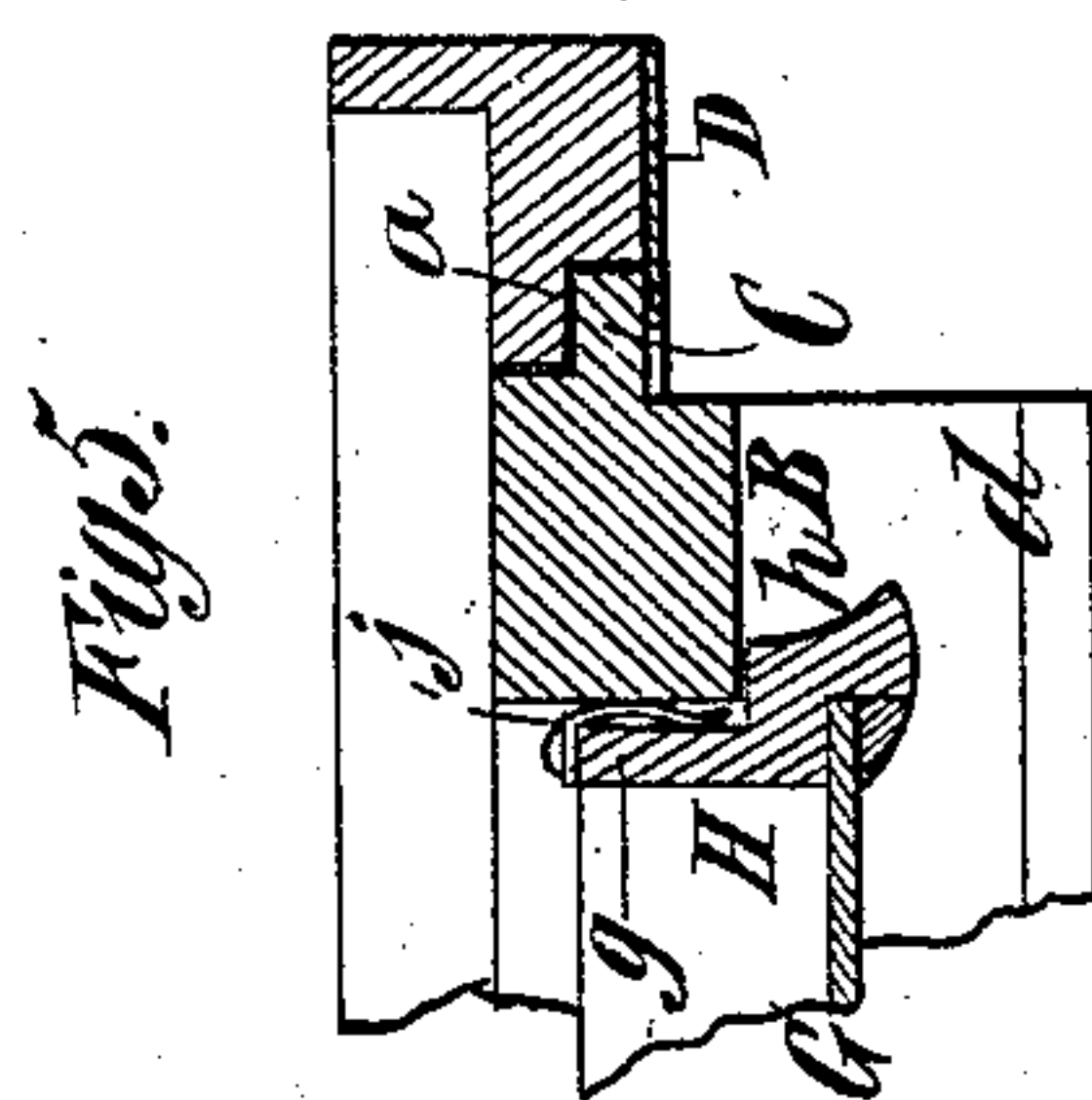
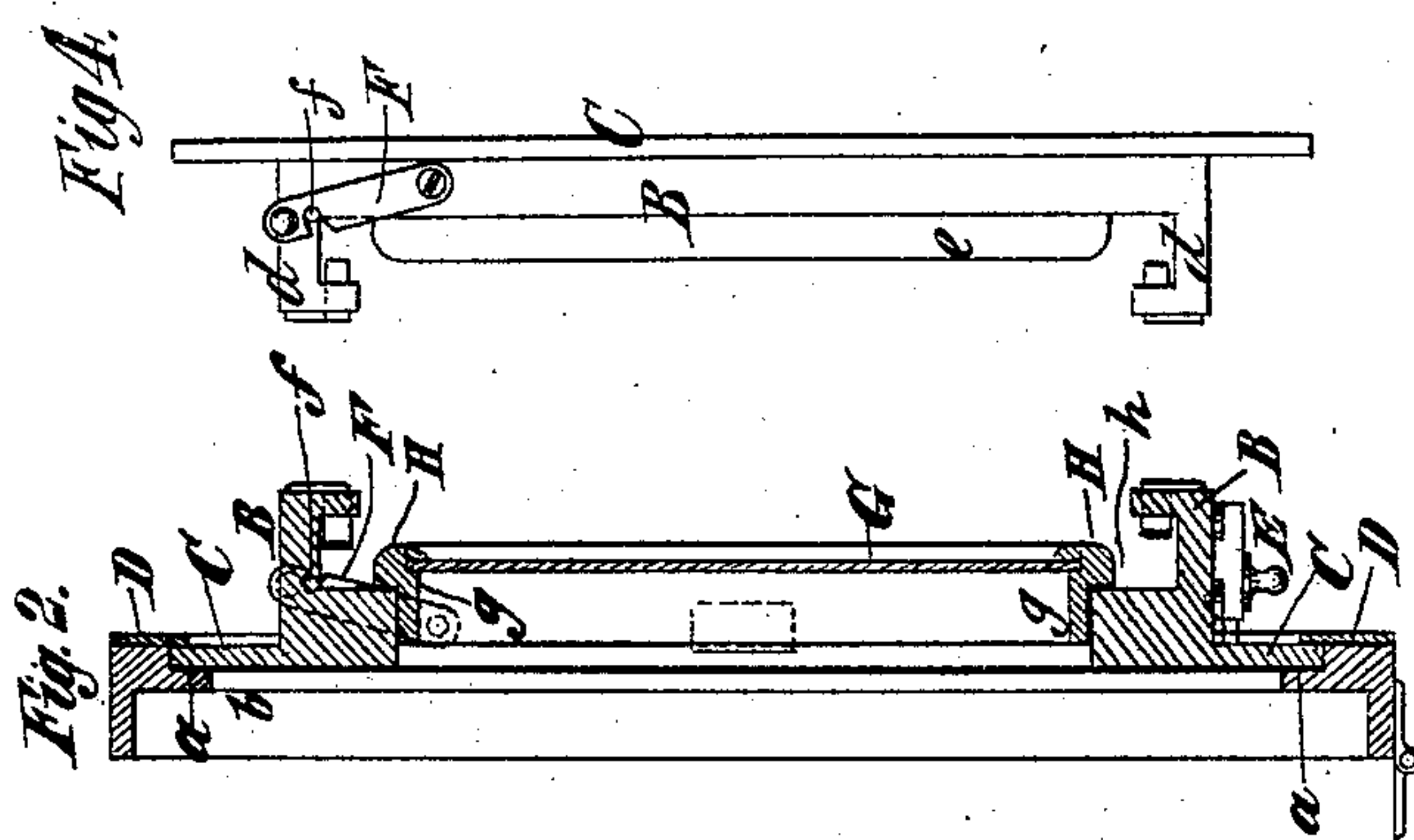
