(No Model.) 2 Sheets—Sheet 1.

B. A. McFADDEN.

EXERCISING MACHINE.

No. 602,517. Patented Apr. 19, 1898.

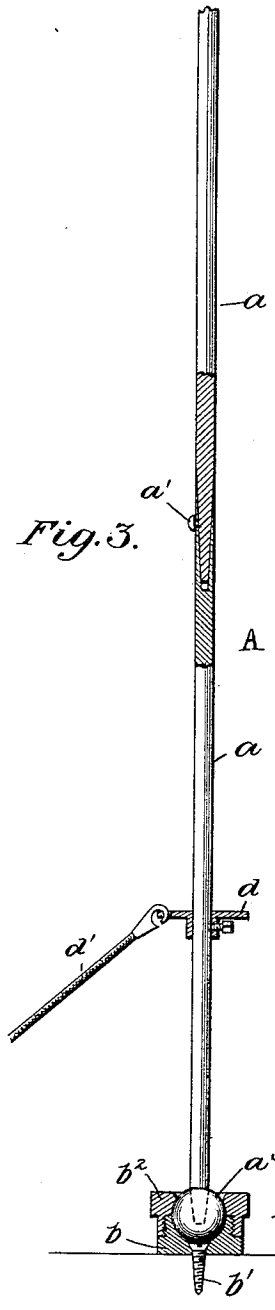

Fig. 3.

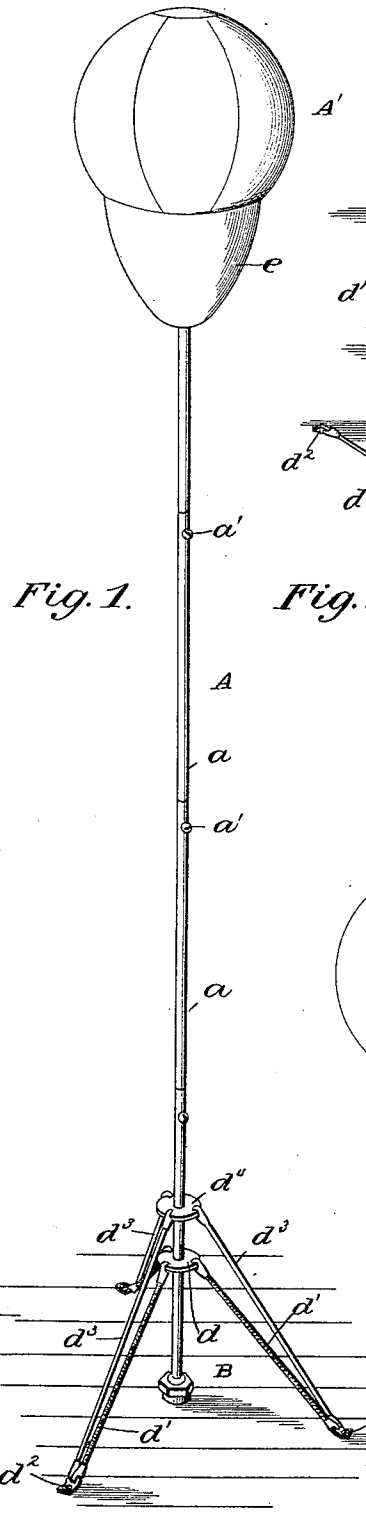

Fig. 1.

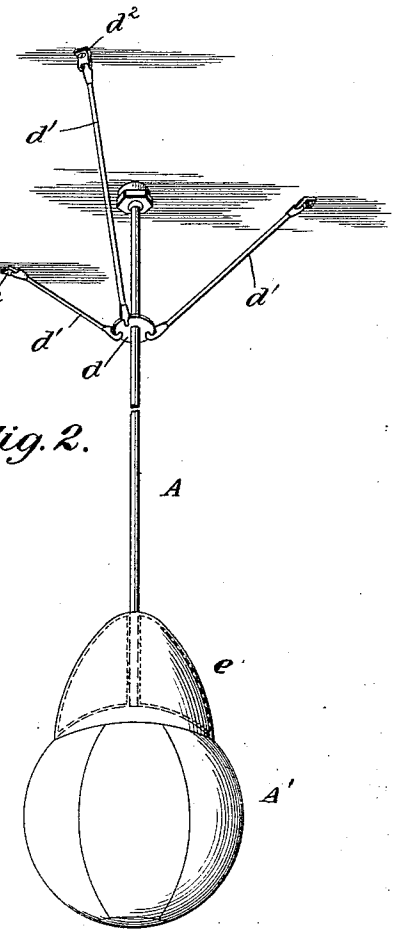

Fig. 2.

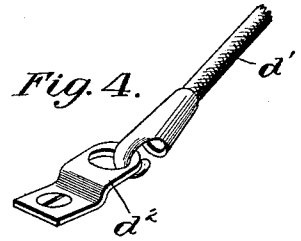

Fig. 4.

