

A. PAGET.
MECHANICAL TOY.
APPLICATION FILED MAR. 21, 1904.

3 SHEETS—SHEET 1.

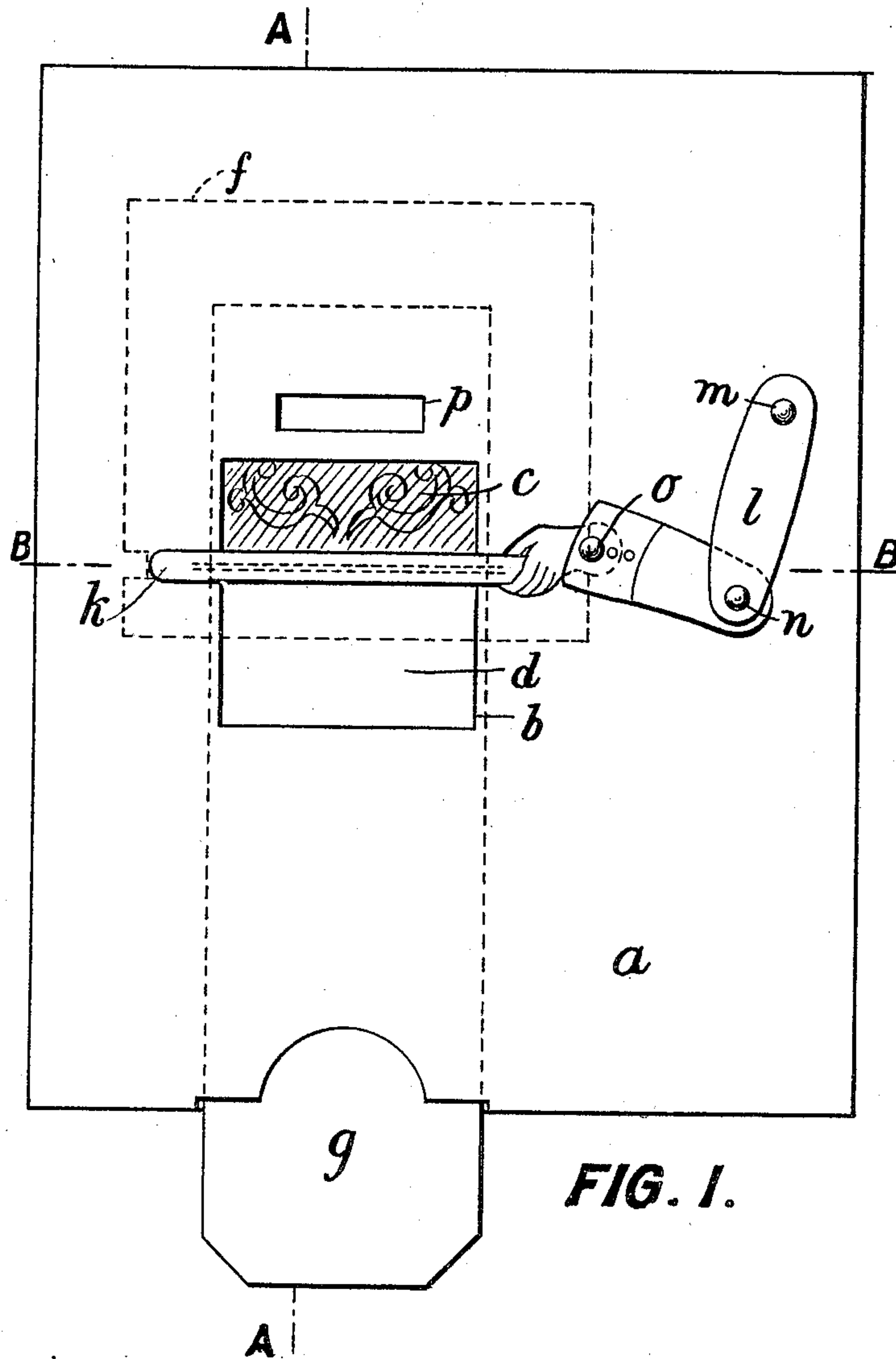


FIG. 1.

