

(No Model.)

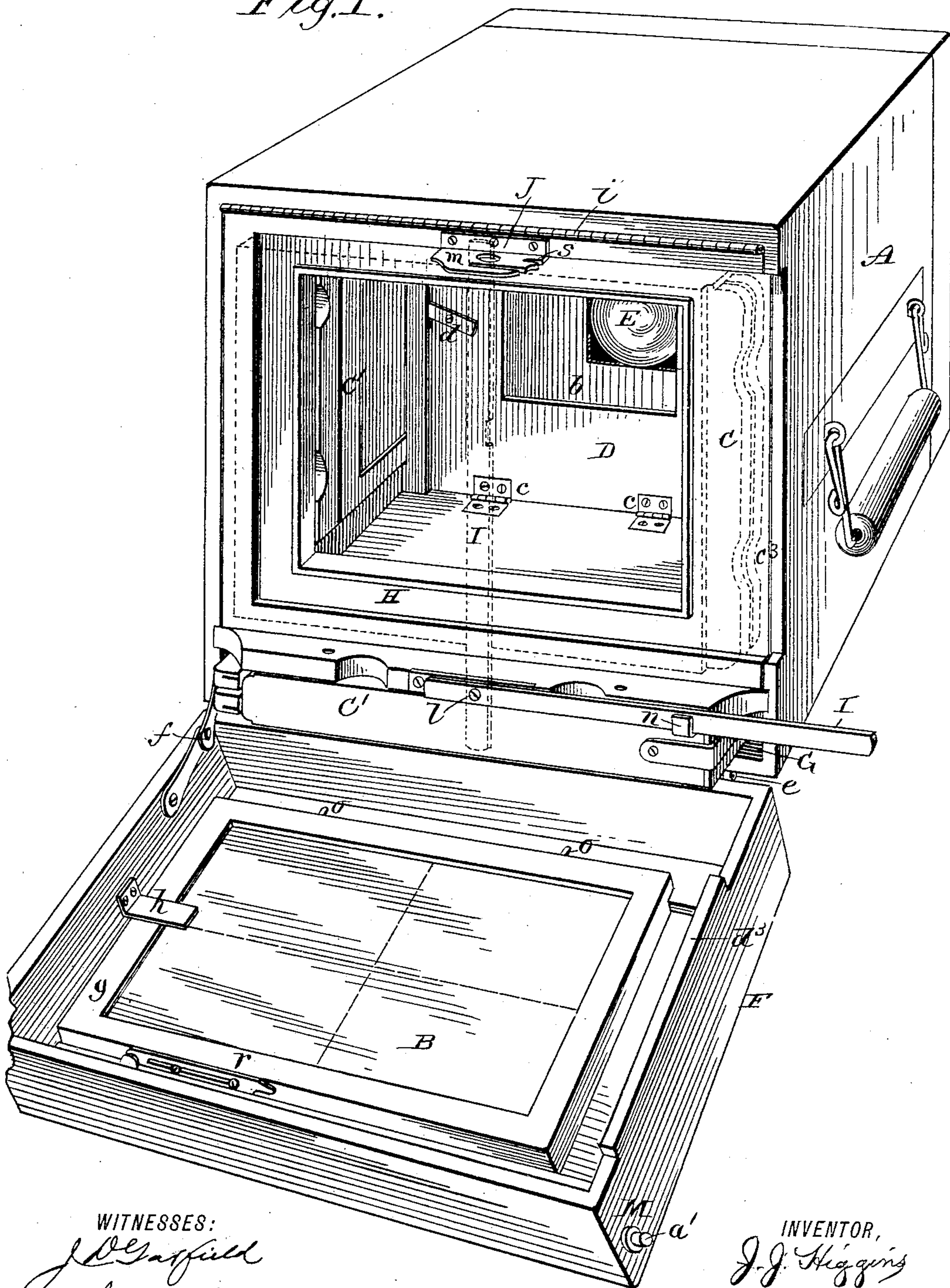
4 Sheets—Sheet 1.

J. J. HIGGINS.
PHOTOGRAPHIC CAMERA.

No. 397,429.

Patented Feb. 5, 1889.

Fig. 1.



WITNESSES:

J. D. Garfield
C. Seagrave

INVENTOR,

J. J. Higgins

BY

Munn & Co.

ATTORNEY.

J. J. HIGGINS.
PHOTOGRAPHIC CAMERA.

No. 397,429.

Patented Feb. 5, 1889.

Fig. 2.

