

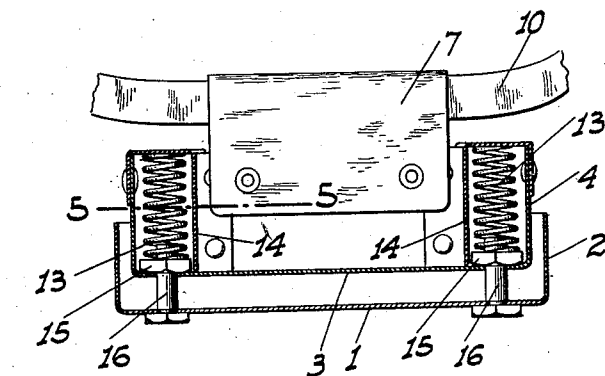
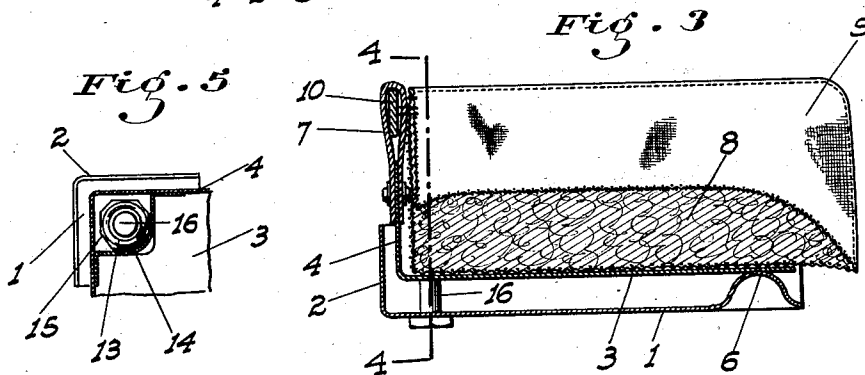
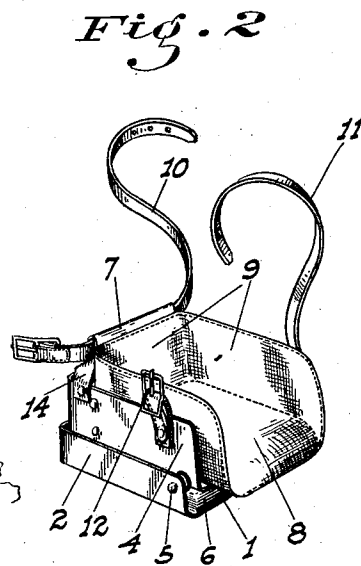
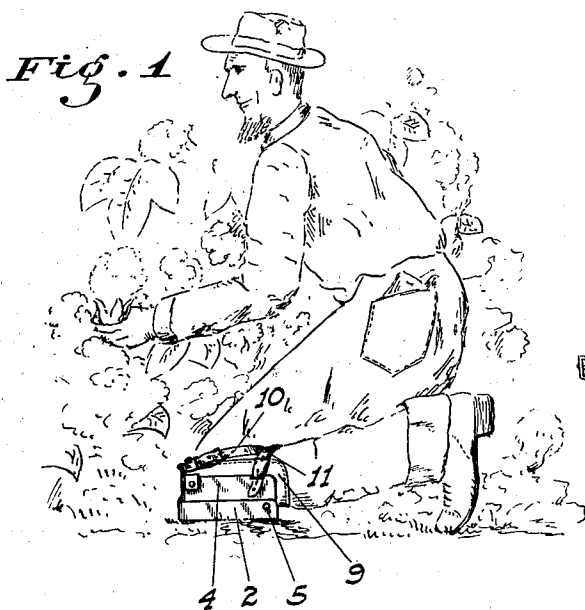
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J. E. SHOTWELL

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RESILIENT KNEE PAD

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INVENTOR

J. E. Shotwell

BY

Curry & White
ATTORNEY

UNITED STATES PATENT OFFICE

JOE E. SHOTWELL, OF STOCKTON, CALIFORNIA

RESILIENT KNEE PAD

Application filed September 21, 1929. Serial No. 394,261.

This invention relates to knee protecting pads for agricultural and similar workers and is particularly intended for the use of pickers of cotton and similar crops which are harvested by hand and which necessitate considerable kneeling on the part of the workers. The knee being more or less continuously in contact with the hard or broken ground soon becomes fatigued and chafed as is well known to those experienced in this work and the ordinary form of knee pad while preventing the wearing out of the trousers, does not materially protect the knee itself against the fatiguing effect.

