June 30, 1936. M. A. TOMPKINS 2,045,972

STRIKING BAG APPARATUS

Filed Jan. 23, 1933

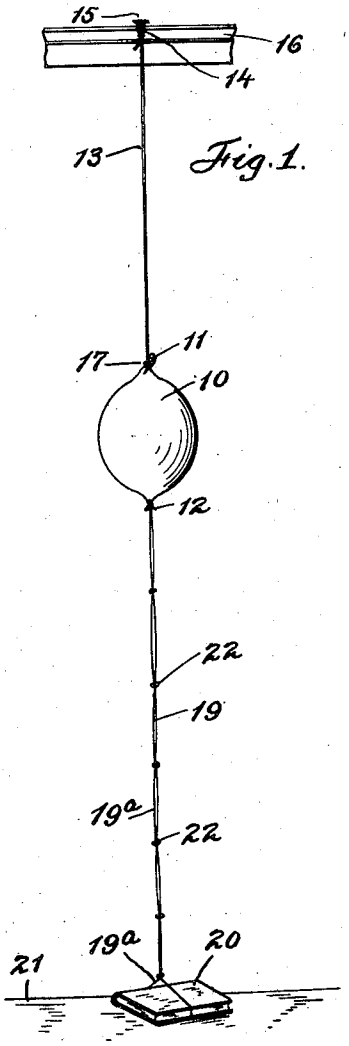


Fig. 1.

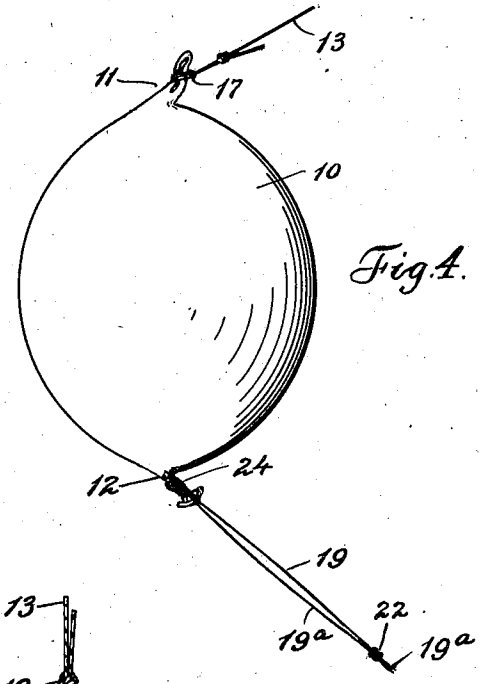


Fig. 4.

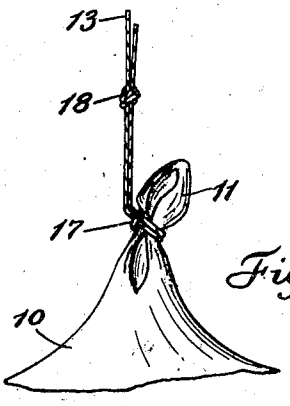


Fig. 2.

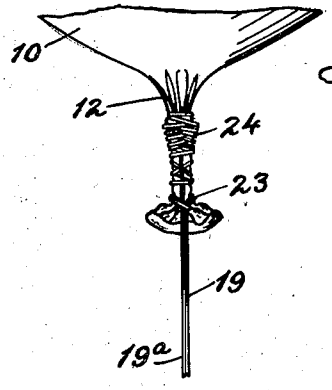


Fig. 3.

Inventor

M. A. Tompkins,

By Robert M. Pierson,

Attorney

Patented June 30, 1936 2,045,972

UNITED STATES PATENT OFFICE

2,045,972

STRIKING BAG APPARATUS

Marvin A. Tompkins, Akron, Ohio

Application January 23, 1933, Serial No. 653,024

4 Claims. (Cl. 272—77)

This invention relates to exercising and it has for its object to provide an inexpensive, durable and lively structure or apparatus of this class including an inflatable rubber bladder flexibly suspended or anchored by upper and lower cord connections.

The ordinary striking bag apparatus including an internal, inflatable rubber bladder contained in a cover of sewed leather is expensive and hard on the fists, difficult to mount, inconvenient to inflate and requires an exceedingly strong connection between the bag and its attaching cord, rod or equivalent anchoring device or devices.

Prior attempts to employ a plain rubber bladder have, so far as I am aware, been unsuccessful, due to various causes such as a relatively expensive bladder construction and imperfect forms of connection between the latter and the anchoring devices. These objections are overcome by my invention, which affords new and unexpected results in the way of combined simplicity, cheapness and durability. It is found that an ordinary toy balloon made by the usual dipping and vulcanizing process and having only the thickness and structure of a deposited rubber film in the body and in the terminal necks thereof to which the upper and lower cords are tied, possesses the necessary strength to withstand the blows to which it is subjected and, by reason of its lightness and resiliency, provides a quicker return after being struck than the bags and connections heretofore employed in apparatus of this class, and also that simple tied joints between the bag and cords will withstand the rough usage.

Of the accompanying drawing, Fig. 1 is a front elevation, partly in perspective, showing a striking bag apparatus constructed in accordance with my invention.

Fig. 2 is an enlarged detail view showing the preferred form of connection between the bladder and the upper anchoring cord.

Fig. 3 is a similar view of the connection at the lower end.

Fig. 4 is a side elevation illustrating the relative position of the parts at the end of a swing.

In the drawing, 10 is an inflatable, elastic, rubber bladder adapted to be produced in the manner of an ordinary toy balloon by the dipping process, with a sufficient number of dips to provide walls of the necessary strength which can be inflated with the user's lungs.

