April 17, 1928. 1,666,846

D. S. COOPER

KNEE PAD

Filed Oct. 23, 1926 2 Sheets-Sheet 1

Fig. 1.

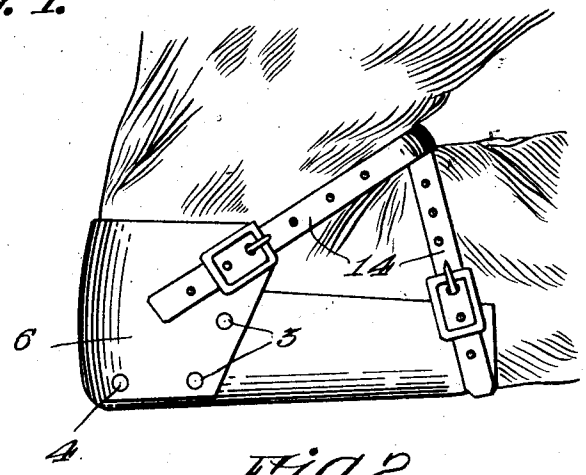
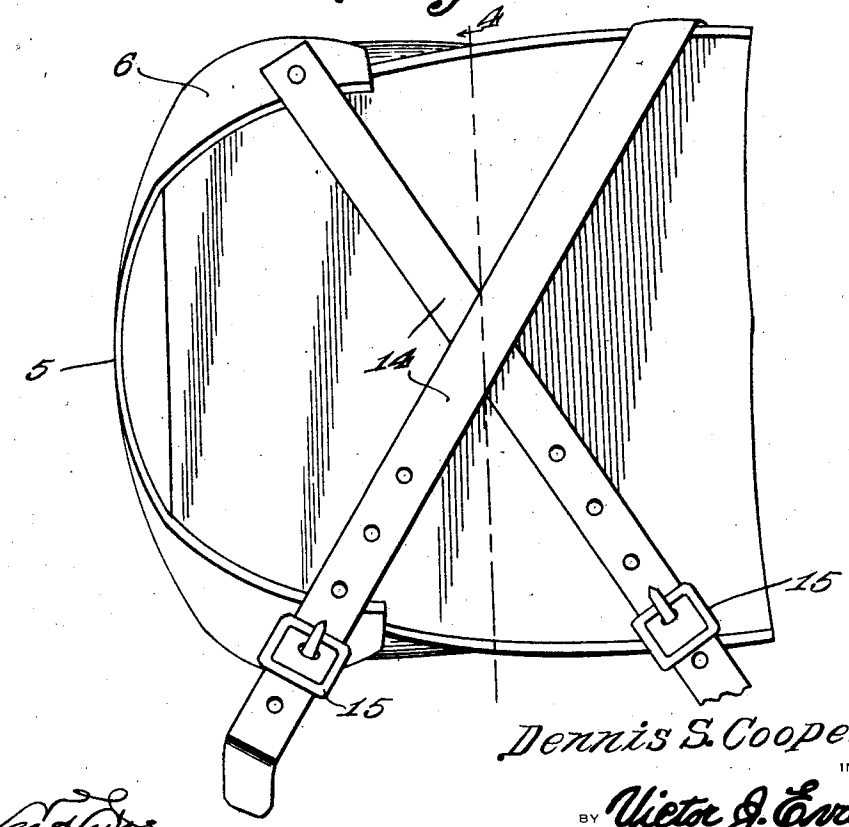


Fig. 2.



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Fig. 3.

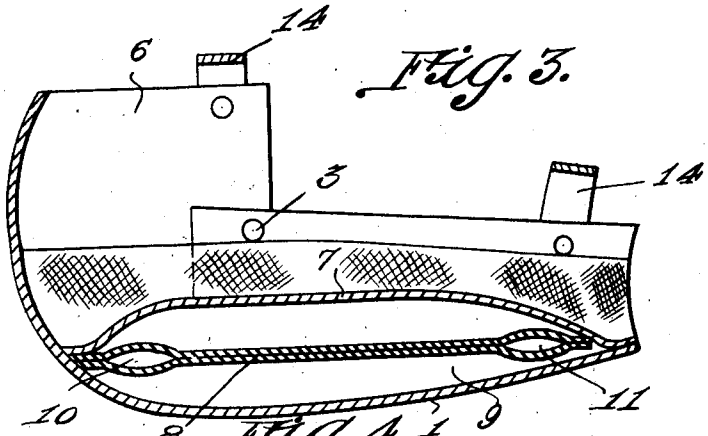


Fig. 4.

