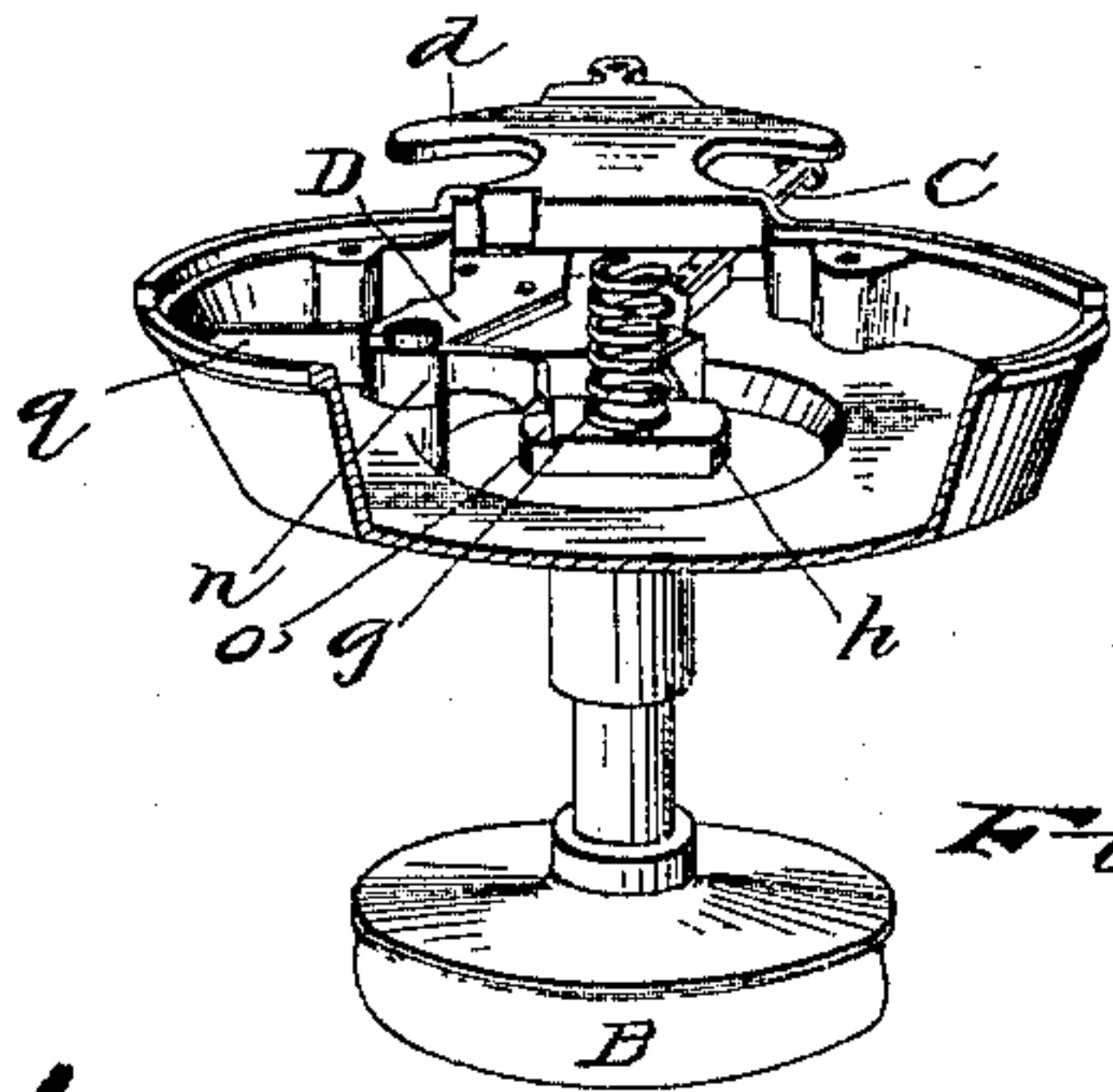