The principal object of my invention is to avoid the above objectionable features and to increase the comfort and physical well being of such workers by providing a knee protecting pad so constructed that a spring mounted or suspended cushion is provided between the knee and the ground.

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 claims.

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

Fig. 1 is a fanciful perspective of a cotton picker in operation showing my improved knee pad in place.

Fig. 2 is a perspective view of the pad detached.

Fig. 3 is a longitudinal section of the pad.

Fig. 4 is a transverse section of the device as on the line 4—4 of Fig. 3.

Fig. 5 is a fragmentary plan section taken on the line 5—5 of Fig. 4.

Referring now more particularly to the numerals of reference on the drawings, the device comprises a shoe which is preferably of rigid sheet metal and consists of a flat bottom or base 1 of rectangular form having upstanding flanges 2 around the sides and front, to re-enforce the base against deflection or warping.

Fitting loosely between the flanges of the shoe is a cushion supporting frame of a shape similar to that of the shoe and comprising a flat bottom 3 with upstanding flanges 4 along the sides and across the front. Adjacent its rear end this frame is pivoted on the shoe as indicated at 5, in such a manner that the members 1 and 3 are vertically spaced from each other. Under the axial plane of the frame pivots, the base 1 is provided with an upstanding curved ridge 6 extending across said base and on which the member 3 rides. This ridge prevents bending of said member 3 while permitting it to freely rock about its pivotal connections.

Projecting upwardly from the front flange 4 is a thick but flexible leather strap or band 7, to which a cushion or pad 8 of suitable character is flexibly attached. This cushion rests on the bottom member 3 and has side flanges 9 of flexible material such as canvas, projecting upwardly therefrom along the sides and across the front edge to a level considerably higher than the top of the flange 4. The cross sectional area of the pad or cushion is such as to enable the knee of the worker to be received between the side flanges 9, the leather band 7 engaging the joint of the knee adjacent its upper extremity. A flexible strap 10 provided with a buckle is mounted in connection with the member 7; while a similar strap 10 is secured at one end of the side flange 4 of the cushion frame adjacent its rear or pivoted end, this strap being adapted to co-operate with a buckle 12 fixed on the opposite side flange. These straps are adapted to engage the leg of the worker adjacent the knee as indicated in Fig. 1, so that the pad will be removably secured in the proper position relative to the knee, and the worker may move about as necessary without danger of the pad becoming displaced or slipping off. The front free end of the cushion supporting frame is resiliently supported from the base of the shoe by vertical compression springs 13 disposed in the front corners of the frame and enclosed in housings 14 mounted on said frame. The upper ends of the springs bear against the tops of the housings, while their lower ends bear against shoulders or

enlargements 15 provided adjacent the upper ends of pins 16 which are fixed in and project upwardly from the bottom member 1 and through the bottom member 3 axial of the springs. The enlargements 15 are normally disposed just above the bottom 3 so as to limit the upward movement of the springs 1 and 3 relative to each other.

It will therefore be seen that by reason of the above construction the knee is not only cushioned by the member 8, but the latter itself is resiliently mounted in connection with the main ground bearing shoe, so that the weight of the worker as imparted to the device is mainly taken by the yieldable compression springs.

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 claims.

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

1. A resilient knee-pad comprising a shoe, said shoe including a flat base to rest on the ground, a cushion support seating in the shoe, said support having a base and side and front flanges upstanding therefrom, pivot connection means between the shoe and support adjacent the rear end of the latter and maintaining the support-base spaced from the shoe-base, a cushion to engage a knee resting on the support-base between the flanges thereof, vertical compression springs housed in the support at its front corners, pins fixed in and projecting upwardly from the shoe and slidable through the support-base axially of the springs, and shoulders on the base above said base and on which the lower ends of the springs bear.

2. A resilient knee pad including a shoe to rest on the ground, a cushion to engage the knee, a support for the cushion, pivot connections between the shoe and support at one end, resilient elements between the other end of the shoe and support and normally maintaining the latter spaced from the shoe, and a ridge upstanding from the shoe in the vertical plane of the pivots and engaging the support to brace the latter against bending without interfering with its rocking movement.

In testimony whereof I affix my signature.
JOE E. SHOTWELL.