

(No Model.)

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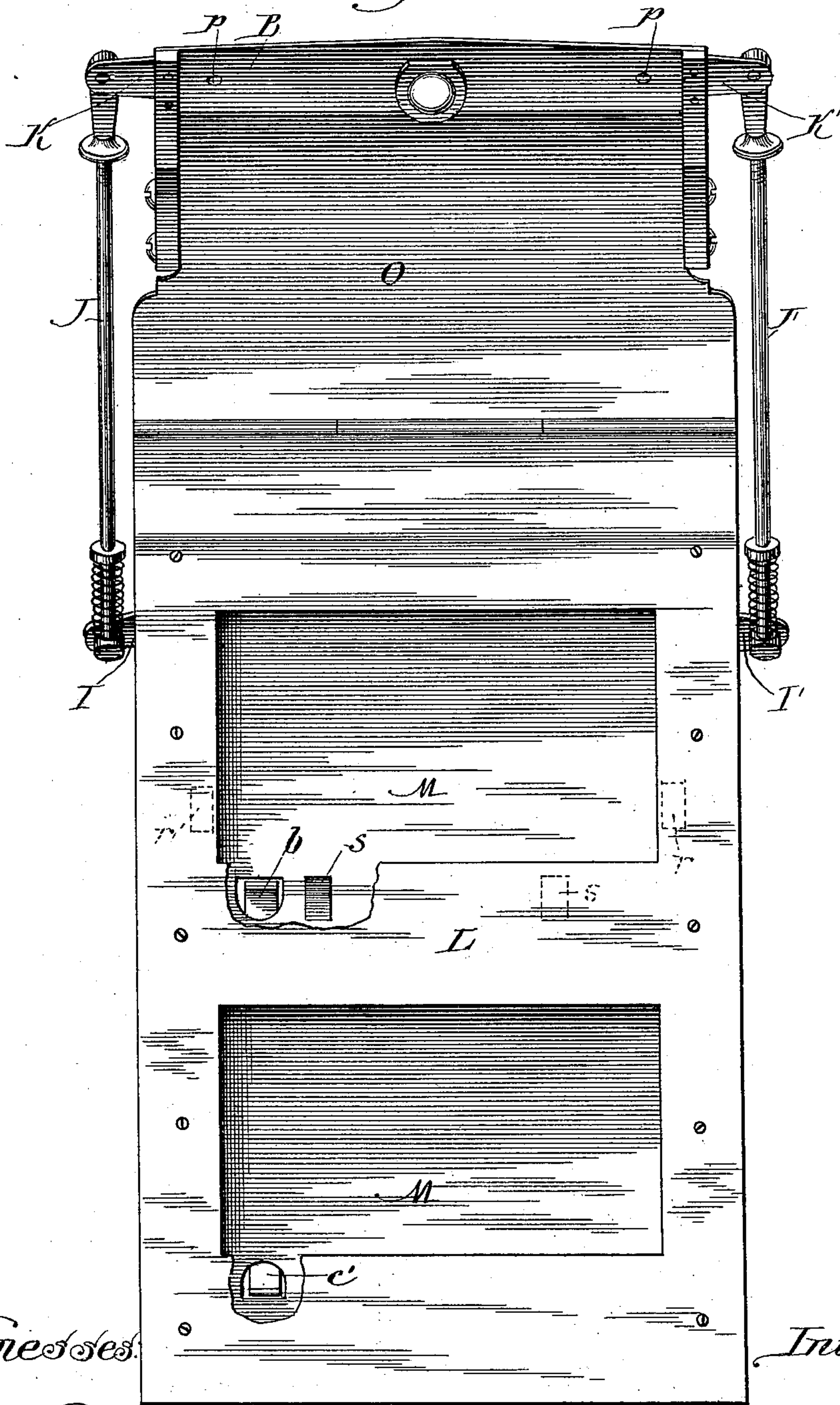
O. C. HOFFMANN.

DEVICE FOR DISPLAYING ADVERTISING CARDS.

No. 360,881.

Patented Apr. 12, 1887.

Fig. 1.



Witnesses:

Inventor:

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Albert H. Adams.

Otto C. Hoffmann

(No Model.)

