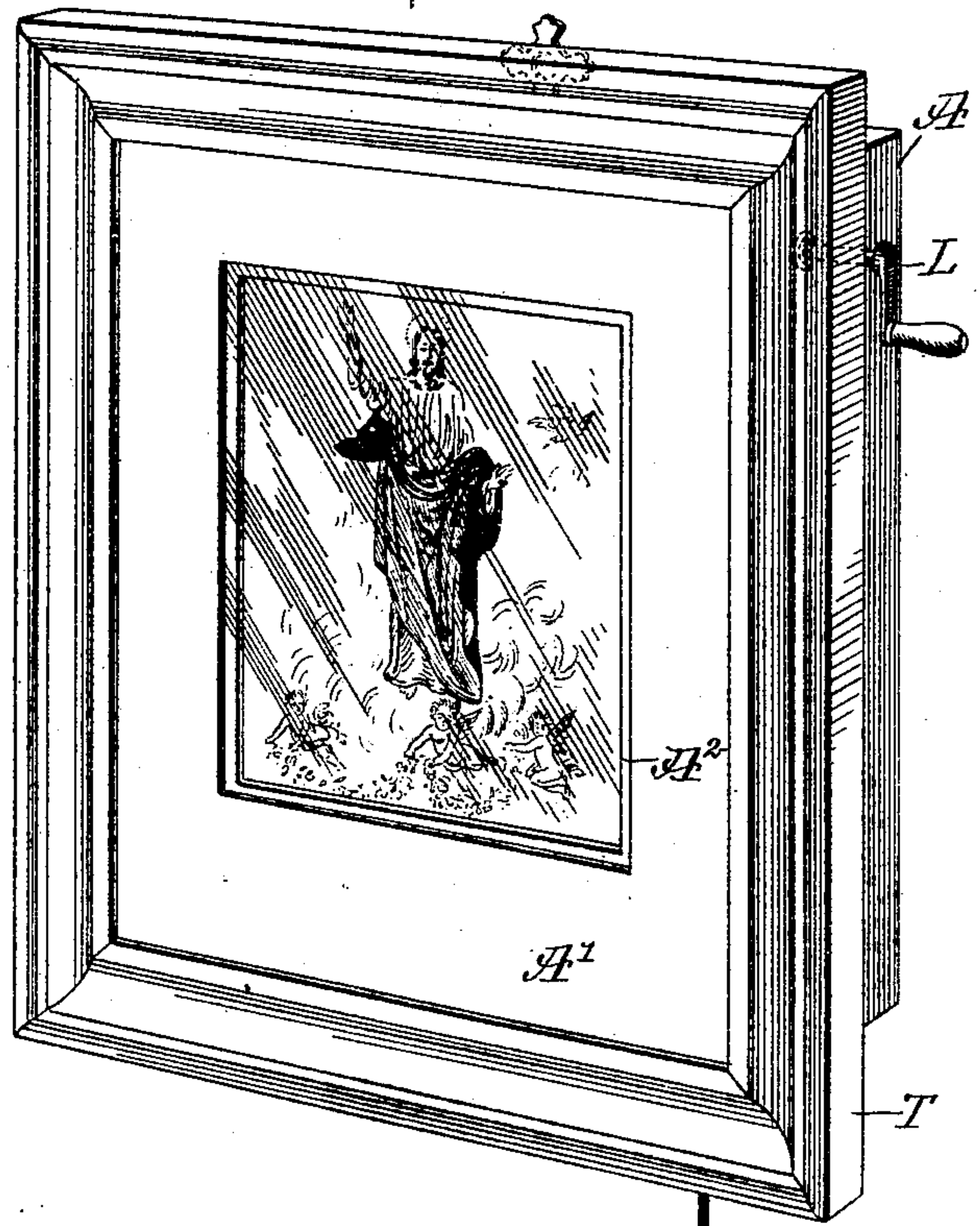


Fig. 6.

