Jan. 9, 1940. E. BULLIS ET AL 2,186,403

STRIKING BAG STAND AND ATTACHMENT

Filed April 3, 1937

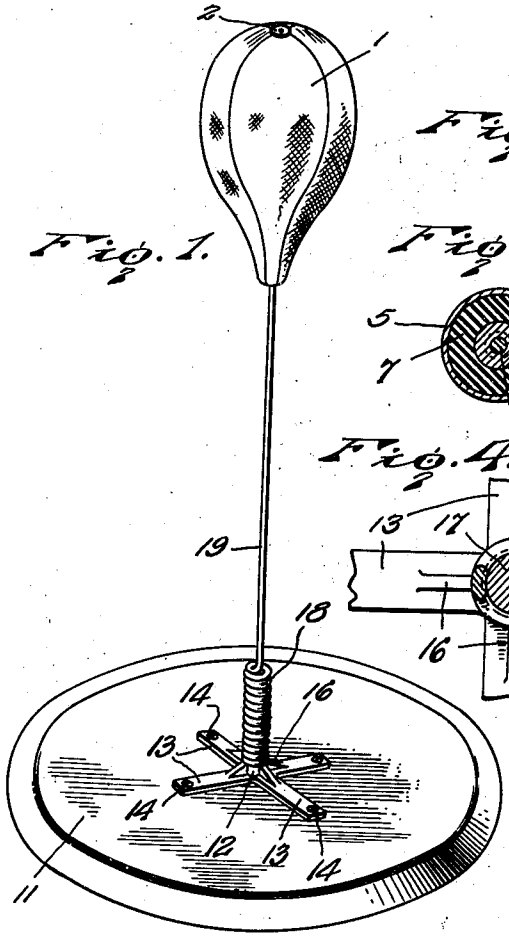


Fig. 1.

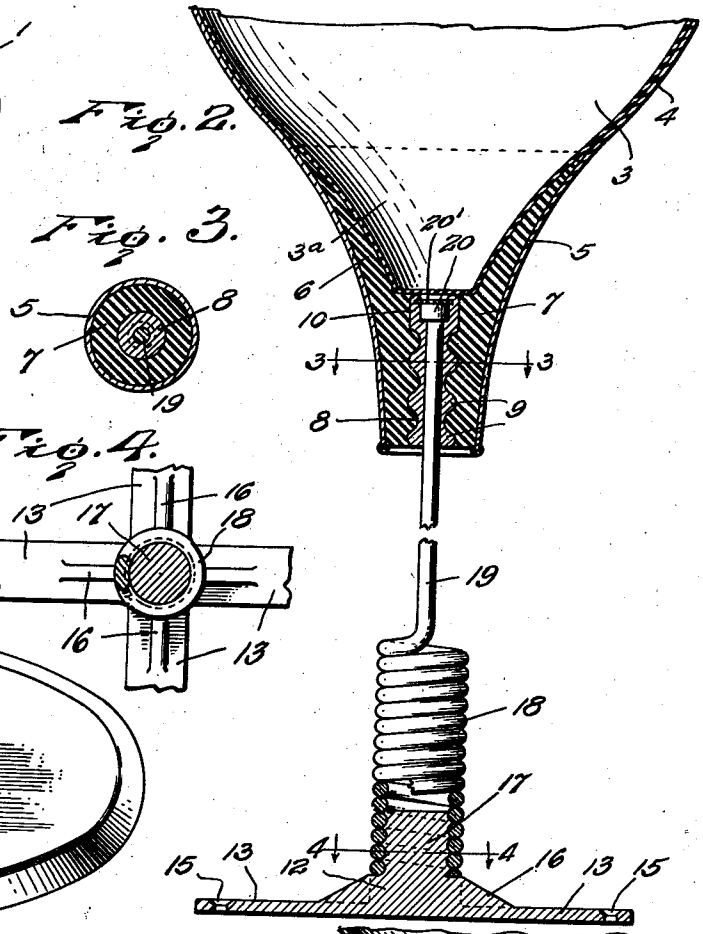


Fig. 2.

