

No. 708,342.

Patented Sept. 2, 1902.

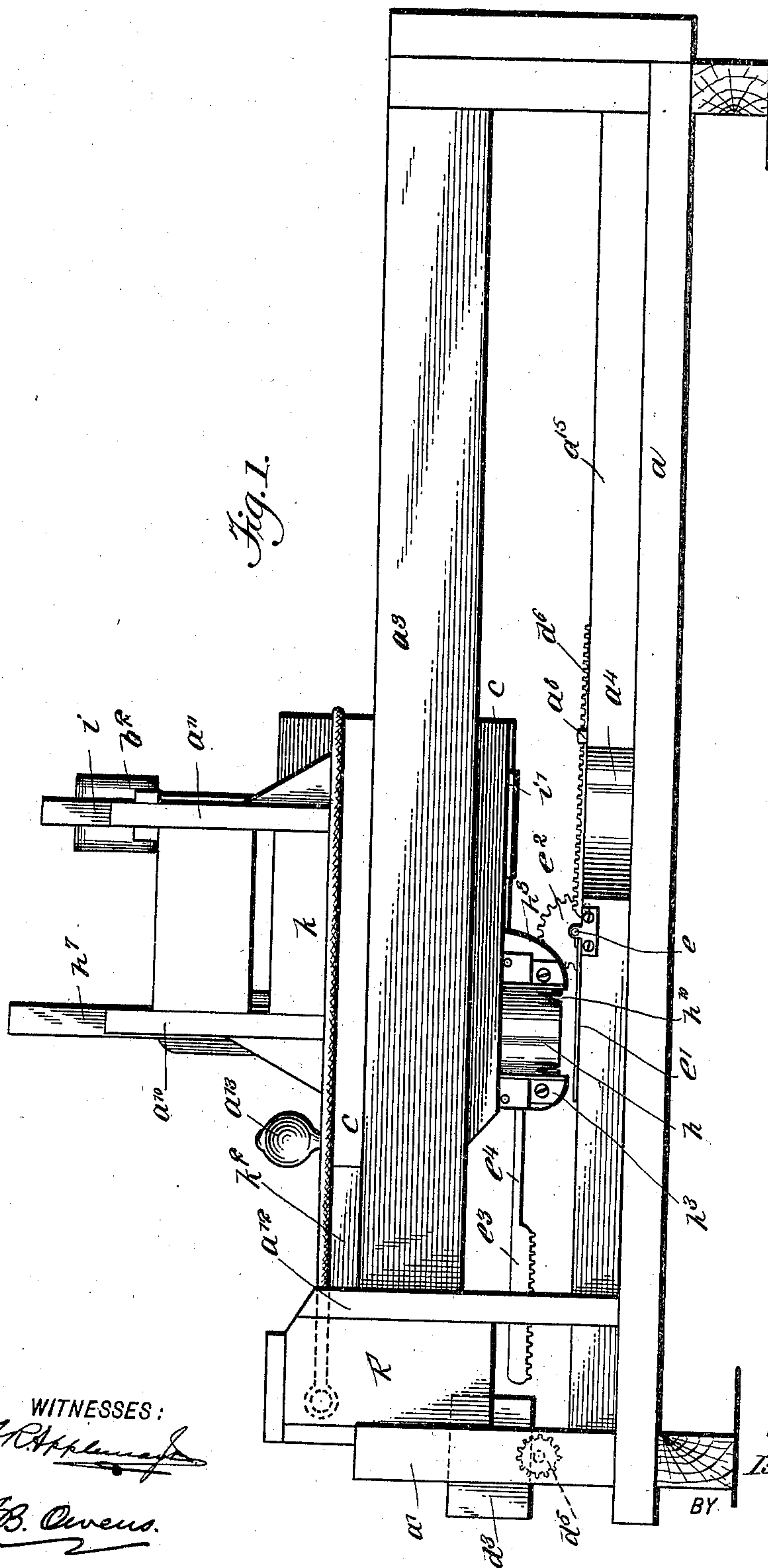
I. G. GRANT.

