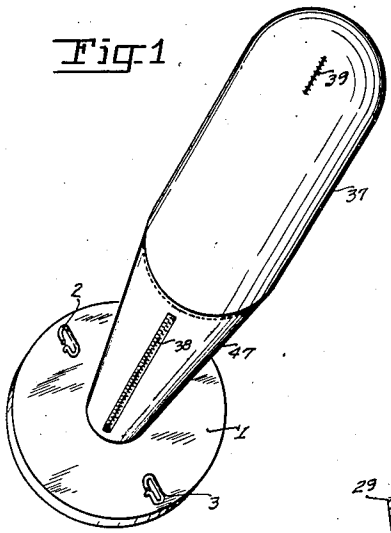
March 26, 1935. H. A. BARNICK 1,995,495

DUMMY PNEUMATIC PUNCHING BAG

Filed March 29, 1932 2 Sheets-Sheet 1

Fig. 1



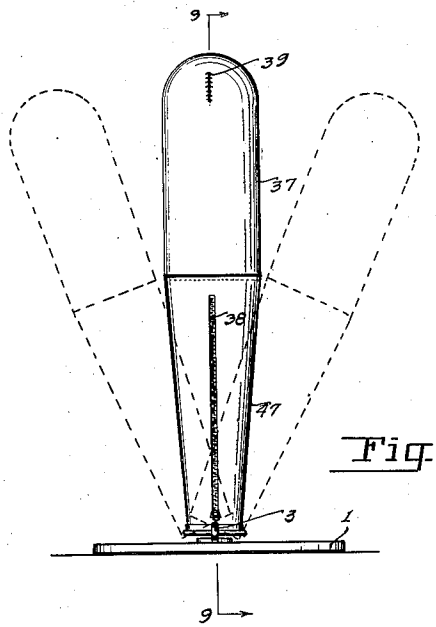


Fig. 2

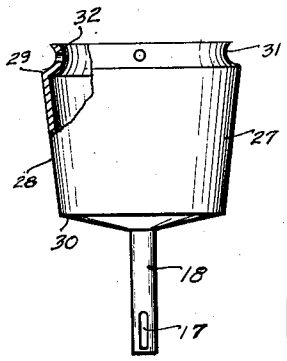


Fig. 3

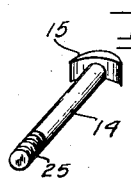


Fig. 4

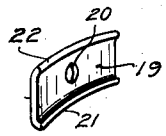
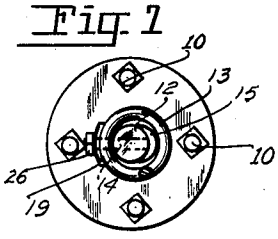


Fig. 5

Fig. 7



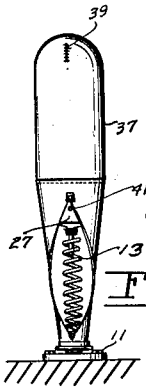


Fig. 8

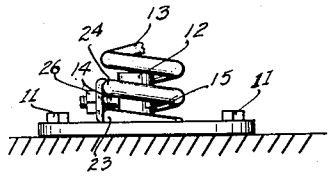


Fig. 6

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DUMMY PNEUMATIC PUNCHING BAG