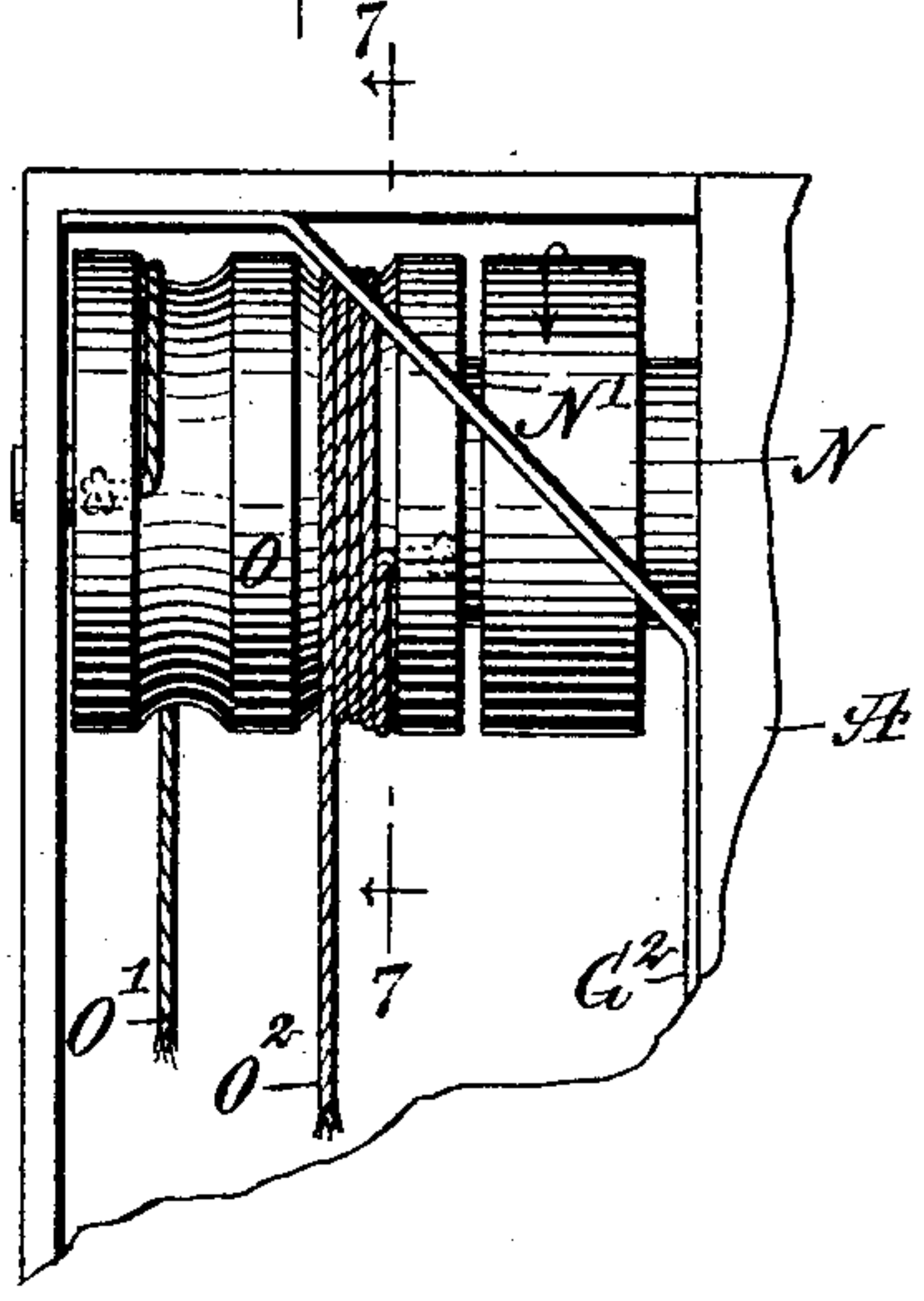


Fig. 7.

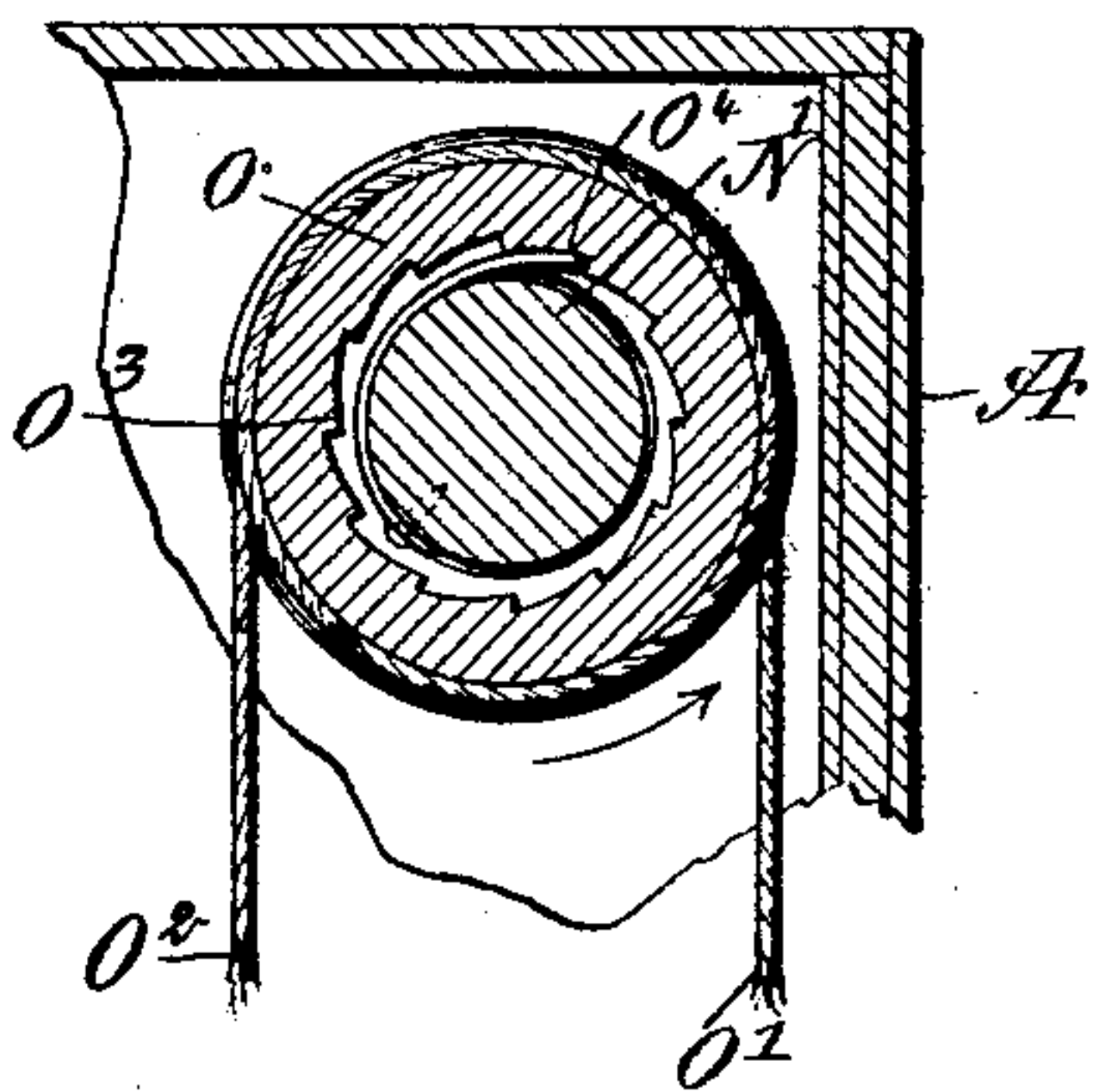


Fig. 8.

