

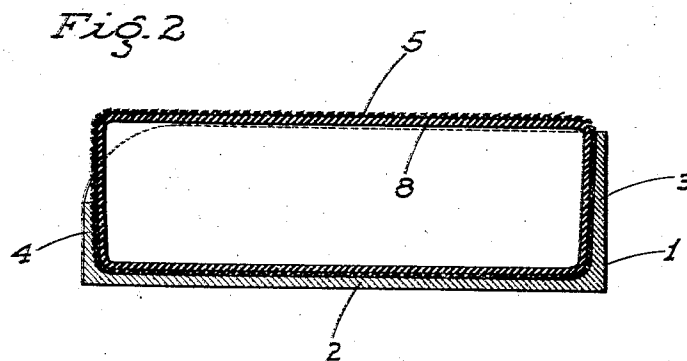
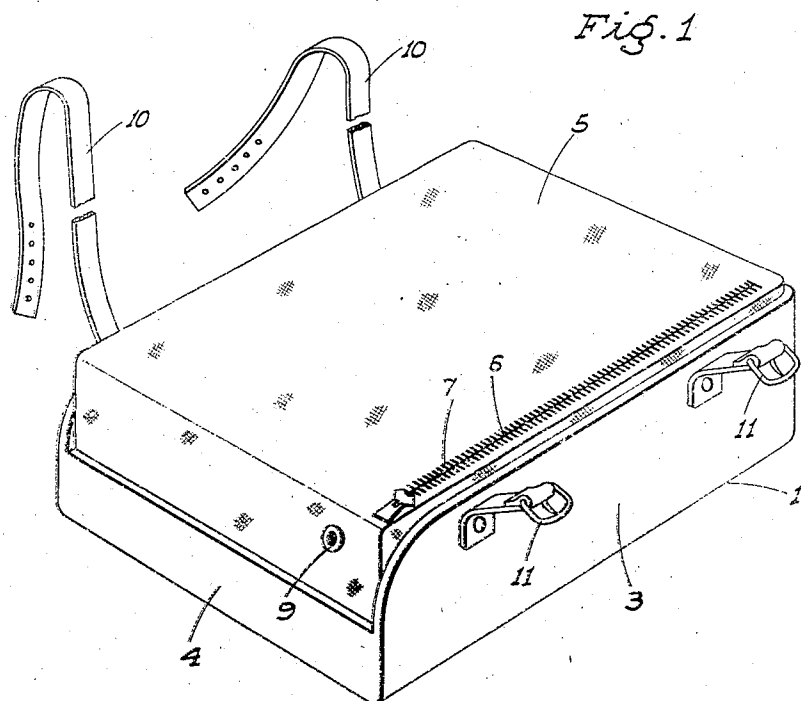
Jan. 30, 1945.

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2,368,433

AIR-CUSHION KNEE PAD

Filed March 18, 1944



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UNITED STATES PATENT OFFICE

2,368,433

AIR-CUSHION KNEEPAD

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Application March 18, 1944, Serial No. 527,071

1 Claim. (Cl. 2—24)

This invention relates to knee pads such as are used by kneeling workers in the fields and elsewhere.

The principal object of my invention is to provide a pad for the purpose which includes a pneumatic cushion member or bladder so mounted and confined that only a negative pressure within the bladder is sufficient to provide the desired knee supporting and soft cushioning action, and without any possibility of the bladder collapsing under the weight thereon.

Another object is to mount the bladder and its confining means in the supporting shoe so that they may be readily removed from the shoe as a unit, while at the same time the bladder may be independently removed from said confining means at any time, if desired. In this manner, the shoe and confining means (which is preferably a canvas casing) may be readily replaced if worn, or the pneumatic bladder repaired or replaced, with a minimum of time and expense, and without having to discard the entire pad.

A further object of the invention is to produce a simple and inexpensive device and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects I accomplish by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claim.

In the drawing similar characters of reference indicate corresponding parts in the several views:

Figure 1 is a perspective view of the improved pad.

Figure 2 is a longitudinal section of the same.

Referring now more particularly to the characters of reference on the drawing, the pad comprises a rigid supporting base or shoe 1, of rectangular form in plan and preferably made of a suitable wear-resistant but light plastic material. The shoe includes a flat, ground-engaging base 2, side and front end walls 3 of equal height, and a shorter back end wall 4; the side walls 3 curving downwardly to meet the wall 4 as shown.

A rectangular casing 5 of canvas or similar tough and non-stretchable but flexible material, removably and closely fits within the shoe, preferably projecting slightly above the side walls 3. The casing is provided along the top adjacent one side edge with a slit 6 closed by a hookless fastener 7 of the "zipper" type.

A rectangular pneumatic cushion bladder 8 of "inner tube" rubber, fits closely without stretching within the casing, being inserted in or re-

moved from the casing through the slit 6. The bladder is provided with a valve of the type commonly used in football bladders and the like, indicated at 9, and which projects through the end wall of the casing in the portion thereof exposed above the end wall 4.

The shoe on one side is provided with a pair of longitudinally spaced strips 10 adapted to cooperate with conventional buckles 11 secured on the shoe on the opposite side, and by means of which the pad is strapped to the knee.

In use, it is only necessary to inflate the bladder 8 sufficient to cause the same to be self-sustaining, or so as to completely fill and hold the casing relatively taut without tending to stretch the same. The bladder thus has only sufficient air therein to provide a yielding and soft cushion when the weight of the user is placed thereon, and which enables such user to work in comfort for an indefinite period, and regardless of the type of ground or other surface on which the shoe of the pad is resting. This is made possible by the use of the bladder enclosing casing, which confines the bladder against upward deformation, when the air in the tube becomes compressed when sustaining the weight of the wearer. The low back wall 4 of the shoe prevents possible contact of the same with the leg of the wearer when the bladder becomes depressed in the shoe.

From the foregoing description it will be readily seen that I have produced such a device as substantially fulfills the objects of the invention as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claim.

Having thus described my invention, what I claim as new and useful and desire to secure by Letters Patent is:

A knee pad consisting of a substantially rectangular rigid shoe, a substantially rectangular pneumatic pad within the shoe, such pad comprising a fabric cover of a size to fit snugly within the confines of the sides of the shoe, and a hollow inflatable rubber bladder fitted into the cover and which bladder, when inflated, conforms to the rectangular walls of the cover, the rigid walls of the shoe then preventing any deformation of the pneumatic pad in any direction except about the knee of the wearer of the pad.

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