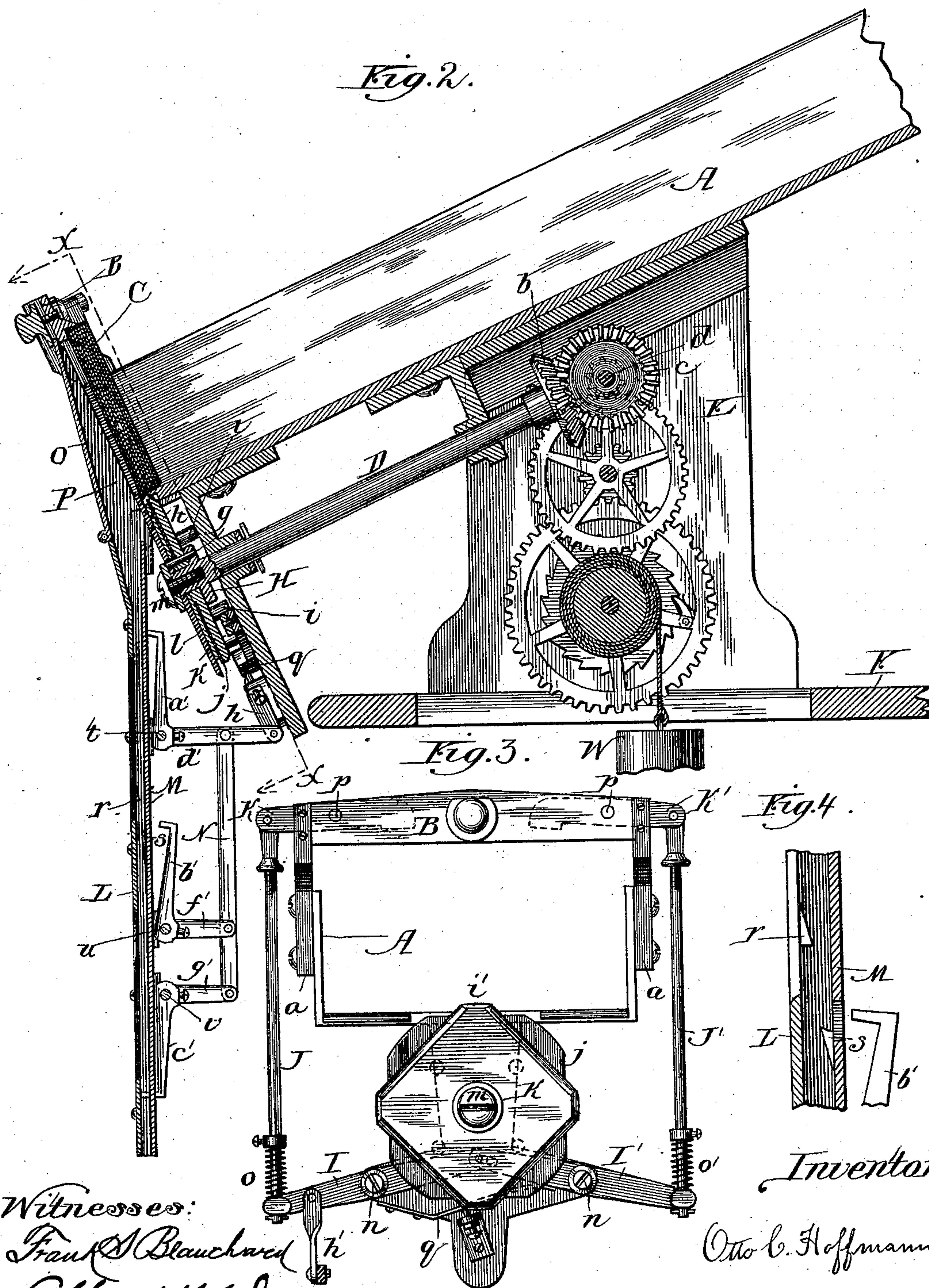
3 Sheets—Sheet 2.

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DEVICE FOR DISPLAYING ADVERTISING CARDS.

No. 360,881.

Patented Apr. 12, 1887.



(No Model.)

3 Sheets—Sheet 3.

O. C. HOFFMANN.

DEVICE FOR DISPLAYING ADVERTISING CARDS.

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Fig. 5. Patented Apr. 12, 1887.