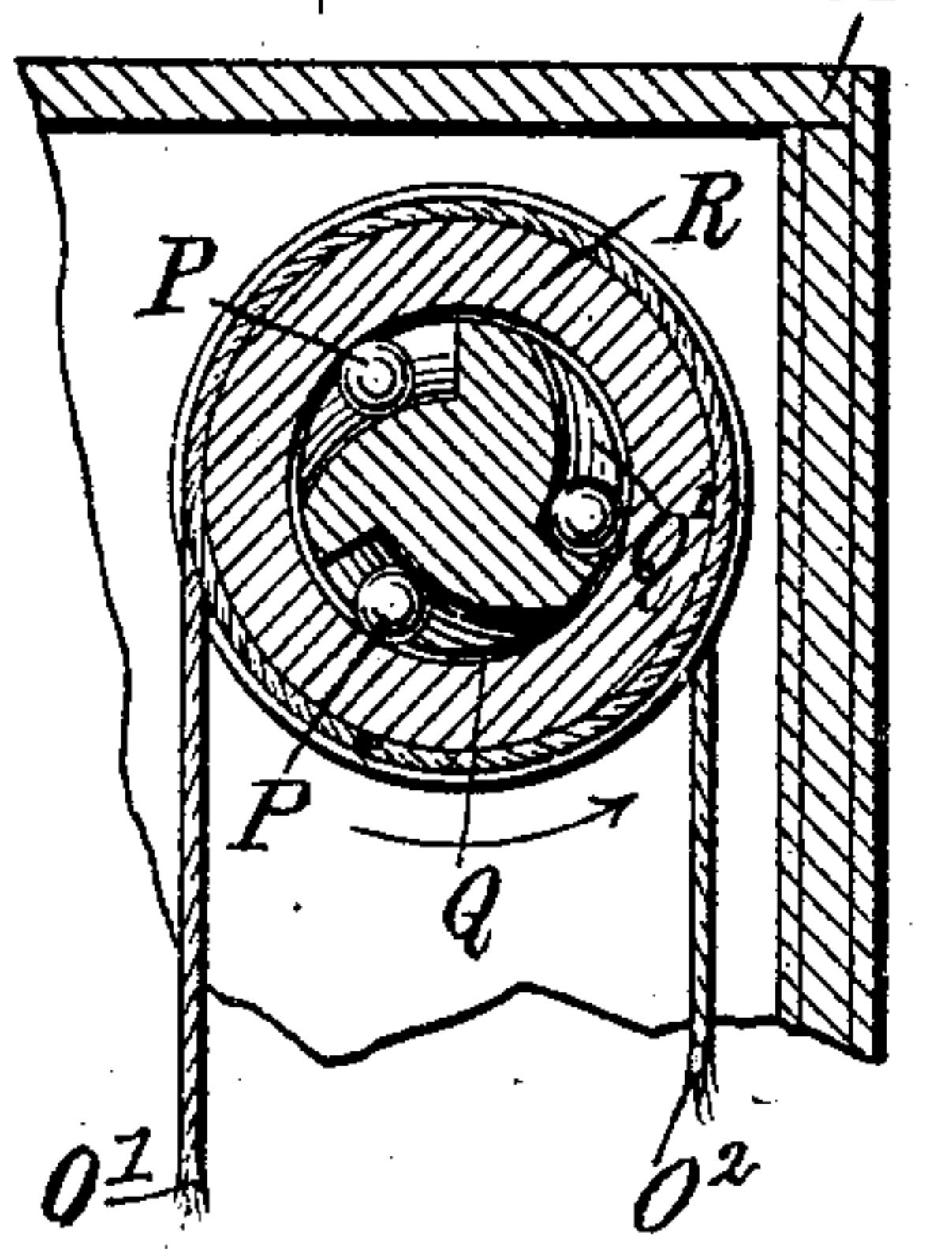


Fig. 9.