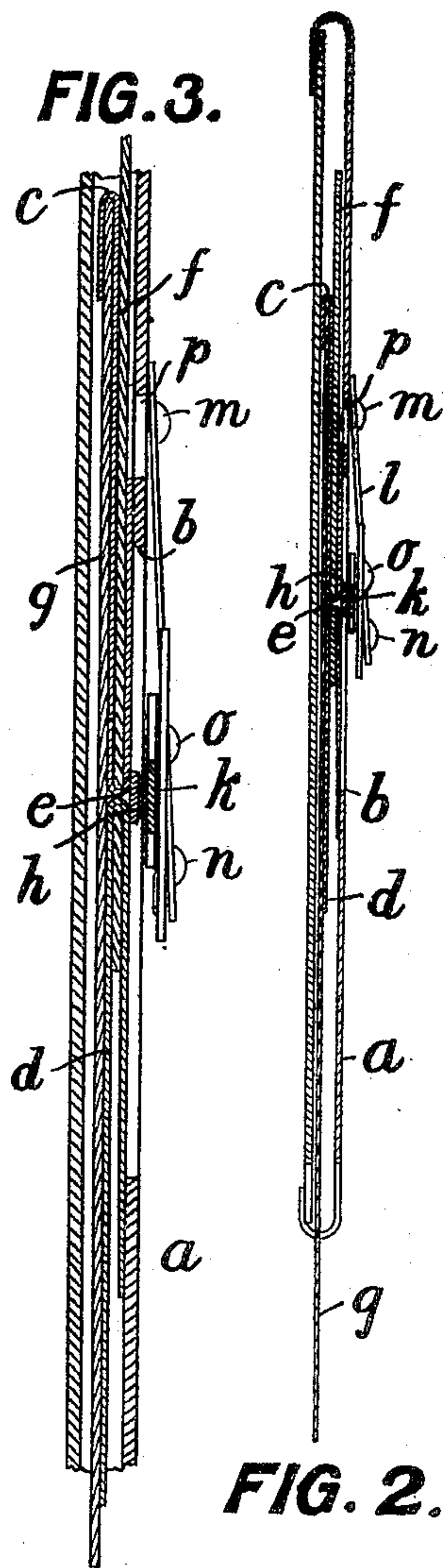


FIG. 2.

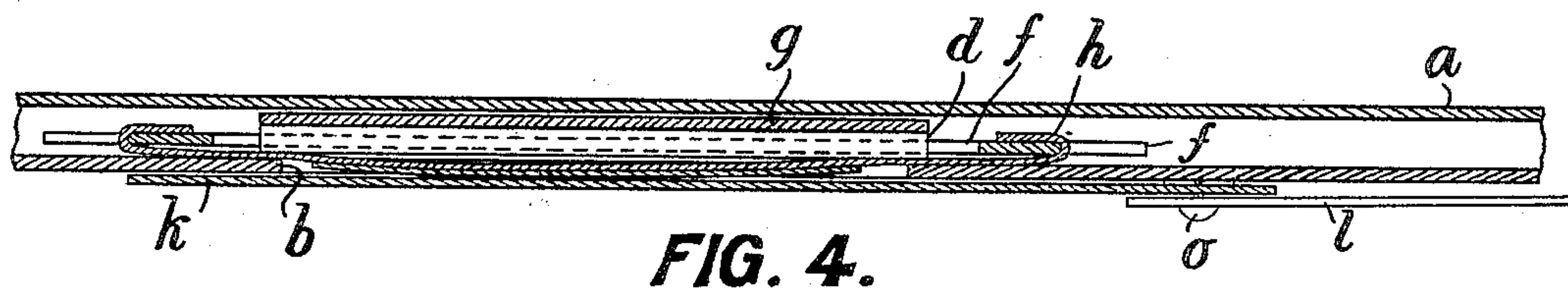


FIG. 4.