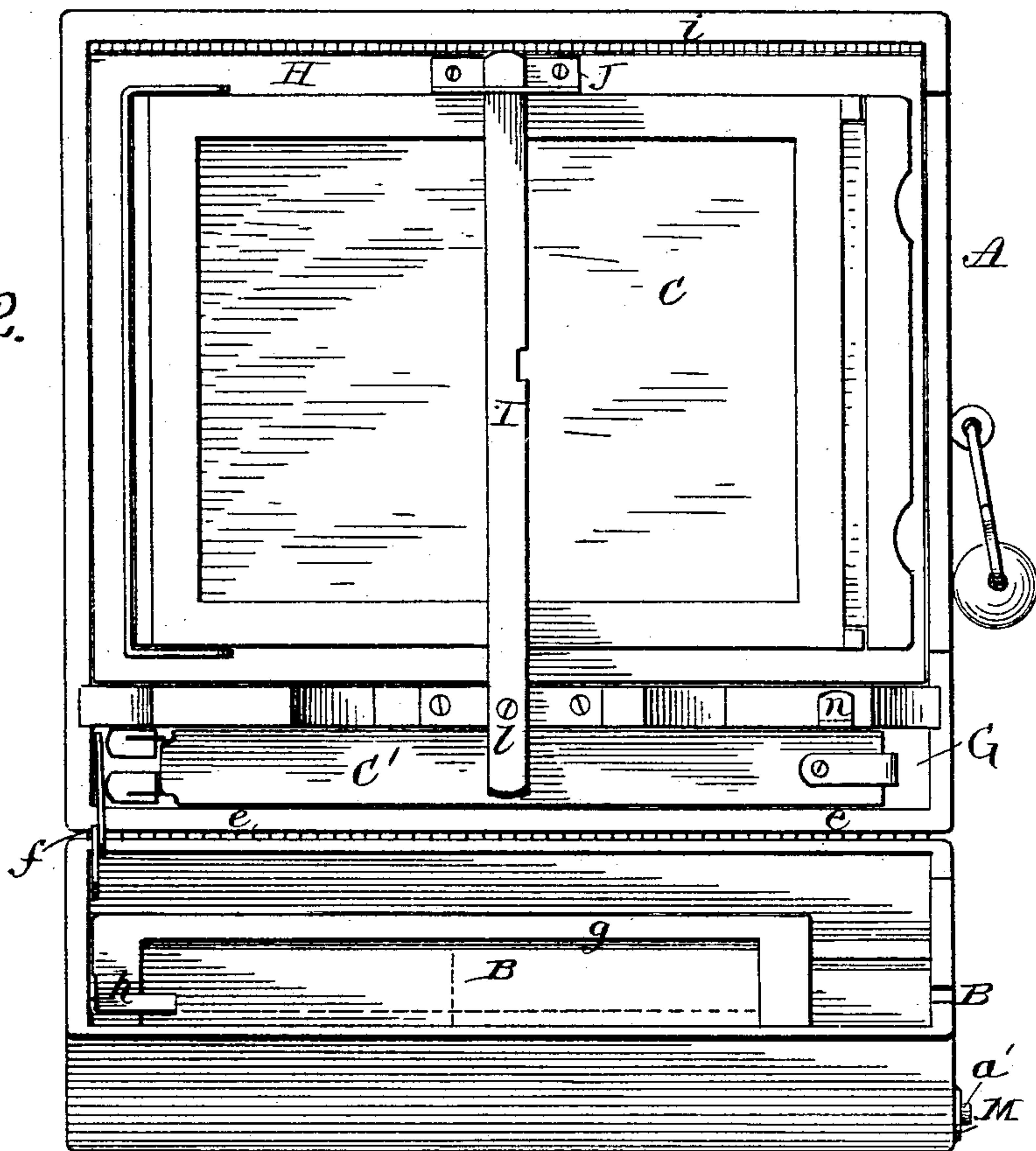
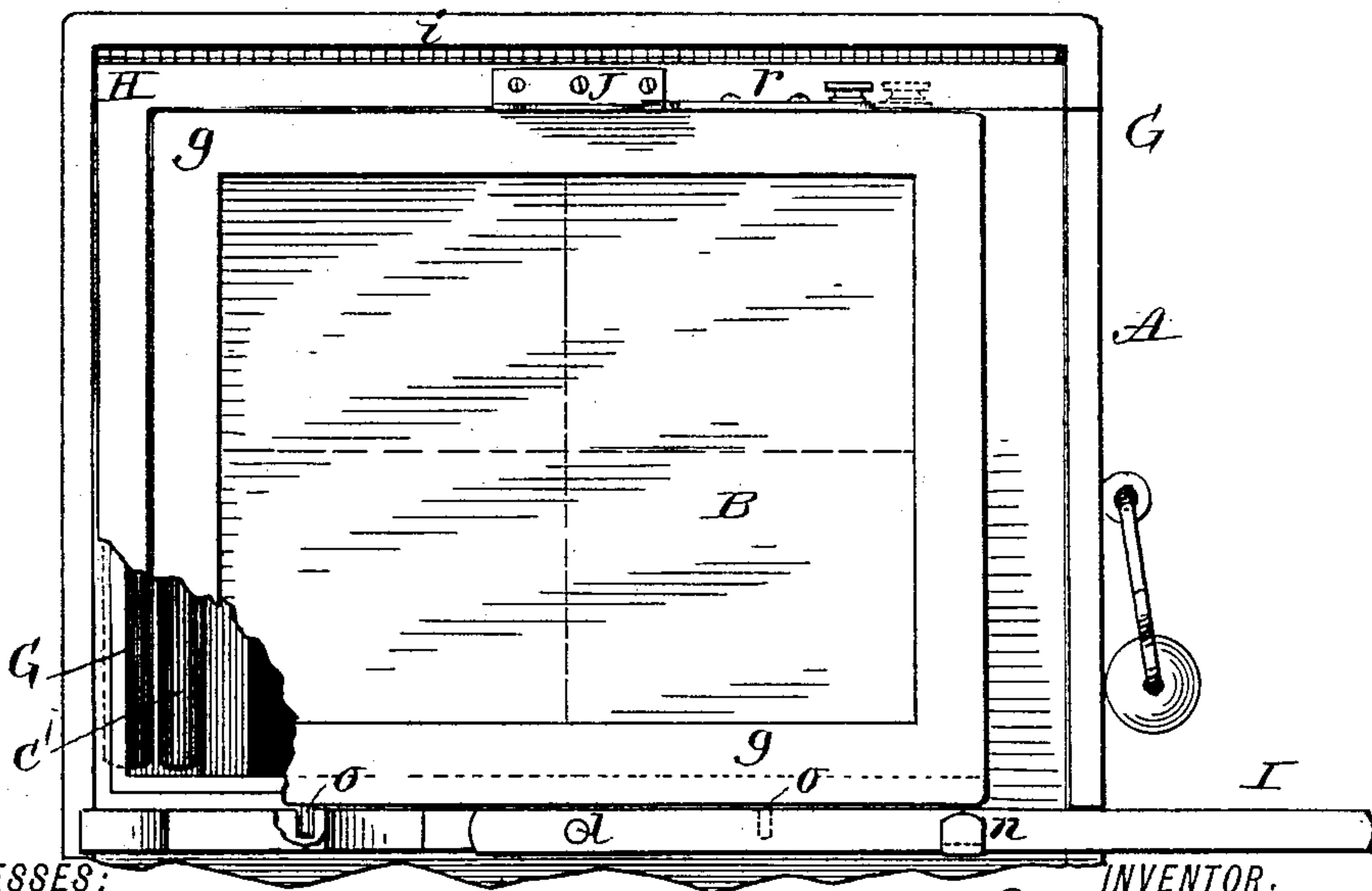