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Fig. 9

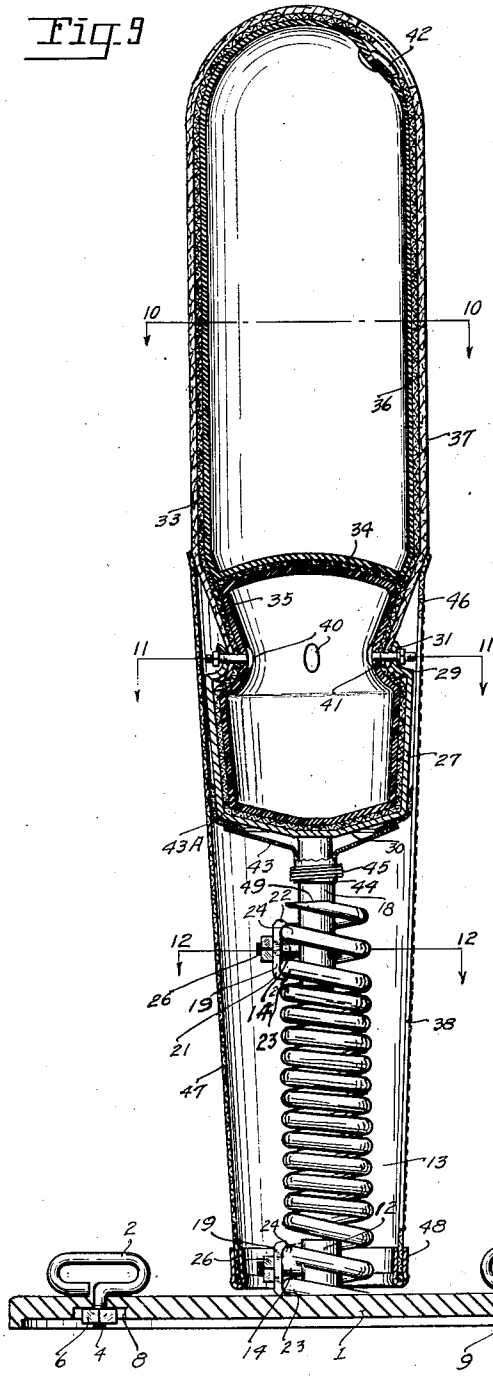
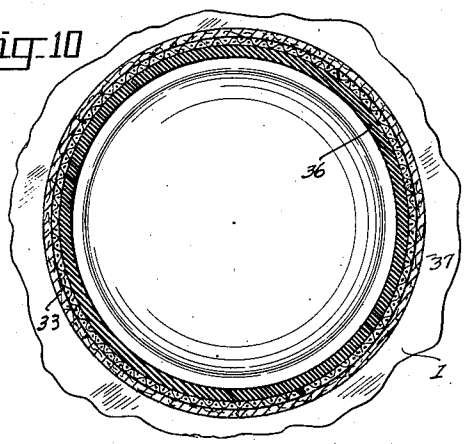


Fig. 10



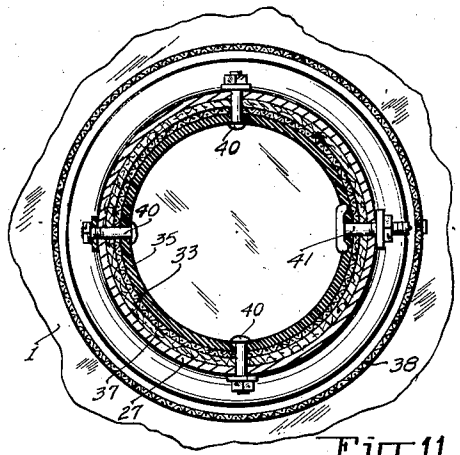


Fig. 11

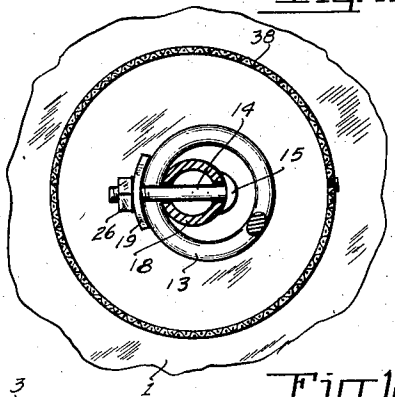


Fig. 12

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Patented Mar. 26, 1935

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UNITED STATES PATENT OFFICE

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DUMMY PNEUMATIC PUNCHING BAG

Herman A. Barnick, Portland, Oreg.

Application March 29, 1932, Serial No. 601,805

4 Claims. (Cl. 272—77)

My invention relates to punching and exercising bags.

The invention is comprised primarily of a base having handles associated with the oppositely disposed sides of the base, a central anchor post upwardly extends from the base and a reacting element, as a coil spring, is removably secured to the anchor post.