Witnesses

W. Kelly
C. J. Rose

Inventor

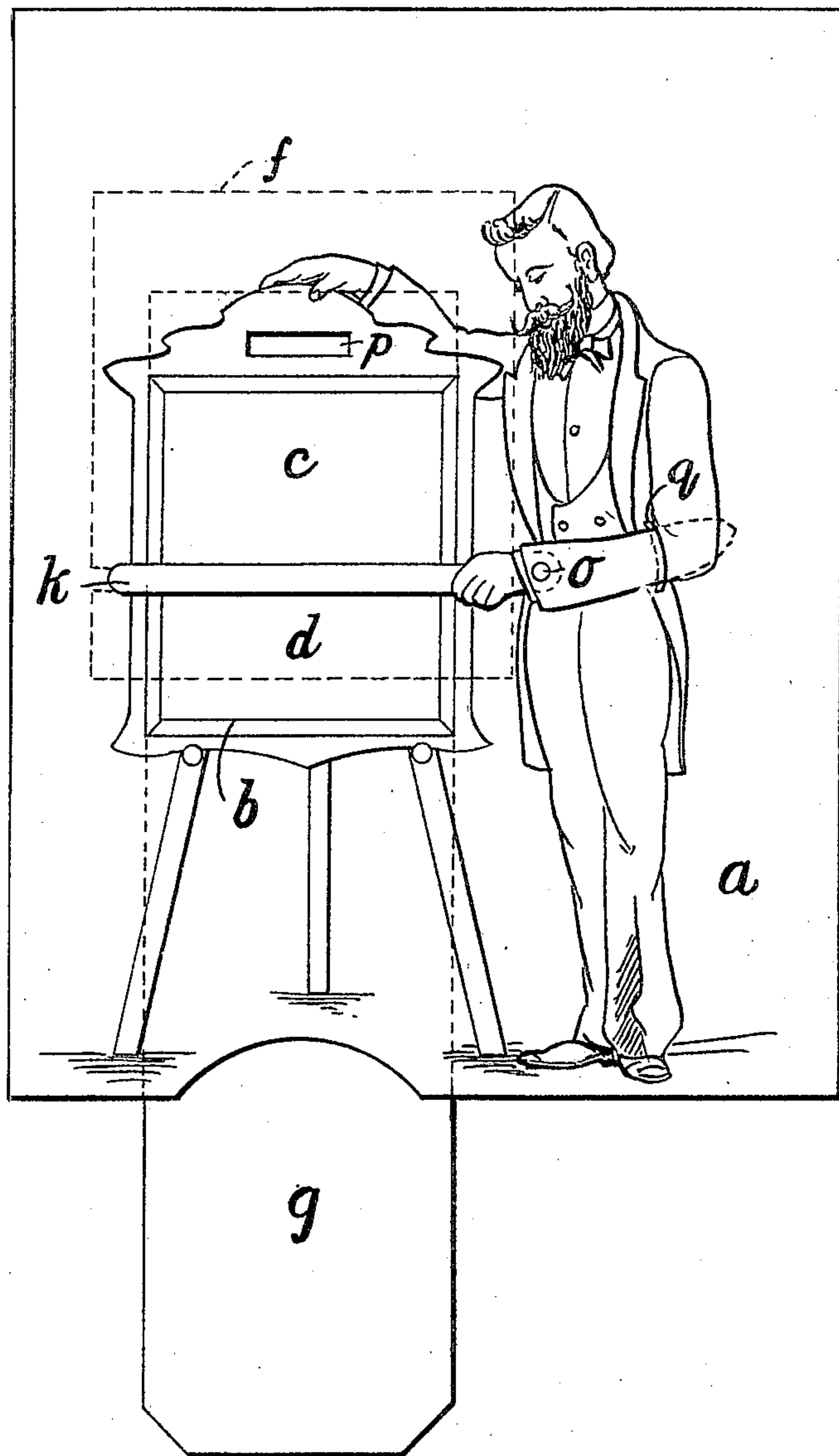
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3 SHEETS—SHEET 2.

FIG. 5.



Witnesses

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3 SHEETS—SHEET 3.

FIG. 6.