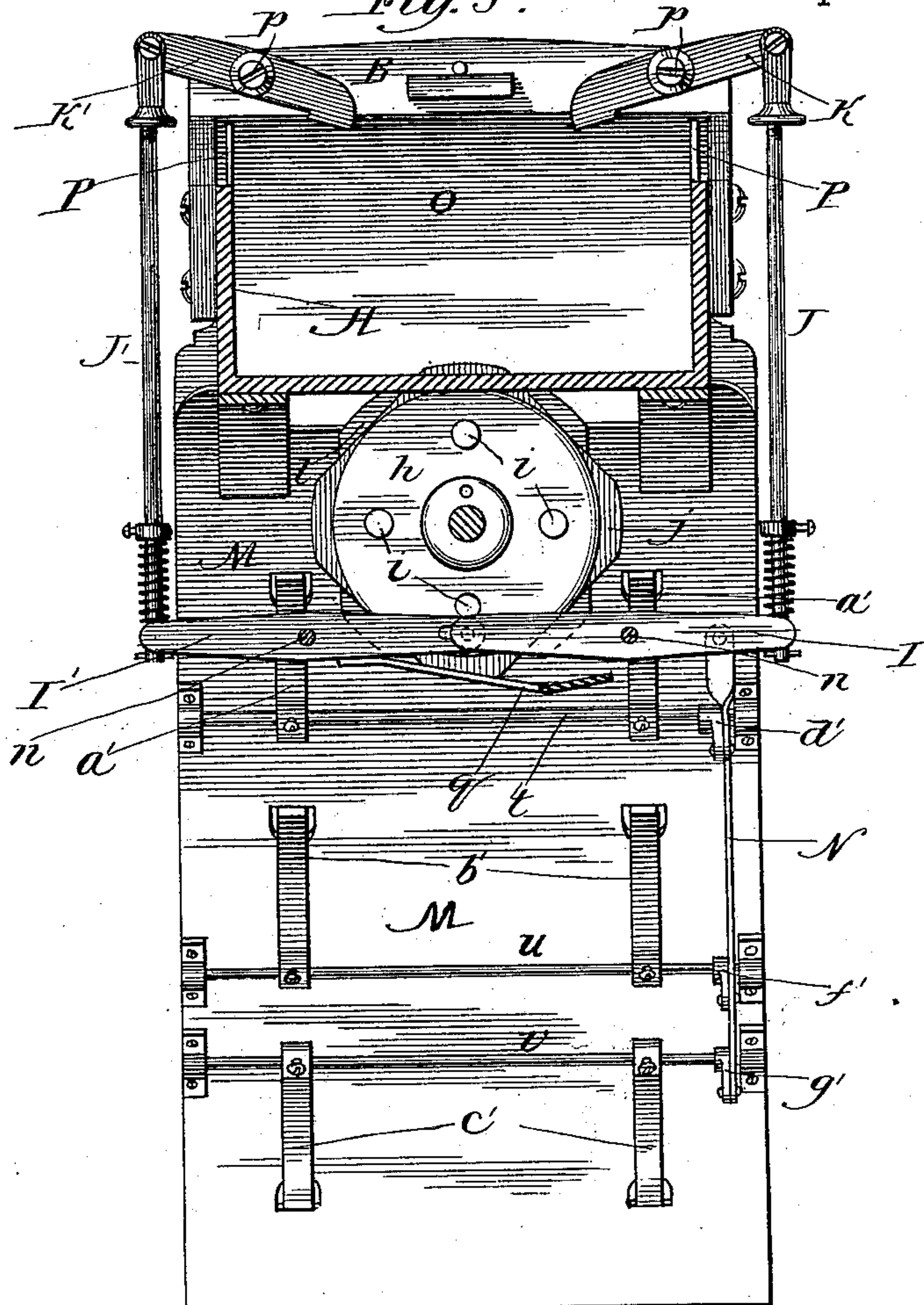