Fig. 3.

Fig. 4.

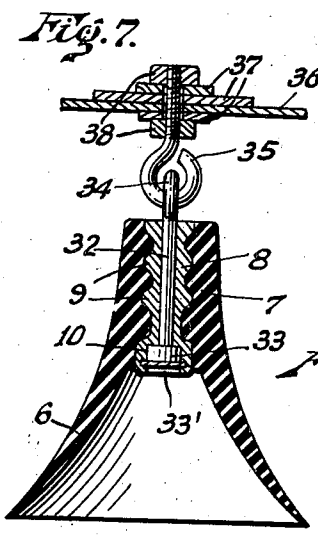


Fig. 7.

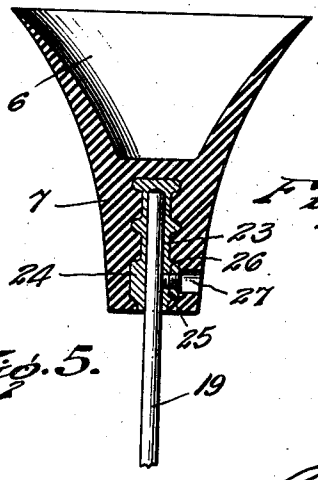


Fig. 5.

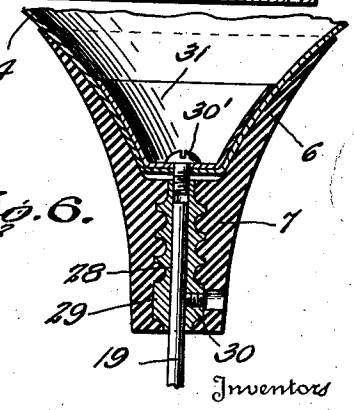


Fig. 6.

Inventors

E. Bullis.

M. Stechler.

By Lacey & Lacey,

Attorneys

Patented Jan. 9, 1940 2,186,403

UNITED STATES PATENT OFFICE

2,186,403

STRIKING BAG STAND AND ATTACHMENT

Earl Bullis, Amsterdam, N. Y., and Max Stechler, Chicago, Ill.

Application April 3, 1937, Serial No. 134,912

7 Claims. (Cl. 272—78)

This invention relates to an improved striking bag which may be either of the type suspended from an overhead support or of the floor type in which case the bag is supported upon the upper end of a staff rising from a floor-engaging base and yieldably maintained in a vertical position.

One object of the invention is to provide the bag with improved means for connecting it with either the overhead support or the upper end of the staff and to so form the mounting means that, when the bag is in use, transverse strain created by hitting the bag will be distributed over a large area and thus prevent the bag from being torn loose from the support or distorted out of a position in axial alinement with the staff in case the bag is connected with a support of the floor type instead of being suspended from an overhead support.

It has been found that, when a striking bag is supported in a conventional manner and blows delivered upon the bag which tend to impart a turning or spinning movement to it, this turning movement will weaken the support and cause bag-suspending straps to be broken.

It is, therefore, another object of the invention to provide a support which will permit the bag to turn freely about a metal rod or bolt forming part of the support and thus eliminate elements which are liable to be weakened and broken by twisting motion when the bag is in use.

Another object of the invention is the provision of a support so constructed that it may be mounted in the smaller end of the leather or fabric cover of a punching bag with the tapered portion of the bladder of the punching bag fitting snugly into a cup-shaped portion of the support. By this arrangement of parts pressure will be exerted when the bladder is inflated and the cup-shaped portion of the support which fits within the cover will be firmly held in place.

It is another object of the invention to so form the cup-shaped portion of the attachment that, when it is disposed within the cover of the punching bag and the bladder inflated, the external appearance of the bag will not be changed and, therefore, the bag will have a conventional outline and a person using the striking bag will not have to become accustomed to a new type of bag.