WITNESSES.

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(No Model.) 2 Sheets—Sheet 2.

B. A. McFADDEN.

EXERCISING MACHINE.

No. 602,517. Patented Apr. 19, 1898.

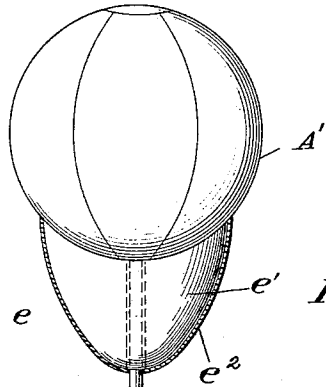

Fig. 8.

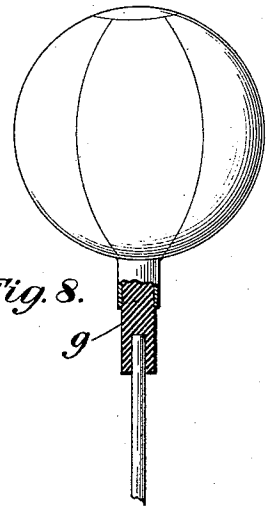

Fig. 6.

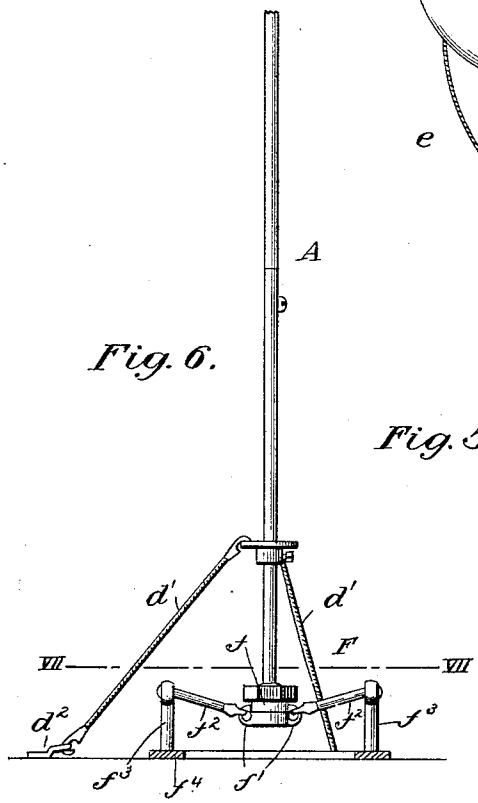

Fig. 5.

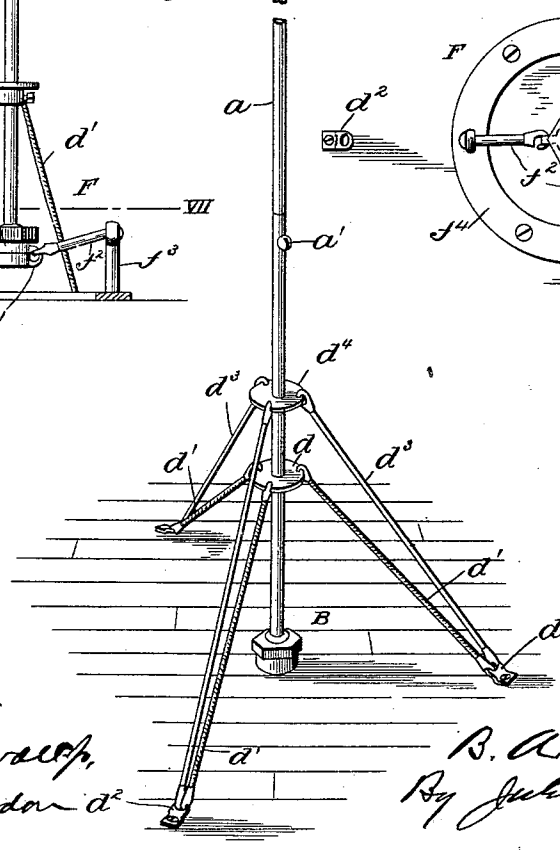

Fig. 7. d^2

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UNITED STATES PATENT OFFICE.

BERNARD A. McFADDEN, OF NEW YORK, N. Y.

EXERCISING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 602,517, dated April 19, 1898.

Application filed May 10, 1897. Serial No. 635,770. (No model.)

To all whom it may concern:

Be it known that I, BERNARD A. McFADDEN, a citizen of the United States, residing at New York, in the county of New York and State of New York, have invented certain new and useful Improvements in Exercising-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to exercising-machines, but more particularly to punching-bags.