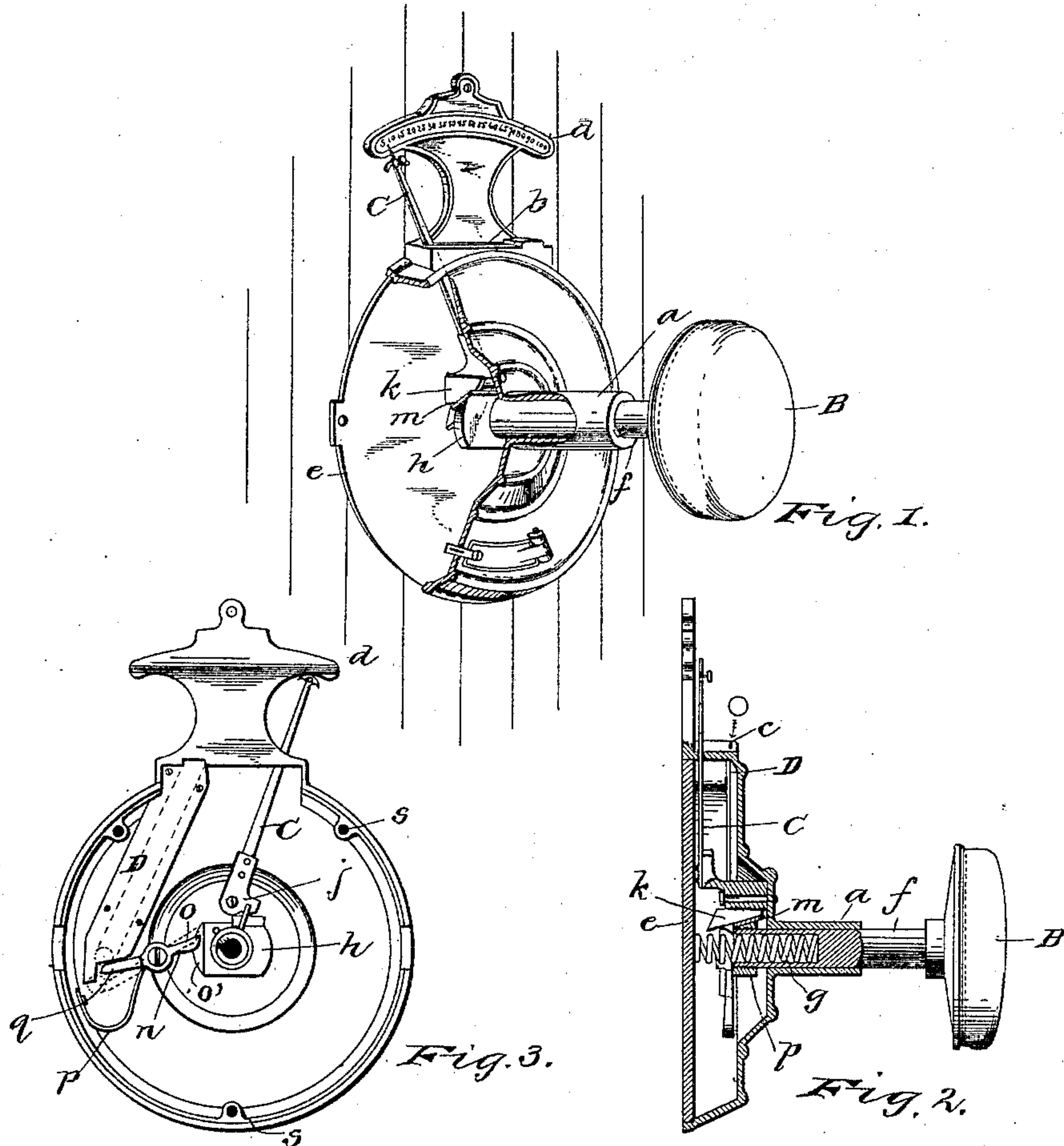