A metallic holder is provided that has a stem downwardly extending from its base. The holder is adapted for being removably secured to the upper end of the reacting element. A normally open ended casing jacket is provided and lacing members are associated with the open ends that are adapted for lacing the open ends closed. A diaphragm is disposed across the casing jacket and in spaced relation with the bottom end of the same. An air holder is adapted for being placed within the lower end of the casing jacket and within the metal holder. A valve is associated with the air holder to facilitate the same being pumped up by an air pump.

An air bag is also associated with the upper end of the encasing jacket and a valve is secured thereto to adapt the same for being pumped up. Each of the air holders is adapted for being independently pumped to develop the required working pressure within the respective bags. A skirt downwardly extends from the encasing jacket to cover the reacting element and the metal container. The skirt may be made of any suitable material, as of canvas.

The primary object of my invention is to provide a punching and exercising bag that is portable and that is so constructed that the hands and arms of the user of the same may be developed without injury to the hands and arms.

A further object of my invention consists in providing a punching bag that will be comprised of few parts and one that may be easily maintained in the highest state of utility.

And a still further object of my invention consists in providing a punching bag and exerciser that may be used in the home, in the gynasium and in any and all places where an exerciser may be required and one that is made portable and that may be easily placed out of the way when not in use.

And a still further object of my invention consists in providing an exerciser, the movements of which will resemble that of an opponent developed in sparring.

A still further object of my invention consists in providing an assembly, the resistance of which may be easily regulated to meet the requirements of the user.

A further object of my invention consists in so constructing my assembled device that the reacting tendency of the bag structure itself may be set, or predetermined to meet the requirements of the user, both as to the activity of the bag created by a spring disposed in its base and by the air pressure itself disposed within the bag or bags.

A still further object of my invention consists in placing a reacting element, as a coil spring, adjacent the base of the assembly, the pitch of which is greatest adjacent its ends and is least intermediate its ends.

A still further object of my invention consists in providing a stem for the container that has a slot disposed within the stem and through which a fastening bolt passes, to secure the stem to the reacting element, as a coil spring, the slot being made of sufficient length to facilitate the obtaining of the desired activity of the spring and the bag.

With these and incidental objects in view, the invention consists in certain novel features of construction and combination of parts, the essential elements of which are set forth in the appended claims, and a preferred form of embodiment of which is hereinafter shown with reference to the drawings which accompany and form a part of this specification.

In the drawings:

Fig. 1 is a perspective top plan view of the assembled device.

Fig. 2 is a side view of the assembled device, the dotted positions show the device as having been moved in either direction from its normal upright position.

Fig. 3 is a side view partially in section of the metal container into which the bottom of the air bag and the bottom of the container, for the bag are placed.

Fig. 4 is a perspective end view of the clamping bolt used for clamping the reacting element to the respective fastenings.

Fig. 5 is a perspective end view of the clamping washer that is associated with the clamping bolt.

Fig. 6 is a side view of a base of special type that is to be used where the device is to be permanently fixed to the floor.

Fig. 7 is a top plan view of the device illustrated in Fig. 6, with the exception that the reacting element and fastener are shown removed.

Fig. 8 is a side view of the assembly, the base of which is made as illustrated in Figs. 6 and 7.

Fig. 9 is a sectional side view of the assembled device.

Fig. 10 is a sectional end view of the primary air bag and of the encasing jackets. The same is taken on line 10—10 of Fig. 9, looking in the direction indicated.

Fig. 11 is a sectional, end view of the lower end of the bag assembly. The same is taken on line 11—11 of Fig. 9, looking in the direction indicated.

Fig. 12 is a sectional end view of the lower support and of the clamp that secures the stem of the metal container to the reacting element. The same is taken on line 12—12 of Fig. 9, looking in the direction indicated.

Like reference characters refer to like parts throughout the several views.

I preferably form my device of a base 1. Where the assembled unit is to be used as a portable unit I secure hand engaging handles 2 and 3 to the base and at the oppositely disposed sides of the base. The handles are threaded as illustrated at 4 and 5 on their ends to adapt nuts 6 and 7 thereto. The base is recessed at 8 and 9 to receive the fastening nuts thereinto.