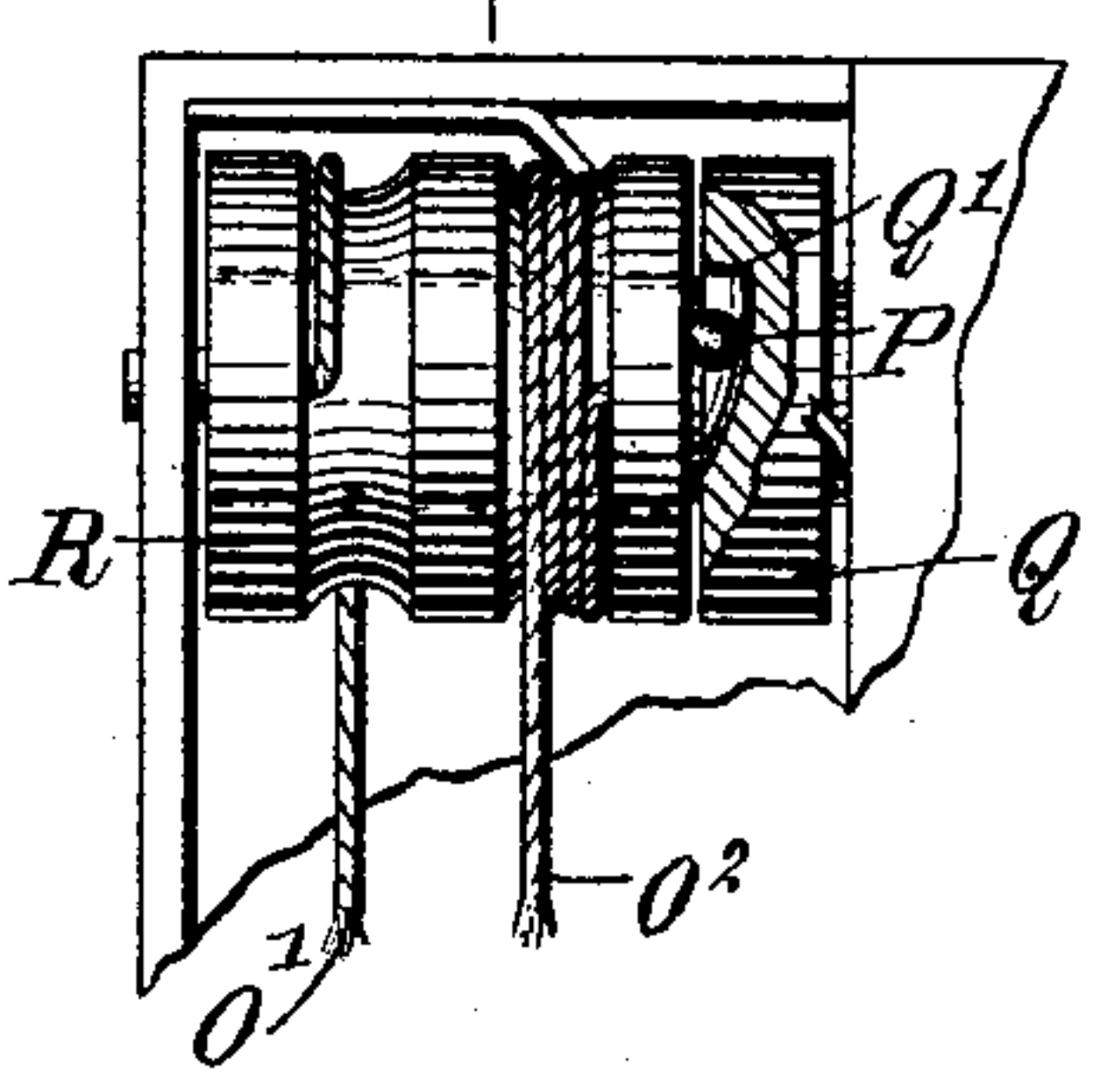


Fig. 11.