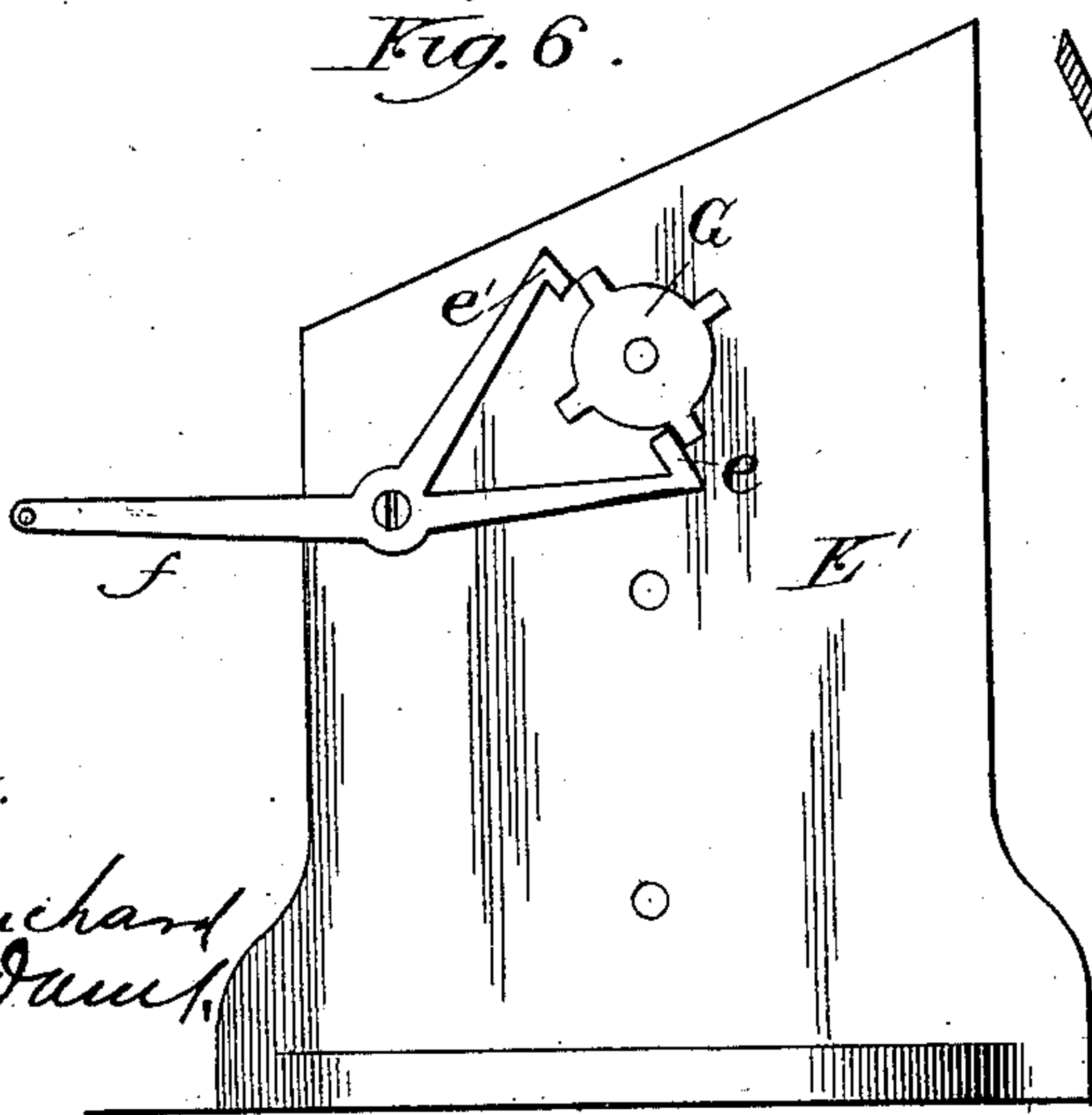