Said bladder is formed at opposite ends with integral, elastic, collapsible rubber necks or projections 11, 12, at least one of which is an inflating tube. While they might both be open-mouthed tubes adapted for inflation of the bladder through either one thereof, it is preferred to have only one of them, such as the lower one 12, of this nature, and to make the upper neck 11 with a closed outer end. These necks require no extra rubber or other reinforcement, although their walls will remain of normal thickness for most of their length when the body walls are extended and thinned by inflation.

13 is an upper anchoring cord attached by its lower end to the neck 11 and provided at its upper end with a knotted loop 14 for receiving the stem of a nail, thumb-tack or the like 15 driven into a fixed support 16, such as the upper frame of a doorway. This cord is preferably inextensible for the whole or the greater part of its length and should be of stout construction to avoid breakage under the blows to which the bladder is subjected. Any strong twine of twisted fibers may be used.

The connection with the bladder is made by tying the lower end of the cord about the neck 11, and the simplest and best tie is a noose or slipknot 17, the loop of which is preferably double, as made by tying the end portion in a loop with a fixed knot at 18 and then making the noose by looping the bight upon itself. This makes a self-tightening connection with a cord material which will not cut the bladder, and the tenacious frictional hold of the fibrous cord upon the rubber aids in preventing slippage.

19 is a lower anchoring cord, of elastic construction throughout the whole or the greater part of its length, connecting the lower bladder neck 12 with a suitable weight 20 supported on the floor 21. This weight may be a book, as illustrated, or any other handy object. The cord 19 could be a single elastic rubber strand or narrow tape, but is more conveniently made by interlooping with each other the ends of ordinary stationer's bands 19a in double slipknots 22 so that the length of the connection may be varied by using a greater or less number of bands according to their individual lengths, the height of the bladder above the floor and the initial tension desired in the lower connection. These endless individual bands 19a also permit the formation of secure end fastenings to the bladder neck 12 and the weight 20. Thus the connection with the neck 12, as best seen in Fig. 3, is made by looping the bight of the uppermost band 19a upon itself in a two-stranded noose or slipknot 23 and making a self-tightening tie therewith around the neck 12. The connection with the

weight 20 may be made by simply stretching the lowermost band 19a around said weight.

Before making the connection between the bladder 10 and the lower anchoring cord 19 the bladder is inflated to desired size and pressure therein by a tire pump or other inflation means, the neck 12 is then twisted to attain a temporary seal for the bladder and either the upper end of the anchoring cord or a separate binding, preferably also of endless elastic stationer's band or bands is then wrapped or wound under tension and preferably of several turns around the neck 12, as seen at 26 in Fig. 4, to maintain a permanent seal for the bladder as well as a fastening means for the cord 19 to the bladder.

In using this apparatus, after mounting it in a doorway substantially as indicated in Fig. 1, or otherwise, the inflated rubber bag, balloon or bladder 10, when struck, swings as a pendulum on the inextensible upper suspending cord 13 and the lower elastic cord 19 stretches until the momentum is arrested and then rapidly returns the bladder.

The use of an inextensible upper connection, in combination with an elastic lower one, by restricting the amplitude of swing of the bag under a given blow as compared with the effect when both connections are elastic, provides a quicker return, affording better exercise and requiring more skill on the part of the user in order to hit the bag on the return. The liveliness of the return is further augmented by the resiliency of the bag itself in its upper neck 11 and to a less extent in its lower neck 12 in response to a blow. The relative positions and distortion of the parts at the end of a swing are approximately represented in Fig. 4. The strain at the connections, and especially at the upper one, is of course very severe, but the yielding of the necks is graduated, there are no hard portions in either of the connections to produce tearing of the balloon walls or abrasion of the fists, and the apparatus proves surprisingly durable under the severest use. It may also be made to sell originally or to be renewed in whole or in part at a price far lower than prior apparatus of the same class, and will give just as good or better results.

It will be understood that the form of embodiment may be more or less changed without departing from the scope of the invention as defined in the claims.

I claim:

1. Striking bag apparatus including an inflatable bladder formed with integral upper and lower elastic, collapsible, cord receiving necks, one of said necks being a bladder inflation neck, upper and lower anchoring cords each having one end thereof tied directly around over the outside of the corresponding neck, and the tying of said cord over said inflation neck promoting the sealing of said bladder.

2. Striking bag apparatus including an inflatable bladder, elastic, collapsible upper and lower necks formed of and with material of said bladder and being free of reinforcements and stiffening means, one of said necks forming an inflation neck for said bladder, upper and lower anchoring cords tied about the respective one of said necks, and one of said cords sealing said bladder after inflation thereof when the corresponding cord is tied to said inflation neck.

3. Striking bag apparatus including an inflatable rubber bladder, an elastic, collapsible inflation tube formed on and with material of said bladder and being free of inner reinforcement, an elastic, collapsible, outwardly closed neck formed of and with material of said bladder and being opposite said inflation tube and being free of reinforcement, an anchoring cord having an elastic rubber band thereon tied around said inflation tube for sealing and for partly supporting said bladder, and an anchoring cord having an end thereof tied around said outwardly closed neck for further support of said bladder.

4. Striking bag apparatus including an inflatable bladder, a sealable inflation tube on the lower end of said bladder, a bladder suspension cord easily and conveniently releasably attached to the upper end of said bladder, and a resiliently extensible bladder anchoring cord easily releasably attached to said inflation tube and adapted to seal said bladder when attached to said inflation tube.

MARVIN A. TOMPKINS.