No. 633,464. Patented Sept. 19, 1899.

J. T. MELSON.

COIN CONTROLLED BLOW TESTER.

(Application filed Feb. 8, 1899.)

(No Model.)

Fig. 1.

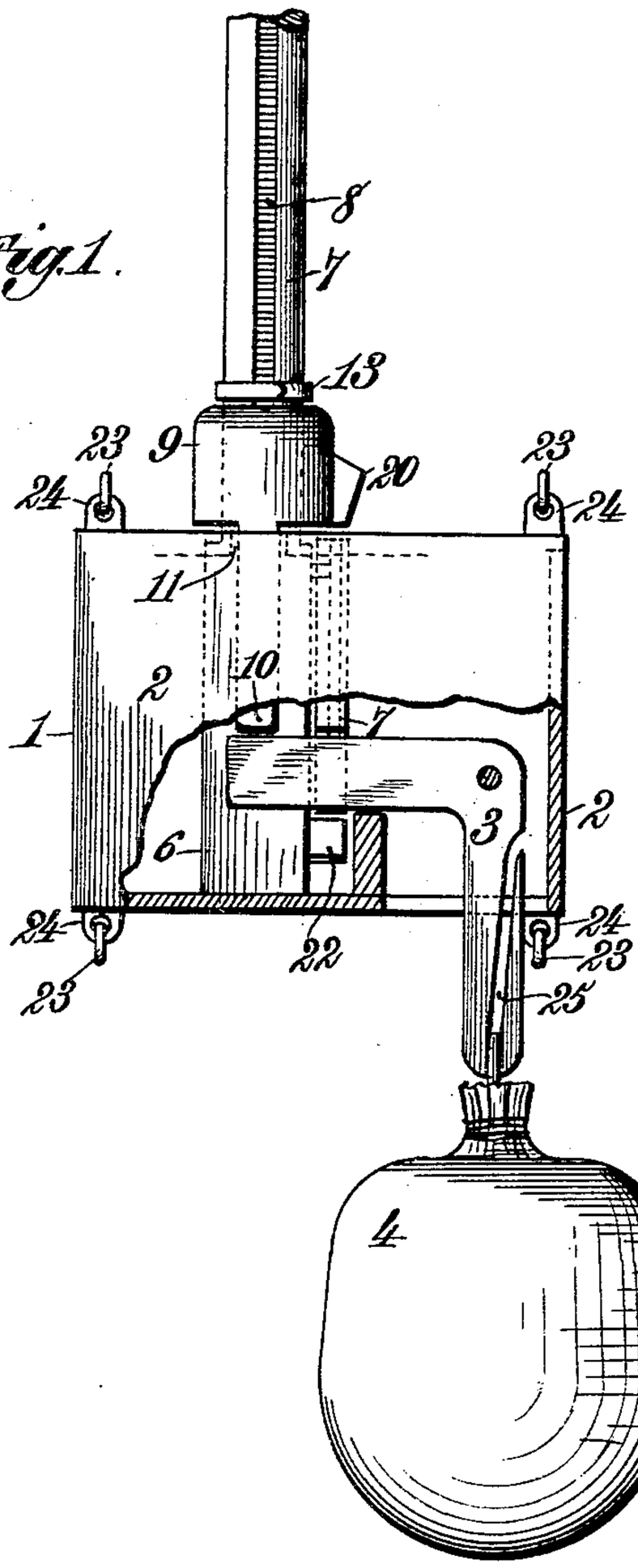


Fig. 2.