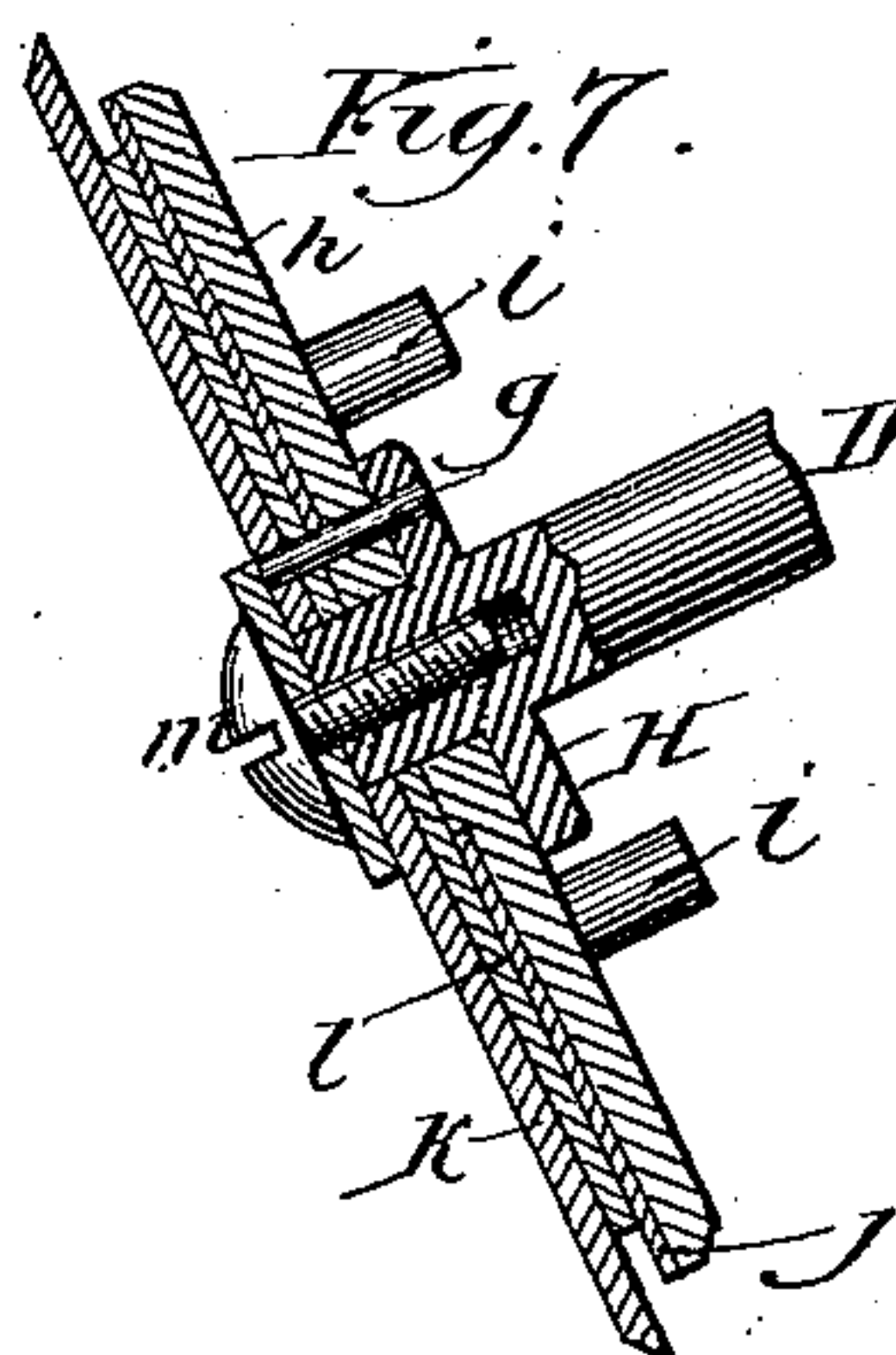