APPARATUS FOR MOUNTING PHOTOGRAPHS.

(Application filed Oct. 23, 1901.)

(No Model.)

4 Sheets—Sheet 1.



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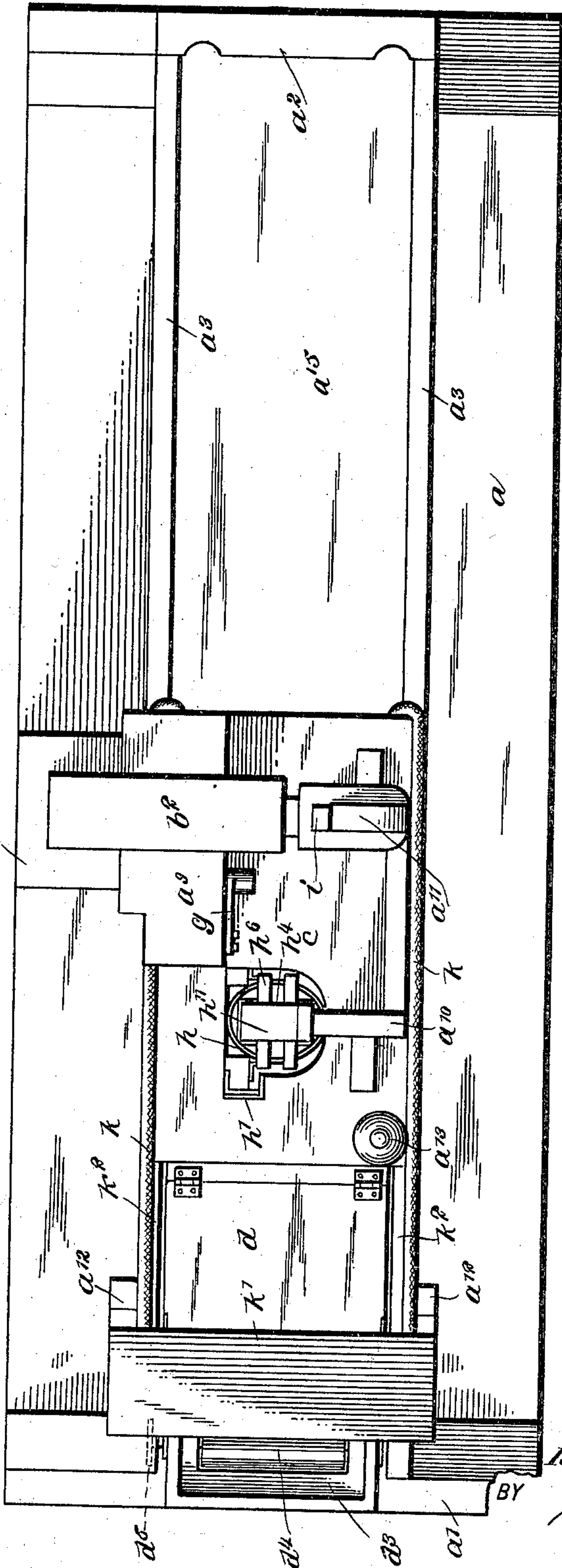
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Fig. 2.