Where the assembled unit is to be fixedly positioned to the floor, I form a plurality of holes 10, here shown as four in number, vertically within the base to facilitate the passing of fastening screws, or bolts 11 therethrough.

An anchor post 12 upwardly extends, centrally of the base. A reacting element as a coil spring 13 is disposed about the anchor. The lower end of the coil spring is disposed about the anchor post. A bolt 14, as illustrated in Fig. 4, is passed through a slitted hole disposed in the anchor post, and in the stem. The bolt is fitted within the slot 16 disposed within the side wall of the anchor post and within a slot 17 disposed within the side wall of the stem 18, the inside head of the bolt is rounded to fit the outer wall of the post and stem. A washer 19 is provided. The washer has a hole 20 disposed centrally thereof and through which the bolt 4 passes. The washer is double rimmed, as illustrated at 21, and 22 to adapt the same for engaging at least two of the turns of the coil spring as best illustrated in Fig. 6. When so used the rims engage the turns 23 and 24 of the spring. The bolt is threaded as illustrated at 25 to adapt a nut 26 thereto and for clamping the spring respectively to the post and to the stem.

A bucket like metal container 27 is provided to which the stem 18 is secured in any suitable manner. The bucket like metal container is preferably made circular in cross sectional area with the outer wall 28 uniformly decreasing in cross sectional area from the rim 29 to the bottom 30.

An annular recess 31 is provided in the upper, outer periphery of the metal container to provide a surface 32, that inwardly extends from the point of greatest diameter of the metal container as illustrated at 29. The curved surface 32 forms a bearing radius for the pneumatic bag and jacket to be placed therein. I provide a non-stretchable jacket 33 and place a diaphragm 34 across the same adjacent its bottom ends.

I provide a high pressure rubber bag 36 within the non-stretchable jacket 33 and over the respective jacket and bag assemblies I place a leather container 37. The non-stretchable canvas bag and the leather bag are open on its respective ends through which the inner rubber bags and jackets are placed and the same are laced therein by lacings 38 and 39.

A higher pressure bag 35 has a plurality of fastening bolts 40 extending therethrough and through the side wall of the holder 27. The fastening bolts also pass through the side walls of the respective outer jackets. One of the fastening bolts 41 comprises the valve stem and through which the air is pumped for the filling of the high pressure bag 35. The inner ends of the bolts are so made that they form a tight seal between the bag and the head of the bolt which prevents leakage of the air from the bag.

A valve stem 42 is disposed within the upper end of the rubber bag 36. The valve is positioned so that it comes at the point of lacing in order that the valve stem may be completely hidden within the assembly. The non-stretchable jacket 33 may be an independent bag or the same may be formed upon the inner surface of the leather jacket 37. A contractable elastic boot 43 is adapted to the stem 18 by having a neck 44 downwardly extending from the body of the elastic boot, and the same secured to the stem, as by having a cord 45 laced therearound. The non-elastic element 43A is secured upon one edge to the inside of the skirt 47 and upon its other edge to the elastic boot 43. The upper end 46 of the non-elastic skirt 47 is adapted to the outer jacket 37 in a manner so when air pressure is developed within the respective air bag closures the elastic member 43 is tensioned to the upper end of the skirt and the container 27 is covered by a material that is under tension and maintains the surface smooth and thereby completely covers the outer surface of the metallic members above the base. The upper end of the elastic member 43 does not extend to the shoulder 43A of the container as illustrated in Fig. 9. A leather cuff 48 is placed as a terminal at the bottom of the skirt.

In the operation and use of my new and improved punching bag assembly, the lower bag 35 disposed within the metal container 27 is maintained at a pressure that will hold the complete bag assembly in fixed relation with the metal container. Fastening bolts 40 are provided to maintain the bag assembly in its proper position within the container when the lower bag is being inflated or if the lower bag should become deflated. The upper bag 36 may be inflated to a pressure that is desired by the user. A low pressure may be used by the beginners in the art or by those whose hands, wrists and arms are more susceptible to injury.

