

No. 661,501.

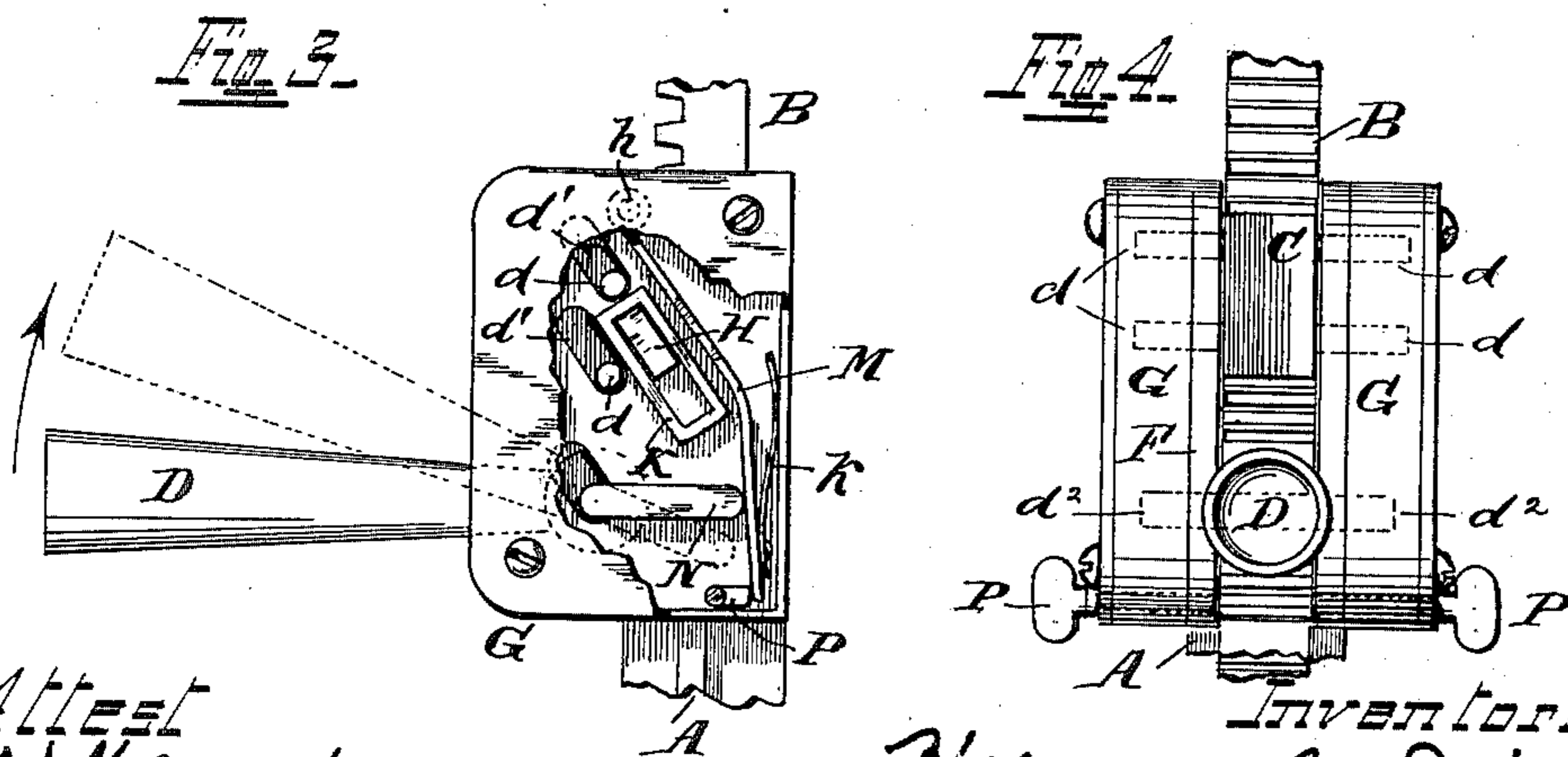