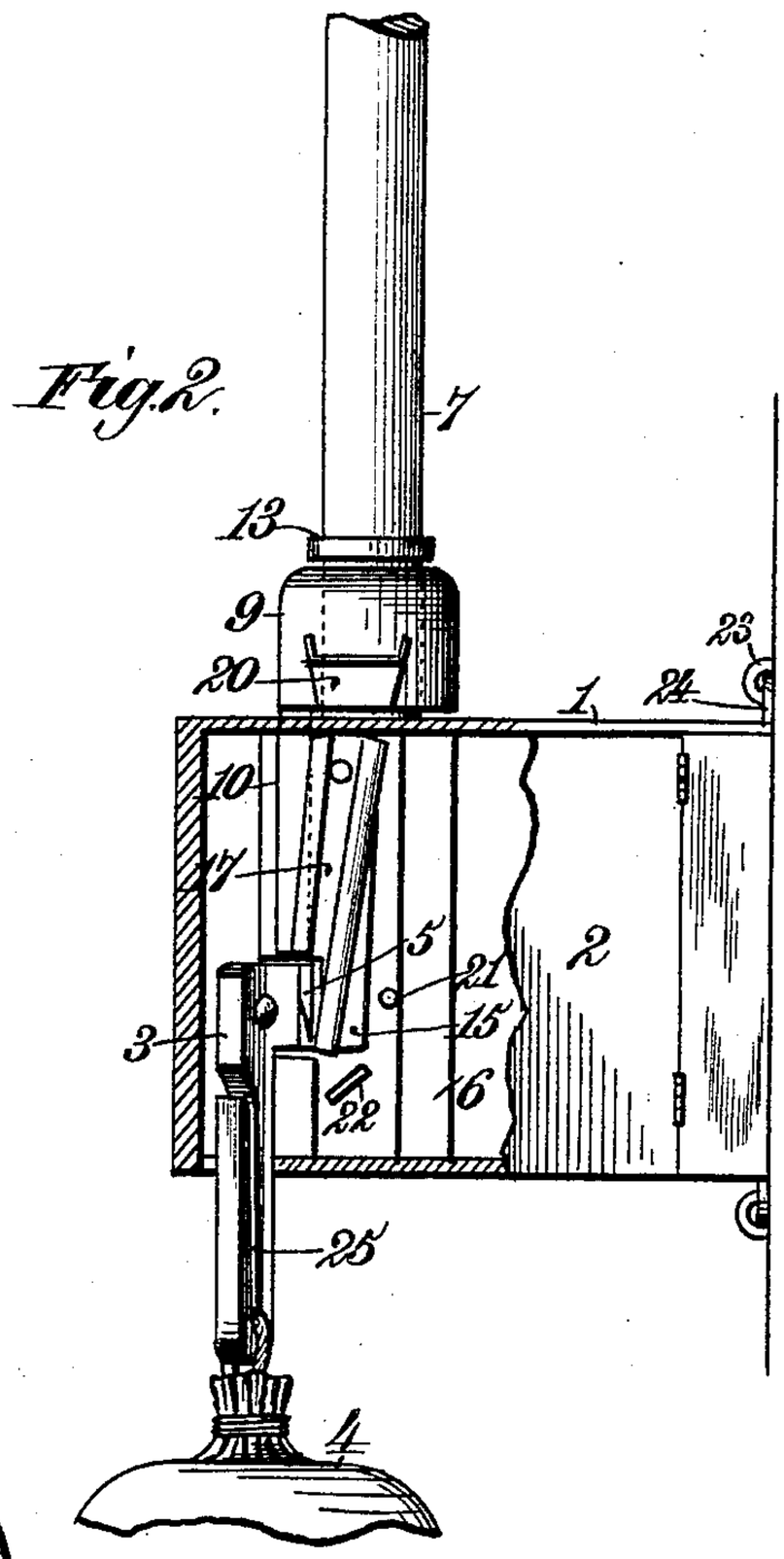


Fig. 3.

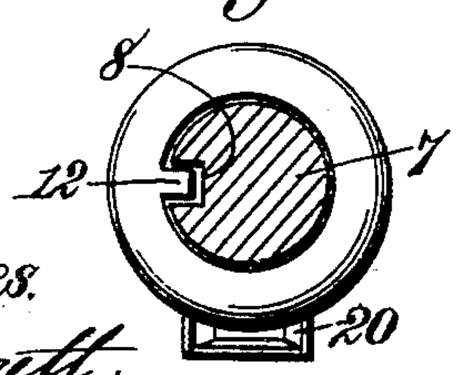
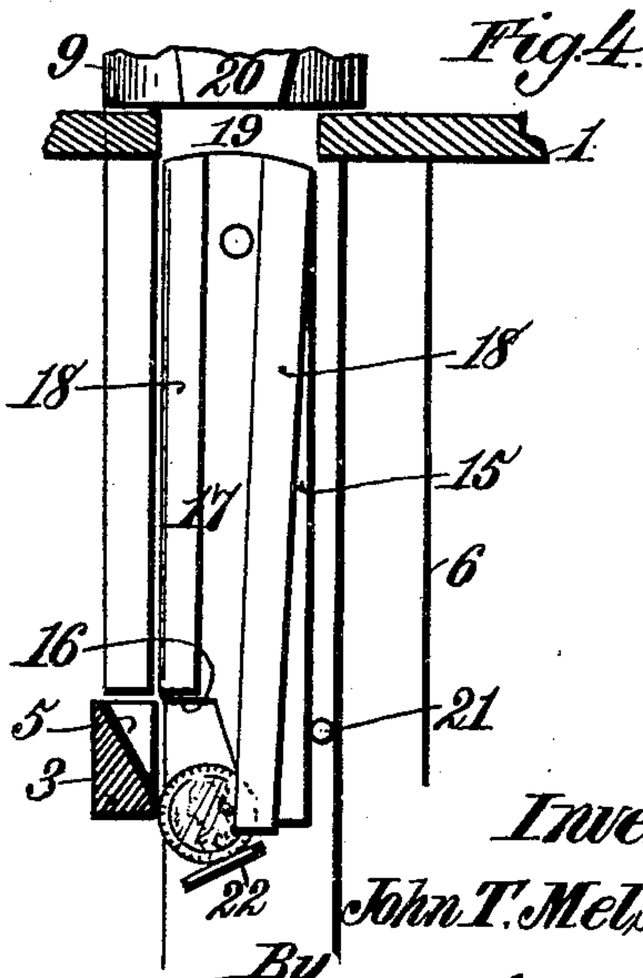


Fig. 4.



