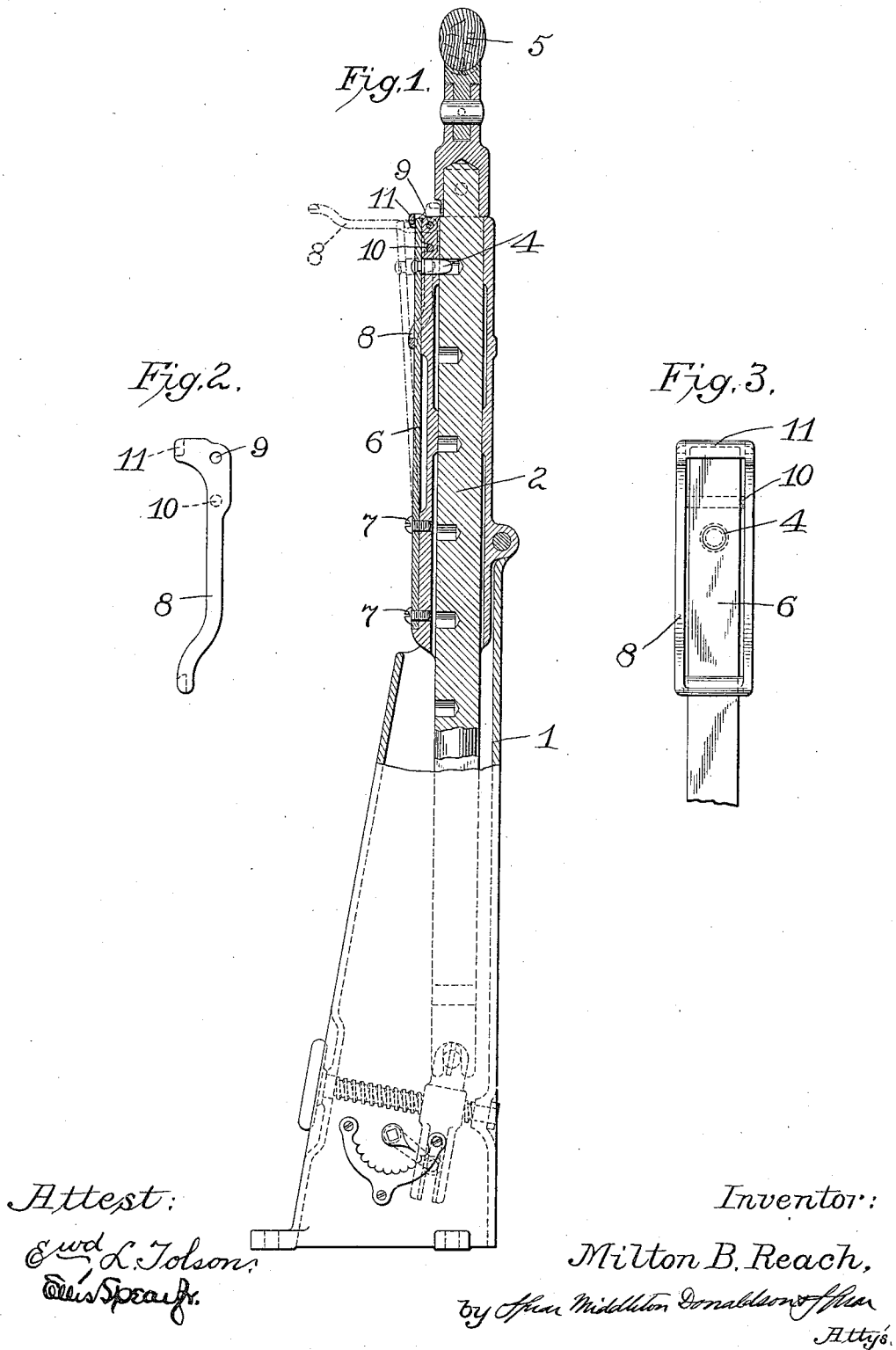


M. B. REACH.
EXERCISING APPARATUS (CONTROLLER FOR VERTICAL ADJUSTMENT).
APPLICATION FILED AUG. 19, 1912.

1,045,611.

Patented Nov. 26, 1912.



Attest:

Edw. L. Tolson,
Wm. Spear,

Inventor:

Milton B. Reach,

by Allen Middleton Donaldson,
Attys.

UNITED STATES PATENT OFFICE.

MILTON B. REACH, OF SPRINGFIELD, MASSACHUSETTS, ASSIGNOR TO A. G. SPALDING & BROS. MANFG. CO., A CORPORATION OF MASSACHUSETTS.

EXERCISING APPARATUS (CONTROLLER FOR VERTICAL ADJUSTMENT).

1,045,611.

Specification of Letters Patent.

Patented Nov. 26, 1912.

Application filed August 19, 1912. Serial No. 715,842.

To all whom it may concern:

Be it known that I, MILTON B. REACH, citizen of the United States, residing at Springfield, Massachusetts, have invented certain new and useful Improvements in Exercising Apparatus, (Controller for Vertical Adjustment,) of which the following is a specification.

My invention relates to exercising apparatus, and particularly to that type in which a horizontal bar is mounted upon upright supports and is vertically adjustable, my present invention being applicable, for instance, to that form of exercising apparatus disclosed in Letters Patent of the United States granted to me July 16, 1912, #1,032,425.

