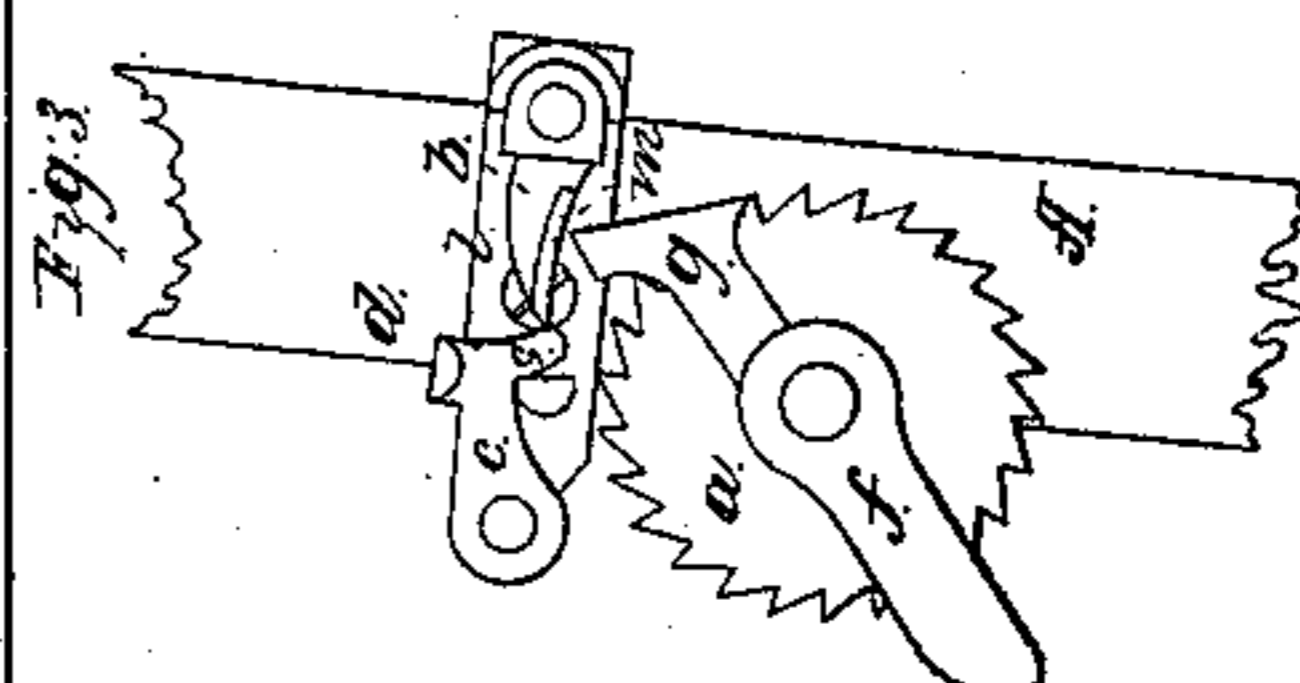
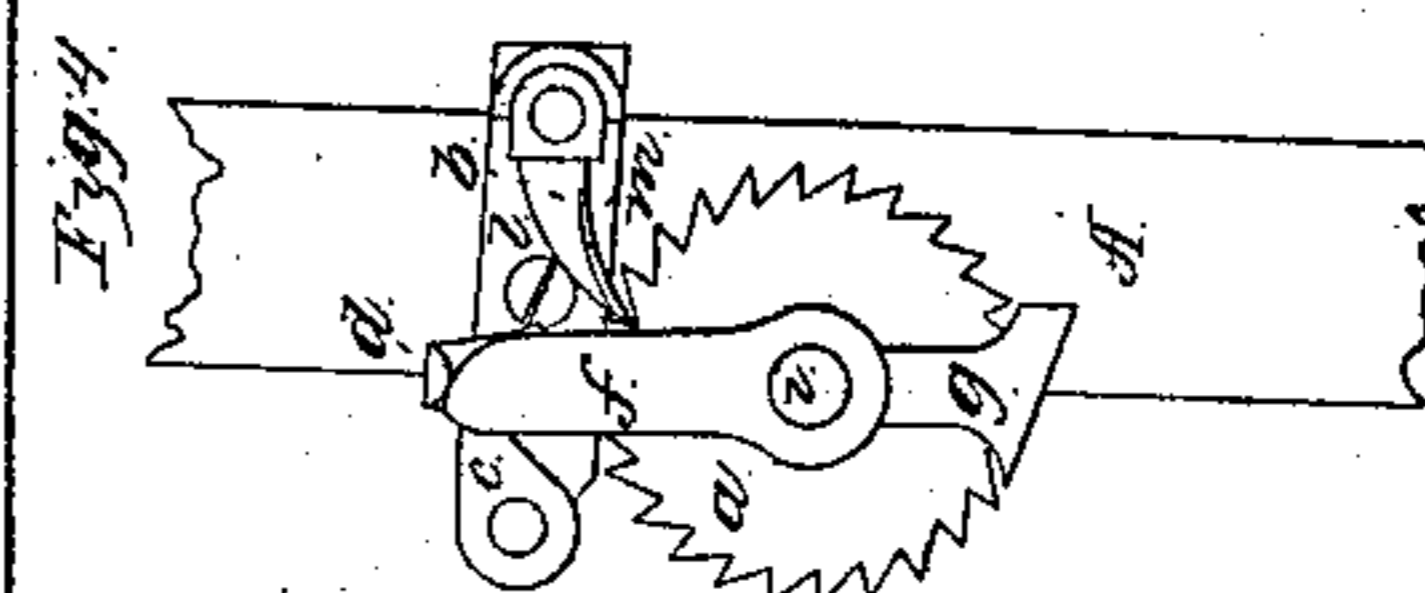