Fig. 6.



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Fig. 7.



Inventor:
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UNITED STATES PATENT OFFICE.

OTTO C. HOFFMANN, OF CHICAGO, ILLINOIS, ASSIGNOR TO JAMES H. ROMAIN, OF SAME PLACE.

DEVICE FOR DISPLAYING ADVERTISING-CARDS.

SPECIFICATION forming part of Letters Patent No. 360,881, dated April 12, 1887.

Application filed December 16, 1886. Serial No. 221,790. (No model.)

To all whom it may concern:

Be it known that I, OTTO C. HOFFMANN, residing at Chicago, in the county of Cook and State of Illinois, and a citizen of the United States, have invented a new and useful Improvement in Devices for Displaying Advertising-Cards, of which the following is a full description, reference being had to the accompanying drawings, in which—

10 Figure 1 is a front elevation. Fig. 2 is a vertical longitudinal section. Fig. 3 is a front elevation of the trough and other parts represented in the figure, the hinged cover in front of the spout and the plates, between which is
15 a passage for the cards and parts connected therewith, being removed. Fig. 4 is an enlarged detail, being a vertical cross-section through the plates, between which is the passage for the cards. Fig. 5 is a rear view of
20 the parts shown, being a section taken on line *x* of Fig. 2, looking to the left. Fig. 6 is a detail, being a side elevation of one of the standards, in which are supported a train of wheels, and showing also an escape-wheel and
25 pallets outside. Fig. 7 is an enlarged sectional detail, the special parts shown being indicated by letters referred to in the descriptive part of the specification.

The object of my invention is to provide an
30 improved mechanism by means of which advertising-cards can be displayed at intervals, which I accomplish as illustrated in the drawings and as hereinafter fully described. Those things which I claim as new will be set forth
35 in the claims.

In the drawings, A represents a trough, which, as shown, is open at the top. It is placed at an angle, supported in any suitable manner adapted to receive and hold any suitable number of cards. The front end of the
40 trough is open.

B is a bar, secured to the upper ends of the supports *a*, which are secured to the outside of the trough. The upper edges of the cards
45 C rest, one after another against the bar B.

D is a shaft supported in suitable bearings. *b* is a bevel-wheel on one end of this shaft, which wheel engages with the bevel-wheel *c* on the shaft *d*. This wheel *c* is the last of a
50 series of wheels forming a train, which is

moved by a weight, W. The shafts on which the wheels of the train are located are, as shown, supported in suitable bearings in standards E E', the lower ends of which rest upon a table; F, in which, as shown, there is
55 a slot, through which the cord which sustains the weight W passes. The trough is supported in part by the upper ends of the standards E E'.

G, Fig. 6, is an escape-wheel provided, as
60 shown, with four teeth. It is located on the shaft *d*, and the wheel, as shown, is outside of the standard E'.

e e' are pallets pivoted to the standard E', and *f* is an arm or lever connected with the
65 pallets, and through which they can be operated. These pallets, as shown in the drawings, are designed to be operated by hand; but they may be operated by any suitable clock-work. The pallets and teeth upon the
70 escape-wheel G are so arranged that when the engaging-pallet is released the wheel G will perform one-eighth of a revolution before its movement is arrested by the other pallet. Near the forward end of the shaft D is a fixed
75 collar, H, which collar may be made integral with the shaft.

g is a pin secured in the collar H.

h is a plate provided with a small hole, through which the pin *g* can pass. On the
80 back side of this plate there are four pins, *i*, arranged at equal distances from each other.

j is a thin steel sheet. It is, in effect, a square sheet with its corners rounded off. (See Figs. 3 and 5.) *k* is another thin metal sheet or
85 plate, which may be made from a square piece having its corners cut off, as shown in Fig. 3. This clipping or cutting off of the corners of the plates or sheets *j k* is not a necessity, but decreases the friction.
90

l is a washer between the plates *j k*, equal in thickness to about the thickness of two cards. These plates *j k* are placed at right angles to each other, so that the corners of each project beyond the other, as shown in Fig. 3. The
95 parts *h j k l* are all held upon the end of the shaft D by means of a screw, *m*, and the pin *g* passes through holes in the parts *j k l*, which holes are properly arranged to insure the proper position of these several parts.
100

I I' are two levers pivoted at *n n*. The inner ends of these two levers pass each other a little, and in one of them there is a slot, and in the other a pin which enters the slot, as shown in Fig. 3, so that if one of these levers is moved the other moves with it.

J J' are two rods, the lower ends of which pass loosely through the outer ends of the levers I I', or through bosses thereon, and are held by pins, which pass through the rods, as shown in Fig. 3.

o o' are springs which encircle the rods, which springs are located between the outer ends of the levers I I' and collars on the rods J J', as shown in Fig. 3. The upper ends of the rods J J' are flattened and pivoted, respectively, to the levers K K', which levers are pivoted at *p p* to the bar B. The inner ends of these levers K K' project downward a little, as shown, and they are thick enough to engage with the edges of two adjoining cards in the trough.

q is a spring arranged to act on the lever I' for the purpose of throwing up its inner end and at the same time the inner end of the lever I.

