

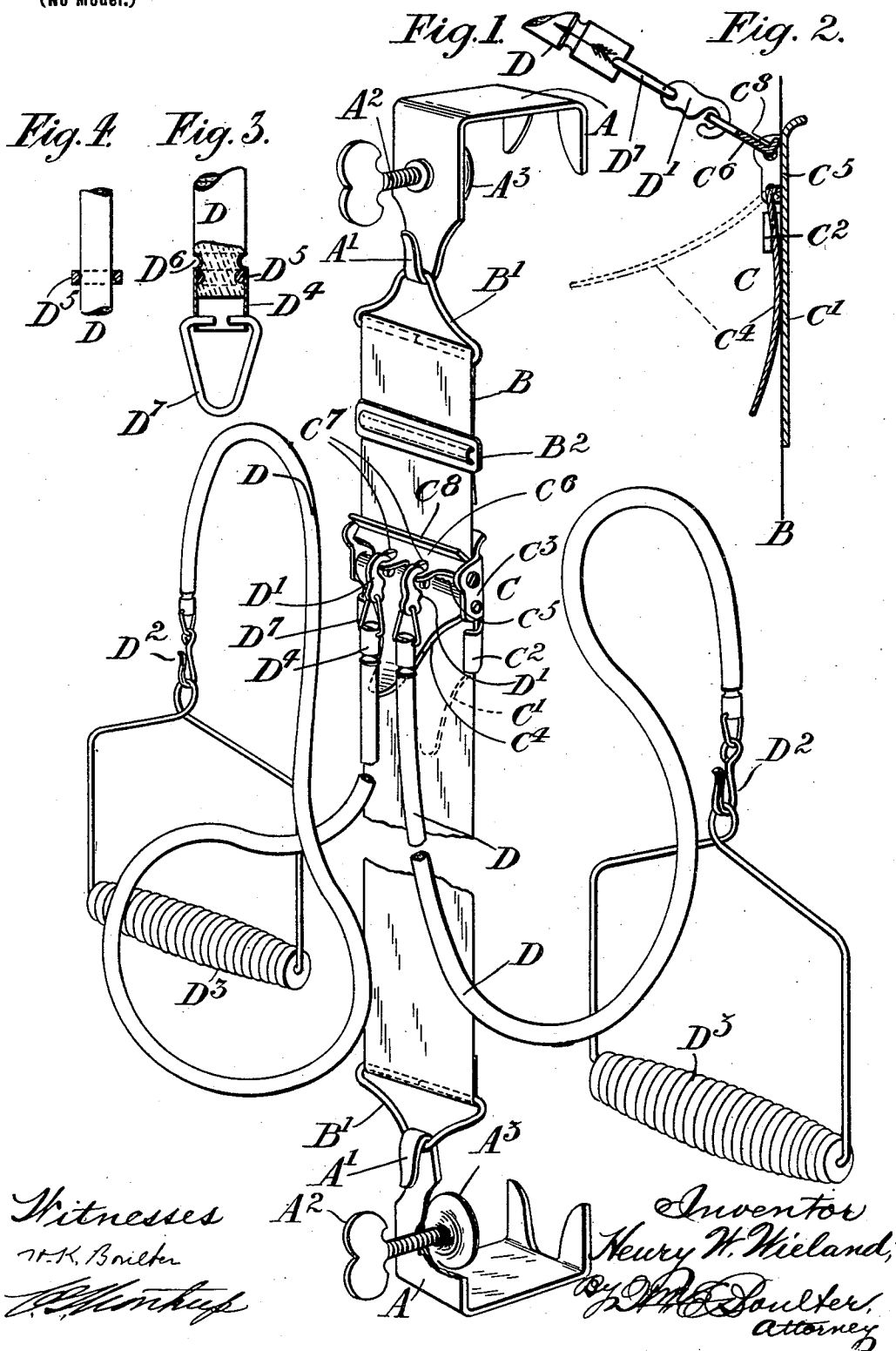
No. 680,556.

Patented Aug. 13, 1901.

H. W. WIELAND.
EXERCISER.

(Application filed Sept. 25, 1900.)

(No Model.)



Witnesses

W. K. Butler

[Signature]

Inventor

Henry W. Wieland,

[Signature]
Attorney

UNITED STATES PATENT OFFICE.

HENRY WILLIAM WIELAND, OF LONDON, ENGLAND, ASSIGNOR TO JOHN CHARLES WRAY, OF LAMBETH, LONDON COUNTY, ENGLAND.

EXERCISER.

SPECIFICATION forming part of Letters Patent No. 680,556, dated August 13, 1901.

Application filed September 25, 1900. Serial No. 31,042. (No model.)

To all whom it may concern:

Be it known that I, HENRY WILLIAM WIELAND, a subject of the Queen of England, residing at London, England, have invented certain new and useful Improvements in or Relating to Athletic Apparatus or Exercisers, of which the following is a specification.

This invention relates to improvements in athletic apparatus or exercisers, and has for its object the construction of apparatus which can be readily fixed in position and adjusted for use. In exercisers according to this invention two clamps are provided which can be secured to, say, the top and bottom of the framing of a door. Hooks are formed in one piece with these clamps to engage with eyes or loops upon the ends of a stretched band, which extends between the clamps. This stretched band is preferably of material which is inelastic or but very slightly elastic and may be provided with a buckle or other adjustment for length. An adjustable friction-grip is provided, which can be readily moved along the stretched band and quickly secured in any convenient position thereon. This grip is provided with a pivoted bar to which may be attached elastic cords terminating in handles shaped to accommodate the hand or, if desired, the foot. Preferably the pivoted bar is employed as an auxiliary gripper, as will be hereinafter described.

