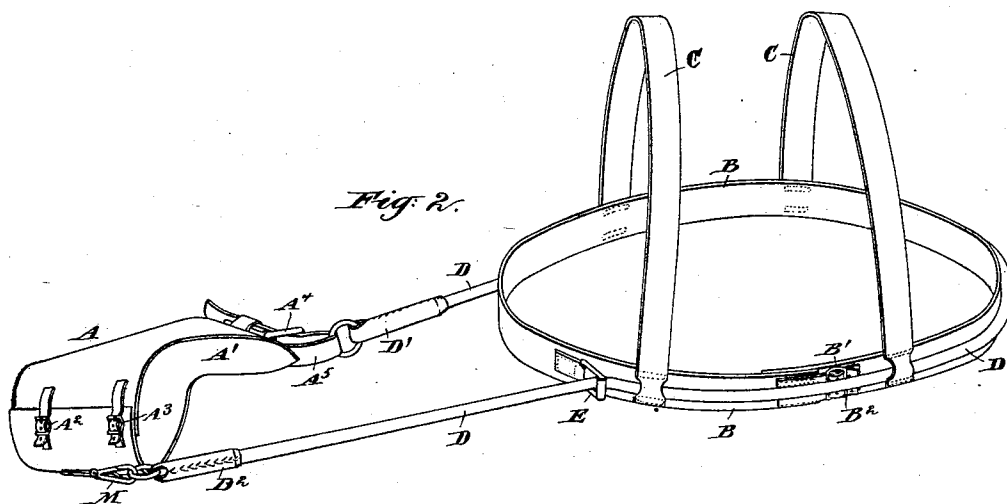
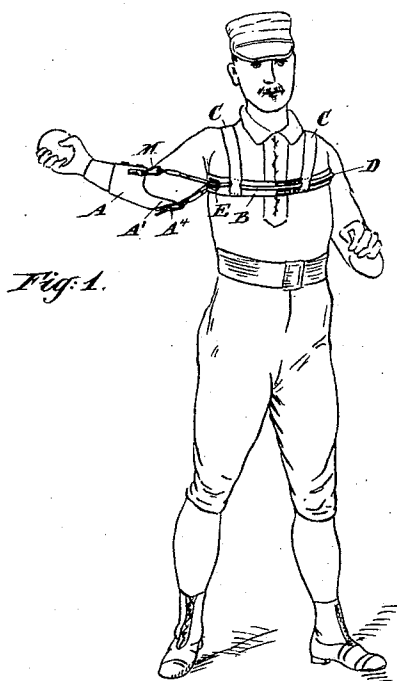


(No Model.)

W. C. BLADES.
BASE BALL APPARATUS.

No. 475,432.

Patented May 24, 1892.



Witnesses:
Charles R. Searle.
H. A. Johnston.

Inventor:
William P. Blades.
By his attorney
John S. Eaton

UNITED STATES PATENT OFFICE.

WILLIAM C. BLADES, OF BROOKLYN, NEW YORK.

BASE-BALL APPARATUS.

SPECIFICATION forming part of Letters Patent No. 475,432, dated May 24, 1892.

Application filed January 28, 1892. Serial No. 419,515. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. BLADES, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented a certain new and useful Improvement in Base-Ball Apparatus, of which the following is a specification.

The object of the invention is to relieve the right arm. It may be used by all the players, but more especially by the pitcher. It provides an elastic tension on the lower part of the arm. The severe work imposed on the right arm in pitching induces lameness in the commencement of a season and tends to induce permanent deformity, the right arm of some base-ball players being found to measure considerably longer than the left. My improvement removes much of the difficulty. I provide a strong cuff of leather or other flexible material, having a tapering interior, adapted to fit on the forearm, a concave extension matching on the elbow at the exterior, a band extending around the chest of the wearer in or near the line of the shoulders, with provisions for holding it in place, and contractile springs connecting these parts on the front and back of the arm. These springs may be and preferably are in a single piece extending around the person, pulling with a nearly constant force on the cuff. The tension fortifies the muscles and contributes greatly to the comfort and efficiency of the user, and enables the wearer to subject his arm to great and repeated strains without injury.

My invention relates to the construction as fully described below and pointed out in the claims.

The accompanying drawings form a part of this specification and represent what I consider the best means of carrying out the invention.

Figure 1 is a perspective view showing the invention in use. Fig. 2 is a perspective view of the apparatus on a larger scale.

Similar letters of reference indicate corresponding parts in both the figures where they appear.

A is the body of the cuff, and A' a concave extension adapted to match the elbow. The body A is held together on the outer side—

that farthest from the body of the wearer—by buckles A² A³, receiving straps, as indicated, one near the upper and one near the lower edge. By taking up and letting out one or the other of these straps the cuff can be varied in size and in taper. It is important that it matches correctly and firmly on the forearm of the wearer in position to allow the concave extension or pocket A' to match upon the exterior of the elbow of the wearer.

A⁴ is a buckle on the exterior of the pocket A' near its upper end, and A⁵ is a strap, sewed to such pocket and forming a loop, which can be varied in length by means of the buckle A⁴, as shown.

M is a snap-hook, sewed on the upper and front face of the cuff near its mid-length.

B is a chest-band, of leather or other suitable strong and flexible material, adjusted at the front by means of buckles B' B² on one end, receiving corresponding straps from the other end.

C C are shoulder-straps, sewed to the chest-band B at the upper and lower edges of the latter, the material of the shoulder-straps being in excess between these points to form a guide for a sufficiently-thick rope or cord D of vulcanized rubber, which extends around the wearer exterior to the chest-band B, with its ends extended and engaged with the cuff. One end D' extends from the guide behind the shoulder of the wearer and attaches to the loop formed by the strap A⁵. It pulls forcibly on the elbow-pocket A' when the arm of the wearer is extended forward. Its tension may be varied by taking up or letting out the strap A⁵ by means of the buckle A⁴. The other end of the rubber cord is extended through a metallic guide E, sewed on the chest-band just forward of the right shoulder of the wearer, and being extended down engages with the snap-hook M, before described. Adjusting the strap A⁵ varies the length of the rubber cord D, and in use the latter adjusts its position so that the tension on the front end D² and that on the rear end D' allows the arm to be swung vigorously forward and backward, with its extreme motion in either direction restrained by the elasticity—that is to say, when the arm is drawn backward the front end D² of the rubber D exerts its elas-

tic tension to restrain the motion and to aid it in coming forward again, and when the arm is thrown forward the elastic tension of the other end D' is available to restrain the further forward movement and to urge the arm back again to its usual position. The tension should be so regulated that there will be a strong force exerted in each of these extreme positions and some force tending to draw the arm up to the shoulder and oppose its longitudinal extension in all positions.

I claim as my invention in base-ball apparatus—

1. The improved appliance for base-ball players, composed of a cuff for the forearm, provided with an extension adapted to match on the elbow of the wearer, in combination with the chest-band and a contractile connection between these parts, arranged for joint operation substantially as herein specified.

2. The apparatus composed of the chest-band B, the cuff A, having the extension A', and the rubber cord D, extended through guides on the chest-band and having its ends adjustably secured to the cuff, adapted to draw the arm forward when thrown back and to arrest the forward motion when extended forward, substantially as herein specified.

In testimony that I claim the invention above set forth I affix my signature in presence of two witnesses.

WILLIAM C. BLADES.

Witnesses:

CHAS. A. BLADES,
H. A. JOHNSTONE.