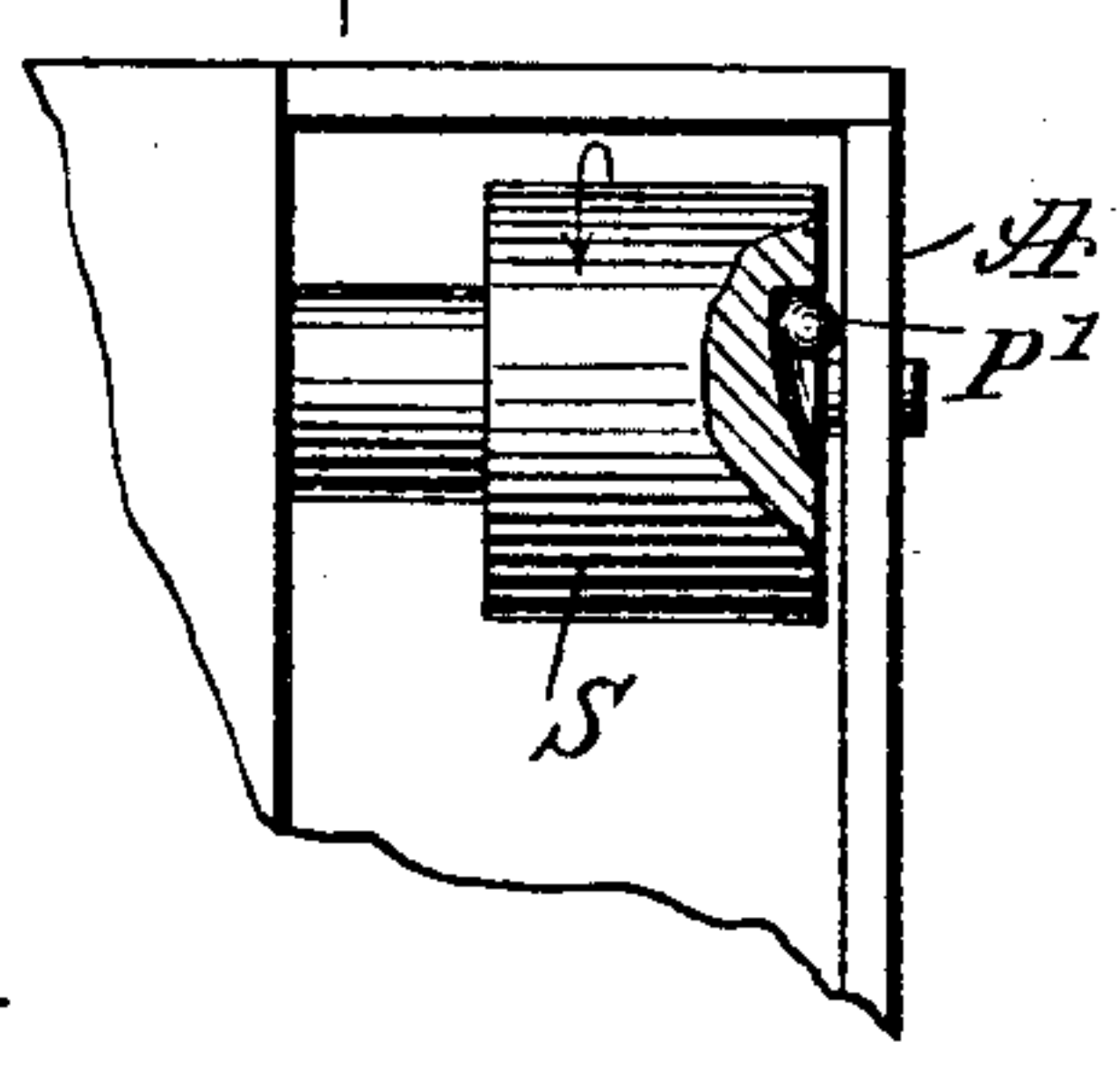
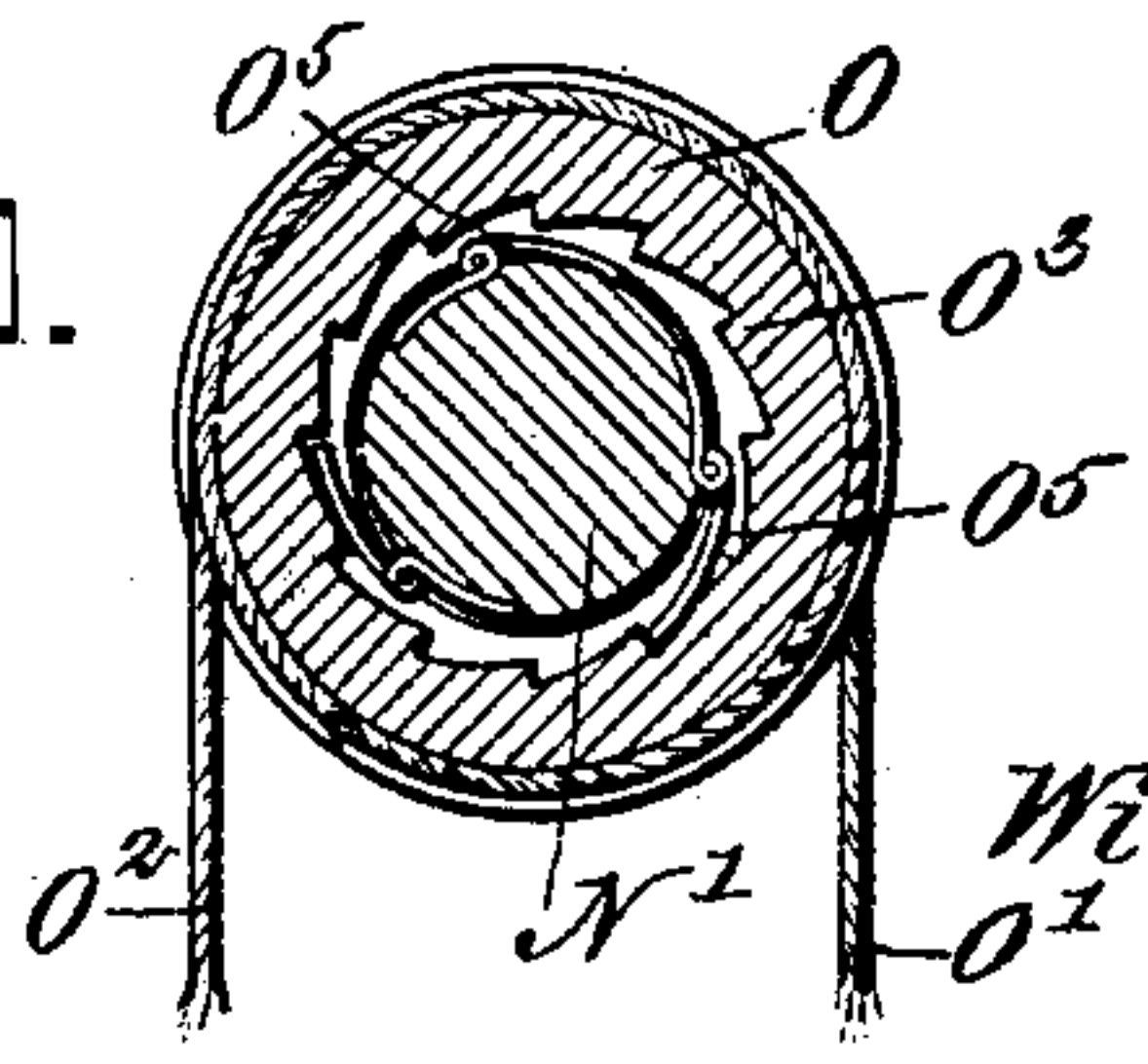


Fig. 10.