Fig. 3.



WITNESSES:

J. D. Garfield
C. Sedgwick

INVENTOR.

J. J. Higgins
BY Munn & Co

ATTORNEY.

J. J. HIGGINS.
PHOTOGRAPHIC CAMERA.

No. 397,429.

Patented Feb. 5, 1889.

Fig. 4.

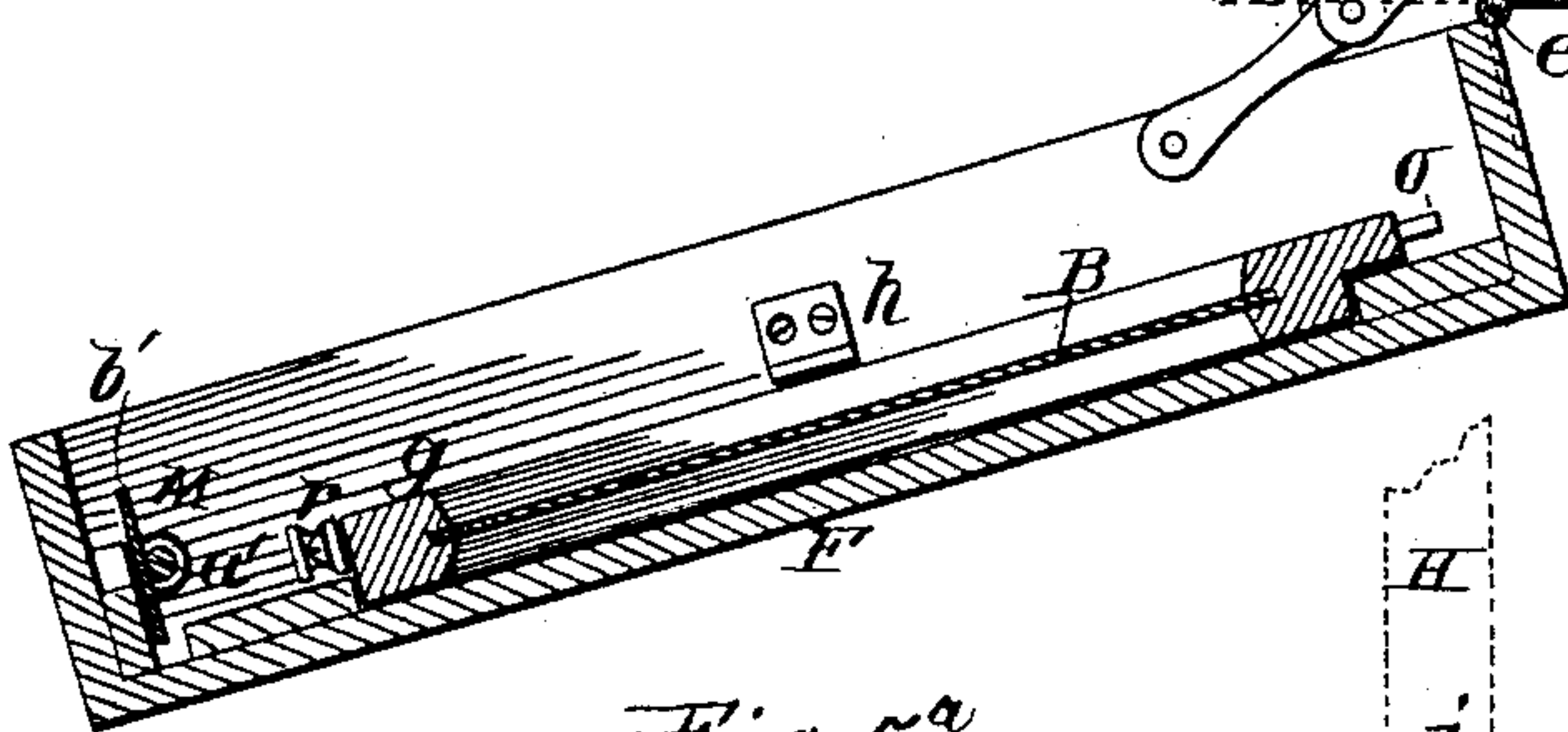
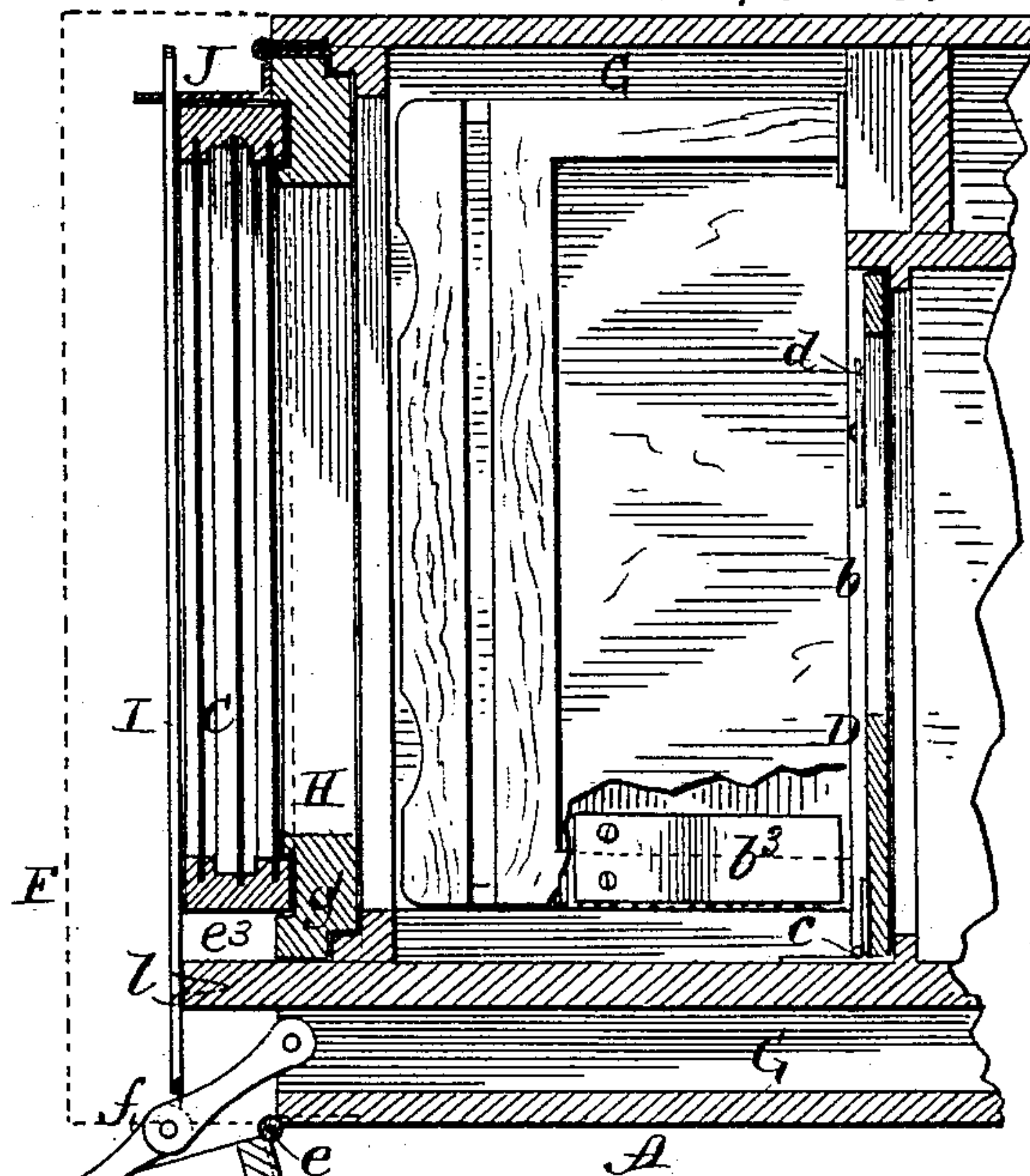