Another object of the invention is to provide an improved type of staff or supporting rod for a striking bag and so form the same that its lower portion will be resilient and thus maintain the rod or staff normally in a perpendicular position while at the same time allowing the staff or rod to swing transversely when the bag is struck.

Another object of the invention is to provide the rod or staff with an improved floor-engaging base so constructed that the helical spring at the lower end of the bag-supporting rod or staff may be easily applied thereto and, when in place, be very firmly held in engagement with the base.

The invention is illustrated in the accompanying drawing, wherein:

Figure 1 is a perspective view showing a striking bag mounted upon a support of the floor type having the improved construction,

Figure 2 is a view showing the lower portion of the striking bag in section and the improved support principally in vertical section and partially in elevation,

Figure 3 is a sectional view taken along the line 3—3 of Figure 2,

Figure 4 is a sectional view taken along the line 4—4 of Figure 2,

Figure 5 is a sectional view showing a bag-engaging member of a modified construction,

Figure 6 is a sectional view showing a bag-engaging member of a modified construction adapted to be engaged about the lower portion of the striking bag instead of fitting within the cover of the bag about the lower end of the bladder,

Figure 7 is a sectional view of an overhead support constructed in accordance with this invention.

The punching bag or striking bag, which is indicated in general by the numeral 1, is of a conventional construction and provided with the usual inflating valve 2 so that the bladder 3 which fits within the cover 4 may be inflated in the usual manner. The opposite end portion of the cover from the valve 2 is tapered to provide the usual neck 5 into which the tapered end 3a of the bladder extends. It will thus be seen that no changes have been made in the formation of the cover or the bladder and that the improved attaching means for connecting the striking bag with an overhead support or a support of the floor type may be applied to a striking bag of a conventional construction.

In Figures 1 and 2, the striking bag has been shown connected with a support of the floor type, but attention is called to the fact that the attaching means is of a special construction and also the support is of a new and improved formation. The attaching member, which is indi-

cated by the numeral 6, has a cup-shaped body formed of rubber and the walls are gradually reduced in thickness to a feathered edge at the free marginal edge of the cup so that, when the attaching member is placed within the cover with its neck enclosed by the neck of the cover, the cup-shaped body of the attaching device will fit snugly between the cover and the tapered end portion 3a of the bladder. This provides a good fit between the attaching device and the striking bag, and it should also be noted that since the tapered end of the bladder fits snugly within the cup-shaped body of the attaching device pressure is exerted when the bladder is inflated and will cause a tight wedging fit between the attaching device and the neck of the cover, and the attaching device will be firmly held in place. The fact that the attaching device fits snugly within the tapered end portion of the cover about the tapered end portion of the bladder will cause transverse strains created when the bag is struck to be distributed over a large area of the tapered end portion of the bag and likelihood of the bag being torn loose from its support will be eliminated. A metal bushing or core 8 extends through the neck 7 axially thereof and is formed with external circumferentially extending ribs 9 in order that the metal core will be prevented from slipping longitudinally through the neck and moving out of its proper position therein. The inner end portion of the bore of the tube is of an increased diameter, thus providing the tube or core with a socket 10 at its inner end, and this socket is open at both ends in order that the attaching member may be operatively connected with a support which may be of the floor type or the overhead type. Frictional binding between the core and the rubber may be depended upon for removably holding the core in the neck or cement may be used to cause them to adhere to each other.