In the accompanying drawings, Figure 1 is a perspective view showing one construction of exerciser according to this invention, and Fig. 2 is a vertical central section through a portion of the apparatus and drawn to a larger scale. Fig. 3 is a longitudinal central section of one of the sockets D^4 and its appurtenances, hereinafter referred to. Fig. 4 is a view of a portion of Fig. 3 and is also hereinafter described.

Like letters indicate like parts throughout the drawings.

A represents clamps preferably formed of metal and shaped to readily fit over the framing of a door. Each clamp A is provided with a hook A' , formed in one piece with the body of the clamp, and a thumb-screw A^2 , having a loose washer A^3 upon its end, serves to grip the door or other support to which the clamp is secured. Between the hooks A' is

a stretched band B, provided with loops B' , which engage with the hooks A' upon the clamps. By means of a buckle B^2 the length of the stretched band B may be adjusted, and the stretch band may be of material which is very slightly elastic, so that the loops B' may be engaged with or disengaged from the hooks A' without altering the position of the buckle B^2 after it is once adjusted.

Upon the stretched band B is an adjustable duplex friction-grip C. (Shown in section in Fig. 2.) It comprises a back plate C' , provided with lugs C^2 , which serve as guides for the stretched band and other lugs C^3 , in which a gripping-plate C^4 is pivoted. The end of this plate C^4 adjacent to the pivots is turned down and formed with teeth C^5 , which serve to grip the material forming the stretched band B. To adjust the position of the grip C, the gripping-plate C^4 is turned upon its pivot into the position indicated in chain lines in Fig. 2, and the grip can then be moved freely up and down the band. By closing the plate C^4 down onto the back plate C' the band B is forcibly held between the back plate and the teeth C^5 . An angle-bar C^6 C^8 is also pivoted to the lugs C^3 and is provided with holes C^7 , which accommodate hooks D' at the extremities of elastic cords D. These cords D are provided at their other ends with hooks D^2 , to which stirrup-shaped handles D^3 are attached.

To use the apparatus, the clamps A are first fixed in position and the band B placed tautly between the hooks A' . The adjustable friction-grip C is then secured in a convenient position upon the band B, and the handles D^3 being gripped exercises of the kind usually performed with apparatus of the type are gone through. When the elastic cords D are pulled in a direction such as that which is indicated by the arrow in Fig. 2, the pull tends to move the grip C upward along the band B, and thus to cause the end of the plate C^4 to move in the direction in which it operates to release the grip. At such times, however, the angle-bar C^6 will be maintained by the cords D in the position in which it is seen in Fig. 2—that is to say, with its flange C^8 pressed against the contiguous surface of the band B and forcing it against the adja-

cent portion of the back plate C'. Consequently the device C⁶ C⁸ constitutes an auxiliary gripper and the grip C cannot move up along the band aforesaid, nor will the pull in the cords D tend to move the gripping-plate C⁴.

It will be appreciated that to carry out the various exercises it is necessary to alter the position of the grip relatively to the band during the use of the apparatus, and hence it is of great convenience to employ a quickly-acting friction-grip, such as C, which instantaneously releases or grips the band and owing to the tautness of the latter the adjustment of the grip may be effected with one hand applied only to the plate C⁴, gravity keeping the angle-bar C⁶ C⁸ normally out of action. Further, the grip, although holding the band quite firmly, does not actually perforate it, and thus there is no danger of injuring the material forming the band.

The means whereby the cords D and the sockets D⁴ for the hooks D² are firmly secured together will now be described with reference to Figs. 3 and 4. Each cord D, the normal thickness of which is indicated in Fig. 3, is first stretched, so that it becomes attenuated to a smaller diameter, such as that which it is shown as having in Fig. 4. While thus attenuated, a ring D⁵, corresponding in internal diameter to the external diameter of the attenuated cord, is easily slid upon the latter, which is thereafter allowed to resume its normal length, in doing which it regains its normal diameter, the ring D⁵ becoming embedded in it, as shown in Fig. 3. This ring bears against a shoulder or constriction D⁶ in the socket D⁴, and it is not found to be

possible to pull the cord out of the ring or the ring through the socket by any stress which the cord is capable of applying to them. Loops D⁷ are sprung over the sockets D⁴, so that their ends enter and turn freely in holes provided in the socket for their reception. These loops the eyes of the hooks D² encircle loosely.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. In an athletic exerciser, the combination with a stretched band B, of an adjustable friction-grip comprising a back plate C, a gripping-plate C⁴ pivoted to the back plate, a bar C⁶ pivoted to the back plate and between which bar and the back plate the said band passes, elastic cords attached to the bar C⁶, a gripping edge C⁸ on said bar adapted to grip the band when the pull on the cords is in a certain direction, as specified.

2. In an athletic exerciser, the combination with a band, of a back plate, a bar C⁶ pivoted to the back plate and having a gripping edge adapted to grip the band as described, said band passing between said bar and back plate, an elastic cord and means for attaching the cord to the bar comprising a socket D⁴ having a shoulder D⁶, a ring D⁵ encircling the cord and lying within the socket, and a connection between the socket and the bar C⁶.

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

HENRY WILLIAM WIELAND.

Witnesses:

HAROLD WADE,

HARRY B. BRIDGE.