L is a face-plate having in it two openings, as shown in Fig. 1, for displaying the advertising-cards, which openings are a little smaller than the cards.

M is another plate located back of the face-plate L and supported at a little distance therefrom. Between these two plates L M is a passage for the cards. On the inside of the plate L are two slight projections, *r*, one near each edge of the plate, which projections incline from the top downward and inward, as shown clearly in Fig. 4. On the inside of the plate M there are two projections, *s*, one near each edge of the plate M, as shown clearly in Fig. 4.

t u v are three shafts, each of which is supported in bearings on the back side of the plate M. On the shaft *t* are secured two arms, *a'*, one near each end of the shaft. The upper ends of these arms *a'* are bent forward, and the bent ends are adapted to enter holes in the plate M. On the shaft *u* are secured two arms, *b'*, similar to the arms *a'*, which arms *b'* are bent over at the top and adapted to pass into holes or slots in the plate M. On the shaft *v* are two arms, *c'*, similar to those described; but these two arms *c'* extend downward. Their lower ends are bent over and adapted to enter holes in the plate M.

d' is an arm secured to the shaft *t*, which arm extends back some distance. *f'* is an arm upon the shaft *u*, and *g'* is an arm which extends back from the shaft *v*.

N is a connecting-bar, which is pivoted to the arms *d' f' g'*.

h' is a connecting-bar, the lower end of which is pivoted to the rear end of the arm *d'*, and its upper end is pivoted to the lever I. (See Figs. 2 and 3.)

O is a hinged door, which can be opened, when desired, for the purpose of adjusting

cards at the front of the trough. The lower edges of the cards C are to be beveled, to facilitate the entry between them of the sheet or plate *j*.

P are side pieces between the hinged cover O and its supports and the front end of the trough and upper end of the back plate, M.

When the mechanism is ready for use, the upper part of the forward card in the trough will rest against the bar B, and its under part will be in contact with one of the corners *i'* of the plate *k*, which will then be in the position shown in Fig. 3.

In use the weight W must be heavy enough to run the train of wheels with which it is connected, the shaft D, and the other operating parts.

The operation is as follows: Suppose the parts to be in the position represented in Figs. 2, 3, and 6 and the machine to have been in operation. There will then be in between the plates LM two cards, the lower one of which will rest upon the lower end of the arms *c'*, and will be in view behind the lower opening in the face-plate, and the other will rest upon the ledges *s*, and will be in view behind the upper opening in the face-plate. If, now, the pallet *e*, which is engaged with one of the teeth on the escape-wheel, be released by lifting the lever *f* by hand, the weight will cause the train of wheels to move, and the escape-wheel G will be given one-eighth of a revolution, its movement being arrested by one of its teeth coming in contact with the pallet *e'*, the lever *f* being elevated high enough to bring the pallet *e'* into position to engage with the teeth on the escape-wheel. At the same time the shaft D will move, and the sheet or plate *j* and the plate *k*, with the other parts which are secured to the end of the shaft D, will make one-eighth of a revolution and a corner of the plate *j* will pass in between the second and third cards from the front, separating the two front cards from the others, and the point *i'* of the plate *k* will be carried away from the front of the cards, so that the two front cards can fall. The position of the two plates *j k* at this time is shown in Fig. 5, *i'* being the corner of the plate *k*, which was in front of the cards, as shown in Fig. 3. At the same time one of the pins *i* on the back of the plate *k* will engage with the lever I' and depress its inner end, and at the same time the inner end of the lever I will be depressed, because the two levers are connected by a slot and pin, as before described, bringing these two levers into the position shown in Fig. 5. By this depression of the levers I I' the springs *o o'* will be compressed, which will cause the free ends of the levers K K' to press upon the edges of the two front cards, with which the free ends of such levers will be in contact, the pressure being transmitted from the springs through the rods J J', which act on the levers K K'. At the same time that the levers I I' come into the position shown in Fig. 5, the upper ends of the arms *a'* will enter holes in the plate M