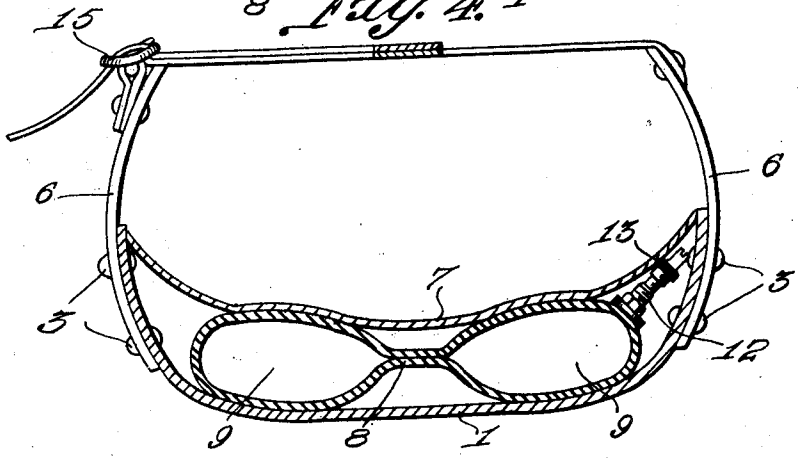
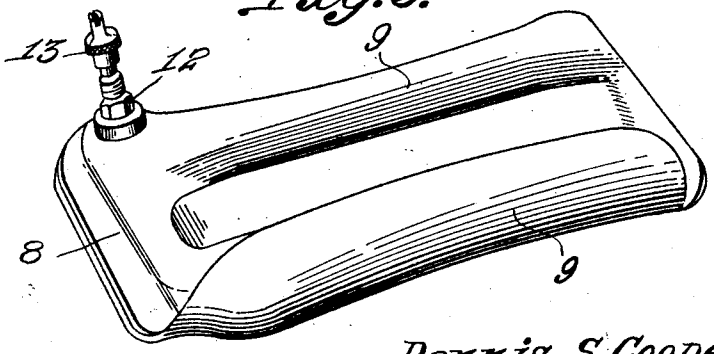


Fig. 5.



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Patented Apr. 17, 1928. 1,666,846

UNITED STATES PATENT OFFICE.

DENNIS S. COOPER, OF ABILENE, TEXAS.

KNEE PAD.

Application filed October 23, 1926. Serial No. 143,741.

My present invention has reference to knee pads especially adapted for cotton pickers' use.

The principal object of the invention is the provision of a knee pad which includes a shoe constructed from a single piece of strong but yieldable material, said shoe having a pneumatic cushion of a novel construction arranged thereon and being provided with an apron to overlie the cushion there being suitable straps for securing the pad on the leg of the user.

To the attainment of the foregoing the invention consists in the improvement as hereinafter described and definitely claimed.

In the drawings:

Figure 1 is a side elevation showing the improvement in applied position.

Figure 2 is a plan view of the improvement.

Figure 3 is an approximately central longitudinal sectional view therethrough.

Figure 4 is a sectional view on the line 4—4 of Figure 2.

Figure 5 is a perspective view of a pneumatic cushion.

The body or shoe 1 of my improvement is formed of a substantially rectangular strip or sheet of suitable strong but flexible material, such for instance, as vulcanized rubber, leather or the like. The strip constituting the shoe is slit angularly along its sides from its edges for a determined distance and the outer portions of the sides are bent over the inner portions thereof and are riveted or otherwise secured thereto, as at 3. The outer edges also lap the underlying portions of the sides and secured to these parts of the sides by rivets or like elements 4. In this manner it will be noted that the outer end of the shoe is flanged upwardly and the sides, adjacent to the said outer end are likewise flanged and are extended a suitable distance beyond the flanges provided by the sides proper. It is also to be noted that by forming the shoe as above described the front 5 and the sides 6, adjacent to the said front are concaved inwardly to the base or bottom of the shoe, and this forms a pocket which effectively receives the knee cap of the user therein.

Cemented or otherwise secured to the open end of the shoe there is one end of a comparatively thick but soft fabric sheet 7, and this flap is designed to be arranged over and fully cover the pneumatic cushioning element of the improvement. The cushioning element, broadly indicated by the numeral 8, is best illustrated in Figure 5 of the drawings. This element can be economically constructed from a section of a pneumatic tube, commonly employed in automobiles. I cement, vulcanize or otherwise effectively connect the confronting portions at the ends of the split tube, and likewise I vulcanize the confronting portions at the center of the tube. This provides the cushioning member with two longitudinal tubular ports 9 and with transverse restricted tubular ports 10 and 11 which communicate with the tubes 9. Thus either air or liquid is circulated around all of the tubular portions or passages through the cushioning member 8. The cushioning member, at one of its corners has secured thereon the casing 12 of a valve of the ordinary type commonly employed in connection with pneumatic tubes, the casing having screwed thereon the usual cap 13 for protecting the valve. The valve stem or casing 12 being arranged at one of the inner and concaved corners of the shoe, is out of the path of contact with the user of the device, and the cushioning element 9 will afford a largely increased resiliency over ordinary stuffed pads. The device is attached to the wearer by cross straps 14 having their ends secured adjacent the corners of the shoe, the said straps being engaged by suitable buckles 15.

My improvement is of simple construction and may be cheaply manufactured. The improvement as heretofore stated, affords a comfortable resiliency to the user thereof, as all of the parts constituting the same are of a yieldable or resilient nature.

Having described the invention, I claim:—

A pneumatic cushion for knee pads formed from a piece of tubular rubber that has its confronting ends contacting and secured together, said tube having its central portion, from points adjacent its ends also contacting and secured together, whereby to provide the member with a central longitudinally flat web, side tubes extending from the ends of the web and restricted transverse end tubes which communicate with the side tubes, and a normally closed valve for inflating the tubes.

In testimony whereof I affix my signature.

DENNIS S. COOPER.