

E. G. CHORMANN.

Easels.

No. 133,759.

Patented Dec. 10, 1872.

Fig 1

Fig 2

Fig 3

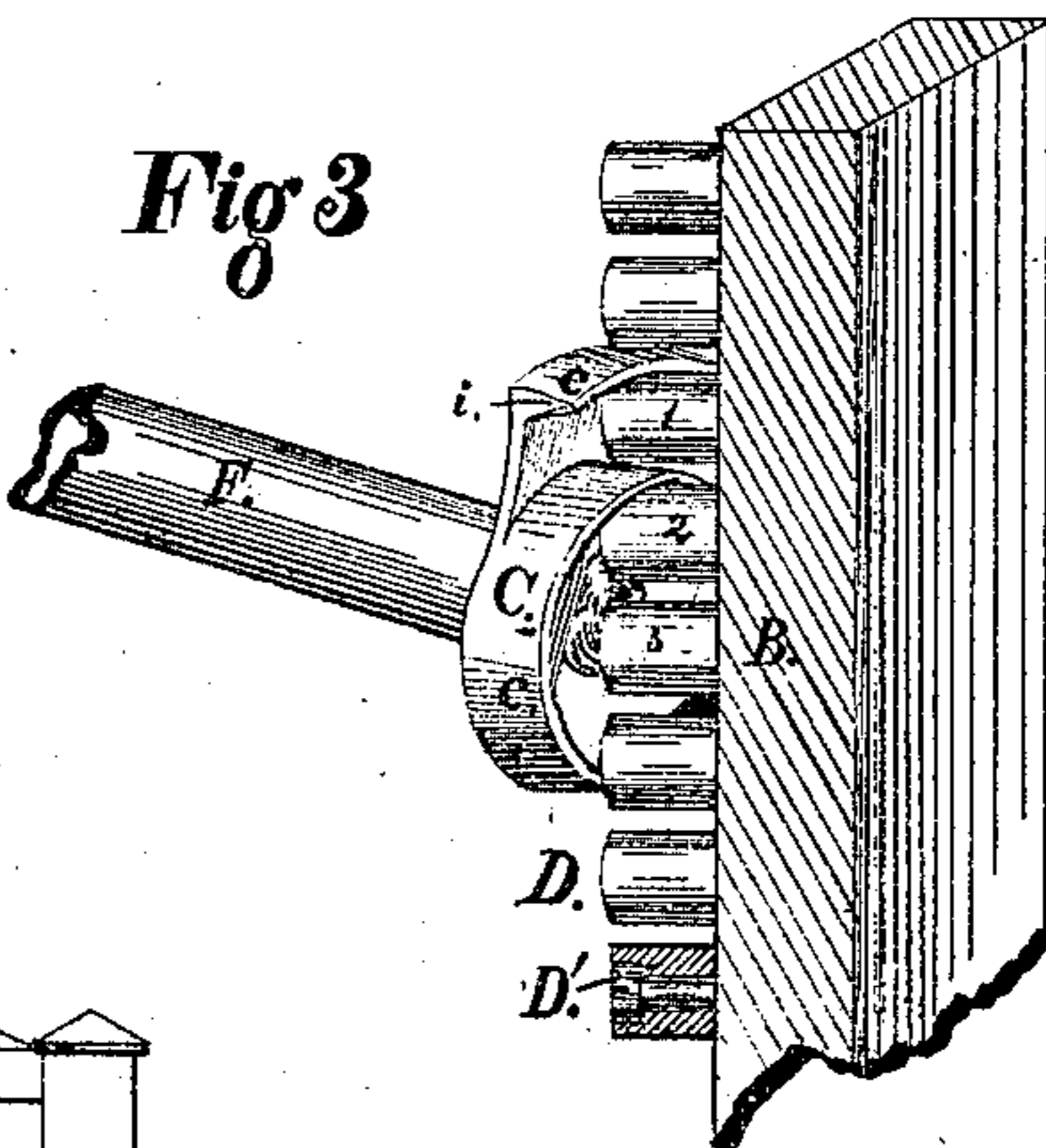
