(No Model.)

F. A. WIDGER.

STRIKING APPARATUS.

No. 410,475. Patented Sept. 3, 1889.

FIG. 1.

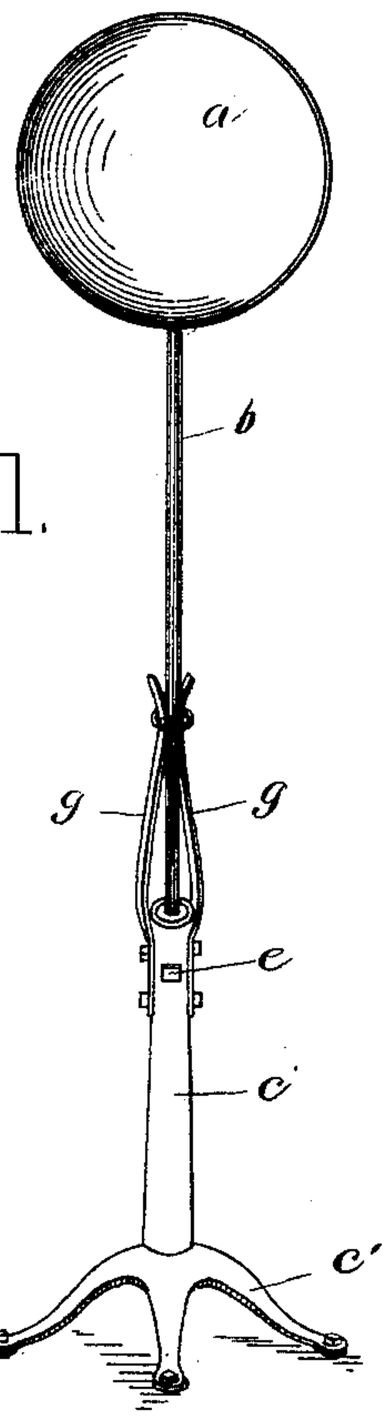


FIG. 2

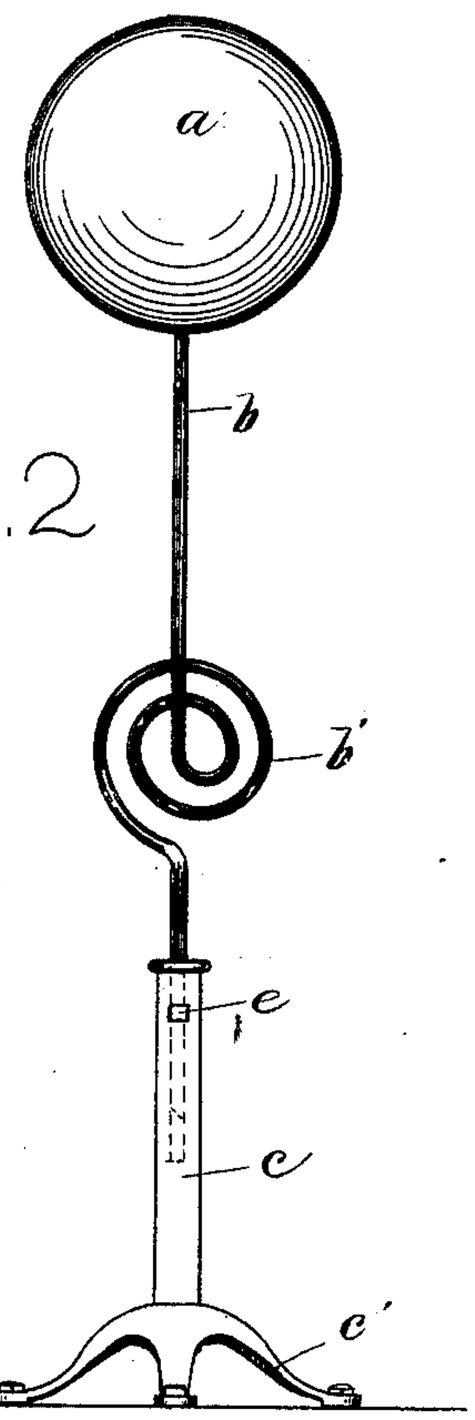


FIG. 4.

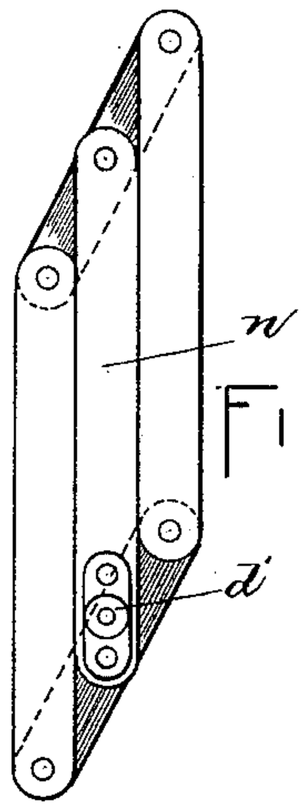
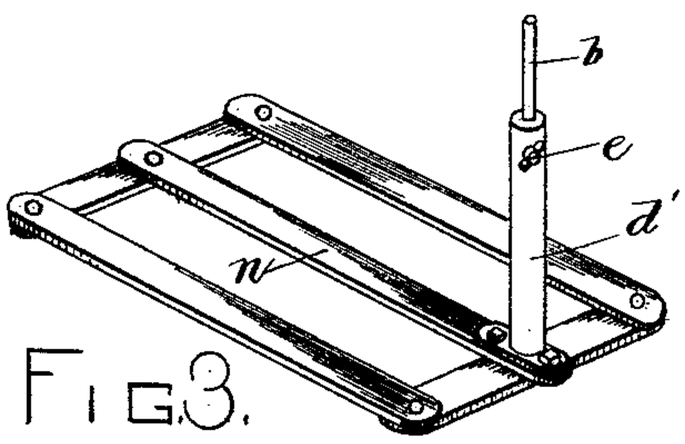


FIG. 3.



