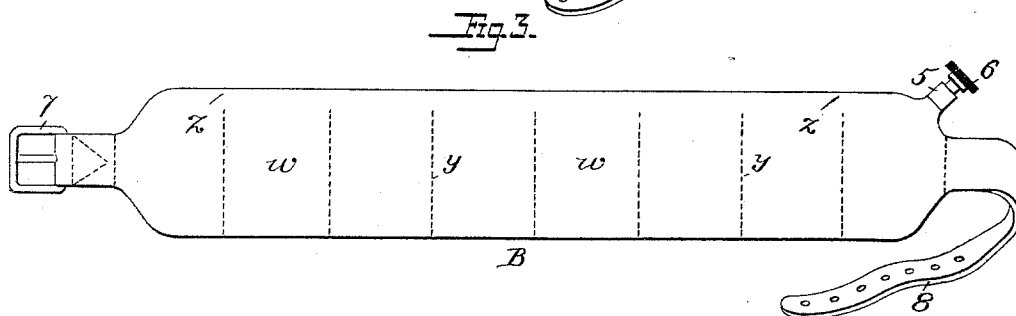
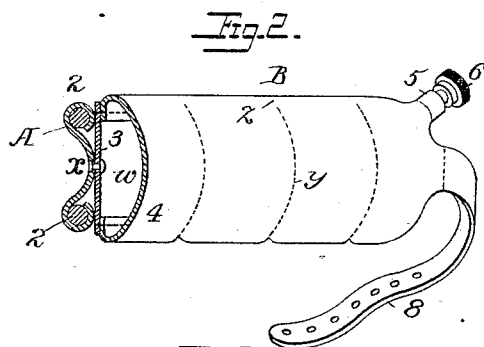
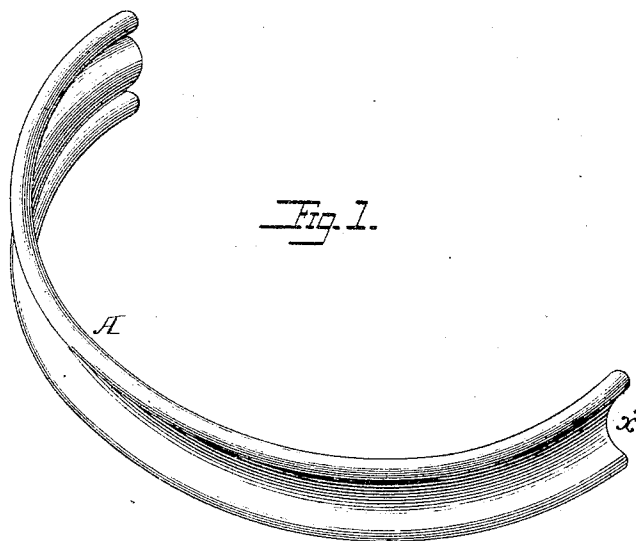


(No Model.)

R. REACH.
TUG OF WAR BELT.

No. 437,822.

Patented Oct. 7, 1890.



WITNESSES
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UNITED STATES PATENT OFFICE.

ROBERT REACH, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE
AMERICAN PATENTS COMPANY, OF SAME PLACE.

TUG-OF-WAR BELT.

SPECIFICATION forming part of Letters Patent No. 437,822, dated October 7, 1890.

Application filed July 7, 1890. Serial No. 357,963. (No model.)

To all whom it may concern:

Be it known that I, ROBERT REACH, a citizen of the United States, residing in the city and county of Philadelphia, and State of Pennsylvania, have invented certain new and useful Improvements in Tug-of-War Belts, of which the following is a specification.

In that class of gymnastic exercise known as the "tug of war," and in which two parties pull in opposite directions upon a rope to test the strength of such parties, it is common to make use of what is known as a "tug-belt," which is a padded structure applied around the waist of each end man to receive the end loop of the rope and prevent injury from the severe strains resulting from drawing upon the rope. Such tug-belts as heretofore constructed have been made of leather and metal, and are not only heavy and expensive, but are apt to wound and injure the person of the wearers from the strain upon the rope forcing the corners of the metal pieces against the hips. In order to avoid these objections I make the belt as fully set forth hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the metallic portion of the belt. Fig. 2 is a transverse section of the completed belt, except the shoulder-straps and braces, which are not shown, as they may be of any suitable character and without any difference from the construction usually employed. Fig. 3 is an inner face view of the buffer portion or pad of the belt.

The belt consists of the two main portions A B, the former portion or bearing consisting of metal bent in one direction to partially encircle the body, and also bent or indented transversely to form an external or circumferential groove α , adapted to receive the rope.

The metallic bearing portion A is preferably struck or hammered or sprung up from thin metal, and is suitably strengthened at the edges, either by doubling it upon itself or by strengthening-bars 2 2, and when the latter are used they may be secured in place by turning or bending the metal back over them, as illustrated in Figs. 1 and 2.

The inner or pad portion B of the belt may

be of any suitable construction to afford a padded covering for the metallic portion; but I prefer to make the same in the form of an air-belt consisting of two strips 3 4, connected at the edges and sewed transversely along lines $y y$, so as to form air cells or chambers w , the seams y extending very nearly, but not quite, to one edge of the belt to leave connecting-passages z between the chambers, so that the air will flow from one to the other.

The air-chambers may be filled through a short tube 5, provided with an ordinary air-valve 6.

A buckle 7 may be connected to a tongue or prolongation of the belt at one end, the other end being elongated to form a connecting-strap 8.

The inner portion B of the belt may be secured to the outer portion by rivets at intervals or in any other suitable manner.

The article constructed as above described serves as a most effectual guard or protector, inasmuch as the continuous metallic bearing portion A will not buckle or bend under the movements of the wearer, except to a slight extent, as the ends are brought to or from each other, while the inner cushion prevents the pressure upon the belt from wounding the person of the wearer, and there are no corners to be forced into the body.

The air-cushion, being divided into different compartments, affords a yielding elastic cushion, which is much more comfortable than the padded cushions heretofore employed, and the whole structure is but about one-tenth the weight of the ordinary articles.

Without limiting myself to the precise construction and arrangement of parts shown, I claim—

1. A tug-belt consisting of a curved metallic outer bearing having a peripheral recess and an inner cushion, substantially as set forth.

2. The combination, in a tug-belt, of a continuous curved metallic bearing having a peripheral recess and strengthened at the edges, and an inner cushion, substantially as described.

3. The combination, in a tug-belt, of an outer bearing consisting of a sheet-metal plate

curved longitudinally and transversely and strengthened at the edges by bars 2 2, and an inner cushion, substantially as described.

4. The combination, in a tug-belt, of an
5 outer curved metallic bearing and an inner cushion provided with a series of air-compartments, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

ROBERT REACH.

Witnesses:

A. W. KIDDLE,
WM. A. REDDING.