

E. Zimmerman,
Lifting Jack,
No 62,175, Patented Feb. 19, 1867.

Fig. 2.

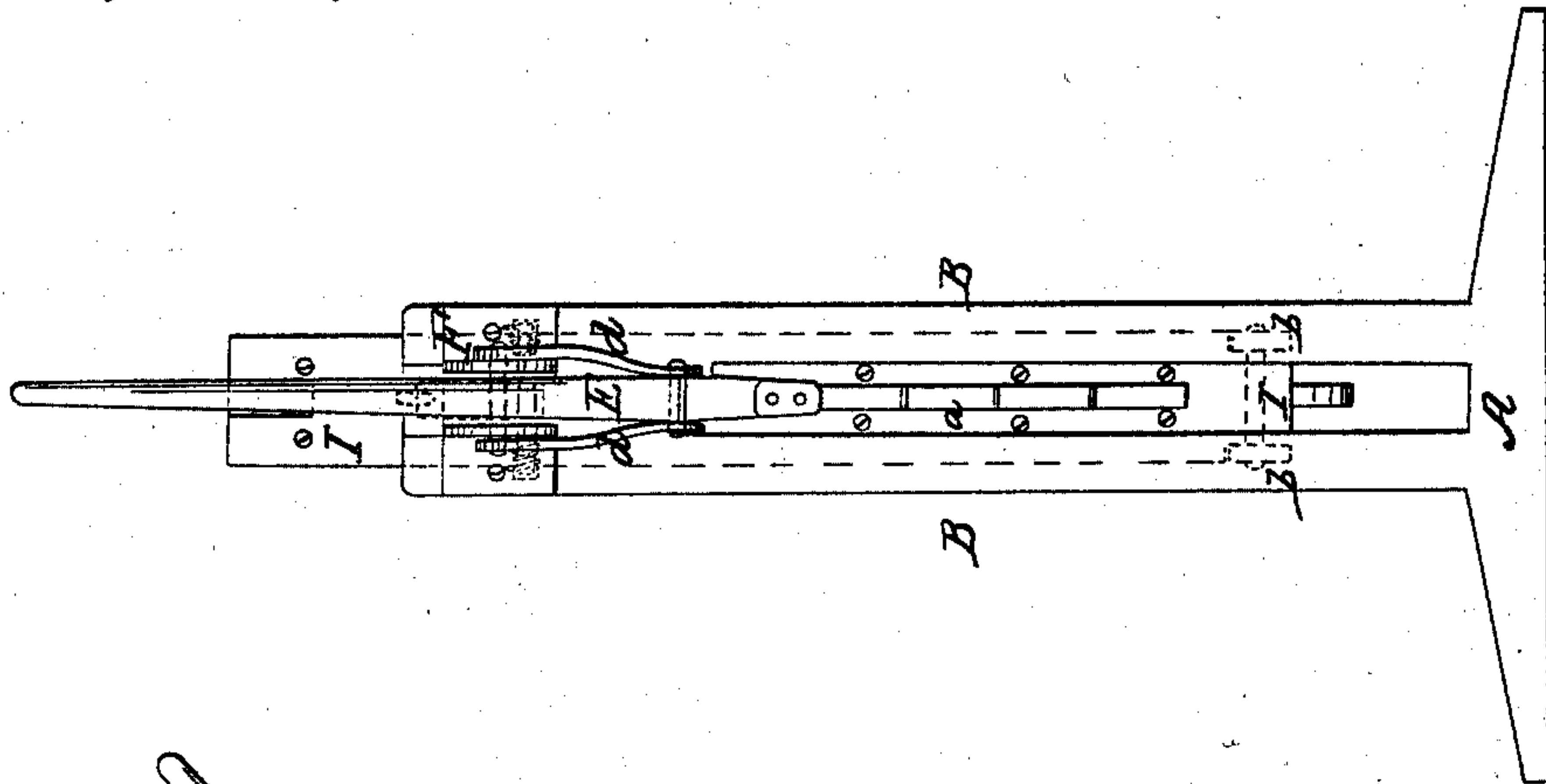
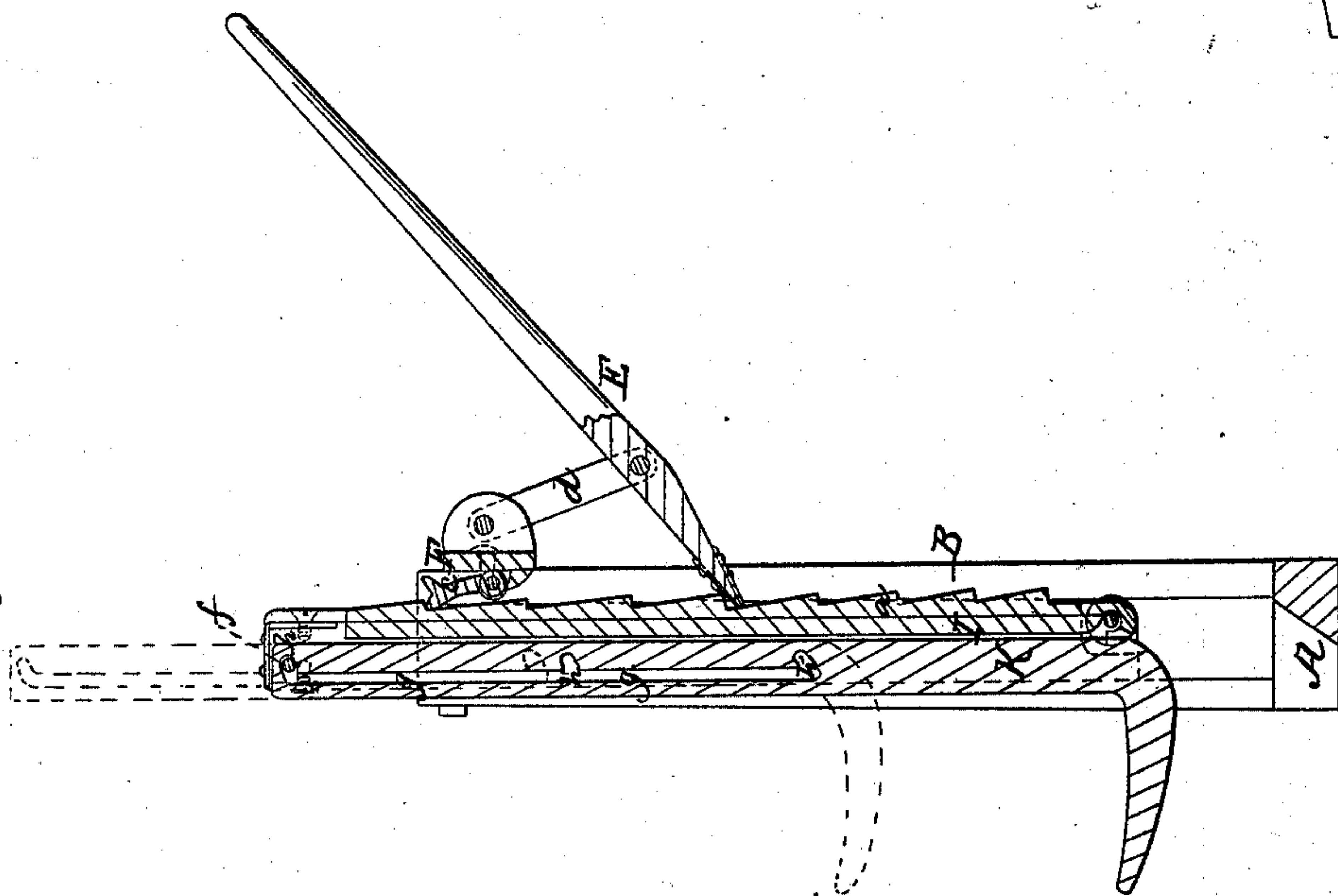