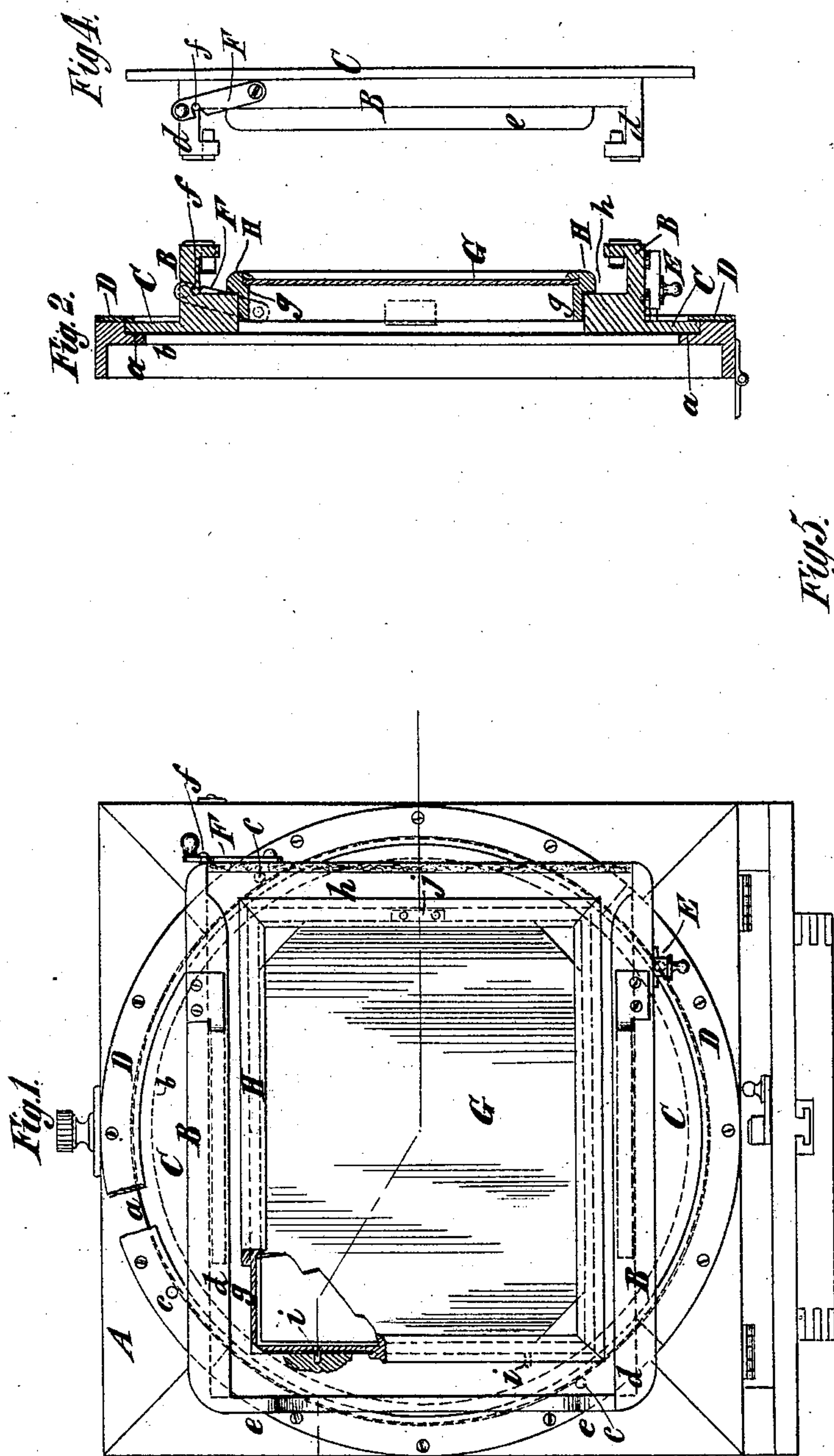