Referring to Fig. 3, I place a slot 17 in the lower end of the stem 18. The top 49 of the spring is normally disposed below the bottom 30 of the container 27 so that the stem may be inserted to a predetermined amount within the spring assembly.

It will be apparent that the resiliency of the spring and the activity of the bag assembly secured thereto, will be predetermined as to the location of the fastening bolt 26 within the spring assembly.

If an inactive bag is desired, or one of lesser speed, the bolt 26 is placed near the top of the spring, whereas if a quick reacting bag is desired, the bolt will be placed farther down the spring. In addition thereto, the bolt may be positioned within the slot 17 as required, to produce the desired result.

While the form of mechanism herein shown and described is admirably adapted to fulfill the objects primarily stated, it is to be understood

that it is not intended to confine the invention to the one form of embodiment herein shown and described, as it is susceptible of embodiment in various forms, all coming within the scope of the claims which follow.

What I claim is:

1. In a device of the class described, the combination of a base, handles removably secured to opposite sides of the base, an anchor post extending upwardly centrally of the base, a coil spring secured at one of its ends to the anchor post and provided at its opposite end with a cup shaped member formed at its upper peripheral edge with an annular retaining groove, a non-stretchable and partitioned bag secured at one of its ends within the cup shaped member and extending upwardly therefrom, an expansible bag disposed on one side of said partition and within the cup shaped member, another expansible bag disposed on the opposite side of the partition and within the upper portion of the non-stretchable bag, a leather covering for the non-stretchable bag extending entirely therearound and secured at its lower end adjacent said retaining groove in the cup shaped member, a skirt secured at its upper end to the lower end of the leather covering and terminating at its lower end in a weighted ring surrounding said anchoring post.

2. In a device of the class described, the combination of a stable base, a post extending upward centrally of the base, a coil spring, secured at one of its ends to the post, and provided at its opposite end with a cup shaped member formed at its upper peripheral edge with an annular retaining groove, a non-stretchable and partitioned bag secured at one of its ends within the cup shaped member and extending upwardly therefrom and having its partition located in a plane remote from the upper peripheral edge of the cup shaped member, an expansible bag disposed on one side of said partition and partly within the cup shaped member, another expansible bag disposed on the opposite side of the partition and within the upper portion of the non-stretchable bag, a leather covering for the non-stretchable bag extending entirely therearound and secured at its lower end adjacent said retaining groove in the cup shaped member, an elastic annulus disposed below and adjacent the cup shaped member, a skirt secured at its upper end to the lower end of the leather covering and terminating at its lower end in a weighted ring surrounding said post, and secured intermediate its ends to the annulus.

3. In a dummy pneumatic punching bag, the combination of an inherently stable base, a cup shaped member having an annular retaining groove adjacent its upper peripheral edge, resilient means connecting said base to said cup shaped member, a non-stretchable and partitioned bag secured at one of its ends within the cup shaped member and extending upwardly therefrom and having its partition located in a plane remote from the upper peripheral edge of the cup shaped member, an inflatable bag disposed on one side of said partition and partly within the cup shaped member, another inflatable bag disposed on the opposite side of the partition and within the upper portion of the non-stretchable bag, a covering for the non-stretchable bag extending entirely therearound and secured at its lower end adjacent said retaining groove in the cup shaped member, an annulus disposed below and adjacent the cup shaped member, a skirt secured at its upper end to the lower end of the covering and terminating at its lower end in a weighted ring surrounding said resilient means, and secured intermediate its ends to the annulus.

4. In a device of the class described, the combination of a base, handles removably secured to opposite sides of the base, an anchor post extending upwardly centrally of the base, a coil spring, secured at one of its ends to the anchor post, and provided at its opposite end with a cup shaped member, a non-stretchable and partitioned bag secured at one of its ends within the cup shaped member, an expansible bag disposed on one side of said partition and lying partly within the cup shaped member, another expansible bag disposed on the opposite side of the partition, an annular member fixed to the cup shaped member, and a skirt member affixed at its lower end to the annular member and affixed at its upper end to the non-stretchable and partitioned bag along a line adjacent the periphery of the partition.

HERMAN A. BARNICK.