Fig 5a

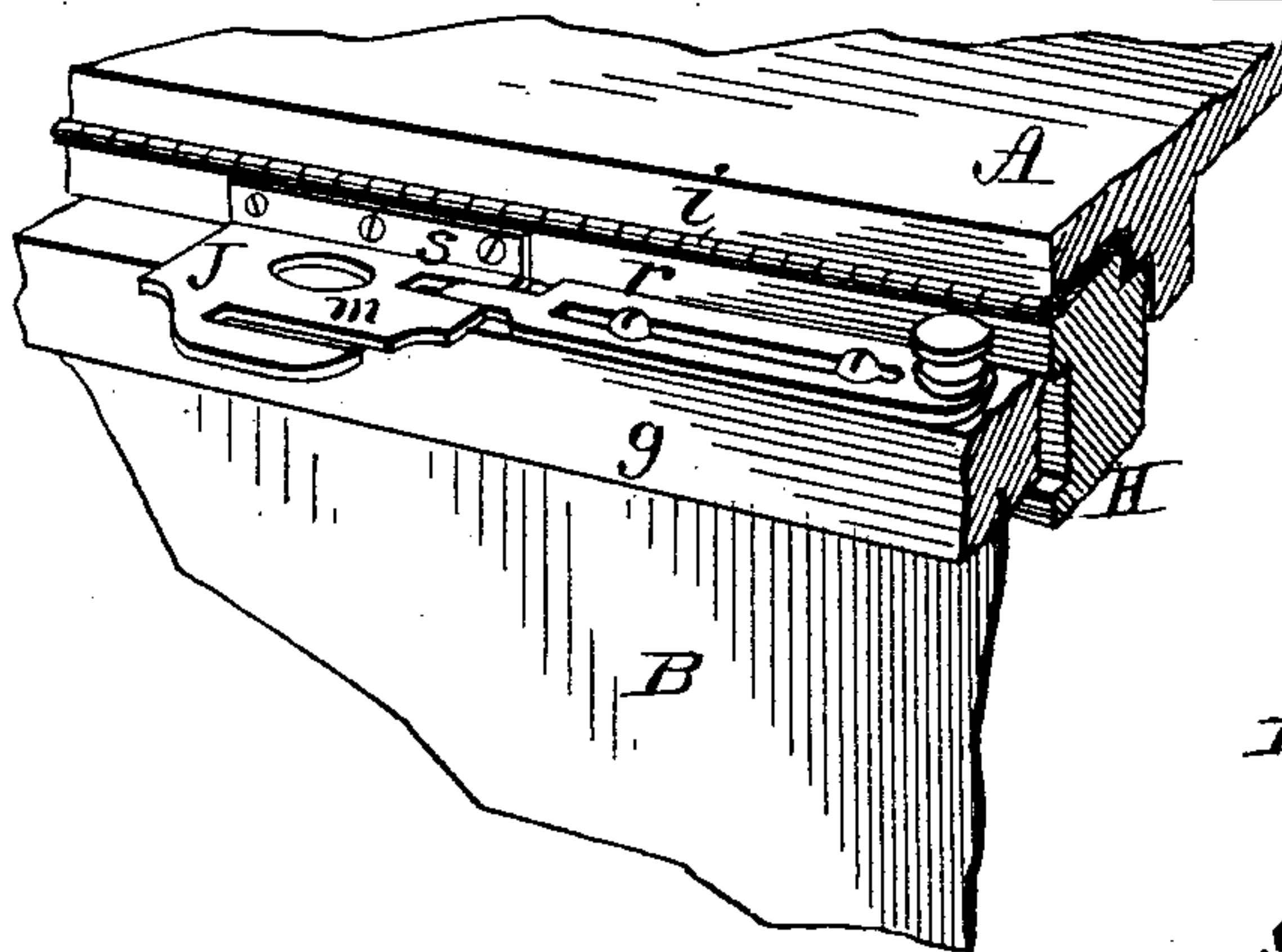
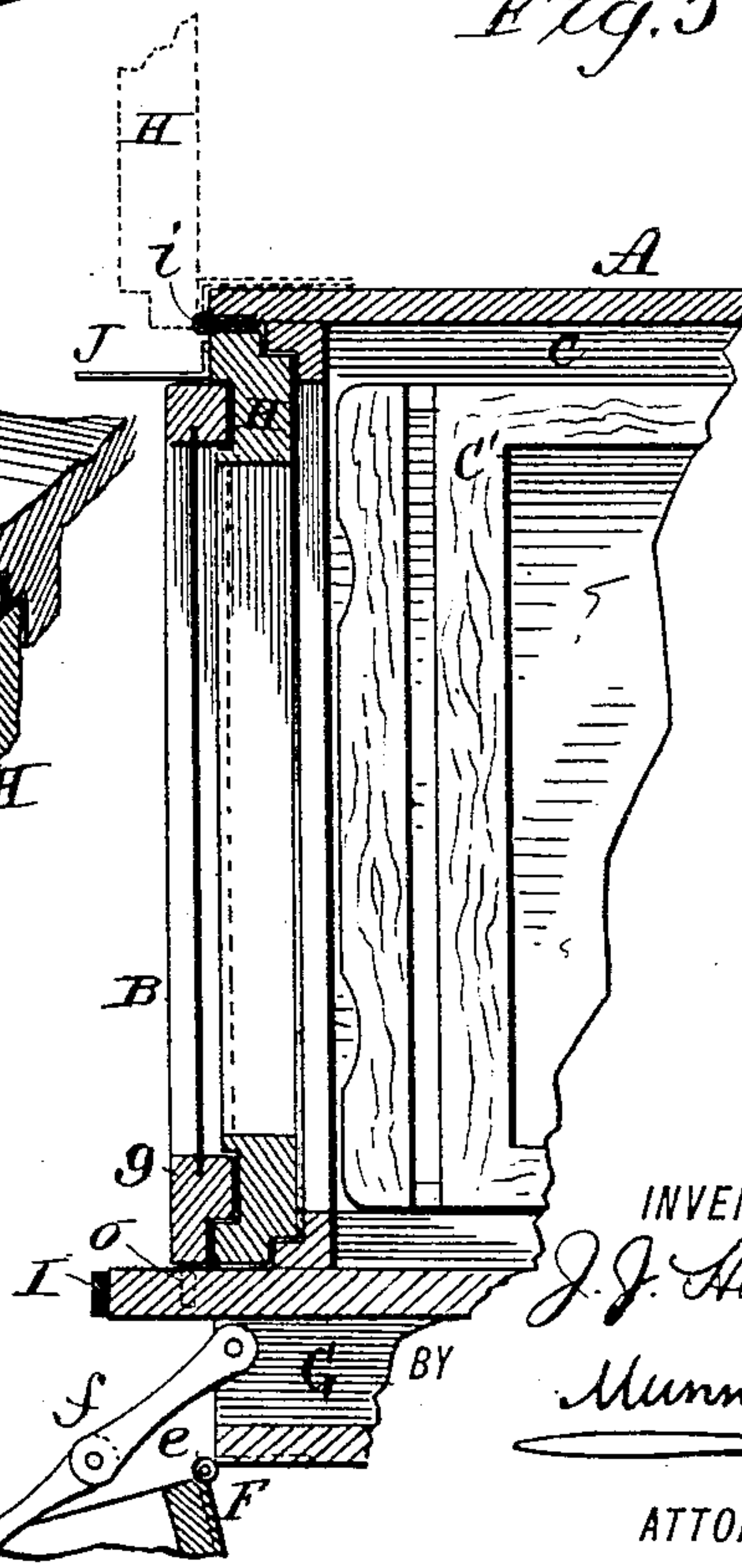


Fig. 5



WITNESSES:

J. D. Garfield
C. Sedgwick

INVENTOR,

J. J. Higgins
Munn & Co

ATTORNEYS

(No Model.)

4 Sheets—Sheet 4.

J. J. HIGGINS.
PHOTOGRAPHIC CAMERA.

No. 397,429.

Patented Feb. 5, 1889.

Fig. 6.