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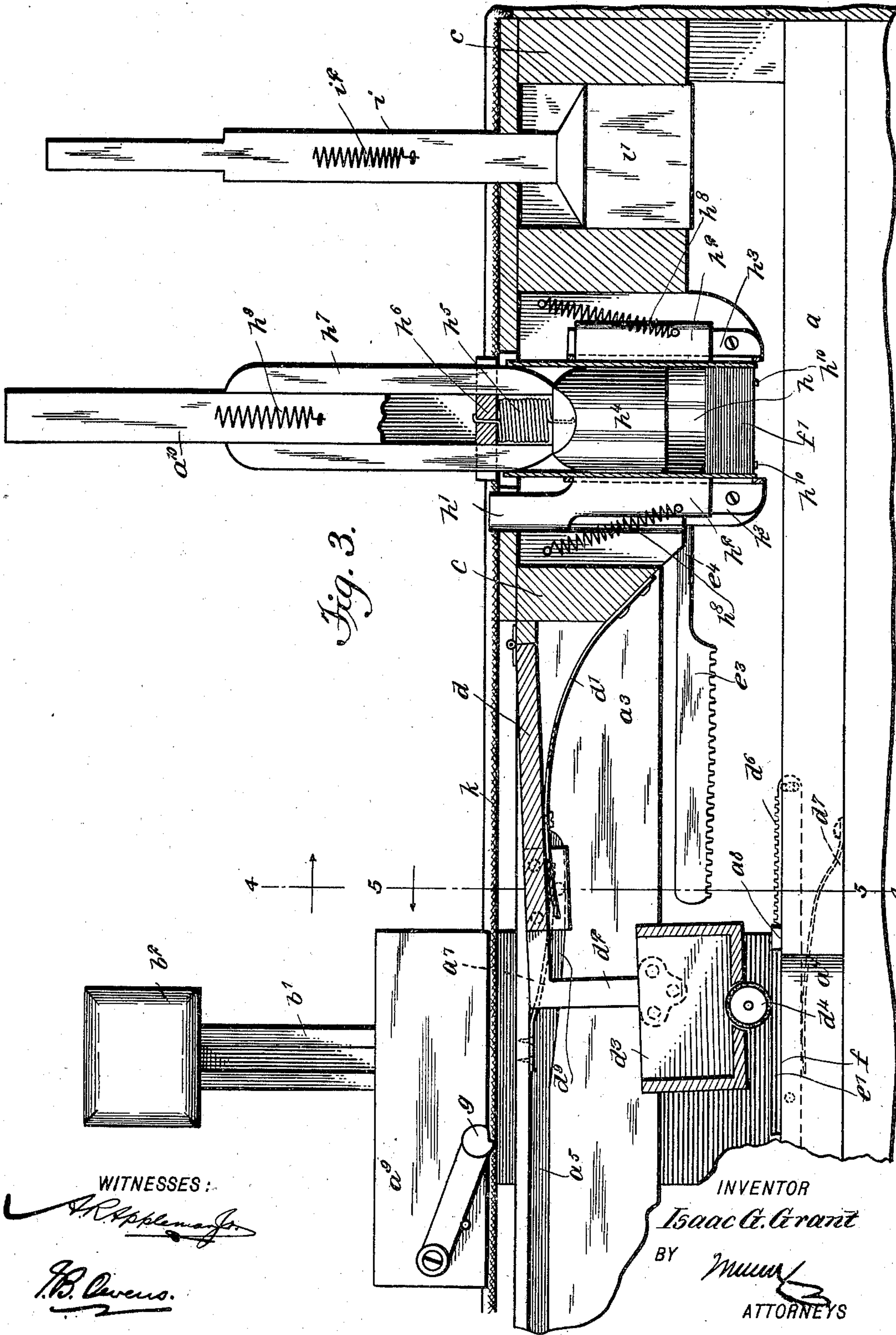
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