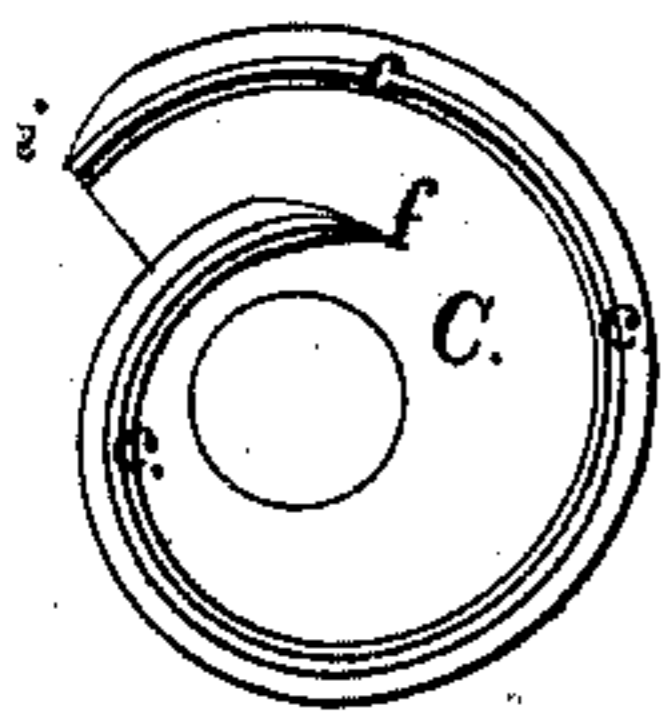
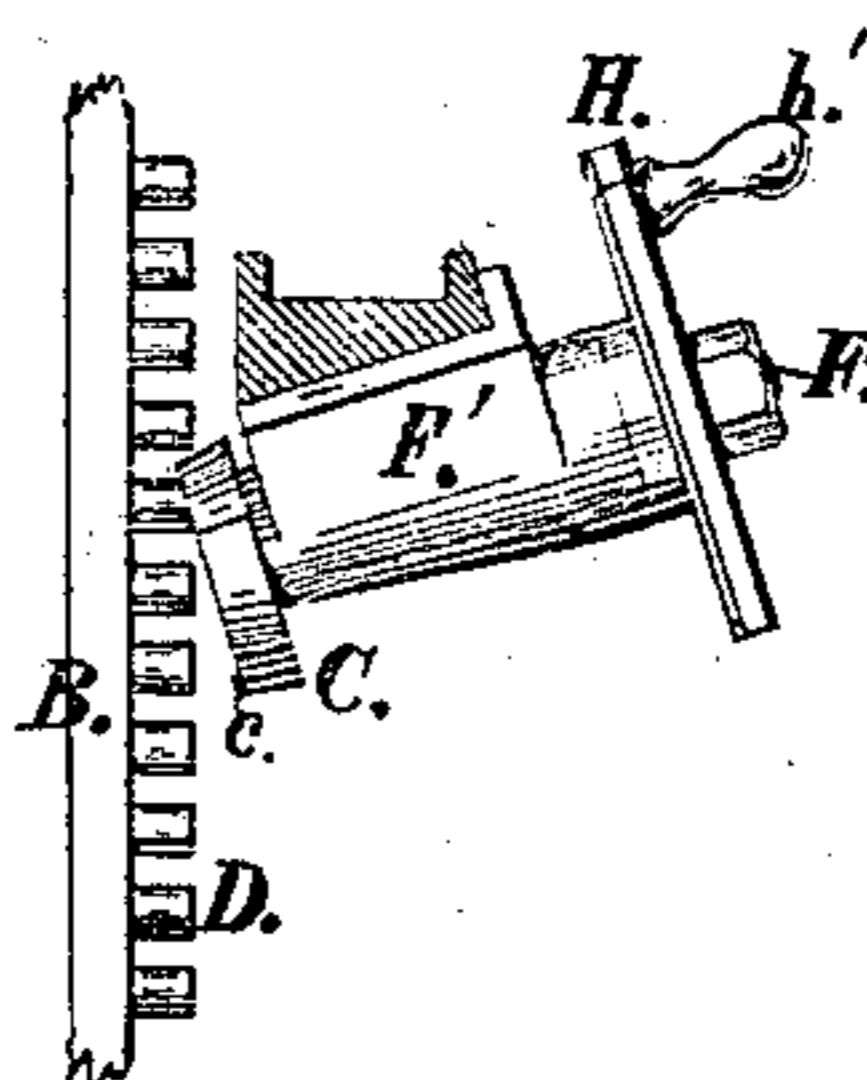