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UNITED STATES PATENT OFFICE.

JOHN T. MELSON, OF LAUREL, DELAWARE, ASSIGNOR OF THREE-FOURTHS TO CHARLES G. OTWELL, GEORGE H. OTWELL, AND OLIVER CORDRY, OF SAME PLACE.

COIN-CONTROLLED BLOW-TESTER.

SPECIFICATION forming part of Letters Patent No. 633,464, dated September 19, 1899.

Application filed February 8, 1899. Serial No. 704,963. (No model.)

To all whom it may concern:

Be it known that I, JOHN T. MELSON, a citizen of the United States, residing at Laurel, in the county of Sussex and State of Delaware, have invented new and useful Improvements in Coin-Controlled Blow-Testers, of which the following is a specification.

The object of my invention is to provide an apparatus for indicating the force of a blow, the same being normally in inoperative position, but adapted to be released by the insertion of a coin of proper size therein.

The apparatus comprises a casing, a lever having a striking-bag or other buffer thereon, an indicating bar or upright containing graduations, a sleeve adapted to be actuated by the movement of said lever, and a collar frictionally engaging said indicating bar or upright and adapted to be moved by said sleeve.

The invention also consists in an improved locking and releasing mechanism for said lever.

In the drawings, Figure 1 is a front elevation of my device, partly in section. Fig. 2 is a sectional side elevation. Fig. 3 is a cross-section through the indicating bar or upright and the movable sleeve thereon. Fig. 4 is a detail sectional view through the inclined groove in the lever with the parts coöperating therewith in elevation.

Like reference-numerals indicate like parts in the different views.

The casing 1 may be of any suitable form and construction, the same being provided on one side with a hinged door or cover 2 and containing the operating mechanism. Pivoted upon a support on the inside of the casing 1 is an L-shaped lever 3, whose vertical arm extends through a slot in the bottom of said casing and has connected to it a striking-bag 4 of any suitable form and construction. The horizontal arm of the L-shaped lever 3 is provided near its free end with a notch or groove 5, whose inner wall is inclined or beveled, as clearly shown. Upon the inside of the casing is a standard or post 6, to the upper end of which is secured an indicating bar or standard 7, which extends above the top of the casing 1 and is provided on its front side with a longitudinal groove 8. In the groove 8 is a series of graduations, as clearly shown. Fitting loosely upon the indicating bar or standard is a sleeve 9, having an arm or extension 10 upon the lower end thereof, which projects through an opening 11 in the top of the casing and normally lies in contact with the free end of the horizontal arm of the lever 3. The said sleeve is provided with a spline or feather 12, which fits within the groove 8 for preventing rotation of said sleeve independent of the indicating-bar and is of such depth that it will not engage or bear against the inner wall of the groove 8, and thereby rub and remove the graduation-marks therefrom. Upon the indicating-bar 7, above the sleeve 9, is a ring or collar 13, which is designed to frictionally engage said bar, so that it will be held in any position thereon to which it may be moved. The said ring or collar is preferably made of a strip of spring metal, with open ends, as clearly shown in the drawings.

From the foregoing description it will be seen that if a blow be imparted to the striking-bag 4 it will cause the lever 3 to be rocked and the horizontal arm thereof to be elevated. This action will throw upwardly the sleeve 9 by the engagement of the arm 10 thereof with the horizontal arm of said lever. The distance which said sleeve is thrown upwardly will be proportionate to the force of the blow imparted to the striking-bag, and the actual force of the blow will be indicated upon the bar 7 by the graduation-mark opposite which the ring or collar 13 rests, it being understood, of course, that the said ring is elevated by the sleeve 9 and that whereas the said sleeve returns by gravity to its normal position said ring will be retained in its raised position.