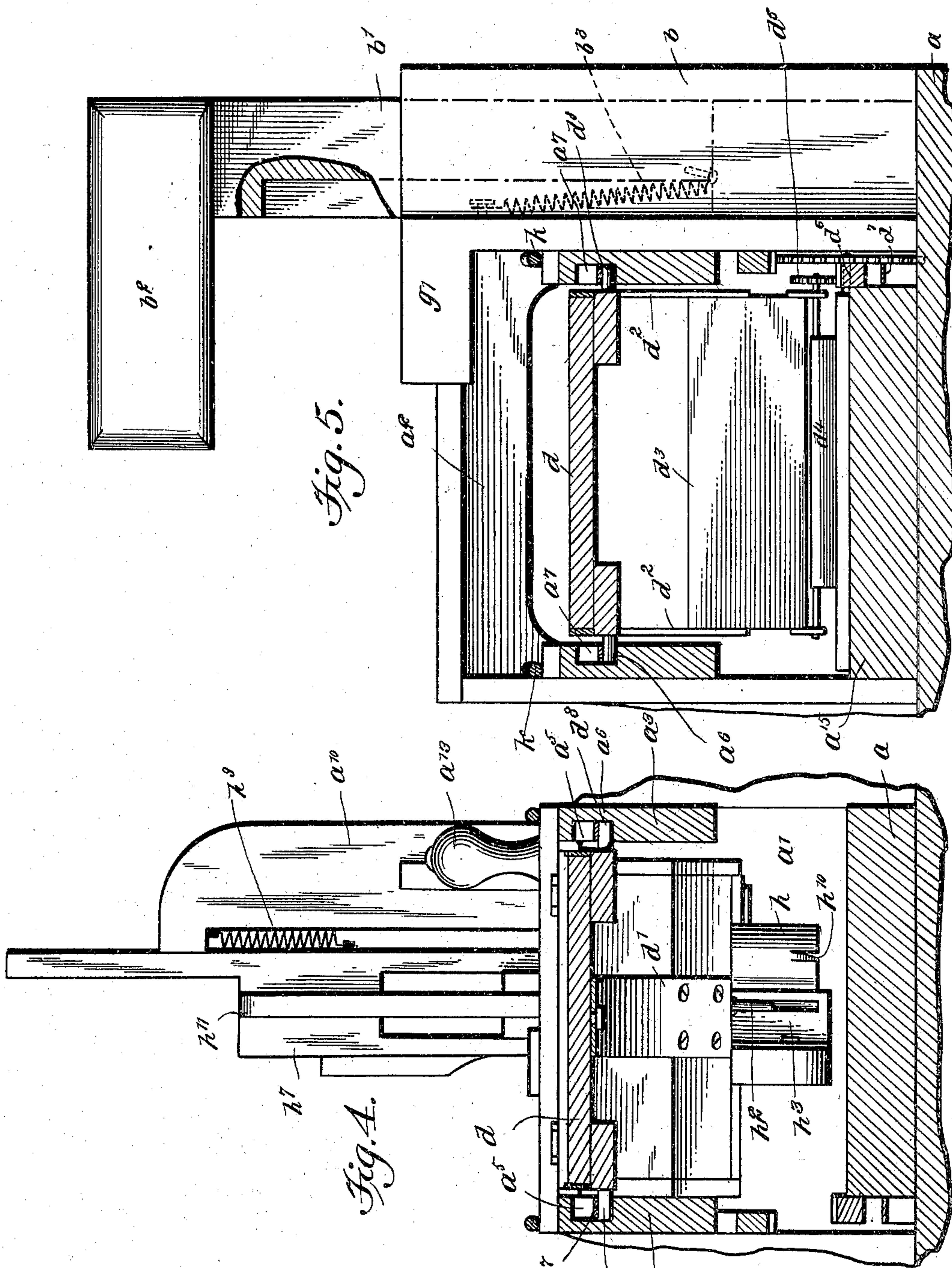
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4 Sheets—Sheet 4.



