DEVICES.

No. 885,927. PATENTED APR. 28, 1908.

F. HULSMANN.

PUNCHING BAG APPARATUS.

APPLICATION FILED JAN. 28, 1908.

#885,927.

Fig. 1

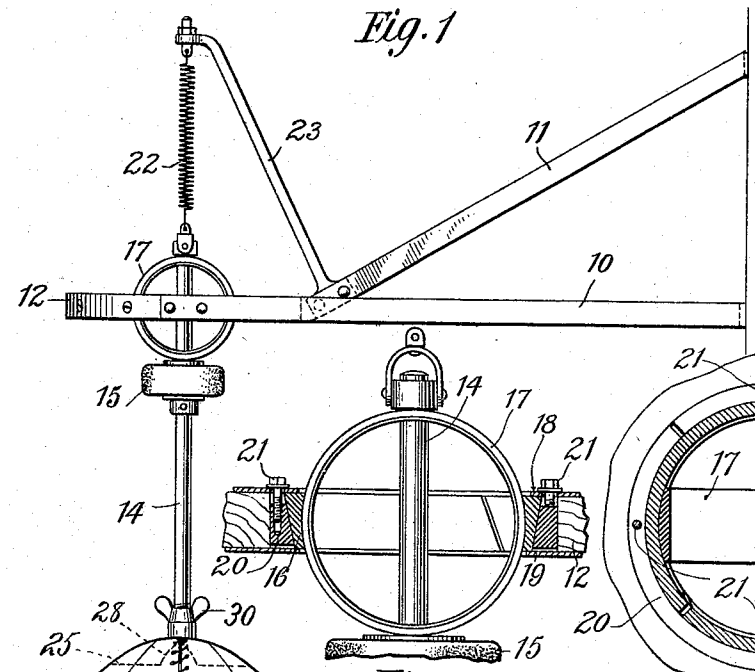


Fig. 3

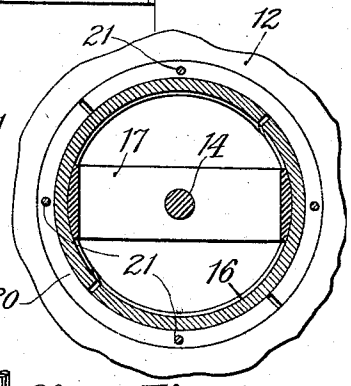


Fig. 4

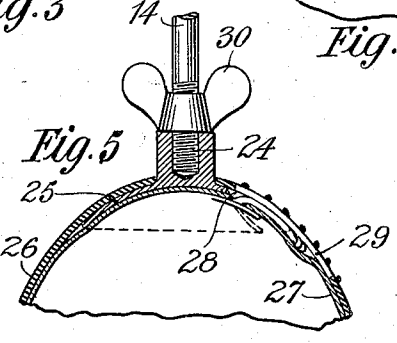
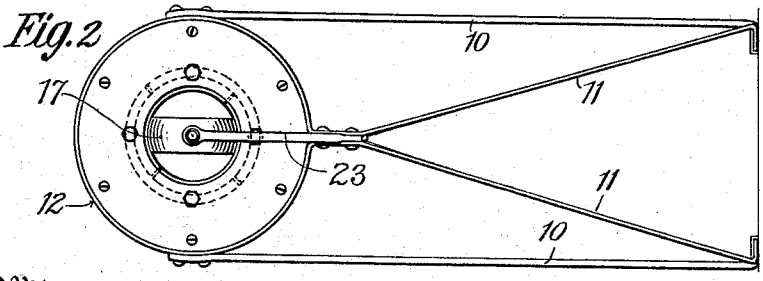


Fig. 5

Fig. 2



Witnesses:
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DEVICES, &c.

ED STATES PATENT OFFICE.

FREDERIC HULSMANN, OF NEW YORK, N. Y.

PUNCHING-BAG APPARATUS.

No. 885,927. Specification of Letters Patent. Patented April 28, 1908.

Application filed January 28, 1908. Serial No. 413,017.

To all whom it may concern:

Be it known that I, FREDERIC HULSMANN, 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 Punching-Bag Apparatus, of which the following is a specification.

This invention relates to punching-bag apparatus of the type wherein the bag is suspended by an arm or rod having a universal mounting in the overhead support and having also a buffer such as a rubber boss, which strikes against a plate of relatively-small area, whereby a rebound is secured without causing the bag itself to strike against a ring or platform. Punching-bag apparatus of this character is, as regards the mode of rebound, much less noisy than the rebounding-bag style, is less damaging to the bag and its suspending member, and occupies less room, but hitherto has been defective in essential particulars which have hindered its practical adoption.

My invention aims to overcome prior defects, which I have found to reside principally in the mode of mounting the suspending-rod to give it universal swinging movement; in the absence of adequate means for effecting a quick return of the bag toward its vertical position, particularly when struck with only partial force which fails to carry the buffer against the striking plate; and in the absence of proper connections between the bag and its suspending-rod which will allow the bag to be readily inflated and yet afford a durable connection capable of surviving the rough usage administered.

The manner in which my improvements are effected will now be more particularly ascertained by describing a preferred embodiment thereof.

