

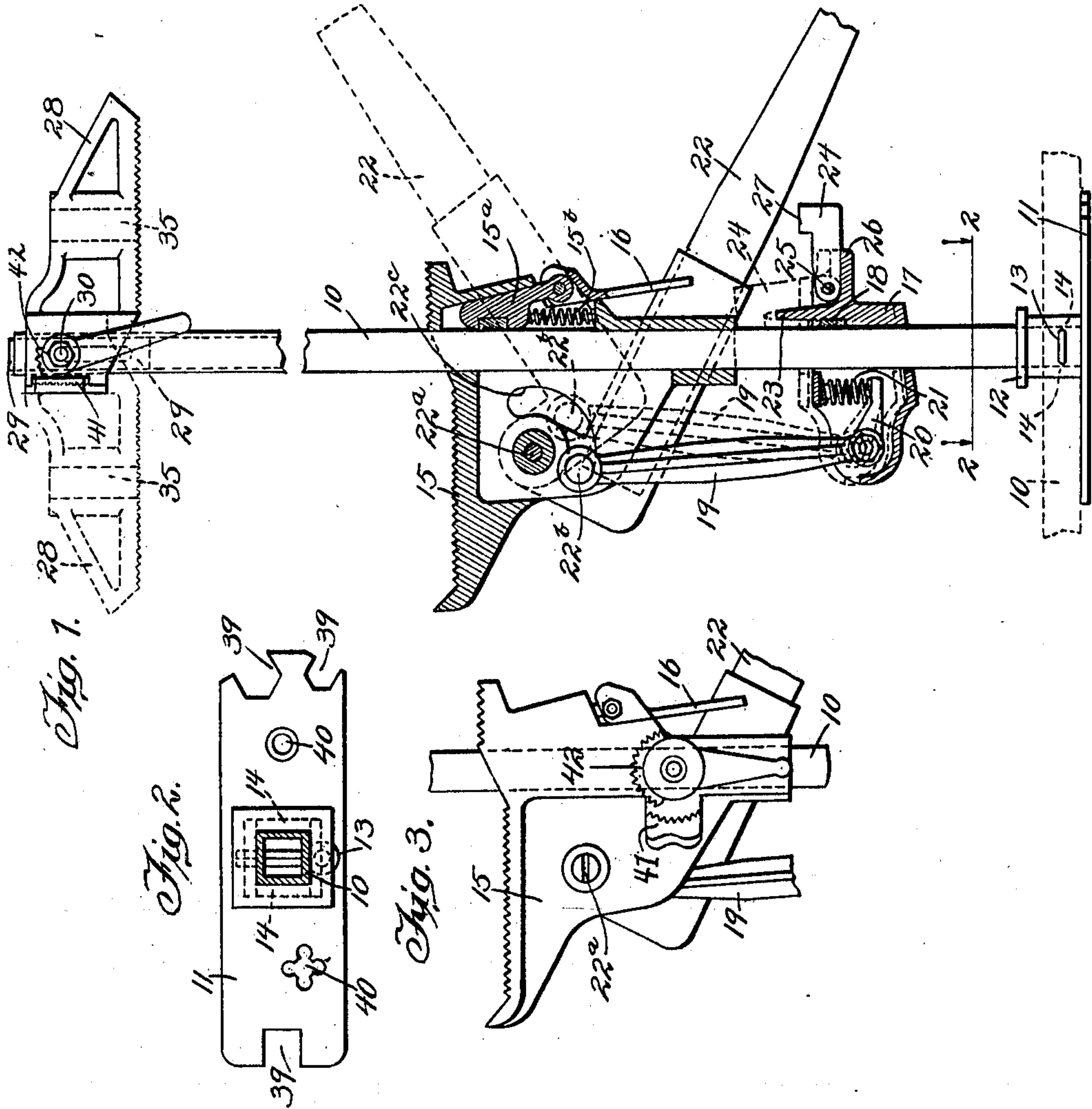
L. C. BERMAN.

JACK.

APPLICATION FILED APR. 17, 1909.

978,544.

Patented Dec. 13, 1910.



Witnesses:  
H. W. Marshall

J. F. Gochum, Jr.

Inventor  
Louis C. Berman  
By Bruno Hoffmann

Atty's.



# UNITED STATES PATENT OFFICE.

LOUIS C. BERMAN, OF CHICAGO, ILLINOIS.

JACK.

978,544.

Specification of Letters Patent.

Patented Dec. 13, 1910.

Application filed April 17, 1909. Serial No. 490,562.