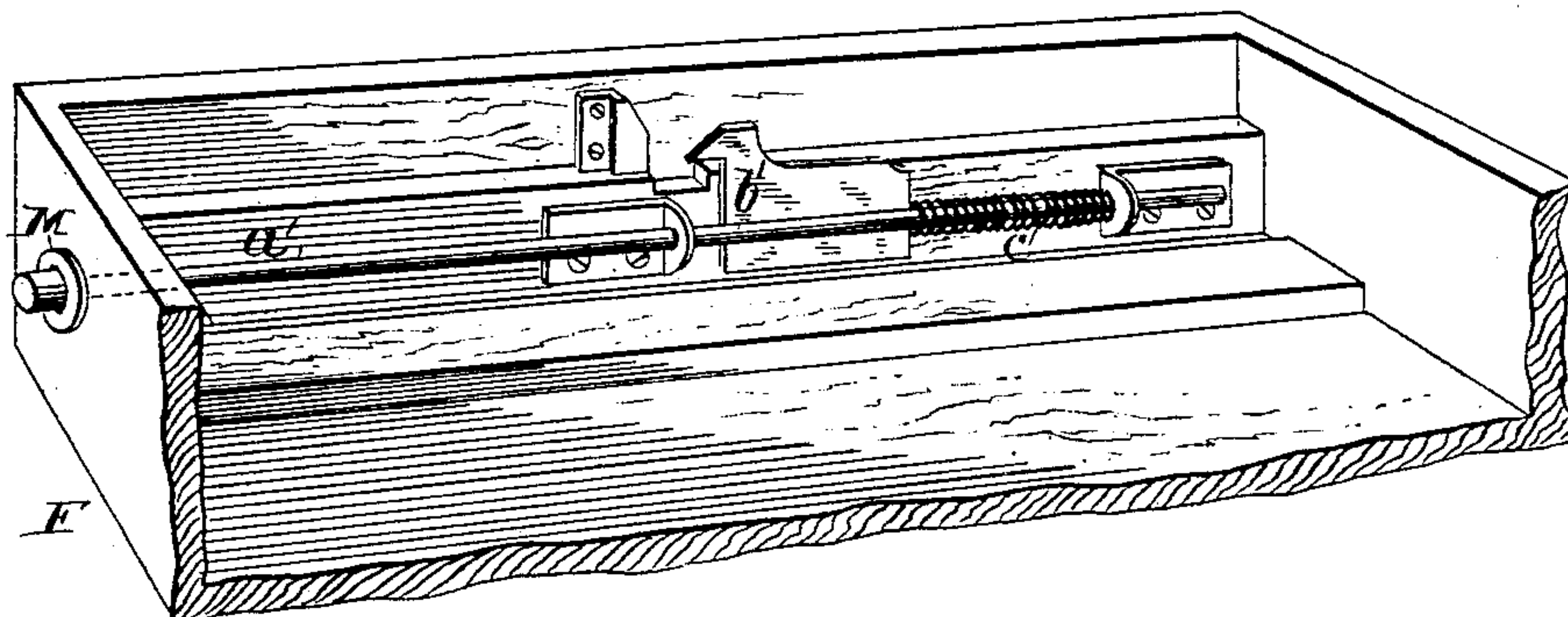
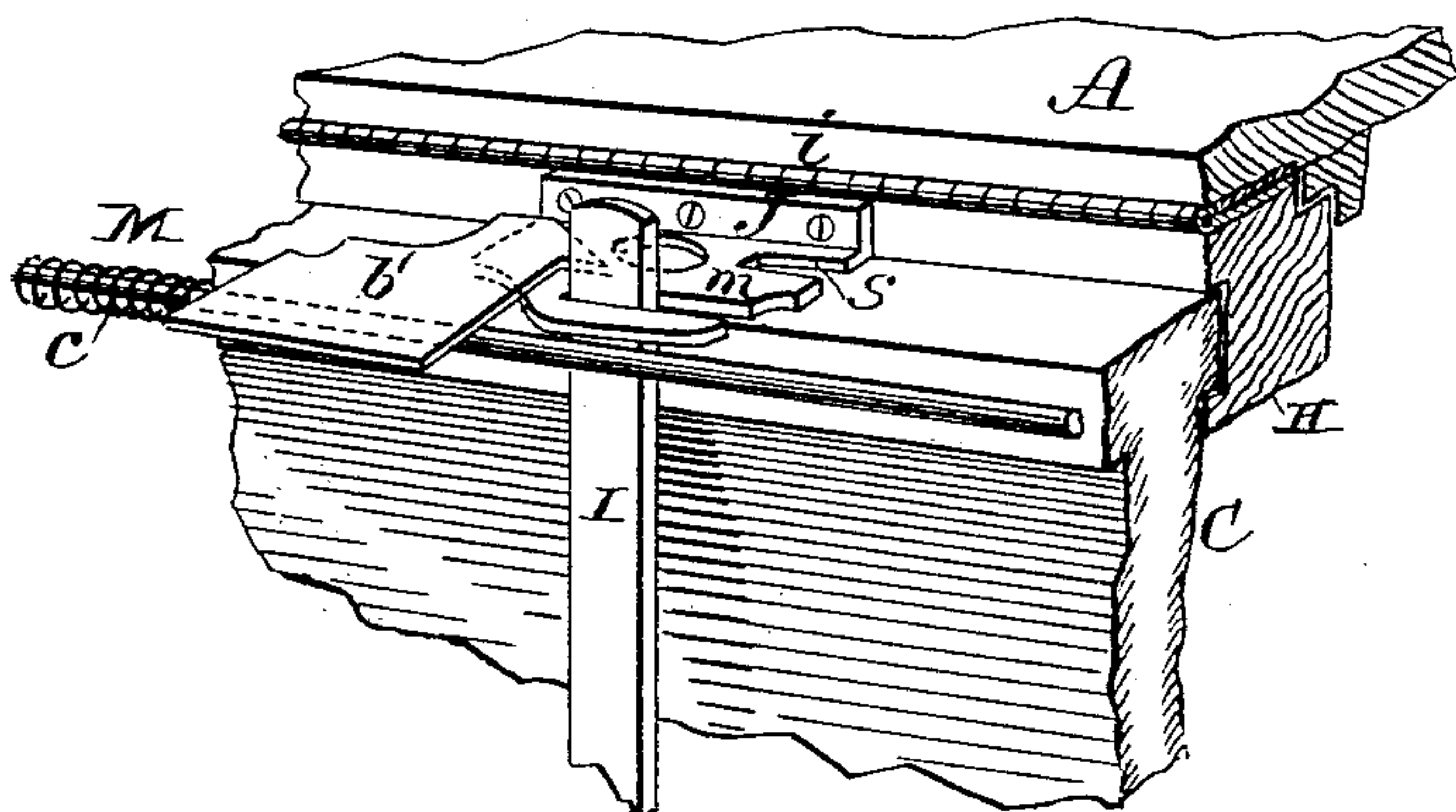