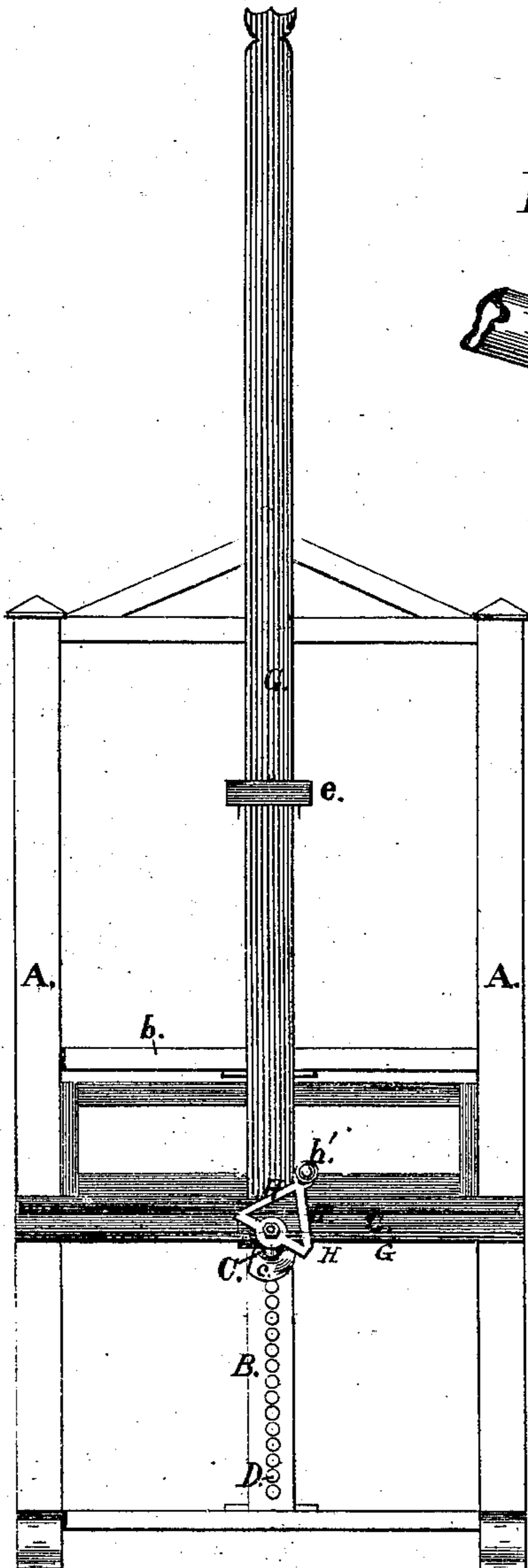
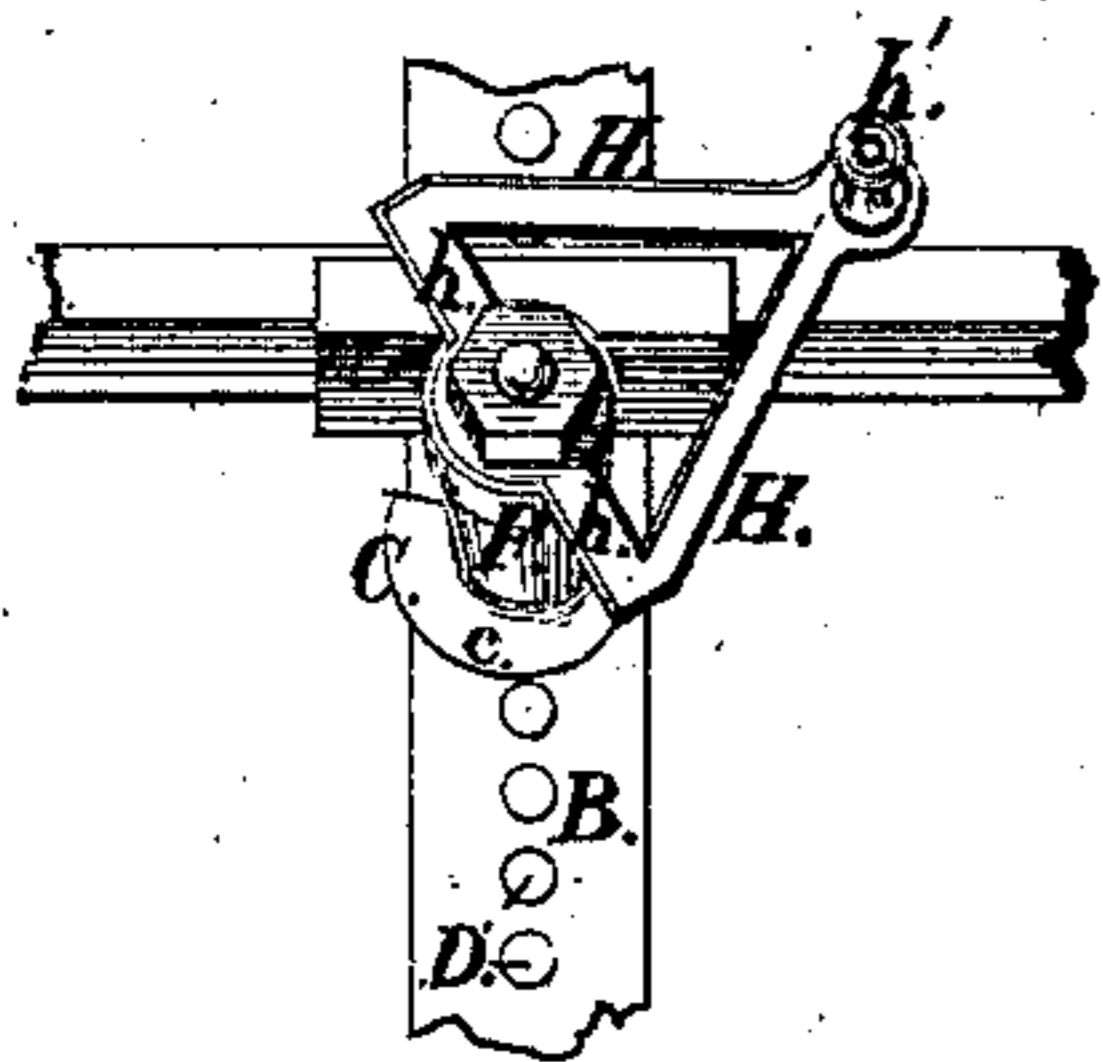