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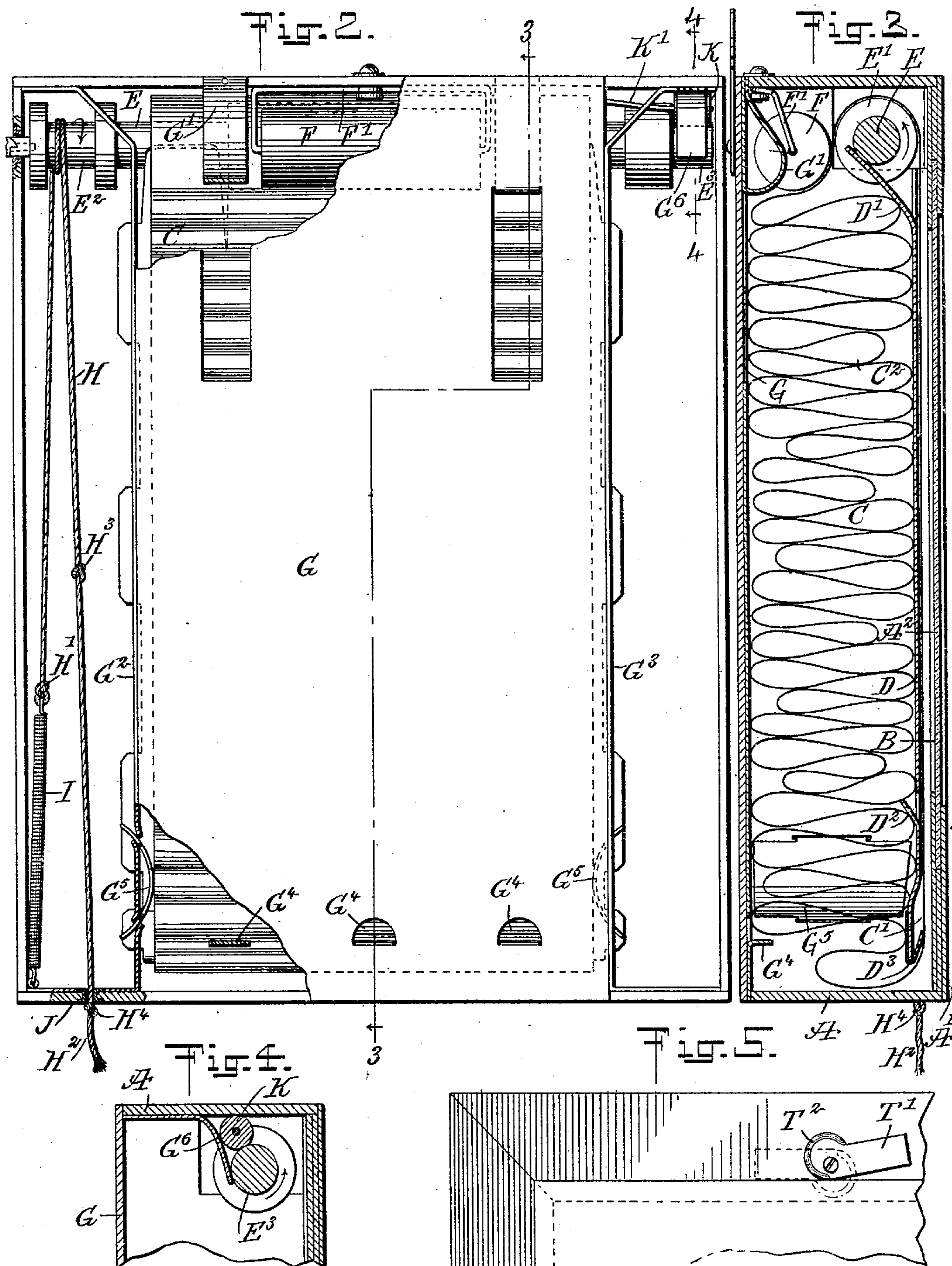
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930,073.

W. HENDRICK.
MOVING PICTURE DEVICE.
APPLICATION FILED MAR. 25, 1907.

Patented Aug. 3, 1909.

2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

WILLIAM HENDRICK, OF NEW HAVEN, CONNECTICUT, ASSIGNOR TO CHARLES GAY, OF NEW HAVEN, CONNECTICUT.

MOVING-PICTURE DEVICE.

No. 930,073.

Specification of Letters Patent.

Patented Aug. 3, 1909.

Application filed March 25, 1907. Serial No. 364,302.

To all whom it may concern:

Be it known that I, WILLIAM HENDRICK, a citizen of the United States, and a resident of New Haven, in the county of New Haven and State of Connecticut, have invented a new and Improved Moving-Picture Device, of which the following is a full, clear, and exact description.

The invention relates to chaplets and shrines of the holy rosary, such as shown and described in the Letters Patent of the United States, No. 899,977, granted to me on September 29, 1908.

The object of the present invention is to provide certain new and useful improvements in chaplets and shrines of the holy rosary, whereby actuating mechanism is employed and the endless web containing pictures is properly actuated, to accurately display one of the pictures at a time and to display the several pictures in the proper order according to the intended devotional exercise.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a perspective view of the improvement; Fig. 2 is a rear face view of the same, parts being broken out; Fig. 3 is a transverse section of the same on the line 3—3 of Fig. 2; Fig. 4 is a transverse section of the roller stop for the drawing roller, the section being on the line 4—4 of Fig. 2; Fig. 5 is a rear face view of part of the casing, the ornamental frame for the same and the fastening device for removably securing the frame to the casing; Fig. 6 is a rear face view of a modified form of the actuating mechanism for the drawing roller; Fig. 7 is a transverse section of the same on the line 7—7 of Fig. 6; Fig. 8 is a transverse section of another modified form of the actuating mechanism for the drawing roller; Fig. 9 is a rear face view, partly in section, of another modified form of the actuating device for the drawing roller; Fig. 10 is a cross section of another modified form of the actuating device for the drawing roller, and Fig. 11 is a rear face view, partly in section, of the draw-

ing roller, provided with a modified form of the stop for preventing the return movement of the drawing roller.

The casing A, adapted to be fastened on the wall or placed on a table or other support, is provided with a display front A' having an opening A² preferably covered with a pane B of glass or other transparent or translucent material. An endless web C of paper or other flexible material and containing pictures or the like on its outer face is adapted to move in a stretched condition past the rear face of the pane B, to display the pictures in the opening A², the pictures being preferably of religious character and of a size for one to fill the opening A² at a time, and the said pictures are arranged in a predetermined order and successively displayed in the opening A², according to the intended devotional exercise.