Fig. 7.



WITNESSES:

J. O. Garfield
C. Sedgwick

INVENTOR.

J. J. Higgins

BY

Munn & Co

ATTORNEYS

UNITED STATES PATENT OFFICE.

JOHN J. HIGGINS, OF NEW YORK, N. Y.

PHOTOGRAPHIC CAMERA.

SPECIFICATION forming part of Letters Patent No. 397,429, dated February 5, 1889.

Application filed April 21, 1888. Serial No. 271,370. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. HIGGINS, of the city, county, and State of New York, have invented a new and useful Improvement in
5 Photographic Cameras, of which the following is a full, clear, and exact description.

This invention, which is applicable to photographic cameras generally, but more particularly to those of a readily-portable character having provision for storing away a series of plates or plate-holders, relates more particularly to the rear portion and body of the camera, in which the plates or plate-holders are carried or held, irrespective of the
10 lens and shutter or forward portion of the camera, which may be of any suitable construction.

The invention consists in certain novel constructions and combinations of parts, including a lid or cover at the back of the camera-body provided with a special locking means, a hinge or swinging plate-holder frame, and special locking means for introducing and securing the plate-holder being utilized in position, or for removing it, as required, and a special construction of the body of the instrument for storing away in a compact manner additional or extra plate-holders out of the line of vision or field of view, substantially
20 as hereinafter described, and pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate
35 corresponding parts in all the figures.

Figure 1 represents a view in perspective of a photographic camera embodying my invention, with its rear lid or cover thrown down or opened and its hinged plate-holder frame fully exposed without a plate-holder, and with the locking-bar which holds the plate-holder and plate-holder frame to their place released. Fig. 2 is a rear end elevation of the camera opened, with a plate-holder in position for
40 taking a picture, and with the locking-bar, as above, closed. Fig. 3 is a partly-broken end elevation showing the ground glass used in focusing in position on back of the hinged plate-holder frame, also showing in part one of the additional plate-holders in its stored position within the body of the camera. Fig. 4 is a vertical longitudinal section of the

camera in part, with its rear lid or cover thrown down or open, and with a plate-holder locked in position on the back of the hinged
55 plate-holder frame. Fig. 5 is a vertical longitudinal section, and Fig. 5^a a perspective view, of the rear portion of the instrument in part, showing the focusing ground glass in working position and as locked on the back
60 of the hinged plate-holder frame. Fig. 6 is a view in perspective of the interior of the rear outer lid or cover in part, with attached means for locking it when closed. Fig. 7 is a view in perspective in illustration of the locking
65 devices of the plate-holder on back of its hinged carrying-frame, and of the locking devices of the back lid or cover of the case.

A indicates the body of the camera, which is open in its rear to facilitate the placing of
70 the focusing ground glass B and the subsequent placing of one, C, of a series of plate-holders, C C', in position for photographing.

D is the diaphragm, having an aperture, b, arranged between the rear of the camera and
75 its lens E for the passage of the rays of light passing through the lens to the plate under operation, and which is represented as hinged below, as at c, and fastened by a button, d, when closed. The open back end of the cam-
80 era-body A is closed when required, and when moving the camera about by an internally-hollow lid or cover, F, hinged below, as at e, to the bottom of the camera-body at its back, and which may be further supported and
85 stayed when down by a jointed brace, f. This hollow lid or cover F serves to carry or hold the focusing ground glass B when not in use, which ground glass is incased in a suitable frame, g, or to hold an extra plate holder or
90 holders, which, when stowed away in the hollow back lid, F, may be held in place by a clasp, h, from under which they are slipped when required to be used. Instead of the clasp, any other simple device may be used
95 for the same purpose.

The body of the camera is virtually composed of two cameras, one placed within the other, the inner camera being made of smaller dimensions than the outer camera,
100 and the spaces between the two cameras being utilized for the storage of extra plate-holders or for other purposes. These spaces between the two cameras or inner and outer

walls of the instrument are here represented as forming longitudinal pockets or chambers G, open in their rear in both the sides and bottom of the instrument, and this not only constitutes a compact arrangement for the storage of extra plates or plate-holders C', but when the same are thus stored away they will be out of the line of vision or field of view and do not require to be removed. A spring, *b*³, Fig. 4, is fastened to the inside of the outer wall of either side pocket, G, to press the plate-holder inserted therein away from said wall to facilitate the removal of said plate-holder when required.