Fig 4

Fig 5



Witnesses:

G. Huckel
H. A. J. J.

Inventor:

E. G. Chormann
M. J. J. J.

UNITED STATES PATENT OFFICE.

ERNEST G. CHORMANN, OF PHILADELPHIA, PENNSYLVANIA.

IMPROVEMENT IN EASELS.

Specification forming part of Letters Patent No. 133,759, dated December 10, 1872.

To all whom it may concern:

Be it known that I, ERNEST G. CHORMANN, of Philadelphia, in the county of Philadelphia and State of Pennsylvania, have invented certain Improvements in Painters' Easels, of which the following is a specification:

The first part of my invention relates to the application of a mechanical device, of which I am the first and original inventor, to the adjustment vertically of the easels of painters. An easel being mounted upon a suitable frame, in which it may slide up and down in grooves, or otherwise, a suitable bar is attached to the lower end of the main frame and nearly in line with its length, and upon the front face of this bar is inserted a vertical series of pins, equidistant from each other and perpendicular to such face, and upon each pin is mounted a friction-roller. Then upon the lower portion of the frame of the easel is fastened a suitable bearing for a shaft, upon the outer end of which is a crank, by means of which the shaft is to be revolved, and upon the inner end of which is fastened a device of peculiar construction, which, when the shaft is revolved to the right, climbs up the bar upon the pins, before mentioned, with a steady gradual motion, without jumping or jarring, but, when revolved to the left, descends the bar in a similar manner. The device carries the easel with it in either case. One of the excellencies of this movement is that, when the shaft ceases to revolve, the easel is locked exactly in the position it then occupies. The second part of my invention relates to the application of the form and construction of the crank by which the climbing device is revolved, of which I am also the first and original inventor.

The crank alluded to, instead of the usual single bar, is in the form of a triangle, and is composed of three bars of nearly equal length fastened together at their extremities. One of these bars, at a point near its longitudinal center, is attached to the shaft, and the handle is attached to the angle opposite. A crank constructed in this manner will enable the operator, by the application of a given amount of force, to overcome a much greater amount of resistance than one of the usual construction with a single bar, besides being more convenient in use.

In the accompanying drawing, Figure 1 represents a front elevation of an easel in a suitable frame, with my invention introduced; Fig. 2 represents a rear view of the climbing device; Fig. 3 represents an enlarged sectional perspective view of the stationary bar with pins and rollers upon them; Fig. 4 represents a front elevation of the crank, shaft, climbing device, and sections of the bar B and cross-piece G, to which the climbing device is attached; and Fig. 5 represents a side elevation of the bar B, pin D, flange *c* of the climbing device, and the shaft F, and a section of the bearing F' of the latter.

All the parts, before mentioned, are sufficiently described and shown in the first part of this specification, and in the drawing, except, perhaps, the climbing device. It consists of the head plate C, which is fastened to the inner end of the shaft F and the flange *c*, which extends perpendicularly out from its inner face and is bent into a coil, as shown in Figs. 3 and 5, and very much in the form of the shell of a snail. The ends of the flange lap over each other, but are some distance apart. The great value of the device depends upon its peculiar form. Near the upper end *i* of the flange *c* it begins to curve, and along its whole length the pitch of its curve gradually increases, until at the inner end *f* a comparatively wide space is left between it and the outer end.

The operation is obvious: In Fig. 3 the upper end of the flange rests upon pin No. 1 and the lower end on pin No. 2. Now, when the device is revolved to the right it must rise as the upper end travels over pin 1, because of the increase of the pitch of the curve in the flange, until, when it has made nearly an entire revolution, the upper end *i* mounts upon the next higher pin, which it does before the lower end lets go the lower pin, so that there is no interruption to the gradually-rising movement.

In order to facilitate the letting go of the pins by the lower end, the shaft is not perpendicular to the bar B, but it is inclined, as shown in the drawing. The amount of this inclination, the length and distance apart of the pins, the breadth and curve of the flange, have, of course, a mutual dependence upon each other, which will be readily understood

and arranged by any mechanic in order to secure efficient operation. The outer ends of the rollers D should be beveled so as to present larger plain surfaces to the flange c.

I do not herein claim independently the climbing device as a mechanical movement, nor do I claim in that way the described crank, but only their application to painters' easels; but intend to make another application for Letters Patent for them.

Claims.

What I claim as my invention is—

1. The climbing device C c, constructed substantially in the manner and for the purpose described.

2. The crank H H h, in combination with the shaft F, constructed substantially as and for the purpose described.

3. The bar B, having the pins D' and roller D, in combination with the climbing device C c, constructed and arranged substantially as shown and described.

4. The bar B, having the pins D without the rollers D', in combination with the climbing device, all constructed and arranged substantially as shown and described.

E. G. CHORMANN.

Witnesses:

ALEX. M. STOUT, Jr.,
WM. B. DAYTON.