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UNITED STATES PATENT OFFICE.

ISAAC GORDON GRANT, OF BOZEMAN, MONTANA.

APPARATUS FOR MOUNTING PHOTOGRAPHS.

SPECIFICATION forming part of Letters Patent No. 708,342, dated September 2, 1902.

Application filed October 23, 1901. Serial No. 79,634. (No model.)

To all whom it may concern:

Be it known that I, ISAAC GORDON GRANT, a citizen of the United States, and a resident of Bozeman, in the county of Gallatin and State of Montana, have invented a new and Improved Apparatus for Mounting Photographs, of which the following is a full, clear, and exact description.

This invention relates to an apparatus for mounting photographs upon their cards or "mounts;" and the object is to provide means for enabling this work to be done properly and in less time than is taken by the present hand method.

This specification is a specific description of one form of the invention, while the claims are definitions of the actual scope thereof.

Reference is to be had to 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 side elevation of the apparatus. Fig. 2 is a plan view thereof. Fig. 3 is a fragmentary longitudinal section. Fig. 4 is a section on the line 4 4 of Fig. 3, and Fig. 5 is a section on the line 5 5 of Fig. 3.

The machine has a suitable framing, which, as here shown, is made up of a base member a , a closed front end a^1 , an open rear end a^2 , and guide-rails a^3 , respectively at the sides and joining the end portions a^1 and a^2 . The base a has a central raised portion a^{15} , as indicated best in Fig. 5, and this central raised portion is notched at a^4 , (see Fig. 1,) so that the photographs, which are laid over the notched portion of the raised central part of the base a , may be readily grasped. On the base, at one side thereof, (see Figs. 2 and 5,) is a vertically-disposed casing b , wherein is fitted a vertically-movable plunger b^1 , having a transverse head b^2 and held yieldingly in raised position by a spring b^3 within the casing b . By depressing the plunger b^1 certain of the parts of the apparatus are operated, as will be hereinafter brought out.

Sliding on the guide-rails a^3 is a carriage c , which contains the operative parts of the apparatus. This carriage carries pivotally at its rear end a hinged apron d , which is normally pressed downward by a spring d^1 , fastened to the carriage and in sliding connection with the apron. Carried by the apron d

through the medium of arms d^2 is a paste-box d^3 , within the outlet of which is arranged a distributing-roller d^4 , having at one end (see Fig. 5) a pinion-gear d^5 . This gear is arranged to mesh with a rack d^6 , mounted stationarily on the base a and extending longitudinally therewith, so that as the carriage moves, carrying with it the paste-box and bringing the paste-box over the rack d^6 , the gear d^5 rolls on the rack and the roller d^4 is turned. It is at this point that the paste is distributed, as will be hereinafter described. The rack d^6 is pivoted at its rear end, and its opposite end (see Fig. 3) is slotted to receive a pin on the base, so as to hold the rack free to swing on its pivot within a limited distance.

d^7 represents a spring which is fastened to the base and bears under the rack d^6 to press it normally upward. Formed in the inner sides of the guides a^3 are longitudinally-extending grooves a^5 , which have directly over the point where the rack d^6 is located downwardly-offset portions d^9 , and within these offset portions are located springs a^7 , which press downward. These grooves a^5 receive transversely-projecting pins d^8 , carried on the apron d . As the carriage c moves over the base a the projections d^8 run in the guide-grooves a^5 , and at the normal elevation of these grooves the paste-box d^3 is kept clear above the base a ; but as the projections d^8 run into the offset portion d^9 of the grooves a^5 the paste-box is lowered, so that it rolls over the picture and applies the paste. As the carriage returns the paste-box is lifted to its inactive position.

e indicates a rock-shaft which is mounted on the base a and extends transversely of the base. This rock-shaft is located just rearward of the notch a^4 . (See Fig. 1.) The rock-shaft e carries a frisket e^1 in the form of a central notched plate, the notch of which corresponds to the form of the picture to be mounted. The shaft e carries at one side a pinion-gear e^2 , and this gear is in the path of a rack e^3 , mounted through the medium of a spring-shank e^4 on the carriage c . As the carriage moves from the position shown in Fig. 1 to that shown in Fig. 3 the rack e^3 rides over the gear e^2 and the shaft e is turned a half-revolution, throwing the frisket e^1 from the position shown in Fig. 1 to that partially

illustrated in Fig. 3, in which latter position the frisket lies on the central part of the base a immediately adjacent to the notch a^4 . Previously to this operation the mount should be placed face upward on the base in such position that the frisket when it is thrown over will bear on the mount and hold it in place. The mount is indicated at f in Fig. 3.

a^8 indicates a cleat which is placed on top of the base to gage the position of the mount when it is manually placed on the base. Assuming that the parts are in the position shown in Fig. 1, the mount should be placed on the base a against the cleat a^8 and then the carriage moved forward. The first operation will be the throwing of the frisket e' to cover the mount, excepting at the orifice in the frisket, through which orifice the paste is to be distributed. The second operation will be the depression of the paste-box and the application of the paste to the mount through the opening in the frisket. This done the carriage is permitted to partly return, its complete operation being arrested by a gravity-dog g , mounted on a part a^9 of the frame, the dog engaging a member h' , forming a part of the picture-applying device. The carriage is then held in this partly-retained position until other operations take place, as will be now described.