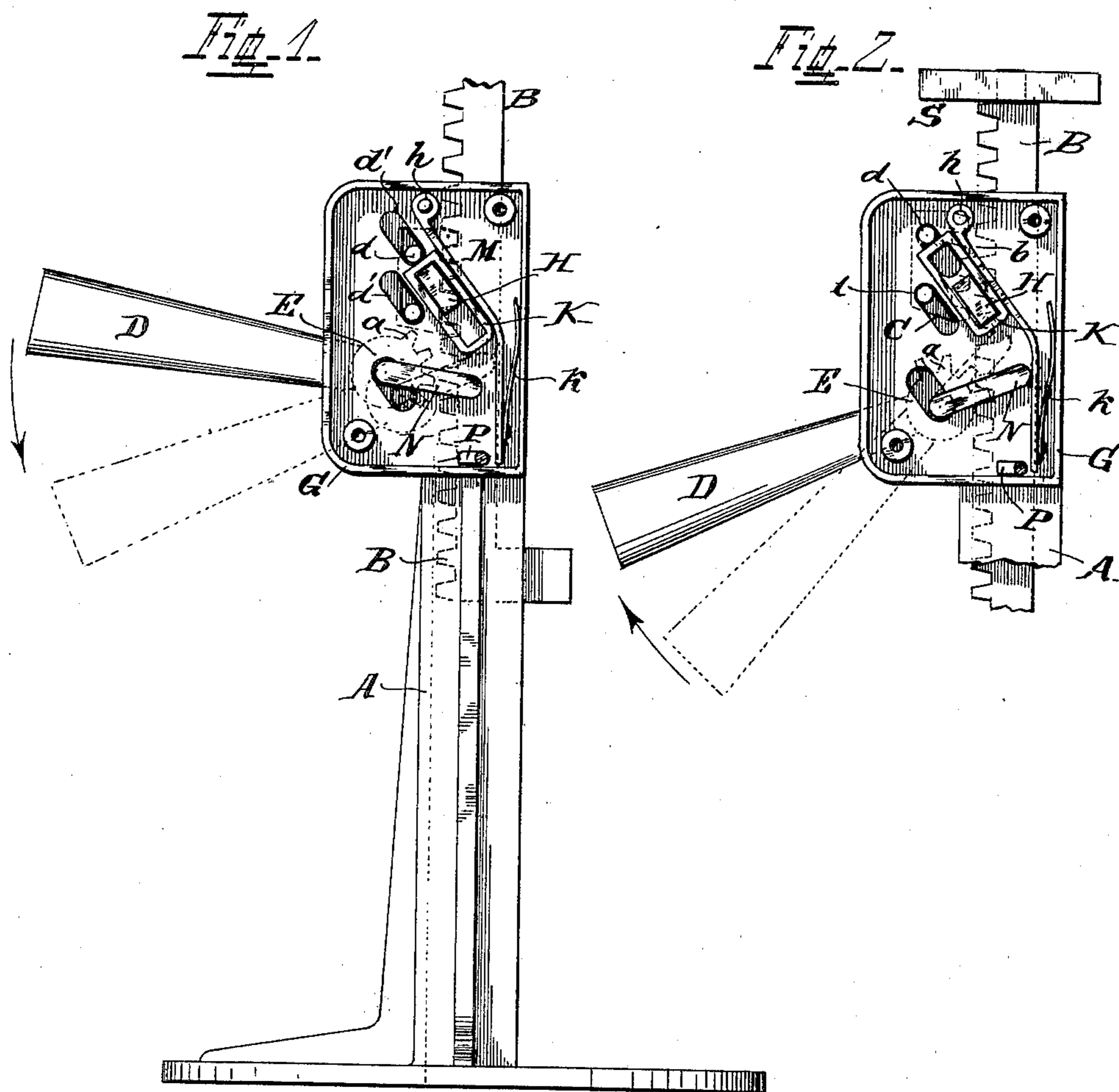
Patented Nov. 13, 1900.