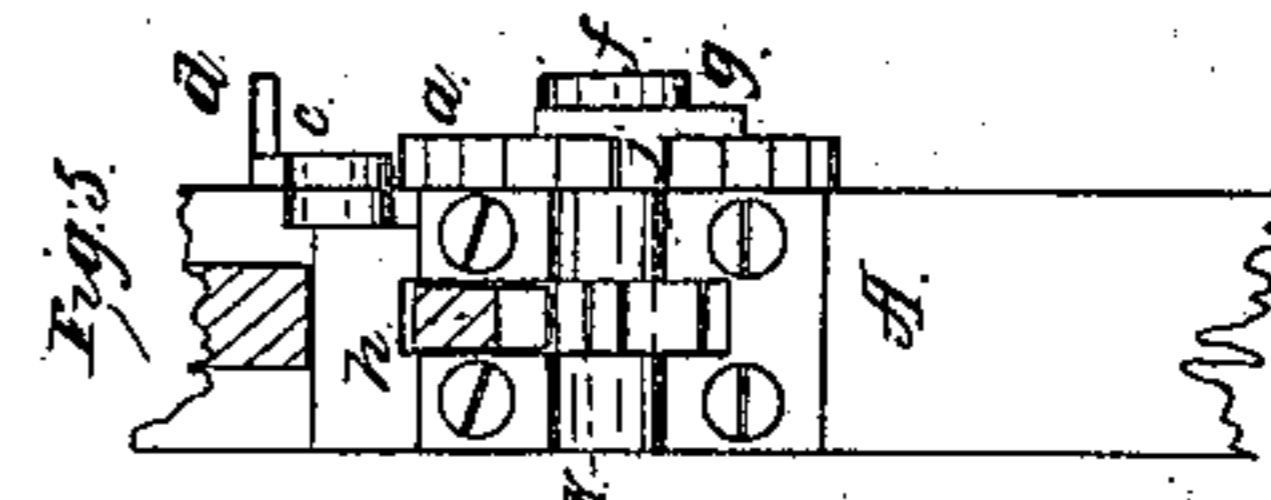