(No Model.)

J. M. AKERS.
COIN CONTROLLED BLOW TESTER.

No. 436,819.

Patented Sept. 23, 1890.



WITNESSES:

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JOHN M. AKERS, OF ALLIANCE, OHIO.

COIN-CONTROLLED BLOW-TESTER.

SPECIFICATION forming part of Letters Patent No. 436,819, dated September 23, 1890.

Application filed April 24, 1890. Serial No. 349,376. (No model.)

To all whom it may concern:

Be it known that I, JOHN M. AKERS, a citizen of the United States, and a resident of Alliance, county of Stark, State of Ohio, have
5 invented a new and useful Improvement in Coin-Operated Apparatus for Indicating the Force of a Blow, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings,
10 making part of this specification.

My invention relates to an improvement in apparatus for indicating the force of a blow; and it consists in certain features of construction and combination of parts, as will be hereinafter described, and pointed out in the
15 claims.

Figure 1 of the accompanying drawings is a view in perspective of an apparatus constructed to indicate the force of a blow on a
20 coin or token of predetermined value being inserted in the apparatus illustrating my invention. Fig. 2 is a vertical sectional view through the central portion of the apparatus; Fig. 3, a rear elevation showing the detail
25 from rear. Fig. 4 is a perspective showing interior of inclosing-case and detail from below.

Similar letters of reference indicate corresponding parts in all the figures of the drawings.
30

A represents the inclosing and supporting case, which may be made up of any suitable material, preferably of cast-iron. At the front and central to said inclosing-case is
35 provided an outwardly-projected tube portion *a*, and at the upper side of said case is provided an oblong aperture *b*, a coin-receiving slot *c*, and a graduated dial or scale *d*, and at the bottom a door or other provision by which
40 the coin above referred to may be removed. *e* is an inclosing back piece.

In the tube *a* is placed a sliding tube *f* containing a spring *g*. On the inner end of said tube is mounted a head portion *h*, and
45 on the outer end a striking pad or cushion B.

An index or pointer C is pivotally secured to the case A, as shown in the drawings, having at its pivoted end a laterally-projected arm *j*, to which is secured a downwardly-projected
50 graded or wedge-shaped piece *k*, corresponding with a graded piece *m*, secured to the head *h* or a graded portion of the head. The

free end of the index is passed through the aperture *b* in the top of the case to vibrate over the scale *d*. 55

To hold the tube *f* against movement in the tube *a*, a balanced lever *n* is pivotally secured to the inclosing-case A, as shown in Figs. 3 and 4, the inner end *o* cut away or
60 graded to correspond with a similar graded portion *o''* of the head *h*. The inner end *o* of said lever is held against the head *h* by the upwardly-extended energy of the spring *p*, (shown in Fig. 3,) the end of the spring resting under the outer end *q*. 65

A flat tube D is provided having its upper end to correspond with the slot *c* in the case and the lower end to terminate over the outer end portion of the lever *n*.

A back plate *e* is secured in position shown
70 by screw-bolts passed through said back and into threaded perforations *s* in the case A.

As assembled, the rear end of the spring *g* rests against the back plate *e*, the front end against a shoulder or stop in the tube *f*, the
75 energy of the spring exerted outwardly, and the lever *n* behind the graded portion *o* of the head *h*, in which position the machine is locked, so that a blow on the cushion B would not move the tube *f* against the spring, and
80 therefore a blow could not be registered or indicated by the index C on the scale *d*.

In operation a coin of predetermined weight or value if placed in the slot *c* will pass down the tube D, strike the outer end *q* of the lever *n*, throw said end down and the inner end
85 up out of engagement with the head *h*, at which instant, if a blow be struck on the cushion, the graded portion *m* of the head *h* will move on the wedge *k* on the index C to
90 throw the free end of the index over the figures on the scale *d*, the index to stand and register the blows, in pounds, as indicated by the figures on the scale *d*, when it may be returned to the starting-point by hand, placing
95 the machine in position to repeat the operation of registering blows.

The machine may be secured to the wall or any convenient place by screws passed through the perforations provided, as shown in Fig. 1. 100

Having thus fully explained the nature and object of my invention, what I claim as new, and desire to secure by Letters Patent, is—

1. In an apparatus for indicating the force

of a blow, the combination, with the inclosing-
case A, having a projected tube *a*, of an elon-
gated aperture *b* and slot *c*, a spring *g* and
spring-supporting tube *f*, adapted to slide in
5 the tube *a*, the tube *f*, having on its outer end
a cushion B and on its inner end a head por-
tion *h*, having a graded portion *m*, to engage
a similar graded portion *k*, secured to the in-
dex C, by which said index is vibrated about
10 its pivotal connection with the case and its
free end over the scale *d*, a locking-lever *n*,
a spring *p*, and a coin receiving and conduct-
ing tube D, substantially as set forth.

2. In an apparatus for indicating the force
15 of a blow, the combination, with the inclosing-

case A, of the tube *f*, cushion B, the head *h*,
having graded portions *m* and *o*, an index C,
having a graded portion *k*, a locking-lever *n*,
having a graded end portion *o* to correspond
with the graded portion *o'* of the head *h*, an 20
actuating-spring *g*, and a coin-receiving de-
vice, substantially as described and for the
purpose set forth.

In testimony whereof I have hereunto set
my hand this 21st day of April, A. D. 1890. 25

J. M. AKERS.

Witnesses:

J. F. FILER,

J. H. JOHNSON.