H. A. DIERIG & A. A. VORNDIEKE.

LIFTING JACK.

(Application filed Sept. 25, 1899.)

(No Model.)



Attest
J. H. Klayner.
Oscar C. Dodson

Inventors
Herman A. Dierig
and Anton A. Vorndieke
by J. W. Prehler, Atty.

UNITED STATES PATENT OFFICE.

HERMAN A. DIERIG, OF DAYTON, KENTUCKY, AND ANTON A. VORNDIEKE,
OF CINCINNATI, OHIO.

LIFTING-JACK.

SPECIFICATION forming part of Letters Patent No. 661,501, dated November 13, 1900.

Application filed September 25, 1899. Serial No. 731,695. (No model.)

To all whom it may concern:

Be it known that we, HERMAN A. DIERIG, residing at Dayton, Campbell county, Kentucky, and ANTON A. VORNDIEKE, residing at Cincinnati, Hamilton county, Ohio, citizens of the United States, have invented certain new and useful Improvements in Lifting-Jacks, of which the following is a specification.

The object of our invention is to produce a cheap, simple, and efficient device or attachment to be applied to lifting-jacks by means of which the dog which works in connection with the rack can be raised automatically by the operator with the handle or lever when it is desired to lower or allow the weight which is being lifted to move downward.

In the accompanying drawings, forming part of this specification, Figure 1 is a side view of our lifting-jack, partly in section, the parts being in a position ready to be moved so that the parts will cooperate with the rack and move the rack and weight resting on it upward. Fig. 2 is a side view showing the position of the parts when the dog is up and when the rack and weight have been moved upward. Fig. 3 is a fragmentary side view showing position of parts when it is time to let weight down. Fig. 4 is a fragmentary front view of the device.

A represents a hollow standard in which the toothed rack B works up and down.

C represents the dog, and D the lever or handle, carrying teeth *a* on its head E.

The dog C works loosely in a space F above the head E of handle or lever D. By working the lever D up and down the teeth *a* on head E mesh with the teeth on the rack B and move it upward. While being moved upward, the teeth *b* on dog C are disengaged from the teeth of rack B; but as soon as the movement upward has been made one notch the dog falls back into position and holds the rack in place. The dog has extending from each side pins *d d*, which work up and down in slots *d' d'*. The head E carries on each side pivotal pins *d² d²*.

The above description relates to the ordinary lifting-jack now in common use. We will now particularly describe our attachment. On each side at the top of the jack we provide a box G. On the inside of the box we

provide a lug H, set at an angle to coincide with slots *d' d'*. Over this box we provide a rectangular slide K, which slides up and down over the sides of the lug H.

M represents a spring-arm peculiarly shaped, as shown, fastened at *h*, extending down over and lying close to the long face of the slide K, and then branching off and down along the rear end of the box G. A flat spring *k*, connected to the lower end of the spring-arm M, extends upward and impinges against the back of the box G. To the pivotal pins *d²* we attach a finger N, which moves up and down as the lever D is moved up and down.

When it is desired to use the jack in the ordinary way without our attachment, the key P is turned so as to impinge against the spring-arm and keep it out of contact with the spring-arm M. If it is desired to use the attachment, key P is turned away from impingement with the spring-arm M.

We may provide our attachment on one or both sides of the jack. In the present instance it is on both sides. We may use it in connection with jacks of other specific constructions and differing from the one herein described by slightly changing and differently arranging the parts.

Having described the different parts of our invention and their relations to one another, we will now describe how our invention operates.

In operation the handle or lever D is moved up and down, the teeth on the head E meshing with the teeth on the rack B, which carries the weight on head S upward, the dog C falling in and holding the rack in place where it has been moved. When it is desired to let the weight down, the lever or arm is moved downward, the finger N moving up and striking the slide K upward. The slide in moving upward over face of lug H strikes pins *d* of the dog C and moves them upward. Consequently the dog C is moved out of contact with the rack B, the spring-arm impinging against the slide K and holding it against the lug H until in the upward movement of the handle the lower end of the spring-arm is touched by the downward movement of finger N. This raises the upper part of spring-arm

from the slide K and it falls down in the position shown in Fig. 3. While this operation is going on the rack can be lowered, as the dog is out of contact with the rack, by moving the handle or lever D in proper direction.

5 A great many accidents have arisen to the operator when desiring to lower the weight by pulling out the dog with the hand, as in this way the hand is often caught and hurt.
10 By the use of our invention the operator can control the lowering of the weight with the handle.

What we claim as new and of our invention, and desire to secure by Letters Patent, is—

1. In a lifting-jack, rack B, dog C, lever D, 15 toothed head E, in combination with finger N, slide K, lug H, and spring-arm M, as set forth.

2. In a lifting-jack, rack B, dog C, lever D, toothed head E, in combination with finger 20 N, slide K, lug H, and spring-arm M, and spring k and key P, as set forth.

HERMAN A. DIERIG.
ANTON A. VORNDIEKE.

Witnesses:

JOSEPH W. WEBER,
KATIE M. STREHLI.