(No Model.)

M. FLAMMANG.
PHOTOGRAPHIC CAMERA.

No. 283,589.

Patented Aug. 21, 1883.



Witnesses

James R. Bowen.
Alfred L. Brown.

Inventor
Mathias Flammang
by his attorney,
Edwin H. Brown

UNITED STATES PATENT OFFICE.

MATHIAS FLAMMANG, OF NEWARK, NEW JERSEY.

PHOTOGRAPHIC CAMERA.

SPECIFICATION forming part of Letters Patent No. 283,589, dated August 21, 1883.

Application filed February 26, 1883. (No model.)

To all whom it may concern:

Be it known that I, MATHIAS FLAMMANG, of Newark, in the county of Essex and State of New Jersey, have invented a certain new and useful Improvement in Photographic Cam-
5 eras, of which the following is a specification.

The object of my improvement is to facilitate shifting a focusing-plate or a photographic plate into different positions relatively to a
10 photographic camera.

To this end my improvement consists in the combination, with a photographic camera, of a frame constructed with a slideway having parallel sides, which adapt it to receive an or-
15 dinary oblong photographic-plate holder, and capable of being turned round into different positions to bring the length of the photographic plate in a vertical or horizontal plane, as more fully hereinafter described.

20 The improvement also consists in a peculiar construction of a focusing-plate holder.

In the accompanying drawings, Figure 1 is a view of the rear of a back of a camera embodying my improvement. Fig. 2 is a vertical section of the same. Fig. 3 is a horizontal section thereof; and Figs. 4 and 5 are detail
25 views, hereinafter described, Fig. 5 being upon a larger scale.

Similar letters of reference designate corresponding parts in all the figures.

30 A designates the camera-back. It may be made of wood and of rectangular form, as usual, and it is provided on the rear side with a recess, *a*, which has a circular outline, and
35 extends to the opening *b*, with which the camera-back is provided.