The primary object of the invention is to provide a simple, light, and inexpensive apparatus adapted to be readily secured to or supported upon the floor or ceiling of a building or in various positions without a separate or special structure therefor and to be taken apart and placed in a very small compass for transportation or storage purposes, whereby a pleasing and healthful exercise may be afforded and at the same time avoid many of the objectionable features of such machines as ordinarily constructed.

A further object of the invention is to provide a simple and efficient machine by which a graduated or adjustable speed return of the bag may be secured.

The invention will be hereinafter more particularly described in connection with the accompanying drawings, which form a part of this specification, and then pointed out in the claims at the end of the description.

Referring to the accompanying drawings, wherein similar letters of reference refer to similar parts, Figure 1 is a general perspective view of the invention in position for use and supported upon the floor. Fig. 2 is a perspective view of the invention in an inverted position and supported from the ceiling, the standard or rod being partly broken away. Fig. 3 is a fragmentary detail vertical sectional view, partly in elevation, of one form of standard and supporting device therefor. Fig. 4 is a detail perspective view of one of the plates, illustrating how the flexible connections may be attached to the floor or other fixture. Fig. 5 is a perspective view of the machine on an enlarged scale, the protector below the bag being partly in section and the standard partly broken away. Fig. 6 is a fragmentary elevation, partly in section, of another form of machine or apparatus embodying my invention, illustrating another means for supporting the lower end of the standard. Fig. 7 is a sectional plan view taken on the line VII VII of Fig. 6, the connections being removed; and Fig. 8 is a detail showing a modification of the protector.

In the drawings, A may designate a standard, which may be a flexible steel rod of any desired form and thickness and either formed in one piece or comprising two or more sections a, or said standard may be a flexible wooden rod provided with a steel center, or may be of any suitable construction. The sections a of the standard may have one end thereof tapered and adapted to fit similarly-formed sockets or recesses in the next adjacent section, as shown in Fig. 3, and the two sections secured together by a screw, as at a', though other means for securing the sections together may be employed, or the standard may have the sections thereof formed either telescopically or otherwise, so that it may be adjusted to various heights. At one end of the standard a bag A′ may be secured, while its other end may be provided with a ball, as at a^3, adapted to fit into the socket-piece b of a supporting device B. This socket-piece may be rigidly secured to the floor or other fixture by a screw, as at b', or otherwise and may have its upper end screw-threaded and fitting the screw-threaded end of a cap b^2, so as to prevent upward movement or the withdrawal of the standard from said socket-piece, though instead of the screw-threaded connection the cap and the socket-piece may be secured together in any preferred manner. By this means the standard may have a universal-joint connection with the floor, ceiling, or other support, so that its upper portion may move freely in various directions.

For the purpose of holding the standard in its normal position or at substantially right angles to the support-fixture and to provide a graduated or adjustable return for said standard and the bag I may arrange a series of flexible connections between the standard and the floor or fixture. The standard A may have a disk or collar d secured thereto at a suitable distance above the supporting de-

vice B. This collar or disk may be secured to the standard by a set-screw or otherwise, so as to be adjustable, and said collar may have a series of apertures or other engaging portions adapted to be engaged by hooks secured to suitable non-elastic connections d', as rope and the like, while the lower ends of said connections may be provided with hooks adapted to engage suitable plates, as at d^2, secured to the floor or fixture, thus adapting the connections to securely hold the standard in its normal position and to be readily attached to or be disconnected from the standard and the floor. The plates d^2 may be of any desired number, corresponding to the number of connections (usually three) arranged radially around the standard, so as to properly compensate for the strain thereon, and may be simply a strip of metal provided with a screw-hole in one end as a means for securing the same to the fixture, and its other end offset and provided with an aperture adapted to be engaged by the hooks of the connections. The manner of securing the connections to the fixture and to the standard may be varied, and the plates d^2 may be of any desired form, and instead of using a screw as a securing means said plates may have a shank or point formed on their lower surface, adapted to be forced into the surface of the fixture. A series of resilient or elastic connections d^3, provided with hooks on their ends, similar to the connections d', may each be connected at one end to a collar d^4, secured to the standard above the collar d, and its other end connected to the plates d^2 or other portion of the floor or other fixture. The collars d and d^4 may be similarly formed and secured to the standard, and the connections d^3 may correspond in number to the connections d'. The connections d' serve to rigidly hold the lower portion of the standard below the collar d against any movement, and when used alone will secure a moderately-quick return movement of the standard by reason of the spring or flexibility thereof, while by using the elastic connections d^3, together with the non-extensible connections d', the return movement will be assisted by said elastic connections and a very quick return thereby secured. By dispensing with or detaching the connections d' and using simply the elastic connections d^3 a slow return movement of the standard and bag may be obtained for the reason that the return movement depends on the elasticity of said connections and not on the resiliency or spring of the standard or their combined action.