In order to adapt my testing device for use in public places, where a small toll may be charged for using the same, I provide that the lever 3 shall be normally locked and incapable of movement. To effect this result, I employ a dog 15, which is pivoted at its upper end to the post or standard 6 and is formed with a shoulder 16 on one side thereof adjacent to its lower end, which normally lies above the upper edge of the horizontal arm of the lever 3, and thereby prevents the rocking movement of said arm. In order that the indicating mechanism may be operated, it is

necessary that this locking-dog be moved from its normal position away from the lever 3. To effect this operation by means of a coin, I secure to one side of the dog 15 a coin-chute 17, the same consisting, preferably, of a guide-way made of sheet metal bent to form side flanges 18, between which a coin of the proper size may pass. The said chute is angularly arranged upon the dog 15, and its lower end is cut away and lies directly opposite the notch or groove 5 in the horizontal arm of the lever 3. The upper end of said chute leads from an opening 19 in the top of the casing 1, with which communicates a funnel-shaped open coin-receptacle 20, secured to one side of the sleeve 9. The action of this part of my device is as follows: The coin being inserted into the hopper 20 falls by gravity through the lower end thereof and through the slot 19 into the coin-chute 17, being guided thereby down to a point opposite the notch or groove 5 and bears against the inclined wall of said groove. This action serves to throw the dog 15 away from the horizontal arm of the lever 3 until it strikes against a stop-pin 21, secured to the post or standard 6, and the coin rests upon another stop-pin 22, below the pin 21, so as to hold the dog 15 away from the lever 3 until the blow has been struck. When the blow is imparted to the striking-bag 4, the lever 3 is rocked in the manner heretofore described, and as the horizontal arm thereof rises the coin is free to pass from the supporting-pin 22 down into the coin-receptacle in the bottom of the casing and the dog 15 returns to its normal position, so that when the horizontal arm of the lever 3 drops it will again be automatically locked in inoperative position.

It will be understood, of course, that when my improved device is in operative position it is supported against the side of a wall, an upright, or the like, so that the punching-bag 4 will be in proper position to receive the blow. The means of supporting the casing is of course immaterial; but I prefer to employ securing-staples 23 23, which are driven into the wall and extend through loops or staples 24 in the back of the casing.

In order that the punching-bag 4 may be readily attached to or removed from the lever 3, I form in the vertical arm of said lever an elongated slot 25, which produces a hook upon the end of said lever, the upper end of the bill thereof lying within the casing 1. When the door 2 is in its closed position, it will of course be impossible to remove the bag from the lever 3 without breakage of parts; but by unlocking said door and opening the same the bag 4 may be readily elevated and slipped out of the slot 25.

Having thus described my invention, what I desire to secure by Letters Patent is—

1. In indicating mechanism, a graduated bar, a slide thereon, a frictional device engaging said bar and operated by said slide, normally-locked operating means for the slide, and coin-controlled mechanism for releasing said operating means.

2. In indicating mechanism, a graduated bar, a sleeve loosely mounted thereon, a ring frictionally engaging said bar and adapted to be operated by said sleeve, normally-locked operating means for the sleeve, and coin-controlled mechanism for releasing said operating means.

3. In a blow-tester, the combination with a graduated bar, a sleeve thereon, a ring frictionally engaging said bar and operated by said sleeve, a rocking lever for imparting movement to said sleeve, normally-locked operating means for said lever, and coin-controlled releasing mechanism for said operating means.

4. In a blow-tester, the combination with a casing having an opening in the top thereof, of a vertically-disposed indicating-bar, a sleeve loosely mounted on said bar, having an arm thereon which extends down through said opening to the inside of the casing, a band or ring frictionally engaging said bar above said sleeve and adapted to be moved by the latter, a normally-locked rocking lever carrying a striking bag or buffer, one arm of which is adapted to engage the arm on said sleeve, and coin-controlled releasing mechanism for said lever, as and for the purpose set forth.

5. In a blow-tester, the combination with a casing having an opening in the top thereof, of a vertically-disposed indicating-bar extending above said casing, and provided with a longitudinal groove having graduations marked upon the inner wall thereof, a sleeve loosely mounted on said indicating-bar, and provided with a spline or feather which fits within said groove and is of less depth than said groove, the said sleeve being further provided with an arm or extension which projects through said opening into said casing, a normally-locked rocking lever fulcrumed in said casing, one arm of which extends through the bottom of the casing and carries a striking bag or buffer and the other arm of which is adapted to engage the arm or extension on said sleeve, and coin-controlled releasing mechanism for said lever, as and for the purpose set forth.

6. In a coin-controlled apparatus, a rocking lever having an inclined groove therein, a pivotally-mounted locking-dog for said lever, a diagonally-arranged coin-chute secured to said dog whose discharge end lies opposite said groove, a stop for limiting the outward movement of said dog, and a support for the coin beneath the lower end thereof, as and for the purpose set forth.

7. In a coin-controlled apparatus, a rocking lever having an inclined groove therein, a post or standard, a locking-dog for said lever pivoted at its upper end to said standard, a coin-chute secured to said dog arranged di-

agonally thereon, and having its discharge end cut away and lying opposite said groove, a stop-pin on said standard for limiting the outward movement of said dog, and a supporting-pin for the coin located beneath the lower end of said dog, as and for the purpose set forth.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

JOHN T. MELSON.

Witnesses:
JOHN H. ELLIOTT,
CHARLES G. OTWELL.