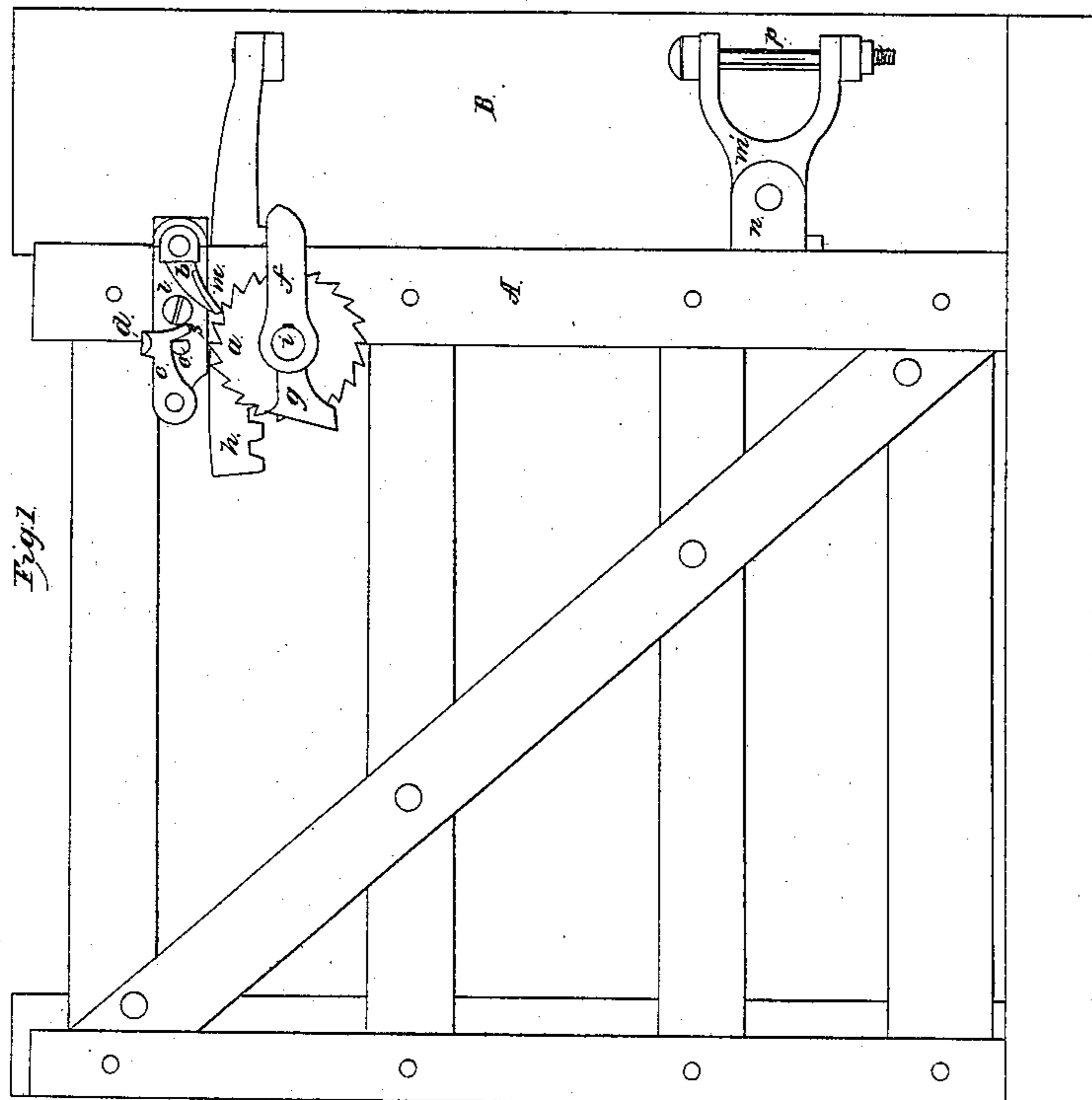
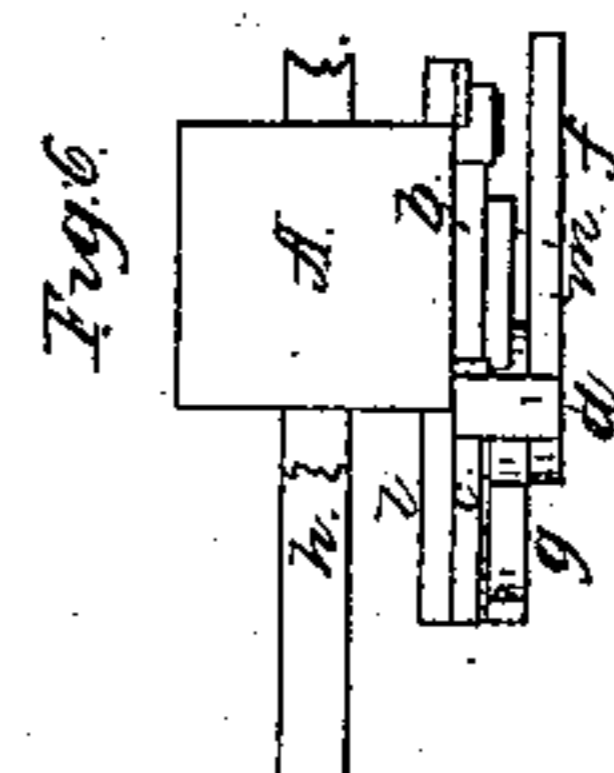