My present improvement concerns particularly means for controlling or locking the spring which carries the locking pin so that should this spring become weak or bent and tend to retract the pin from its holding position, the controlling device or lock will prevent this and maintain the locking pin in proper position to hold the support of the horizontal bar at the position to which it has been vertically adjusted, and thus assure safety in the use of the apparatus. I have shown a standard and features of adjustment like those shown in the patent above referred to, it being understood, however, that this showing is representative of any suitable apparatus which may be employed for this purpose, and I wish it understood that I do not limit myself to the precise form of apparatus shown.

The invention consists in the features of construction and arrangement and combination of parts hereinafter described and particularly defined by the appended claims.

In these drawings, Figure 1 is a central vertical sectional view through one of the standards with the horizontal or parallel bar in place, and with my invention applied; Fig. 2 is a detail view of the lock or controlling device to which my invention particularly relates; Fig. 3 is a front view of said device.

In these drawings, 1 represents a standard of any suitable form within which is vertically adjustable a post or bar 2 provided with a series of recesses to receive a locking pin 4, by which, when the post is adjusted vertically, it will be held. This post supports the horizontal bar 5 which may

be one of a pair of parallel bars. The locking pin is carried by a spring 6 of leaf form which is attached to the standard at its lower end as by means of the screws 7. For withdrawing the locking pin to permit the post to slide vertically, a lever 8 is employed pivoted to the standard at 9, and having a cross piece 10 to engage the inner side of the leaf spring so that when the lever or controller is moved from the position shown in full lines to that shown in dotted lines, the cross piece, acting against the spring, will press it laterally a sufficient distance to withdraw the end of the locking pin from the socket or recess in the post. This action is due to the position of the cross piece relative to the pivot of the lever.

Should the leaf spring become weak or injured or bent in use, and have a tendency to stand away from its proper position against the standard, the locking pin would be retracted, and there would be liability of the post being freed from the supporting pin and therefore dropping in the standard, resulting, possibly, in an accident to the person using the exercising apparatus. In order to prevent such a result, I provide the controlling or operating lever with a holding member or portion for retaining the pin in locking position so long as the operating lever is in its normal position. This retainer, in its best form, consists of a cross piece 11 extending from one side arm of the operating lever to the other, the said cross piece being carried by laterally or backwardly extending upper portions of the sides of the locking lever. The position of this retainer relative to the upper end of the spring and to the pivot of the lever is such that when the lever is down in holding position to keep the locking pin in engagement with the post, the retainer will lie against the outer side of the spring adjacent its upper end, and substantially in the same horizontal plane with the pivot of the lever so that it will lock the spring in position with the locking pin fully engaged with the post. The retaining bar is mainly located, however, slightly above the horizontal plane of the pivot, so that any back pressure exerted by the spring will tend to hold the locking lever in position to react on the spring, as this pressure would tend to force the lower end of the locking lever against the side of the standard rather than

to force the locking lever into the position shown in dotted lines.

When it is desired to release the locking pin, the locking lever, as before stated, is moved to the position shown in dotted lines, and in this action the retainer will swing around the pivot of the locking lever and over the top of the spring, so that the spring will be free to be retracted by the action of the cross piece 10. In Fig. 3 the leaf spring is shown in its relation to the locking lever.

It will be observed that the retracting bar 10 of the operating lever is located between the locking pin and the end of the spring, and when the operating lever is moved into the dotted line position, the retracting bar is substantially in the same horizontal plane with the pivot of the lever.

I claim as my invention:

1. In combination in an exercising apparatus, a standard, a post adjustable vertically on the standard, a locking pin to engage openings in the post, a spring carrying the locking pin, and secured to the standard, and an operating lever to engage and retract the spring with the locking pin, said lever having a retaining portion to hold the locking pin and spring in operative position when the operating lever is in normal position, substantially as described.

2. In combination with the standard, a post vertically movable, a locking pin, a member carrying the said pin, a lever pivotally mounted on the standard and having a portion to engage and retract the pin carrier, and having a retaining portion adjacent the locking pin to hold the pin in locking position when the lever is in normal position, substantially as described.

3. In combination in an exercising machine, a standard, a vertically adjustable post, a locking pin, a carrier for said pin

mounted on the standard, a lever having a portion to engage the inner side of the carrier to retract it, together with the pin, when the lever is operated to active position, said lever also having a portion to engage the carrier adjacent the pin to hold the pin in locking position when the lever is in normal position, substantially as described.

4. In combination in an exercising apparatus, a standard, a vertically movable post, a locking pin, a carrier connected with the pin and with the standard, and an operating lever pivotally mounted on the standard and having connection with the carrier to operate the same, said lever, at its upper end, having a retaining member to engage the outer side of the carrier adjacent the pin when the operating lever is in normal position and to free the upper end of the carrier when the operating lever is moved to active position, substantially as described.

5. In combination in an exercising apparatus, a standard, a post vertically adjustable along the standard, a locking pin to engage the post, a spring of leaf form carrying the locking pin, and an operating and locking lever pivotally mounted above the locking pin, said lever having a member to engage the spring between the locking pin and the end of the spring, for retracting the same, and also having a locking member to bear upon the outer side of the spring to prevent its retraction when the operating lever is moved to a position to permit the locking pin to engage the post, substantially as described.

In testimony whereof, I affix my signature in presence of two witnesses.

MILTON B. REACH.

Witnesses:

MAY JAMESON,
J. M. CONVERSE.