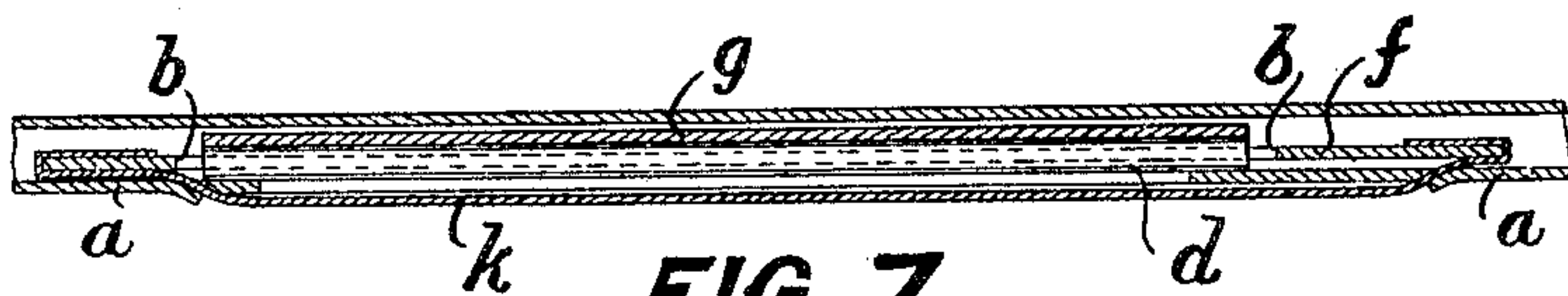
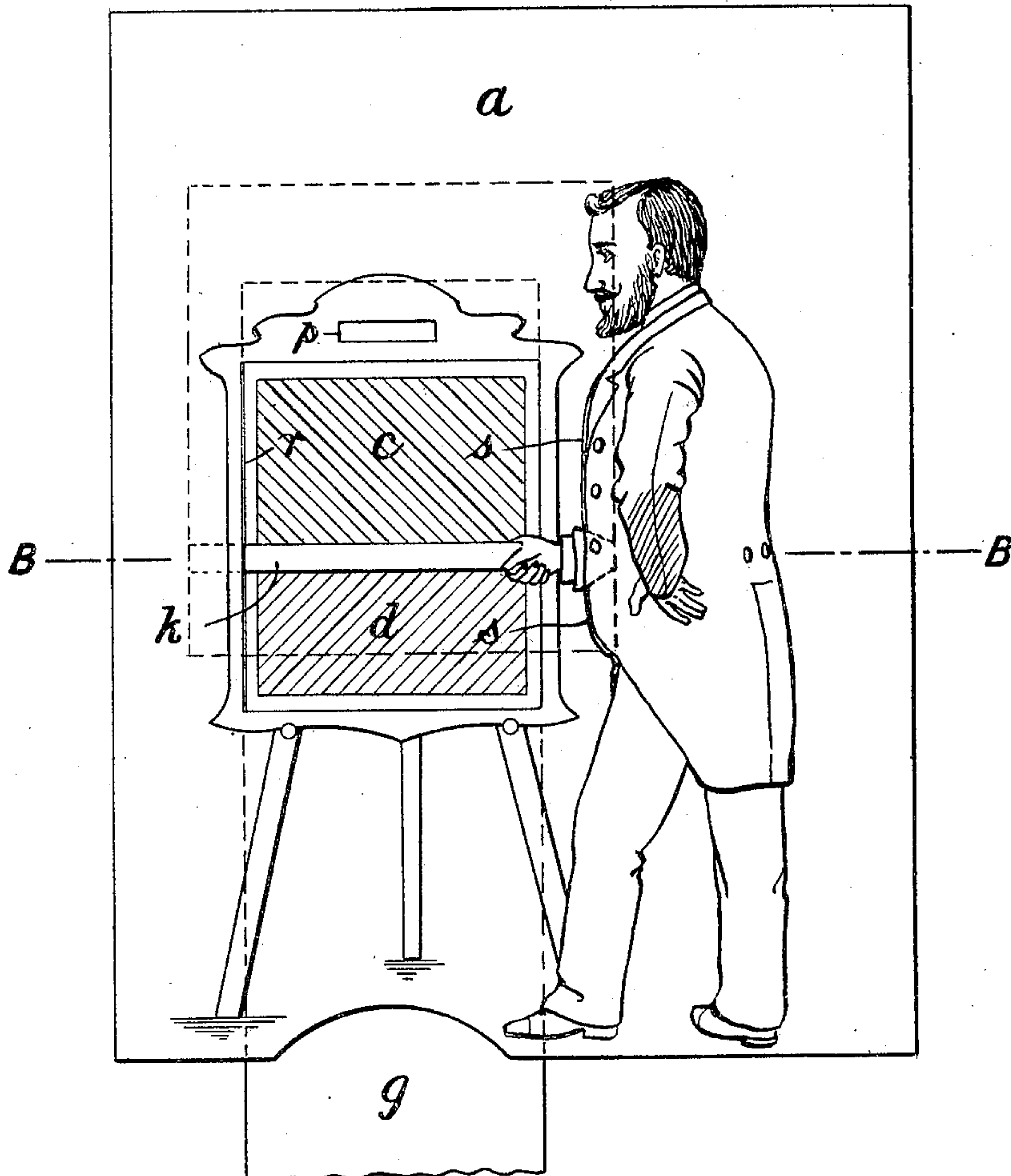


FIG. 7.

Witnesses

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UNITED STATES PATENT OFFICE.