*To all whom it may concern:*

Be it known that I, LOUIS C. BERMAN, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Jacks, of which the following is a specification.

The object of this invention is to provide an improved combination tool of the type which is capable of being used as a lifting jack and also as a wire stretcher when desired and which embodies a runner member adapted to be adjusted and released by the operating handle, and also improved means for releasing the runner member by the handle when the tool is used in a position which will prevent the free and full movement of the operating handle.

A further object is to provide an improved device of this character which will be simple, durable and cheap in construction and effective and efficient in operation.

To the attainment of these ends and the accomplishment of other new and useful objects, as will appear, the invention consists in the features of novelty in the construction, combination and arrangement of the several parts hereinafter more fully described and claimed and shown in the accompanying drawing illustrating the embodiment of the invention, and in which—

Figure 1 is a side elevation, partly in section, of an improved device of this character constructed in accordance with the principles of this invention, as used as a lifting jack, showing the parts in adjusted position in dotted lines. Fig. 2 is an enlarged detail sectional view on line 2—2, Fig. 1. Fig. 3 is an elevation of the upper runner member when the jack is held in an upright position.

Referring more particularly to the drawing in the present exemplification of the invention, the numeral 10 designates a support preferably in the form of an upright or standard of tubular construction and angular in cross section. A base, designated generally by the reference numeral 11, is provided for the support 10, and this base is provided with a tubular portion 12, into which one extremity of the support is inserted, and the support may be removably secured to the base in any suitable manner, preferably by means of a fastening device 13. The tubular member 12 is also provided with openings 14 at diametrically op-

posite points in the walls thereof, into which the extremity of the support 10 may be inserted when the jack is to be employed as a vise. To accomplish this change, the fastening device 13 is first removed to release the support 10 and to permit the latter to be removed from the socket. The extremity of the support may then be inserted or passed through the registering openings 14 to hold the support in a position for use as a vise, a portion of the support in this position being indicated in dotted lines in Fig. 1.

When used as a lifting jack the runner member 15 is the lifting member and is provided with the usual locking member 15<sup>a</sup> controlled by the spring 15<sup>b</sup> and is adapted to be adjusted into or out of operative position by the dog 16, and the runner member is freely movable on the support when the dog is properly adjusted. The other runner member 17 is provided with a gripping block 18 and is connected to the upper runner member 15 by means of the link 19, which link is provided with an arm or extension 20 extending into the runner member 17 and an elastic member 21, such as a coil spring or the like, is disposed between the arm 20 and the body portion of the member 17 and tends to hold the gripping block 18 against the support 10 in the ordinary and well known manner. The specific construction of the mechanism whereby the runner members grip the support 10, however, forms no part of the present invention.

The operating handle 22 is provided and is pivotally supported as at 22<sup>a</sup> by the runner member 15. One end of the link 19 is pivotally connected to the handle 22 beyond its pivot by means of a pivot pin 22<sup>b</sup>, which pin is adapted to travel in the slot 22<sup>c</sup> in the runner member 15 in the usual manner, so that when the handle 22 is rocked about its pivot the pin 22<sup>b</sup> will be moved in the slot and the runner members 15, 17 will be alternately adjusted to cause the members to move upwardly or toward the free end of the support 10.

The runner member 17 is provided with a projection 23, which is adapted to be engaged by the lower extremity of the runner member 15 when the handle 22 is moved from the position shown in full lines in Fig. 1 to that shown in dotted lines in Fig. 1, and thereby rock the runner member 17 so as to move the clutch block 18 out of en-



gagement with the support 10, which permits the runner member to be moved toward the base 11 when the support is upright.

It frequently happens that in using this device, it is impossible to move the handle 22 to such a position as to cause the extremity of the runner member 15 to engage the projection 23 and release the runner member 17 in order to prevent the jack from operating.

In order to render it possible to release the runner member 17 by a slight movement of the handle 22 in a direction away from the member 17, there is provided a dog or detent 24, which is pivotally supported by one extremity as at 25 to a projecting portion 26 of the member 17. The member 26 is preferably bifurcated so that the pivoted extremity and a portion of the body of the dog or detent extends into the bifurcation so as to rest upon the body portion of the projection 26 to hold the dog or detent in a substantially horizontal position. In this position the dog or detent will serve as a trip when it is desired to release the runner member 17 by applying the foot thereto, or the dog or detent 24 will serve as a handle or projection by means of which the operator may release the member 17 by hand pressure. When it is desired to automatically release the runner member 17 by the operation of the handle 22, when the handle can not be moved to the full limit, the dog or detent 24 is moved about its pivot 25 from the position shown in full lines to the position shown in dotted lines in Fig. 1, so that a projecting portion 27 on the dog or detent will extend over the extremity of the projection 23 on the runner member 17 and in the path of movement of the adjacent edge of the runner member 15, so that a comparatively short upward movement of the handle 22 (when the jack stands upright) will cause the runner member 15 to engage the dog or detent 24 to rock the member 17.