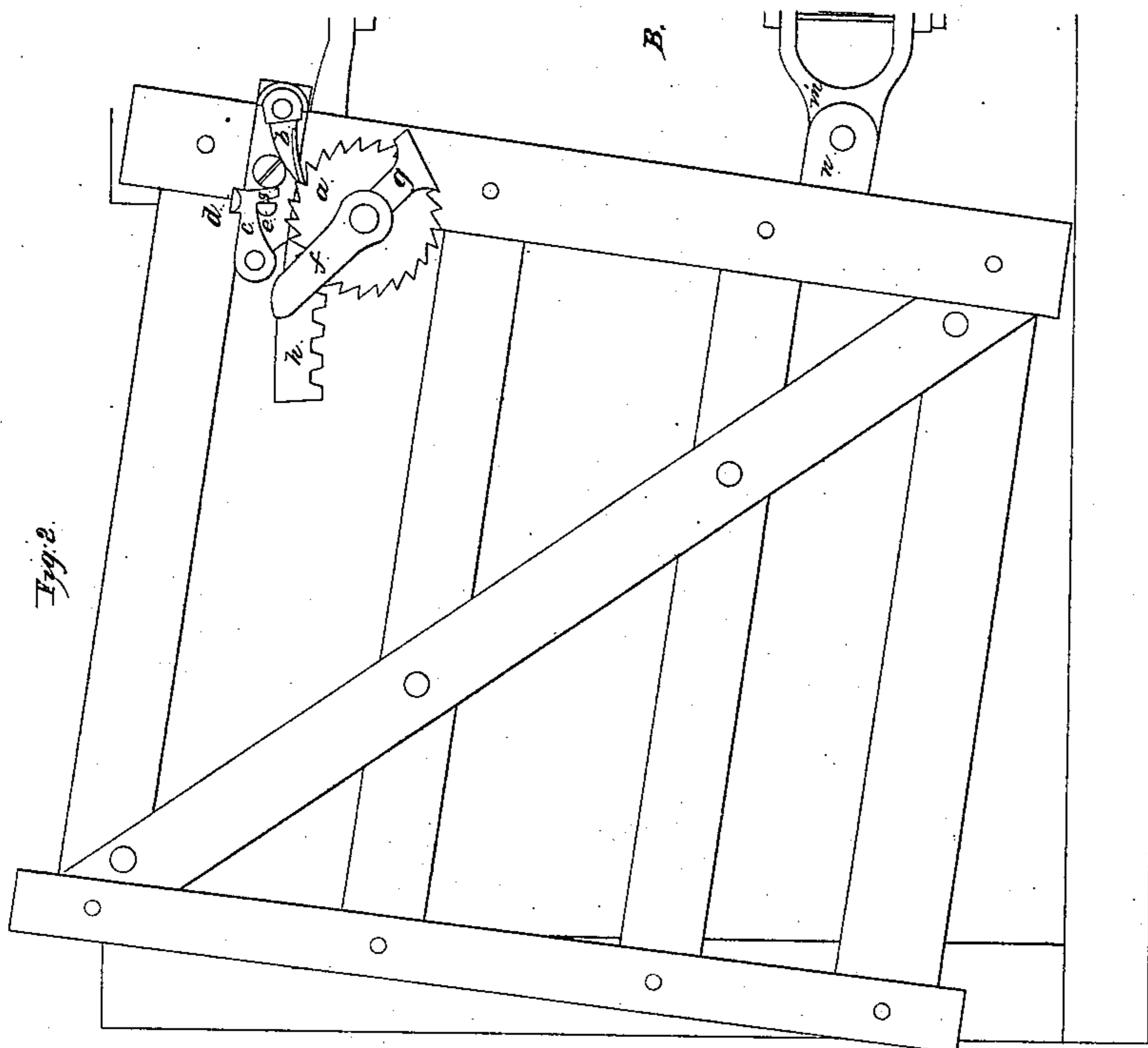