ARTHUR PAGET, OF LONDON, ENGLAND.

MECHANICAL TOY.

No. 803,244.

Specification of Letters Patent.

Patented Oct. 31, 1905.

Application filed March 21, 1904. Serial No. 199,265.

To all whom it may concern:

Be it known that I, ARTHUR PAGET, barrister-at-law, a subject of the King of Great Britain, and a resident of London, in the Kingdom of England, (whose post-office address is 2 Harcourt Buildings, Temple, London, E. C.,) have invented certain new and useful Improvements in Mechanical Toys, (for which application has been made in Great Britain, No. 28,541, dated December 29, 1903,) of which the following is a specification.

This invention has for its object an improved form of hand-actuated mechanical toy or illusion device which will be best described with reference to the accompanying drawings, in which—

Figure 1 is a front elevation of the toy; Fig. 2, a vertical section on the line A A of Fig. 1; Fig. 3, an enlarged view of the central portion of Fig. 2; Fig. 4, an enlarged horizontal section taken on the line B B of Fig. 1; Fig. 5, a front elevation showing a somewhat different arrangement; Fig. 6, a front elevation of a simplified form of the device shown in Fig. 5, and Fig. 7 a section on the line B B of Fig. 6.

According to this invention the device consists of a frame or the like *a*, of paper, cardboard, or other suitable material, forming the front of the device, having in it a principal opening *b*. Behind this opening *b* are mounted two flexible sheets *c* and *d*, each of which has on it one or two alternative designs to be exhibited in the opening *b*. These sheets are brought through a horizontal slot *e*, formed in a loose sliding piece *f*, after which they are folded back upon themselves in the rear of this slotted piece *f* and secured, as shown, to the actuated sliding piece *g*, one end of which projects beyond the front piece or frame *a*, so as to be capable of being moved in and out by hand. It will be obvious that on the vertical movement of the sliding piece *g* the sheets *c* and *d* will cause the slotted piece *f* to move in the same direction as the slotted piece *g*, but at half the speed. This movement of the slotted piece *f* will cause the horizontal slot *e* to move over the aperture *b* in the front piece, and in this movement the designs appearing on the sheets *c* and *d* will be alternatively exhibited in the opening.

In order to conceal the operation of the slide and to give an apparent explanation of the change from one design to the other, I provide a transverse strip *h*, formed so as to represent any desired object to the passage of which over the picture the change shown in

the alternative designs might be attributable—as, for example, a scrubbing-brush—for a change of color or tone in the picture, or a conjuror's wand, for changes generally. This transverse strip extends in front of and beyond the opening, preferably on both sides, and is rigidly attached to the strip *h*, which in turn is secured to the loose or slotted sliding piece *f*, so as to move with it, an intermediate piece *h'* being interposed between the strips *h* and *h'* for spacing them apart to give room for the front plate of the frame *a*, the piece *h'* forming the attaching means between the strips *h* and *h'*. At one end of this strip *h* is a mechanism *l*, representing a human arm, pivoted at *m* to the front piece or frame *a*, and jointed at the elbow by a pin *n* and wrist by a pin *o*, or, as shown in Fig. 5, the strip *h* is secured or connected to an arm, the elbow end of which works in a slot *q* or in a still simpler form, as shown in Figs. 6 and 7, when the strips move through a vertical slot or slots *r* and *s*, formed in the front piece or frame *a* on either side of the opening *b*, through which extensions of the transverse strip pass and are connected to either side of the slotted piece or indirectly through the opening *b* to a subsidiary transverse piece *h*, attached to either side of the slotted sliding piece in the rear of the front piece, the vertical slots in Fig. 6 having the double function of providing a means (like the slot *q* in Fig. 5) for a sliding attachment of the transverse strip to the external figure and also for the attachment of this transverse strip to the slotted piece in substitution for attachment through the opening *d*, as in Figs. 1 and 5.

The pin *o* does not pass through the frame *a*, but after extending through the strip *h* it is bent back to hold it in, as indicated more clearly at the pin *n* in Fig. 3.

In order to give an apparent explanation of the movement of the transverse strip, I design on the front piece a human figure or figures or other subject suitable as a plausible source of motion according to the change represented, and I connect the transverse strip *h* to the figure drawn on the front piece by a simple sliding attachment, as shown in Fig. 6, or a parallel or similar motion or by sliding pieces or a combination of both, as shown in Figs. 1 and 5. The transverse strip and its attachment are so designed that the transverse strip appears to be set in motion by the external figure and the change appears to be effected by the movement of the strip, so that

in every case the external figure appears to move the transverse strip, and thus effect the change in the picture.