The pictures to be applied are indicated at f' in Fig. 3, and they are contained within a case h , mounted to slide vertically in the carriage, said case having longitudinal exterior ribs h^2 fastened thereto and running in guides h^3 on the carriage, whereby the case is held to move vertically within a limited degree. The projected part or shoulder h' , which contacts with the dog g , is carried by and, indeed, constitutes an extension of one of the ribs h^2 , as may be seen in Fig. 3. As the case h moves downward the shoulder member h' moves with it, and consequently disengages the dog g and permits the carriage to return. Within the carriage is arranged a stamp h^4 , which is independently movable within the carriage and connected by a retractile spring h^5 with a cross-head h^6 , which slides freely in the slotted plunger h^7 .

h^8 indicates retractile springs which are connected with the case h and with the carriage c and which tend to raise the case.

h^9 indicates a retractile spring (best shown in Fig. 4) which is fastened to the plunger h^7 and to an upward projection a^{10} of the frame. This spring h^9 tends to keep the plunger h^7 raised. The case h is provided with inwardly-projected spring-prongs h^{10} , which serve to sustain the pictures within the case. The plunger h^7 has a shouldered top portion h^{11} . Now when the pawl g arrests the return movement of the carriage the picture-applying device stops immediately over the point where the mount f lies, the frisket e' having been previously thrown off of the mount. The shoulder h^{11} of the plunger h^7 will lie immediately under the laterally-turned end b^2 of

the plunger b' . The operator should now throw down the plunger b' . This will cause the plunger h^7 to follow. The spring h^5 is of greater strength than the aggregate force of the springs h^8 . As the plunger h^7 moves down the parts h^4 and h^6 will follow it until the cross-head h^6 strikes the top of the case h . The superior force of the spring h^5 will cause the springs h^8 to give way, and the case will be moved down until it bears down on the mount f . Continued movement of the plunger h^7 will cause the stamp h^4 to move downward with the plunger independently of the cross-head, which is now at rest on the top of the case h , and the plunger will be struck on the pile of pictures f' , thus applying the lowermost picture to the paste-covered surface of the mount. Simultaneously with this action the shouldered member h' in moving downward with the case h will disengage the pawl g , and the carriage will then return to its rearwardmost position.

Mounted in the carriage c is a plunger i , carrying a stamp i' at its lower end, the plunger being kept normally raised by a retractile spring i^2 , fastened to the plunger and to a portion a^{11} on the frame. When the carriage returns to its rearwardmost position, the plunger i lies under the end b^2 of the plunger b' , and then the operator should again strike the plunger and depress it, carrying with it the stamp i' . The stamp i' is forced down on the picture and its mount, and the picture is thereby flattened out and caused to adhere smoothly to the mount. When these operations are performed, a single picture will have been mounted.

The carriage is drawn with a steady tension toward the rear end of the machine by retractile springs k , here illustrated in the form of elastic cords. These springs are fastened to the carriage and to a yoke k' , which is in the form of an inverted U and is slidably mounted between the sides of the end a' of the frame and vertically-extending guide-rails a^{12} . (See Figs. 1 and 2.) This yoke k is provided with forwardly-projecting arms k^2 , which lie, respectively, on the upper edges of the guide-rails a^3 of the frame and which are engaged by the carriage as it moves into its rearwardmost position, thus arresting such movement.

a^{13} indicates a hand-knob which is fastened to the carriage and serves to facilitate the manipulation thereof. The pictures are supplied to the case h by withdrawing the parts h^7 , h^6 , and h^4 , which may be effected by simply pulling upward the plunger h^7 , the spring h^9 being sufficiently flexible to permit this operation.

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

1. In a picture-applying apparatus the combination of a base, a carriage thereon, means on the carriage for applying the picture to the mount, and a frisket mounted on the base

and movable to cover and uncover a mount placed on the base.