H is the plate-holder-carrying frame, within or on the outside of which the plate-holder C or C' being utilized is placed, or within or on which the ground glass B is placed when focusing. This frame H is hinged above, as at *i*, to the upper portion of the rear end of the camera-body A, which provides for its being thrown up or raised, as partly shown by dotted lines in Fig. 5, to give free access to the interior of the camera-body and to expose the open rear ends of the side pockets, G, when necessary to insert within or remove from them the extra plate-holders C', which the pockets are designed to carry. When this hinged frame H is shut down, the same, being hinged above, will remain closed, and either the focusing ground glass B or the plate-holder C in use may then readily be adjusted to their places in or on the back of hinged frame H, the hinged back lid or cover, F, of the camera being let down preferably at a slightly-dipping inclination below the body of the camera, for which the jointed brace *f*, as shown in Figs. 1, 2, 4, and 5 of the drawings, provides. The rear of the camera-body has a recess, *c*³, at its one end (see Fig. 1) to provide for manipulating the plate on the plate-holder when in position for photographing, and the lid F has a corresponding tongue, *d*³, which closes said recess when the lid F is closed.

I is a locking-bar, pivoted below, as at *l*, to the floor of the camera in the rear, and which when raised enters a slot, *m*, in a locking-plate, J, secured to the upper portion of the hinged frame H. The floor of the camera is extended in the rear, as shown at *e*³, Fig. 4, to provide for thus arranging the locking-bar I, and to support and stiffen the same when turned up or closed and exposed to pressure. This locking-bar I when down rests in a keeper, *n*, on the lower portion of the rear of the camera above the lower plate-holder-storage pocket G, so as not to interfere with the insertion or removal of the plate-holder fitting said pocket, and so as not to interfere with the raising of the hinged frame F, which gives free access to the side pockets G. Such position of the locking-bar I, too, (shown by full lines in Figs. 1 and 3,) also provides for the placing of either the focusing ground glass B, as shown in Figs. 1, 3, and 5, or the plate-holder C, as shown in Figs. 2, 4, and 7, within or on the back of the hinged frame F

when the latter is closed. When said locking-bar I is raised, however, to enter the slot *m* in the locking-plate J, as shown in Figs. 2, 4, and 7, it then serves the double purpose of securely holding or locking the plate-holder C seated to the hinged plate-holding frame H and of holding both immovably, and, as it were, hermetically sealed against the entrance of light into the body of the camera, and, furthermore, of keeping the lower plate-holder in place. The plate-holder frame H is rabbeted on its inner face, and the end of the camera-body against which it fits when closed is also rabbeted to match, as shown at *g*³, Fig. 4, for the purpose of more effectually excluding light through the joint formed by the closed frame H. When focusing by the ground glass B, the said bar is let down, and the frame *g* of said glass is locked or held in position by lower dowel-pins, *o o*, entering suitable holes in the projecting bottom portion of the back of the camera-body, and by engaging a sliding bolt, *r*, on the top of the ground-glass frame in a second slot or notch, *s*, in the keeper or locking-plate J, whereby the same plate, J, answers both for the locking-bar I and the bolt *r*. It also answers, at least indirectly through the locking-bar I when raised and engaged with the slot *m* in said plate, for a spring-bolt, M, applied to the back lid, F, to lock or hold said back lid closed, the spring-bolt M consisting of a sliding rod, *a*³, within the closing end portion of the lid F, a nose-piece, *b*³, on said rod adapted to automatically engage with the raised and engaged locking-bar I on shutting the lid, and a spring, *c*³, applied to said rod to shift it longitudinally, whereby said automatic locking of the lid is effected and the rod *a*³ is forced outward through the one side of the lid, so that on pressing the same inward the locking-bolt M will be released and the lid F is at liberty to be thrown back and down or opened. This locking attachment is more clearly shown in Figs. 5, 6, and 7 of the drawings.

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

1. The camera-body provided with a lid or cover in its rear and constructed between inner and outer walls with pockets adapted to form storage-chambers for plate-holders out of the field of view of the instrument, substantially as specified.

2. The combination, with the camera-body open in its rear and the hinged lid closing the same, of the plate-holder frame hinged to said body at its back within or under cover of said lid, substantially as specified.

3. The combination, with the body of the camera constructed to open in its rear and the plate-holder-carrying frame hinged to said body in its rear, of pockets forming storage-chambers for plate-holders arranged between inner and outer walls of the camera-body back of said plate-holder-carrying frame, essentially as described.

4. The combination, with the camera-body opening in its rear and the plate-holder frame hinged thereto, of the pivoted locking-bar and a locking-plate with which said bar when closed is made to engage, substantially as specified.

5. The combination, with a locking plate or device attached to the camera in its rear, and the locking-bar I, of the hinged lid F, provided with a spring bolt or rod, M, arranged to project through the side of said lid, and having an attached nose-piece adapted to engage with said locking-bar when said lid is closed, essentially as described.

6. The frame *g* of the focusing ground glass, provided with a catch or bolt, in combination with the hinged or swinging plate-holder-carrying frame, and a locking-plate attached thereto, with which said catch or bolt is made to engage, essentially as described.

7. The combination, with the body of the camera constructed to open in its rear, of the hinged plate-holder-carrying frame II, having an attached locking-plate, J, provided with slots *m s*, the pivoted locking-bar I, the rear hinged lid, F, the spring-bolt M, and the focusing ground glass having its frame provided with a catch or bolt, substantially as specified.

8. The combination, with the camera having one or more side pockets, G, adapted to carry plate-holders, of a spring within either pocket arranged to bear on the inserted plate-holder, substantially as and for the purpose specified.

JOHN J. HIGGINS.

Witnesses:

C. SEDGWICK,
E. M. CLARK.