In order to explain or emphasize the change of design, a second aperture p is cut in the frame, preferably above or below the opening b , the slotted piece f being extended upward or downward, as the case may be, sufficiently to allow alternative inscriptions to be printed on this strip and alternatively presented through the opening p when the sliding piece f is at its highest and lowest positions and the alternative designs fully presented to view—that is to say, when the device on one of the sheets c or d has been substituted for the device on the other of the sheets d or c .

The action is as follows: As these sheets c and d are secured both to the inside of the front piece or frame a and to the sliding piece g in the manner shown, on the sliding piece g being drawn down the slotted piece f will be caused to descend by the pull of the sheet d , the sheet c passing from the back of the slotted piece to the front, while the sheet d will pass from the front of the slotted piece f to the back, or, in other words, any device on the sheet d will be gradually replaced by the device on the sheet c . During the above movements the transverse strip k , which is secured as described to the slotted piece f , will pass down the opening b , always covering the slot or junctions between the designs on the two sheets c and d . This transverse strip having a sliding or pivoted attachment to the external figure or device on the front piece will have the appearance of being moved by the external figure or other device and will, further, give the idea that the movement of the outer strip itself alters the designs appearing in the aperture. It will be evident that the form of the principal opening b may be altered to suit the design without departing from the scope of this invention.

Where the transverse strip is connected to the slotted piece through vertical slots, these may be curved, so as to disclose or present varying portions of the lateral extensions of the transverse strip in different positions. For example, in Fig. 6 the sleeve is formed tapering, and the slot through which it passes curves outwardly at its extremities, so that in its upper position the sleeve appears to slope downward and in its lower position upward toward the elbow which is concealed.

I declare that what I claim is—

1. In a mechanical toy or illusion device a frame; a sliding piece in said frame adapted to be actuated by external means; a second loose sliding piece; a horizontal slot in said loose sliding piece; two separate flexible sheets folded back upon themselves and both secured to both said frame and said externally-actuated means and passed through said horizontal slot, substantially as described.

2. In a mechanical toy or illusion device a

frame; a sliding piece in said frame adapted to be actuated by external means; a second loose sliding piece; a horizontal slot in said loose sliding piece; two flexible sheets folded back upon themselves and both secured to both said frame and said externally-actuated means and passed through said horizontal slot; a transverse strip secured to said loose sliding piece in front of said slot substantially as described.

3. In a mechanical toy or illusion device a frame; a loose sliding piece in said frame; a slot in said piece; two flexible sheets each secured to said frame and passing through said slot, means secured directly to both said flexible sheets for actuating the device substantially as described and set forth.

4. In a mechanical toy or illusion device a frame; an actuating sliding piece in said frame; two flexible sheets both secured to both said frame and said sliding piece; a second sliding piece adapted to move at half the speed of the first sliding piece; a slot in said second sliding piece adapted to embrace both said flexible sheets substantially as and for the purpose set forth.

5. In a mechanical toy or illusion device a frame; a sliding piece actuated by external means; two flexible sheets both secured to both said frame and said sliding piece; a second loose sliding piece; a slot in said loose sliding piece adapted to allow of the passage of said flexible sheets, a transverse strip exterior of said frame covering said slot and connected to said loose sliding piece; a moving part having the appearance of actuating the device connected with said transverse strip substantially as and for the purpose set forth.

6. In a mechanical toy or illusion device a frame; a sliding piece actuated by external means; two flexible sheets both secured to both said frame and said sliding piece, a second loose sliding piece; a slot in said loose sliding piece adapted to allow of the passage of said flexible sheets a transverse strip secured on said loose sliding piece passing over said slot, a second transverse strip secured to said first transverse strip having its ends exterior of the frame, substantially as and for the purpose described.

7. In a mechanical toy or illusion device the combination of a frame, an actuating slide-piece, a slotted slide-piece, and two flexible sheets; with a transverse strip exterior of said frame and connected with said slotted slide-piece and a moving part having the appearance of actuating the device mounted on said frame and connected with said transverse strip, each of said sheets being brought through said slotted side piece, folded back upon themselves, in the rear of said piece, and secured to said actuating slide-piece, substantially as and for the purpose set forth.