A jaw 28 may be secured to the support 10 to cooperate with the runner member 15 and is placed in position on the support so that it will project therefrom on the same side of the support from which the runner member 15 projects and cooperates with the runner member to act as a vise. This jaw 28 may also serve as a handle to assist in placing the jack in position and when employed as a handle, it is removed from the support, reversed and replaced on the support so that it will project from one of the sides other than the side from which the runner member 15 projects.

The support 10 is preferably square in cross section and located within the support, adjacent the upper end thereof, is a link 29 which is preferably of a size and configuration to fill the extremity of the support to prevent the entrance of dirt. This

link may be held against displacement by means of a suitable fastening device 30 such as a screw, bolt or the like, which passes through suitable openings in the support and through the link and also through the body portion of the jaw 28 which surrounds the support, and this fastening device 30 serves as a means for limiting the inward movement of the link.

The jack may also be used as a wire stretcher, and when employed the handle or jaw 28 is placed in the position shown in full lines in Fig. 1, and the link 29 is withdrawn from the end of the support and to which link the usual clamping member for the wire is attached. When thus arranged, the runner member 15 may be placed against a post of the fence and the handle 22 operated so as to draw the support 10 through the runner members 15 and 17, and thereby draw upon the clamping members 33. When the device is used as a lifting jack or bench vise, the link 29 may be pushed into the end of the support, where it will be held against accidental displacement by friction.

The jaw or handle 28 is provided with a bearing 35, within which bearing the shank of a drill or any other tool may be journaled.

The base 11 is provided with openings 39 extending through the edges thereof, which openings may be shaped to form wrenches, and suitable openings 40 may be provided through the base within the edges thereof, which openings may be employed as threading or cutting devices.

Suitable cooperating gripping members 41 and 42, may be provided on the runner member 15 and the jaw or handle 28 which are adapted to grip the extremities of adjacent wires so that the operation of the handle 22 will serve to draw the ends together to permit the latter to be fastened. With this improved construction and by providing a support 10 which is tubular and also angular in cross section, a device which is extremely light and at the same time strong will be produced, and the angular configuration of the support will serve as a means for preventing the runner members 15 and 17 from rotating about the support.

I claim—

1. A jack comprising a hollow support angular in cross section, a pair of runner members having bores conforming to the configuration of the support for receiving the support, said members being mounted to slide upon said support and provided with means for gripping the support, an operating handle for moving the runner members on the support, a link connection between the runner members for making one of the runner members engage the other runner member to release the latter when the handle is moved in one direction, and means for varying the time that one of the runner members will auto-



atically release the other runner member with respect to the movement of the actuating handle.

2. A jack comprising a support, a pair of runner members mounted to slide upon the support, said members being provided with means for gripping the support, an operating handle for moving the runner members on the support, a link connection between the runner members for making one of the runner members engage the other runner member to release the latter when the handle is moved in one direction, and means supported by and movable with one of the runner members for insertion between the runner members to be directly engaged by one of the runner members to automatically release the other runner member when the movement of the handle is restricted.

3. A jack comprising a support, a pair of members mounted to slide upon the support and provided with means for gripping the support, an operating handle for moving the runner members on the support, a link-connection between the runner members for making one of the runner members engage the other runner member to release the latter when the handle is moved in one direction, a member pivotally supported by one of the runner members to be projected over the said runner member to vary the time of engagement with the runner member to

automatically release the former member and to vary the time of engagement of the members with respect to the movement of the operating handle.

4. A jack comprising a support, a pair of runner members mounted to slide upon the support and provided with means for gripping the support, a pitman connecting said members, an operating handle for moving the runner members on the support, one of the runner members engaging the other runner member to release the latter when the handle is moved in one direction, a member pivotally supported by one of the runner members to be projected beyond the latter and into the path of movement of the other runner member to be engaged thereby when the movement of the handle is restricted, and means for supporting the said pivoted member to project beyond its supporting runner member out of the path of movement of the other runner member to form a projection for manually releasing the runner member.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, on this 7th day of April A. D. 1909.

LOUIS C. BERMAN.

Witnesses:

ODUS EDWARDS,  
Mrs. LOUIS C. BERMAN.