The floor type support includes the usual platform 11 which may be formed of wood or other desired material and may be of circular outline or any other desired shape. The base 12 of the support which may be referred to as a mounting bracket is formed of strong metal and is provided with radiating feet 13 through which screws or equivalent fasteners 14 are passed to hold the base firmly in place at the center of the platform. Openings 15 are formed through the feet to receive the screws, as shown in Figure 2. Ribs 16 which are formed at the junction of the feet with the base reinforce the feet and base and prevent them from being broken when subjected to strain. A neck 17 extends upwardly from the base and is externally threaded so that it may have threaded engagement with the convolution of a helical spring 18 provided at the lower end of a rod or standard 19. This spring has its convolutions closely wound so that they have contacting engagement with each other and provide a helical spring of the type known as an initial tension spring. The fact that the convolutions of the spring have contact with each other causes them to resist transverse flexing of the spring and, therefore, when the spring is flexed transversely by the force of a blow delivered upon the striking bag, the resiliency of the spring will return it to a vertical position and transverse distortion of the spring will be prevented. Attention is also called to the fact that, as initially formed, the spring has an internal diameter slightly less than the diameter of the neck. Therefore, when the spring is screwed into place about the neck, it will be expanded somewhat and it will have tight gripping engagement with the neck. This will prevent the spring from working upwardly out of its proper position about the neck. In the embodiment of the invention shown in Figures 1 and 2, the spring and the rod or standard 19 are formed from a single strand of resilient metal having one end portion coiled to form the spring and the remainder of the rod being left straight. At its upper end the metal rod or standard is formed with a head 20 of dimensions adapting it to be snugly received in the socket 10. Since the socket and the head are of cylindrical formation, the metal insert or core 8 may turn about the standard in case it is desired to permit this action to take place. A disk 20' is secured in the upper end of the core for limiting upward movement of the rod through the core and preventing the head 20 from puncturing the lower end of the bladder 3. If it is desired to prevent turning of the attaching device about the rod, a set screw may be passed through the core with its inner end engaging the rod.

When a striking bag mount, as shown in Figures 1 and 2, is in use, it will be supported in an upright position. When the bag is struck, it will be impelled transversely and the rod will be swung laterally. The fact that the core extends along the rod for quite a distance prevents the strain from being applied to the rod at the extreme upper end thereof, and since the attaching device is confined in the cover of the bag and encloses the tapered lower portion of the bladder will cause strain to be distributed over a relatively large area of the lower portion of the bag. Therefore, the bag and the rod will move together as a unit instead of the bag being tilted at its junction with the rod and the bag will not be liable to be distorted laterally or broken loose from the upper end of the rod. In view of the fact that the closely wound convolutions of the spring serve to resist transverse bending of the spring, the spring will at all times return to a vertical position after a blow has been struck and lateral distortion of the spring will be prevented.

In Figures 5 and 6, there have been shown modified forms of attaching members for connecting the bag with the upper end of the rod or standard. Referring to Figure 5, it will be seen that a metal bushing or core 23 is mounted in the neck of the carrier but this core terminates in spaced relation to the upper end of the neck instead of extending entirely through it and is closed at its upper end in order that, when the upper end portion of the resilient rod 19 is thrust into this core, its upward movement therein will be limited and the attaching device will be well supported upon the rod. In using this form of attaching device, the head 20, shown at the upper end of the rod 19 in Figure 2, is omitted. The lower portion of the core is thickened, as shown at 24, and a threaded opening 25 is formed through this thickened portion to receive a set screw 26 which, when tightened, will grip the rod and hold the attaching device firmly in place thereon. An opening 27 is formed through the neck in alinement with the threaded opening 25 to receive a screw driver and permit the set screw to be tightened or loosened. The attaching device shown in Figure 6 also has a metal bushing or core 28 having a thickened lower portion 29 formed with a threaded opening to receive a set screw 30 in order that the attaching device may

be firmly secured upon the upper end portion of the resilient rod or standard 19. The upper end portion of the core or insert is exposed through the upper end of the neck centrally of the cup 6 and threaded to receive a securing screw 30' which passes through a cup-shaped clamping disk 31. When this embodiment of the invention is in use, the attaching device may be disposed about the lower end portion of the striking bag instead of fitting within the cover about the bladder. The cup-shaped disk 31 fits within the tapered lower end of the cover with the cup-shaped portion 6 of the attaching device fitting about the cover of the bag, and, when the screw 30' is passed through the opening formed at the center of the disk and screwed into the internally threaded upper end portion of the core 28, the bag will be very firmly held in place as the lower portion of its cover will be tightly gripped between the cup-shaped disk and the cup-shaped portion of the attaching device.