The portion of the web C not stretched over the pane B is arranged in folds within the casing A, and in order to move the web C to hold a portion C' thereof stretched in the rear of the pane B and to fold the remaining portion C² within the casing A, the following device is provided: The stretched portion C' of the web C extends over the front of a board D, held within the casing A and spaced from the pane B and the upper end of the stretched portion C' passes over a drawing roller E and then down and between the drawing roller E and a pressure roller F, of which the drawing roller E is journaled in suitable bearings in the upper portion of the casing A, while the pressure roller F is journaled on a spring frame F' attached to the casing and serving to exert sufficient pressure on the web C to insure a proper drawing of the web C when the roller E is rotated. The portion C² is arranged in folds below the rollers E and F and within an auxiliary casing, of which the front is formed by the board D and the rear is formed by a plate G having near its upper end cut-out fingers G' extending inwardly on opposite sides of the pressure roller F, so as to guide the web C in a downward direction, and to prevent upward movement thereof within the auxiliary casing. The similar fingers D' are cut out from the front board D and extend into cut out annular portions E' of the drawing roller E, so that the web C is prevented from upward movement between

the roller E and the upper end of the board D, as will be readily understood by reference to Fig. 3.

The sides G^2 , G^3 of the auxiliary casing are spaced from the sides of the main casing A and near the lower end of the back plate G are formed inwardly extending lugs G^4 , to guide the last fold toward the lower edge of the front board D, and which lower edge is a distance from the bottom of the main casing A, as indicated in Fig. 3.

The front board D is provided at its lower edge with upwardly and inwardly extending lugs D^2 for retaining the lowermost folds in such a manner within the auxiliary casing as to cause the end of the lowermost fold to readily pass under the lower edge of the board D without danger of the folds binding or otherwise becoming disarranged.

In order to give the desired tension to the lower end of the stretched or displayed portion C' of the web C, a friction arm D^3 is provided secured to or formed on the lower end of the board D and extending upwardly and forwardly thereof, as indicated in Fig. 3, so that the web C in passing under the board D is engaged by the tension arm D^3 , which thus causes the web to be drawn tight by the pull of the upper roller thereon, so that the display portion C' is held in proper condition in the display opening A^2 of the casing A. The arm D^3 as shown in the drawing is formed of a piece of paper or other suitable material secured to the rear face of the board D and bent around the lower end of the same.

The sides G^2 , G^3 of the auxiliary casing are provided with lateral curved guide arms G^5 , as plainly shown in Fig. 2, to keep the web C in proper alinement while passing to the lower edge of the front board D.

In order to intermittently rotate the drawing roller E, one side thereof is provided with a reduced portion E^2 (see Fig. 2), around which winds once or twice a portion of a cord or rope H, connected at one end H^1 to a coil spring I attached to the bottom of the casing A, and the other end H^2 of the said cord H extends through an eyelet J arranged in the bottom of the casing A, to permit the operator to take hold of the outer end H^2 of the rope to exert a pull thereon, whereby the roller E is rotated and the spring I is placed under tension. Now when the roller E is rotated the web C is drawn up in front of the board D and in the rear of the pane B, to display another picture in the opening A^2 . When the operator releases the pull on the outer end H^2 of the rope H then the spring I returns the rope H to its normal position, but in doing so, the roller E is held against rotating, and for this purpose a stop is provided, which may be of various forms, preferably, however, of the form illustrated in detail in Figs. 2 and 4. The stop in this

case consists of a roller K journaled on a spring arm K' and in frictional contact with a reduced portion E^3 on the drawing roller E, the said roller K being also in frictional contact with the inner face of the top of the main casing A. Now when the roller E is rotated on exerting a pull on the rope H, as above explained, then the roller K freely rotates with the roller E, but as soon as the cord H is released and the roller E tends to rotate in the opposite direction, then the roller K is wedged in between the top of the casing A and the reduced end E^3 , to lock the latter against return movement. Now in order to insure a proper rotation of the roller E for moving the web C a distance for displaying but one picture in the opening A^2 , the cord H is provided with stops H^3 , H^4 , preferably in the nature of knots tied in the said cord, one inside the casing and one outside thereof, as plainly indicated in Fig. 2. Thus when the device is at rest, the stop H^4 abuts against the outside of the eyelet J, and when the cord H is pulled the stop H^3 finally abuts against the inside of the eyelet J, to prevent further outward pulling of the cord H. In order to prevent the stop roller K from being displaced while the apparatus is stored or in transit, a finger G^6 is provided and preferably cut out from the side G^3 of the auxiliary casing (see Figs. 2 and 4), the finger G^6 extending over the roller K and the cut out portion E^3 of roller E. If desired the drawing roller E may be turned continuously or intermittently by the use of a crank L having a removable connection with one end of the drawing roller E, as shown in Fig. 1.

Various mechanisms may be employed for actuating the drawing roller E for preventing return movement of the same, for instance, as shown in Fig. 6 the drawing roller N is provided with a reduced portion N' on which is rotatably mounted the drum O having two grooves for the cords O^1 and O^2 winding in opposite directions, and of which the cord O^1 is connected with the coil spring I, while the other cord O^2 is under the control of the operator. The drum O is provided with interior ratchet teeth O^3 engaged by a spring pawl O^4 attached to the peripheral face of the reduced portion N' . Now when the operator pulls the cord O^2 the drum O is rotated and the latter by its ratchet teeth O^3 engaging the pawl O^4 causes a rotation of the drawing roller N, to draw the web C along, and when the operator releases the cord O^2 then the spring I pulls the cord O^1 , to rotate the drum O in the opposite direction, but without rotating the drum N, as the free end of the pawl O^4 now glides over the ratchet teeth O^3 . The pawl instead of being a spring pawl, as shown and described, may be in the form of a hinged pawl O^5 , as indicated in Fig. 10. This arrangement is practically noiseless. As shown in Figs. 8 and 9 the stop is formed

by the use of one or more balls P arranged in inclined guideways Q' formed in the drawing roller Q opposite the face of the drum R. Now when the latter is rotated by the operator pulling the cord O², then the balls P are wedged firmly between the drum R and the drawing roller Q, to rotate the latter, and when the drum R is rotated in the opposite direction by the action of the spring I, then the balls P are loose and allow free rotation of the drum R without rotating the drawing roller Q. Similar balls P' may be interposed between the end of the drawing roller S and the casing A, as indicated in Fig. 11, so as to allow turning of the drawing roller S in one direction, but to prevent turning thereof in the reverse direction.