8. In a mechanical toy or illusion device the combination of a frame, an actuating slide-

piece, a slotted slide-piece and two flexible sheets; with a transverse strip exterior of said frame and connected with said slotted slide-piece, a moving part connected with said transverse strip said moving part comprising an elbow-joint and hinged to said frame, each of said sheets being brought through said slotted side piece, folded back upon themselves, in the rear of said piece, and secured to said actuating slide-piece, substantially as and for the purpose set forth.

9. In a mechanical toy or illusion device, a frame, an actuating sliding piece in said frame, two flexible sheets both secured to said frame and to said actuating sliding piece; a second sliding piece, a slot in said second sliding piece adapted to embrace both said flexible sheets, an opening in said frame, inscriptions on said second sliding piece adapted to appear in said opening at given positions of the device substantially as described.

10. A mechanical toy or illusion device of the character set forth comprising a frame; a device on said frame; a moving part forming part of said device, said moving part having the appearance of actuating said device substantially as described.

11. In a mechanical toy or illusion device the combination of a frame, a slide-piece in said frame, a second loose and slotted slide-piece, devices on flexible material, said material passing through said slotted slide-piece and secured to said first slide-piece and to said frame; with a transverse strip connected to said second slide-piece and a moving part having the appearance of actuating the device attached to said transverse strip with a design forming part of said moving part on said frame; and with means for exhibiting different inscriptions on said second sliding piece at given positions of said device substantially as shown and described.

12. In an illusion device, the combination of means for exposing to view two designs so that one is disappearing from view as the other is appearing to view, and taking the place of the first, and a mechanical figure of an animal, having one of the moving parts thereof connected up movably with said means for making it appear that said animal is operating said means.

13. In an illusion device, the combination of a frame, a loose sliding piece in said frame, having a slot for the appearance and disappearance of different visual designs, a piece of material hiding and moving with said slot, and a figure of an animal connected up with said piece of material.

14. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the

slot for hiding the same and attached to and moving with said sliding piece, and a figure of an animal having one of its prehensile members connected to said cover, for making it appear that the device is actuated by said animal.

15. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, and an imitation of the prehensile member of an animal attached to said cover and moved thereby.

16. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, and a jointed mechanical imitation of the prehensile member of an animal attached to said cover and moved thereby.

17. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, an imitation of the prehensile member of an animal attached to said cover and moved thereby, and a frame for the device, the frame having the picture of an animal thereon of which the said movable member forms a part, whereby the device appears to be operated by the animal.

18. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, a jointed mechanical imitation of the prehensile member of an animal attached to said cover and moved thereby, and a frame for the device, the frame having the picture of an animal thereon of which the said movable member forms a part, whereby the device appears to be operated by the animal.

19. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one

sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, one portion of the cover being formed into the representation of a hand, and the figure of an animal, the hand forming a part of the said animal, whereby the said cover appears to be moved by the said animal.

20. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, one portion of the cover representing a hand which has the appearance of grasping the cover, a piece representing a forearm pivoted to said hand, and the figure of an animal of which the said hand and forearm form a part, whereby the device appears to be actuated by the animal.

21. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for holding the same and attached to and moving with said sliding piece, a frame for the device, one portion of the cover representing a hand having the appearance of grasping the cover, a piece representing a forearm pivoted to said hand, and another piece representing the upper arm pivoted to said forearm and to said frame.

22. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, a frame for the device, one portion of the cover representing a hand having the appearance of grasping the cover, a piece representing a forearm pivoted to said hand, and another piece representing the upper arm pivoted to said forearm and to said frame, the frame having depicted thereon the figure of an animal of which the said hand and arm form a part, whereby the device appears to be actuated by said animal.

23. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the

slot for hiding the same and attached to and moving with said sliding piece, one portion of the cover representing a hand having the appearance of grasping the cover, a forearm pivoted to said hand, an upper arm pivoted to said forearm, and the figure of an animal of which the said hand and arm form a part, whereby the device appears to be actuated by said animal.

24. In an illusion device, the combination of a frame for the device having an opening therein, a sliding piece having a slot therein, two sheets attached to said frame respectively above and below said opening and having respectively different designs thereon for being alternately exhibited through said opening, a sliding handle-piece back of said sliding piece, said sheets passing through said slot and being attached to said handle-piece above and below said slot respectively, for causing one sheet to disappear through the slot and the other to simultaneously appear from the slot when said handle is moved, a cover over the slot for hiding the same and attached to and moving with said sliding piece, and a mechanical figure of an animal, a movable part of said animal being connected to said cover, for giving the appearance that the device is operated by said animal.