The bag A′ is secured to the standard A in any desired manner, and pendent from said bag and surrounding the upper portion of the standard is a protector e, adapted to prevent striking the standard and injuring the hands should the blow be directed too low while punching the bag. This protector is preferably pneumatic, and may be of any suitable form or size, and may have a central tubular portion through which the upper end of the standard may pass, so as to be secured to the bag. The protector may comprise an inner pneumatic sack e', and may have a leather cover, as at e^2, (shown in section in Fig. 5,) and may be secured to the bag or be independent thereof, said protector, like the bag, being provided with suitable means for inflating purposes, though it will be understood that the protector may be filled with fibrous or other yielding material instead of being pneumatic. The protector may be somewhat smaller in diameter than the bag and, as shown, is substantially semi-elliptical in form, the outer surface thereof inclining with a gradual curve from the bag to the standard.

The construction and operation of the invention will be readily understood from the foregoing description when taken in connection with the accompanying drawings.

It will be seen that by the arrangement shown in Figs. 1 and 5 a very quick return of the standard and bag is secured, owing to the assistance rendered by the elastic connections d^3, while if the non-elastic connections are detached or dispensed with a slow return may be secured, for the reason that the return depends almost if not entirely on the elasticity of said connections; or, if the elastic connections are detached or dispensed with, as shown in Figs. 2 and 3, the return movement of the bag will be moderately quick and will depend entirely on the spring or resiliency of the standard.

I thus provide a simple, light, and efficient exercising-machine adapted to be supported either upon the floor or upon the ceiling of a building, and when supported upon the latter it may be so adjusted as to take the place of the bag requiring a special ceiling to rebound from, thus dispensing with this cumbersome and unsightly affair, but still securing the same advantages, and at the same time provide a machine or apparatus that may be readily placed in position or taken apart and packed in a small space either for storage or transportation purposes.

In Figs. 6 and 7 instead of rigidly holding the lower end of the standard to the floor or fixture the standard is supported above the floor in order to give a greater range of motion to the bag. Here the standard may be connected to the floor by simply the non-elastic connections or the elastic, or a combination of the two, in a similar manner to that hereinbefore described. The lower end of the standard may be arranged in a device f, similar to the support B, so as to provide a universal-joint connection with the standard. This device f forms a part of the support F and may be provided with ears or lugs f' on either the cap or the socket-piece, which may be connected by elastic connections f^2 to uprights or standards f^3, projecting upwardly from a suitable base f^4, though it is to be understood that any suitable means may be employed for supporting the standard in a hang-

ing or suspended position. By the means shown the lower end of the standard, instead of being rigidly held to the fixture, may move laterally, together with the device *f*, thus permitting the bag to swing farther, so as to secure a greater range of movement.

The protector may be a solid rubber bar or rod, as *g*, Fig. 8, instead of a pneumatic protector, as shown in Figs. 1, 2, and 5. This rubber bar may be of any desired form and may be secured at one end to the standard and at its other end to the ball or bag. The protector *g* gives greater elasticity and freedom of movement to the bag, and when used the elastic connections attached to the fixture and to the standard may be dispensed with.

Having thus fully described my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. In an exercising-machine, the combination of a standard carrying a bag at one end and connected to a suitable support at its other end, a set of non-elastic connections attached to said standard and to the support for maintaining said standard in an upright position, and a set of elastic connections attached to the support and to said standard, substantially as described.

2. A machine for exercising, comprising a standard, a bag arranged on one end of said standard, an attaching device on the other end of the standard adapted to be secured to the floor or ceiling, non-elastic connections adapted to be secured at one end to the floor or the ceiling and at the other end to said standard, and elastic connections also connected to the floor or ceiling and to the standard, whereby a very quick return movement of the bag and the standard may be secured, substantially as described.

3. An exercising-machine, comprising a resilient sectional standard, a bag arranged on one end of said standard, a universal-joint attaching device on the other end of the standard adapted to be secured to a suitable support, non-elastic connections secured at one of their ends to the standard and adapted to be secured at their other ends to the said support, and elastic connections also secured to the standard and to the support intermediate the bag and non-elastic connections, substantially as described.

4. An exercising-machine comprising a standard, a bag on one end thereof, and an attaching device on the other end of said standard adapted to be secured to a suitable support, a collar or disk secured to the standard intermediate the bag and the support, a series of plates adapted to be secured to the floor or fixture, and a series of connections extending from the said plates to the said collar, substantially as described.

5. In an exercising apparatus the combination of a punching-bag and its supporting-standard; with a protector mounted on the standard below the bag and comprising an inner pneumatic sack e' and an outer cover e^2, said protector being fitted closely to the bag and having a central tube for the passage of the standard, substantially as described.

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

BERNARD A. McFADDEN.

Witnesses:
W. E. SCAMMON,
J. H. WILLETT.