S. Oberholzer,
Hinge.

N^o 14,826.

Patented May 6, 1856.



UNITED STATES PATENT OFFICE.

SAMUEL OBERHOLZER, OF TERRE HILL, PENNSYLVANIA.

METHOD OF HANGING GATES, DOORS, &c.

Specification of Letters Patent No. 14,826, dated May 6, 1856.

To all whom it may concern:

Be it known that I, SAMUEL OBERHOLZER, of Terre Hill, in the county of Lancaster and State of Pennsylvania, have invented a new and useful Improvement in the Hanging of Gates or Heavy Doors; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, Figure 1 being a side view of a gate hanging in a normal position; Fig. 2, a view of the gate hanging in an oblique position, and Figs. 3, 4, 5, and 6 are views of detached portions of the gate and the machinery combined therewith.

Similar letters indicate like parts in all the figures.

My invention consists in so arranging the machinery of an obliquely adjustable gate, or door, that in elevating the outer extremity of said gate or door, up to a certain point, it will be caught or held in an oblique position; but if the outer end of said gate, or door, be elevated above the desired retaining point, the retaining machinery will, by said movement, be detached from its hold and allow the gate to descend to its normal position.

In the accompanying drawings A, is the inner upright portion of a swinging gate frame, and B, is a broad-faced post to which the gate is hung.

The lower hinge of the gate, is composed of the jointed pieces *m'* and *n*;—the latter being firmly secured to the inner upright portion of the gate, and the latter being jointed to the post B, by means of the spindle *p*, and suitable eye-pieces. Or the said lower hinge may be constructed in any other manner that will allow of the requisite double movements of the gate. The upper hinge of the gate, is composed of the rack-bar *h*, the pinion *k*, the shaft *i*, the ratchet-wheel *a*, and the pawl *b*; which parts of said hinge are arranged in connection with the levers *f*, and *g*, and the pawl-holder *c*, in the manner and for the purpose which will be hereinafter clearly set forth.

The inner end of the rack-bar *h*, is hinged to the post B, in any suitable manner. The said rack-bar passes through a mortise in the upright portion A, of the gate, and its teeth match into the teeth of the pinion *k*, on the shaft *i*. The bearing boxes of the shaft *i*, are secured to the sides of the mortise in the upright A, in the manner represented in

Fig. 5. The shaft *i*, projects a sufficient distance in front of the face of A, to receive, first the ratchet wheel *a*, then the lever *g*, and then the lever *f*, as shown in the drawings.

A little above the upper edge of the ratchet-wheel *a*, a plate *l*, is let into a recess in the face of A, and firmly secured therein. The pawl *b*, is pivoted to the right hand end of the said plate *l*, and the pawl-holder *c*, is pivoted to the opposite end of said plate. The vibrating end of the pawl-holder *c*, is supported by the pin *e*, which projects from the plate *l*. The hook *s*, at the outer end of the pawl-holder *c*, curves outward a sufficient distance to catch and retain the pawl *b*, in the elevated position shown in Fig. 3, when it is thrown upward by the action of the lever *g*, upon the flanch *m*, which projects from the outer side of said pawl. By elevating the pawl-holder *c*, a short distance, the pawl *b*, will be detached therefrom and fall upon the ratchet-wheel *a*. The pawl-holder is elevated by the action of the extremity of the lever *f*, against the under side of the handle *d*, which projects from said pawl-holder.

In case the gate should sag to such a degree as to allow its outer extremity to touch the ground; or in case the gate post should be struck by a vehicle and inclined toward the front or rear, so as to prevent the gate from swinging freely; or in case the free movement of the gate should be obstructed by snow, the gate may be made to swing free and clear by elevating its outer extremity. The elevation of the outer extremity of the gate will impart a rotary motion to the shaft *i*, which carries the ratchet wheel *a*, and the levers *f*, and *g*. The pawl *b*, will play upon the teeth of the ratchet wheel *a*, and retain the gate in any desired position. And when it is desired to let the gate down to its normal position again, it is only necessary to raise the outer end of the gate high enough to bring the extremity of the lever *g*, under the pawl *b*, and raise it into the position shown in Fig. 3, when the said pawl will be caught and retained in an elevated position by the pawl-holder *c*, which will allow the gate to descend freely until its descent is arrested at the proper moment by the descent of the pawl *b*, upon the ratchet wheel, caused by the elevation of the pawl-holder *c*, by the action of the extremity

of the lever *f*, under the handle *d*, of said pawl-holder, just before the gate, in its descent, reaches its normal position.

5 The ratchet-bar, the pinion, the ratchet-wheel and the pawl, I am aware have been combined with each other in producing an adjustable upper hinge for a gate, and therefore I do not claim such combination as my invention; but

10 What I do claim and desire to secure by Letters Patent, is—

The arrangement of the pawl *b*, and pawl-

holder *c*, with each other and with the levers *f*, and *g*, the ratchet-wheel *a*, the pinion *k*, and the rack-bar *h*, substantially in the 15 manner and for the purpose herein set forth.

The above specification of my improved method of hanging gates, or heavy doors, signed and witnessed this 7th day of March, 1856.

SAMUEL OBERHOLZER

Witnesses:

Z. C. ROBBINS,
THOMAS W. LAY.