Figure 1 of the accompanying drawings represents a side elevation of the improved punching-bag apparatus. Fig. 2 represents a plan view. Fig. 3 represents a vertical section of the universal joint. Fig. 4 represents a horizontal section thereof. Fig. 5 represents a vertical section of the bag and rod connection.

In the drawings, 10, 11 are supporting-rods or brackets for attachment to a wall, and 12 is an annular rebounding-plate mounted at the outer end of said brackets.

13 is the striking-bag and 14 is its suspending-rod having a universal mounting within the plate 12 and having just below said mounting a rubber buffer 15 which strikes against the rebounding-plate when the bag is struck with full force and limits the swinging movement of the bag while at the same time causing it to rebound toward a vertical position.

The universal joint as shown is composed of a horizontal socket-ring 16 fixed within the plate 12 and a complemental ring 17 attached to the rod 14 and having a universal bearing in said socket-ring. These rings are equivalent to the middle zones of concentric spheres and the ring 17 is traversed diametrically by the rod 14 and stands with its plane at right-angles to the ring 16 when the rod is in a vertical position. It is however capable of universal movement within the ring 16 through wide angles, permitting the bag 13 to be struck and swung in any direction. While I do not claim broadly the use of a universal joint for this situation it will be evident that the construction described gives an ample and durable universal bearing which will stand the shocks of usage and yet operate without undue friction, thus allowing the bag to return very quickly after being struck. These qualities are very important and have not heretofore been attained in punching-bag apparatus of this character so far as I am aware.

It is desirable to have some provision for adjusting the universal joint to take up wear and for this purpose I have shown the socket-ring 16 made in segments, as most clearly seen in Fig. 4, and capable of radial adjustment between upper and lower plates 18, 19 on the rebounding-plate 12. The segmental ring 16 is backed by a wedge ring 20, also in segments, which may be drawn up by means of bolts 21 to decrease the diameter of the socket-ring 16.

The upper end of rod 14 is extended slightly beyond the ring 17 to afford connection for the lower end of a centralizing - spring 22 whose upper end has a fixed connection with a bracket arm 23. This spring tends to bring the rod 14 toward a vertical position and it comes into action whenever the bag is moved from that position. When the bag is struck with less than force sufficient to carry the buffer 15 against the rebounding-plate 12, spring 22 gives a quick return to the bag which is very desirable, and it is to be noted that its returning power increases with the amplitude of movement of the bag, for the

wider the arc in which the bag is swung the more the spring is extended by a departure of the upper end of rod 14 from the vertical. This spring also decreases the shock of impact between buffer 15 and rebounding plate 12 and accelerates the return of the bag when the latter has been struck with sufficient force to carry the buffer against this plate.

An improved form of connection between the rod and bag which can withstand the excessive stress due to the use of a rebounding-plate and a buffer and a substantially rigid suspending-rod, and yet will permit the bag to be readily inflated and if desired removed from its attachment to the rod, is particularly illustrated in Figs. 1 and 5. I attach the end of the rod 14 by a screwed joint 24 to an upwardly-projecting boss on a cup-shaped reinforcing plate 25, the body of which is mounted between the outer case 26 and the inner inflatable sac 27. A cleft 28 formed in said plate under the usual laced slit 29 in the outer casing through which the inner sac is reached contributes to the ease of inflating the inner sac and removing or replacing it while in deflated condition. The bag at any time can easily be detached from rod 14 at the joint 24 and for securing said joint I prefer to provide a lock-nut 30.

In regard to changes which may be effected without departing from the invention, it may be said that it is immaterial whether the buffer 15 be located above or below the ring 17 or in duplicate both above and below, and also immaterial whether the buffer or the rebounding plate has its surface made of yielding material. The particular shape of these members may also be varied and other structural changes effected, all of which will be understood without special illustration.

I claim:—

1. In punching-bag apparatus, the combination of a striking-bag, a suspending-rod therefor, a support for said rod, a universal connection between said rod and support comprising a relatively-narrow socket ring mounted on this support, and a second ring attached to said rod and having a universal sliding bearing in the socket ring, a rebounding member on the rod, and a rebounding plate surrounding the universal joint.

2. In punching-bag apparatus, the combination of a rebounding plate, a striking-bag, a suspending-rod for said bag having a universal mounting within said plate and an extension above said mounting, a rebounding member on the rod for coacting with said plate, and a rod-centralizing spring having its upper end fixed and its lower end attached to the rod extension.

3. In punching-bag apparatus, the combination of a fixed rebounding-plate, a bag-suspending rod having a universal mounting within said plate and a buffer to rebound against the plate, a bag at the lower end of the rod comprising an inner inflatable sac and an outer casing having a slit to afford access to the sac, and an attaching and reinforcing plate mounted on the lower end of the rod and interposed between the sac and casing, said plate formed with a cleft under the casing slit.

4. In punching-bag apparatus, the combination of a fixed rebounding-plate, a bag-suspending rod having a universal mounting within said plate and a buffer to rebound against the plate, a bag at the lower end of the rod comprising an outer casing and a removable inner inflatable sac, a cup-shaped plate interposed between said casing and sac at their upper ends, and means for detachably securing said plate to the lower end of the rod.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses, the 24th day of January, 1908.

FREDERIC HULSMANN.

Witnesses:
G. W. HOPKINS,
R. M. PIERSON.