25. In an illusion device, the combination of a frame for the device having an opening therein, a sliding piece having a slot therein, two sheets attached to said frame respectively above and below said opening and having respectively different designs thereon for being alternately exhibited through said opening, a sliding handle-piece back of said sliding piece, said sheets passing through said slot and being attached to said handle-piece above and below said slot respectively, for causing one sheet to disappear through the slot and the other to simultaneously appear from the slot when said handle is moved, and a cover over the slot for hiding the same and attached to and moving with said sliding piece, a portion of the cover representing a hand having the appearance of grasping the cover, the frame having depicted thereon the figure of an animal of which the said hand forms a part, for giving the appearance that the device is operated by the said animal.

26. In an illusion device, the combination of a frame for the device having an opening therein, a sliding piece having a slot therein, two sheets attached to said frame respectively above and below said opening and having respectively different designs thereon for being alternately exhibited through said opening, a sliding handle-piece back of said sliding piece, said sheets passing through said slot and being attached to said handle-piece above and below said slot respectively, for causing one sheet to disappear through the slot and the other to simultaneously appear from the slot when said handle is moved, a cover over the

slot for hiding the same and attached to and moving with said sliding piece, a portion of the cover representing a hand having the appearance of grasping the cover, and a forearm pivoted to said hand, the frame having depicted thereon the figure of an animal of which the said hand and forearm form a part, for giving the appearance that the device is operated by the said animal.

27. In an illusion device, the combination of a frame for the device having an opening therein, a sliding piece having a slot therein, two sheets attached to said frame respectively above and below said opening and having respectively different designs thereon for being alternately exhibited through said opening, a sliding handle-piece back of said sliding piece, said sheets passing through said slot and being attached to said handle-piece above and below said slot respectively, for causing one sheet to disappear through the slot and the other to simultaneously appear from the slot when said handle is moved, a cover over the slot for hiding the same and attached to and moving with said sliding piece, a portion of the cover representing a hand having the appearance of grasping the cover, a forearm pivoted to said hand, and an upper arm pivoted to said forearm and to said frame, the frame having depicted thereon the figure of an animal of which the said hand and arm form a part, for giving the appearance that the device is operated by the said animal.

28. In an illusion device, the combination of a frame for the device having an opening therein, a sliding piece having a slot therein, two sheets attached to said frame respectively above and below said opening and having respectively different designs thereon for being alternately exhibited through said opening, a sliding handle-piece back of said sliding piece, said sheets passing through said slot and being attached to said handle-piece above and below said slot respectively, for causing one sheet to disappear through the slot and the other to simultaneously appear from the slot when said handle is moved, and a cover over the slot for hiding the same and attached to and moving with said sliding piece, the said frame having a second opening therein for presenting alternately to view therethrough different portions of the said sliding piece according as the one or the other of said designs are visible through the first-named opening.

29. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, and an imitation of a prime mover connected to said cover, for giving the appearance that the device is operated by the said imitation.

30. In an illusion device, the combination of a sliding piece having a slot therein, sheets having respectively different designs thereon, means for feeding said sheets around the respective edges of said slot, for causing one sheet to disappear through the slot as the other appears from the slot, a cover over the slot for hiding the same and attached to and moving with said sliding piece, a movable part connected to said cover, and an imitation of a prime mover of which the said movable part forms a portion, for giving the appearance that the device is operated by the said imitation.

31. In an illusion device, the combination of a frame having an opening therein, a sliding piece having a slot therein, two sheets attached to said frame respectively above and below said opening and having respectively different designs thereon for alternately exhibiting through said opening, a sliding handle-piece back of said sliding piece, said sheets passing through said slot and being attached to said handle-piece above and below said slot respectively, for causing one sheet to disappear through the slot as the other appears from the slot when said handle is moved, a cover over the slot for hiding the same and attached to and moving with said sliding piece, and a movable element connected to said cover, the frame having depicted thereon the representation of a prime mover of which the said element forms a part, for giving the appearance that the said device is operated by the said prime mover.

In witness whereof I have hereunto signed my name, this 7th day of March, 1904, in the presence of two subscribing witnesses.

ARTHUR PAGET.

Witnesses:

GEORGE ISAAC BRIDGES,
REGINALD SMITH.