2. The combination of a base, a carriage thereon, means on the carriage for applying the picture to the mount, a frisket mounted on the base for the purpose specified, and devices actuated by the movement of the carriage, for actuating the frisket.

3. The combination of a base, a carriage thereon, picture-applying devices on the carriage, a frisket on the base for the purpose specified, a gear in connection with the frisket, and a rack on the carriage, the rack riding over the gear to actuate the frisket.

4. The combination of a base, a frisket mounted thereon for the purpose specified, a rock-shaft whereon the frisket is mounted, a gear attached to the rock-shaft, a carriage on the base, a rack on the carriage, the rack riding over the gear, and picture-applying devices on the carriage.

5. The combination of a base, a carriage thereon, a paste-applying device on the carriage, a picture-case on the carriage, means on the carriage for forcing the pictures successively from the case, and a stamp also on the carriage for finishing the operation of applying the picture.

6. In a picture-applying apparatus, the combination of a base, a frisket mounted thereon for the purpose specified, a rock-shaft whereon the frisket is mounted, a gear attached to the rock-shaft, a carriage on the base, a rack on the carriage, the rack riding over the gear to operate the frisket, a paste-applying device on the carriage, means on the carriage for carrying the pictures, and means also on the carriage for separately discharging the pictures from the carriage.

7. In a picture-mounting apparatus, the combination of a base, a carriage thereon, a paste-applying device mounted on the carriage and working over the base, means on the carriage for carrying the pictures and means also on the carriage for forcing the pictures from the carriage.

8. The combination of a base, a carriage thereon, a paste-applying device mounted on the carriage and working over the base, a case vertically movable on the carriage, a stamp within the case, a plunger within the case, a cross-head having limited movement on the plunger, a relatively strong spring connecting the cross-head and stamp, and a relatively weak spring sustaining the case.

9. The combination of a base, a carriage thereon, a case vertically movable on the carriage, a relatively weak spring sustaining the case in normal position, a stamp movable within the case, a plunger, a cross-head having limited movement on the plunger, and a relatively strong spring engaging the cross-head and stamp, said cross-head being capa-

ble of engaging the case, for the purpose specified.

10. The combination of a support, a case movable vertically on the same, a stamp movable within the case, means for yieldingly holding the case, a spring connected to the stamp, and a cross-head connected to the spring and adapted to engage the case for the purpose specified, said spring being stronger than the means for yieldingly holding the case.

11. The combination of a base, a carriage thereon, a picture-applying device mounted on the carriage, a dog sustained on the base, and a part connected to the picture-applying device, with which part the dog coacts for the purpose specified.

12. The combination of a base having a part with a guide-groove and an offset therein, a carriage on the base, and a paste-applying device on the carriage and movable relatively thereto, said paste-applying device comprising a part running in the guide-groove, whereby as the offset of the groove is reached, the paste-applying device is moved into operative position.

13. The combination of a frame having a part with a guide-groove therein, a carriage on the frame, a paste-applying device hingedly mounted on the carriage and having a lateral projection fitting in the said guide-groove, the guide-groove having an offset portion, and a spring lying in the groove at the offset portion to engage and deflect the said projection of the paste-applying device.

14. In a picture-applying device, the combination of a frame, a carriage thereon, a paste-applying device movably mounted on the carriage and engaging an irregular surface on the frame, whereby to throw the paste-applying device into and out of active position, means for applying the pictures, said means including a shouldered member, a dog supported on the frame and engageable with said shouldered member, and means being mounted on the carriage and tending to return the carriage to its position of rest.

15. In a picture-applying device, the combination of a frame, a carriage thereon, a paste-applying device, means for applying the pictures, said means being mounted on the carriage and including a shouldered member movable with the picture-applying means, a dog supported on the frame and engaging the shouldered member, and a spring tending to return it to its inactive position.

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

ISAAC GORDON GRANT.

Witnesses:

MARVIN C. HUTCHINGS,
W. F. DAVIS.