WITNESSES:

A. D. Harrison

W. C. Ramsay.

INVENTOR:

Frank A. Widger

by Wright Brown Quinby & Otis

Attys.

UNITED STATES PATENT OFFICE.

FRANK. A. WIDGER, OF LYNN, MASSACHUSETTS.

STRIKING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 410,475, dated September 3, 1889.

Application filed April 9, 1889. Serial No. 306,635. (No model.)

To all whom it may concern:

Be it known that I, FRANK. A. WIDGER, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Striking Apparatus, of which the following is a specification.

This invention relates to striking apparatus such as are used in gymnasiums, and has for its object to provide a striking apparatus which may be used in any room without disfiguring the ceiling or having overhead attachment; and to this end it consists in the improved means for supporting and giving elasticity to the striking-bag.

Of the accompanying drawings, forming a part of this specification, Figure 1 represents a perspective view of an apparatus embodying my improvements. Fig. 2 represents a side elevation of another form of supporting-rod. Fig. 3 represents a perspective view of another form of base as open for use, and Fig. 4 a top view of the same closed.

The same letters of reference indicate the same parts in all the figures.

In the drawings, *a* represents a striking-bag of spherical form and constructed, as is usual, of rubber, inflated and provided with a covering of leather. Said bag is supported by an elastic or resilient standard or supporting-rod *b*, which is preferably of hickory or other flexible wood, but may be of any suitable elastic or resilient material which will enable it to support the bag in a normal position and to yield to blows exerted on the bag and to quickly return the bag to its normal position. The rod is normally held in a vertical position by being placed in a socket *d*, in which it is held by the thumb-screw *e*. The standard *c*, as shown in Fig. 1, has three or more legs *c'*, which may be screwed to the floor at their ends to more firmly hold the apparatus.

When in use, the bag is struck by the fist, and, owing to the elasticity of the supporting-rod *b*, first flies in the direction of the blow, and then rebounds toward the striker. As it passes its normal point of rest, it is again struck by the fist and knocked back, only to return. By this quick and decided response to the blows a continuous and lively exercise is afforded the user.

To re-enforce the elasticity of the rod I may provide springs *g*—two or more in number—which are attached to the base *c* and bear against the supporting-rod *b*, to which they may be held by the ring *h*, inclosing them all. When the bag is struck and driven back, all of these springs resist the force of the blow, and when the force of the blow is spent all act in returning the rod and bag toward and beyond their original position, thus securing a more energetic response to the blow.

In all previous striking apparatus the bag, being either suspended freely or loosely supported, has had too free a movement and too extended a rebound, knocking the user down at times, or acquiring a side oscillation, which has had to be overcome before further use. In my improved form of machine the rebound is not sufficiently extended to reach the user and the tendency to side oscillation is much less.

It may be desirable at times to give the striking-bag somewhat greater freedom of movement than is afforded by a supporting-rod of hickory. In this case I prefer to use a metal supporting-rod with a spirally-coiled portion *b'*, which gives the greater extent of movement while preserving the elasticity. The metal rod, with the vertical spiral, is adapted to be used with the same standard as the hickory rod *b*.

To avoid attaching the base to the floor by screws or otherwise, I may provide a folding base of greater extent, as shown in Figs. 2 and 3, which will fully uphold and steady the supporting-rod without such attachment. Said folding base may be composed of bars or slats *m* and cross-bars *n*, secured together pivotally by the pins or bolts *o*. The central cross-bar *n* has a boss or socket *d'* for receiving the rod *b*, which may be held therein by the thumb-screw *e'*. Re-enforcing springs may be used with this base, as with the first form.

When not in use, the rod and bag are removed from the base and the latter folded, as shown in Fig. 4.

I prefer to place the socket *d'* at one end of the central cross-bar, since greater resistance will then be offered to a blow tending to overturn the striking apparatus. If the person

exercising stands on the side of the bag opposite the base-frame, the whole extent of its surface resists the blow, or if he stands upon the frame on the side opposite the socket and bag the weight of his body prevents the standard from giving way.

With either form of base no overhead attachment is needed, so the apparatus can be used in any room without disfiguring the ceiling or any special preparation thereof for using the apparatus, and it can as well be used in a gymnasium with a high ceiling without providing a striking or rebounding board above or any overhead attachment. With the folding base no attachment to the floor is needed, and the apparatus may be moved to any place or room for use. The adjustability of the resilient standard in the socket on the base or pedestal enables the bag to be adjusted to the height of the person striking.

I claim—

1. In a striking apparatus, the combination of a hollow bag of yielding material, an elastic or resilient standard supporting said bag, and a base or pedestal having a socket in which said standard is vertically adjustable, as set forth.

2. The combination of the flexible bag, the resilient supporting-standard, and a base having re-enforcing springs bearing on said standard, as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 25th day of March, A. D. 1889.

FRANK. A. WIDGER.

Witnesses:
E. C. PHILLIPS,
C. F. BROWN.