Referring to Figure 7, it will be seen that the attaching device may be connected with an overhead support instead of with a standard or resilient rod forming part of a floor support. The attaching device illustrated in Figure 7 is of the same construction as that shown in Figure 2 and will be mounted in the lower tapered end portion of the cover of the bag where it will be firmly held when the bladder is inflated. A metal shackle 32, corresponding in diameter to the resilient rod 19, extends through the bore of the core or bushing 8 and at its lower end is formed with a head 33 received in the socket 10 of the core. A disk 33' is provided to prevent the head 33 from puncturing the bladder. At its upper end the shackle is formed with an eye 34 which is disposed externally of the core above the upper end thereof and this eye loosely engaged with the eye of the eye-bolt 35. The threaded shank of the eye-bolt is of sufficient length to permit it to be passed through an opening formed in an overhead support 36 and carries washers 37 and securing nuts 38 which are applied, as shown in Figure 7, so that, when the securing nuts are tightened, the eye-bolt will be very firmly mounted through the opening in the overhead support. In view of the fact that the stem of the shackle 32 and its head 33 are of circular cross section, the attaching device may turn about the shackle and, therefore, when spinning motion is imparted to the ball by a glancing blow, the ball may turn about the shackle instead of being subjected to twisting strain.

Having thus described the invention, what is claimed as new is:

1. Means for attaching a striking bag to a support therefor consisting of a cup-like member of elastic material formed to fit within the small end or neck of the bag when it is laced and inflated and having an inwardly thickened neck, and an insert mounted in said neck and constituting means for attaching the cup-like member to the support in such manner that the bag shall be free to rotate, substantially on its own axis.

2. Means for attaching striking bags to supports thereof consisting of a cup-like member of resilient material formed to fit within the small end or neck of the bag when it is laced and inflated, said cup-like member having incorporated therein a metal insert having means for attaching same to a supporting member.

3. Means for attaching striking bags to supports therefor consisting of a cup-like member of resilient material formed to fit within the small end or neck of the bag when it is laced and inflated, said cup-like member having incorporated therein a metal insert having a swiveling member whereby it may be attached to a supporting member.

4. Means for attaching striking bags to supports therefor consisting of a cup-like member of elastic material formed to fit within the neck or small end of a striking bag when it is laced and inflated, said cup-like member having walls gradually increasing in thickness from a thin peripheral edge and merging into a thick neck at the base or closed end of the cup-like member, and a mounting member enclosed in the neck and constituting means for attaching the cup-like member to a support.

5. Means for attaching striking bags to supports therefor consisting of a cup-like member of resilient material adapted to fit within the small end or neck of a striking bag, part of the walls of the cup-like member being adapted to be disposed between the bag and the air containing bladder when the bladder is inflated, a thick neck for said cup-like member, and a rigid bushing enclosed in said neck and held against movement therein by circumferentially extending ribs and constituting means for attaching the cup-like member to a supporting member.

6. In a striking bag outfit of the floor type, the combination of a base, a resilient member disposed above the base and attached thereto, a supporting member extending upwardly from the resilient member, and a cup-like member of resilient material adapted for attachment to a striking bag, said cup-like member being so attached to the supporting member that it shall be free to rotate substantially on its own axis.

7. In a striking bag outfit of the floor type, the combination of a base, a resilient member consisting of a coiled spring disposed above the base, a supporting member extending upward from the spring, a cup-like member of resilient material at the upper end of the supporting member adapted to engage and hold a striking bag, and means for attaching said cup-like member to the supporting member in such manner that it shall be free to rotate substantially about its own axis.

EARL BULLIS.
MAX STECHLER.