In order to embellish the apparatus, the casing A may be provided with an ornamental picture frame T, removably secured to the casing A by a cam lever T' (see Fig. 5) fulcrumed on the rear of the frame T and adapted to engage and cut into the casing A, to securely lock the frame T in position on the casing. For the purpose described the cam lever T' is provided at its fulcrumed end with a sharp cam edge T² which cuts into the material of the casing A on turning the lever T. By the arrangement described the frame T can be shipped separate from the casing A and then the frame T can be readily secured to the casing by the user or seller.

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

1. An apparatus of the class described comprising a casing, an endless display web, a drawing roller and a pressure roller in the upper part of the casing, between which rollers passes the said web, a guide board over which the web passes, a tension device at the front lower end of the guide board for holding the web stretched, a cord wound around the said drawing roller, a spring connected with one end of the said cord, said cord being adapted to be pulled and released at its other end to rotate the said drawing roller, said cord being provided with stops to insure proper rotation of the roller, and a stop device for holding the said drawing roller against return movement on releasing the said cord.

2. An apparatus of the class described comprising a casing, an endless display web, a drawing roller and a pressure roller, between which rollers passes the said web, a cord wound around the said drawing roller, a spring connected with one end of the said cord, said cord being adapted to be pulled and released at its other end to rotate the said drawing roller, a stop roller in frictional contact with the said drawing roller and casing, and a spring arm supporting the said stop roller and holding it in contact with the peripheral face of the said drawing roller.

3. An apparatus of the class described comprising a casing, an endless display web, a drawing roller and a pressure roller, between which rollers passes the said web, a cord wound around the said drawing roller, a spring connected with one end of the said cord, said cord being adapted to be pulled and released at its other end to rotate the said drawing roller, a stop roller in frictional contact with the said drawing roller and casing, a spring arm supporting the said stop roller and holding it in contact with the peripheral face of the said drawing roller, and a retaining device extending over the said drawing roller and the said stop roller to hold the latter in place.

4. An apparatus of the class described comprising a casing having a display front and a back, an endless web within the casing and having a portion extending to and over the said display front, a pair of rollers journaled at the top of the casing and between which passes the web, means for rotating one of the rollers, and oppositely disposed front and rear fingers at the said rollers for guiding the web in a downward direction and preventing a return movement thereof.

5. An apparatus of the class described comprising a casing having a display front and a back, an endless web within the said casing and having a portion extending to and over the said display front, a pair of rollers journaled at the top of the casing and between which passes the web, means for rotating one of the rollers, and oppositely disposed front and rear fingers at the said rollers for guiding the web in a downward direction and preventing return movement of the same, the said rear fingers being formed integrally out of the said back.

6. An apparatus of the class described comprising a casing having a display front and a back, an endless web within the said casing and having a portion extending to and over the said display front, a pair of rollers journaled at the top of the casing and between which passes the said web, means for rotating one of the rollers, oppositely disposed front and rear fingers at the said rollers for guiding the web in a downward direction and preventing return movement of the same, the said rear fingers being formed integrally out of the said back, and a guide board for the web in the rear of the displayed portion, the said guide board having a portion formed into the said front fingers.

7. An apparatus of the class described comprising a casing having a display front and a back, an endless web within the said casing and having a portion extending to and over the said display front, a pair of rollers journaled in the top of the casing and between which passes the said web, means for rotating one of the rollers, oppositely disposed front and rear fingers at the said rollers

for preventing return movement of the web, the said rear fingers being formed integrally out of the said back, and a guide board for the web in the rear of the displayed portion, the said guide board having a portion formed into the said front fingers, the lower end of the said guide board having a forwardly and upwardly extending tension arm for the web to pass over.

8. An apparatus of the class described comprising a casing having a display front and a back, an endless web within the said casing and having a portion extending to and over the said display front, a pair of rollers journaled at the top of the casing and between which passes the said web, means for rotating one of the rollers, oppositely disposed front and rear fingers at the said rollers for preventing return movement of the web, the said rear fingers being formed integrally out of the said back, and a guide board for the web in the rear of the displayed portion, the said guide board having a portion formed into the said front fingers, the lower end of the said guide board having a forwardly and upwardly extending tension arm for the web to pass over, and the lower end of the said back plate having inwardly extending guide lugs for guiding the web toward the lower edge of the said front guide plate.

9. An apparatus of the class described comprising a casing having a display front and a back, an endless web within the said casing and having a portion extending to and over the said display front, a pair of rollers journaled at the top of the casing and between which passes the said web, means for rotating one of the rollers, oppositely dis-

posed front and rear fingers at the said rollers for preventing return movement of the web, the said rear fingers being formed integrally out of the said back, and a guide board for the web in the rear of the displayed portion, the said guide board having a portion formed into the said front fingers, the lower end of the said guide board having a forwardly and upwardly extending tension arm for the web to pass over, and the lower end of the said back plate having inwardly extending guide lugs for guiding the web toward the lower edge of the said front guide plate, and the said guide board being provided near its lower end with rearwardly and upwardly extending lugs for the folds of the web to pass over.

10. An apparatus of the class described, comprising a casing having a front display board and a back, an endless web arranged in folds in the casing and having a portion extending over the display board, a pair of rollers in the upper part of the casing between which passes the web, means for rotating one of the rollers, and inwardly extending lugs on the display board and the back at the lower parts thereof for retaining the folds of the web in position and guiding the last fold toward the lower end of the front board.

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

WILLIAM HENDRICK.

Witnesses:

CARL A. MEARS,
GEORGE W. CRAWFORD.