Fig. 1.



Witnesses.
Mr. Bailey
Chas. H. Page

Inventor.
E. Zimmerman
By his Atty
L. F. Hollock

United States Patent Office.

ELI ZIMMERMAN, OF PAMELIA FOUR CORNERS, NEW YORK.

Letters Patent No. 62,175, dated February 19, 1867.

IMPROVEMENT IN LIFTING-JACKS.

The Schedule referred to in these Letters Patent and making part of the same.

TO WHOM IT MAY CONCERN:

Be it known that I, ELI ZIMMERMAN, of Pamela Four Corners, in the county of Jefferson, and State of New York, have invented certain new and useful Improvements in Jacks for Raising Fences and other purposes; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 represents a transverse vertical section of a lifting-jack constructed in accordance with my invention; and

Figure 2 is a rear view of the same.

The jack constructed in accordance with my invention may be used as a wagon-jack, or for other lifting purposes; but the special object I have in view in these improvements is to facilitate the repairing of zigzag or "Virginia" rail fences when the angles of the fences, *i. e.*, the points of junction of the rails, become displaced by the settling of the supports or abutments upon which the rails rest. The supports are usually boulders or rocks, which settle in the earth, or are otherwise displaced by the action of the frost, rain, &c., and the fence in this manner will soon become undermined and destroyed, unless the evil is promptly remedied, and the panels of the fence reset. The operation of raising and repairing fences which have thus become damaged is very laborious when ordinary "hand labor" is employed, with the assistance of such aids only as are usually found on farms; and it is desirable to employ some means by which the manual labor may be lessened, and the time consumed in the work shortened.

These results I have accomplished by the employment of the lifting device represented in the drawings. It is composed of two standards or uprights B B, erected upon the foot A, and provided with ways, in which the sliding-bar I moves, the bar being provided with friction-rollers *b*. To the rear face of the sliding-bar is attached a ratchet, *a*, with which a pawl or spring latch, *c*, is engaged; and by these means the sliding-bar and its attachments are held in any position to which they may be raised. The spring pawl is mounted on a pin secured to the plate F, to the opposite side of which the lever E is hinged by means of links *d*. The sliding-bar I is recessed or grooved in front to receive the hook K, which swings on a pin, *f*, mounted in the upper part of the sliding-bar, and transversely to the groove formed in the same. It is by means of this hook that the lifting of the fence is accomplished; and in order to allow of the fence being raised higher than the limited range of the sliding-bar, a longitudinal slot, *g*, is formed in the hook, in the rear side of which a series of oblique notches, *h h¹ h²*, are cut, forming sockets or bearings, in which the pin *f* is received. By these means the hook K may be suspended at any desired height from the bottom of the sliding-bar. If, for instance, the fence has been raised to such a height that the hook, when suspended from the notch *h*, cannot be any longer used, the foot of the hook is carried out from the standards, so as to disengage the pin *f* from the notch *h*, and it is then moved up until one of the notches *h¹* catches on the pin, as shown in red lines, fig. 1. The hook is thus considerably shortened; and, in proportion as it approaches the top of the sliding-bar, its capacity to raise to a greater height the fence or other thing to be lifted increases.

The jack is operated as follows: In fences of the kind above mentioned the ends of the rails which compose the panels, and which are laid over one another at each angle of the fence, are inclined to separate or move outwardly and away from each other, from the causes hereinbefore alluded to. In order to move them back to their places the jack is placed on the exterior of one of the angles or salients of the fence, and the hook K, which is turned towards the fence, is caught under the bottom rail. The foot A is then moved back any suitable distance from the fence, say about eight or ten inches, and the jack is inclined forward so that the upper end of the sliding-bar I will rest against the fence. The short end of the lever E is then placed in one of the teeth or cogs of the ratchet, and by pressing down the long end of the lever the sliding-bar with its hook will be raised, carrying with them the fence, which is held up by the hook. As the upper part of the jack is inclined towards the fence, its centre of gravity is of course thrown in the same direction, so that the tendency of the jack, when the fence is lifted, will be to force it back, and to move the rails to their proper places; and the fence will, therefore, strike the ground at a distance from where it was moved proportionate to the height to which it was raised. This operation moves the two panels which form the angle of the fence; and, as a consequence, from its construction, the adjoining angles of the fence are moved the same, or nearly the same, distance as the

angle to which the jack is immediately applied. In raising a fence for the purpose only of placing under it the supports, the jack will be in a vertical position; and, as above explained, if it be desired to raise the fence higher than can be done when the pin *f* is in the notch *h*, the hook is moved up until the pin catches in one of the notches *h*¹, which are formed along the slot *g* at such intervals as desired.

Having described my invention, and the manner in which the same is or may be carried into effect, what I claim, and desire to secure by Letters Patent, is—

1. In a jack for raising fences, and for other purposes, I claim the swinging lifting-hook, arranged so as to be adjusted to different heights on and relatively to the sliding-bar, by which it is actuated, substantially as set forth.

2. The combination with the sliding ratchet-bar, the actuating lever, and the spring latch or pawl, of a slotted lifting-hook, suspended from said bar and adjustable thereon, substantially as shown and described.

In testimony whereof I have signed my name to this specification before two subscribing witnesses.

ELI ZIMERMAN.

Witnesses:

T. BAKER,

Jno. M. SIGOURNEY.