B designates a frame, which serves as a support for the ground-glass plate and for the photographic-plate holder. This frame may
40 be made of wood, and is shown as of rectangular form. Extending from the back of this frame is a disk, C, which is of circular outline, and fits in the recess *a* of the camera-back. Of course this disk does not extend across the
45 opening of the frame. The disk may be made of wood, and can, perhaps, be made most conveniently of segmental pieces of wood secured to the camera-back by screws or otherwise.

50 D designates an annular plate, which, preferably, will be made of metal, and is secured by screws or other suitable means to the rear side of the camera-back, with its edges over-

lapping the disk C, so as to secure it in the recess *a*. The disk fits so loosely between the recess and this plate that it may be turned
55 around to adjust the frame into different positions.

The frame B is provided with a bolt, E, which is adapted to engage with one of a number of holes, *c*, in the plate D, so as to secure it
60 in different positions. Preferably I will employ an ordinary spring-bolt which will automatically engage with the holes *c*. At opposite sides the frame B is provided with parallel flanged rails *d*, between which a photo-
65 graphic-plate holder of ordinary oblong form may be sustained, and at the end of these rails it is provided with a stop-rail, *e*. The plate-holder will be fitted between the rails *d* with its end against the stop-rail *e*. At the ends
70 of the rails *d* at which the plate-holder is inserted there is an arm, F, which is pivoted in place and may be swung into the position shown in dotted outline in Fig. 2, and in full
outline in Fig. 4, so that it will extend across
75 the end of the plate-holder, and may be engaged with a pin, *f*. This arm forms no part of this invention, and any other well-known device may be used for the purpose.

G is the ground-glass plate. It is mounted
80 in a holder, H, which is provided with a rim, *g*, adapted to enter and fit snugly within the opening of the frame B, and a flange, *h*, which is adapted to lap over the rear side of the frame adjacent to the opening. The opening in which
85 the holder H fits is independent of the slideway formed by the flanged rails *d*, and the holder is capable of being inserted into and removed from said opening by a movement directly transverse to the length of said slideway. The
90 holder H at one end or side is provided with pins *i*, which, when the holder is in place, enter recesses in the frame B, and at the opposite end or side the holder is provided with a spring, *j*, which, when the holder is in place,
95 will exert such a friction upon the frame B as to retain the holder against accidental displacement. This spring is best shown in Fig. 5. It consists simply of a piece of metal secured to the inner side of the glass-holder H,
100 and bowed out or curved so as to impinge against the frame B when the holder H is placed therein. When the holder is to be withdrawn, it is only necessary to take hold of

the end or side which is provided with the friction-spring and pull it out. To insert the holder, it is only necessary to first engage the pins *i* with their recesses, and then to push the holder into the opening of the frame.

By making the ground-glass holder and fitting it to the frame in the manner shown and described, I am enabled to make the holder smaller, lighter, and neater than those in common use. The flanged rails *d* of the frame B form a slideway adapted to receive an ordinary photographic-plate holder of oblong shape, and the connection of the frame with the camera-back in the manner described enables the frame to be readily shifted without detachment, so as to provide for focusing with the ground-glass plate in any desirable position, and for photographing upon a photographic plate lengthwise or crosswise.

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

1. The combination, with a photographic camera, of a frame constructed with a slideway having parallel sides, so as to adapt it to receive an ordinary oblong photographic-plate holder, and to be turned around into different positions to bring the length of the photographic plate in a vertical or horizontal plane, substantially as specified.

2. The combination, with a photographic camera, of a frame constructed with an opening

or slideway having parallel sides, which adapt it to receive the ordinary rectangular focusing-plate and photographic-plate holder, and to be turned around into different positions, so as to bring the length of the photographic plate in a vertical or horizontal plane, and means for securing the frame in different positions, substantially as specified.

3. The combination, with a photographic camera, of a frame at the rear of the camera, provided with a slideway for the reception of a photographic-plate holder, and also provided with an opening independent of the slideway, and a focusing-plate having a holder provided with a rim for fitting in the opening in said frame, and adapted to be inserted into and removed from said opening by a movement transverse to the length of the slideway, and also provided with a flange adapted to lap over the outer face of the frame adjacent to said opening, substantially as specified.

4. The combination, with a photographic camera and a focusing-plate arranged in a holder provided with a rim for fitting in an opening and a flange for overlapping the opening, of the pins *i* and spring *j*, substantially as specified.

M. FLAMMANG.

Witnesses:

T. J. KEANE,
ED. L. MORAN.