and will project into the passage for the cards, forming rests or ledges on which the cards which are about to drop from the trough will rest, and at the same time the upper end of the arms *b'* will enter holes in the plate *M*, and will push the card which is behind the upper opening in the front plate off from the ledges *s*, and at the same time the lower ends of the arms *c'* will be withdrawn from the passage for the cards, and the two cards in the passage and behind the two openings will drop out at the bottom of the passage. At the same time the point of the sheet *k*, with which the forward card in the trough is in contact, having been moved out of the way, as before described, the pressure of the levers *K K'* on the upper edges of the two forward cards will force them down into the passage, and they will fall and rest upon the upper ends of the arms *a a'*. The arms *a' b' c'* are operated at the same time through the arms *d' f' g'*, connecting-bar *N*, and connecting-bar *h'* by the said movement of the lever *I*. The parts are so arranged that the rotation of the plates *j k* one-eighth of a revolution, the downward movement of the levers *I I'*, and the described movement of the arms *a' b' c'* are in effect simultaneous. Now, if the lever *f* be pressed downward, the pallet *e'* will be released from the escape-wheel, the shaft *D* and the plates *j k* will make one-eighth of a revolution, carrying the point or corner of the plate *j* away from and releasing the cards, and bringing at the same time the next point or corner of the plate *k* in front of the cards. At the same time the pin on the back of the plate *h*, which before came in contact with and pressed down the inner end of the lever *I'*, will be carried away from such lever, and by the action of the spring *g* the levers *I'* and *I* will be restored to the position shown in Fig. 3, and at the same time, through the action of the bar *h'*, connecting-bar *N*, and arms *d' f' g'*, the arms *a' b' c'* will be restored to the position shown in Fig. 2, and the two cards which are resting on the upper ends of the arms *a'* will be released therefrom and will fall down in the passage, and, coming in contact with the ledges *r*, will pass behind such ledges, and the rear card will be caught by and rest upon the ledges *s*, while the other card will pass down and rest upon the lower ends of the arms *c'*, the two cards in the passage being exposed behind the openings in the front plate.

This operation can be repeated as often as desired, and the exposed cards may be left in view such time as may be determined.

What I claim as new, and desire to secure by Letters Patent, is—

1. In a device for displaying advertising-cards, an inclined trough or receptacle for holding cards, in combination with a shaft, *D*, located beneath the trough, and having a wheel upon its rear end, which wheel engages with a wheel by which the shaft can be intermittently driven, and the plates *j k*, secured to the shaft *D* at or near its front end, the outer edges of the said two plates *j k* being at a little distance from each other, the plates also being arranged relatively to the delivery end of the trough, substantially as shown, whereby the plates *j k* can be made to hold, separate, and release cards in the trough, substantially as and for the purposes specified.

2. In a device for displaying advertising-cards, an inclined trough or receptacle for holding cards, in combination with a shaft, *D*, located beneath the trough, and having a wheel upon its rear end which engages with a driving-wheel which can be intermittently rotated, a plate, *h*, located upon the forward end of the shaft *D*, and carrying pins *i*, arranged to engage with a lever, *I'*, plates *j k*, also located upon and secured to the shaft *D* at or near its front end, levers *I I' K K'*, rods *J J'*, and springs *o o'*, all located, arranged, and operating substantially as and for the purposes specified.

3. In a device for displaying advertising-cards, an inclined trough or receptacle for holding cards, in combination with a shaft, *D*, located beneath the trough, and having a wheel upon its rear end which engages with a driving-wheel, which can be intermittently rotated, a plate, *h*, located upon the forward end of the shaft *D*, and carrying pins *i*, arranged to engage with a lever, *I'*, plates *j k*, also located upon and secured to the shaft *D* at or near its front end, levers *I I' K K'*, rods *J J'*, springs *o o'*, plates *L M*, forming a passage for the cards, shafts *t u v*, supported in bearings on the back side of the plate *M*, arms *a' b' c'*, arms *d' f' g'*, connecting-bars *N h'*, all located, arranged, and operating substantially as and for the purposes specified.

4. In a device for displaying advertising-cards, an inclined trough or receptacle, in combination with a shaft, *D*, located beneath the trough, and carrying a bevel-wheel, *b*, upon one end, a shaft, *d*, carrying a bevel-wheel, *c*, an escape-wheel, *G*, pallets *e e'*, and plates *j k*, secured to the forward end of the shaft *D*, all located, arranged, and operating substantially as and for the purposes specified.

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Witnesses:

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