

No. 692,703.

Patented Feb. 4, 1902.

J. PFEIFFER, JR.
RUBBER GLOVE.

(Application filed Jan. 8, 1901.)

(No Model.)

FIG. 1.

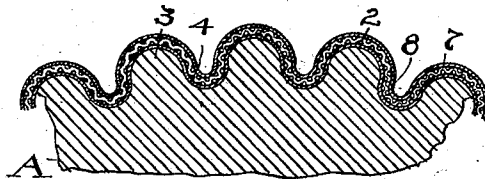
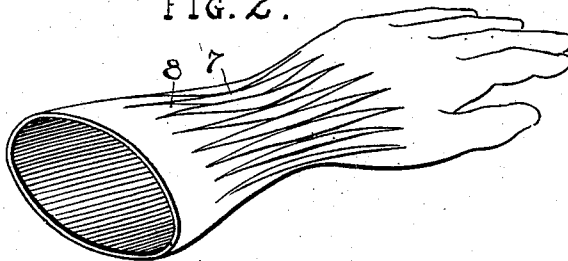


FIG. 2.



ATTEST.

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JACOB PFEIFFER, JR., OF AKRON, OHIO.

RUBBER GLOVE.

SPECIFICATION forming part of Letters Patent No. 692,703, dated February 4, 1902.

Application filed January 8, 1901. Serial No. 42,480. (No model.)

To all whom it may concern:

Be it known that I, JACOB PFEIFFER, Jr., a citizen of the United States, residing at Akron, in the county of Summit and State of Ohio, have invented certain new and useful Improvements in Rubber Gloves; and I do declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to rubber gloves; and the invention has to do with the glove itself as a new article of manufacture, all substantially as shown and described, and particularly pointed out in the claims.

Figure 1 is an enlarged cross-section of a portion of the top and back of a mold by which my improved glove is made and of the glove over it in cross-section conforming to the shape of the mold and designed especially to show the knit fabric forming the body of the glove. Fig. 2 is a perspective view of a glove embodying my invention.

In the manufacture of rubber gloves having a fabric base or fabric covered on both sides with rubber two objections have hitherto been prominent which it is the object of my invention to remedy. The first of these is found in gloves having a non-elastic base, such as woven cloth of any kind, whether of cotton, silk, or other fiber. Gloves made with such material have really been doubly objectionable, first, because they were not elastic, and hence could not stretch and adapt themselves to the hand, especially in the wrist, to put them on and take them off, as well as being non-elastic in use, and had to be made practically as large at the wrist as in the hand to get them on and off. This made such gloves uncomfortable and awkward to wear, especially on account of their clumsy fullness about the wrist. The other objection referred to is that they are necessarily made up of pieces of cloth sewed together to form the fingers and hand. This makes a seam at the place of union which unavoidably enters into the rubber-covered article and not only develops there as a rib, but at once becomes the point of weakness over which the rubber will crack and break and render the glove worthless. I am aware also of a glove that is made of what is termed "stockinet" or fabric that

is extensible in one direction and inextensible in every other direction and which forms the lining of a glove coated outside with rubber; but this glove also is made up in pieces, and after the pieces are coated they are sewed together and the seams are externally healed or covered with rubber to make a smooth exterior. This style of glove therefore also has the objection of seams in the fingers and hand, which produce welts and weakening points in the glove unavoidably.

My invention is designed to and does avoid these objections and provides a glove which is sufficiently elastic for all practical purposes in hand and fingers and is especially elastic in its wrist portion, with the natural take-up provided for in the glove itself.

To these ends I make a seamless knit glove, and hence one that is elastic in every direction. The body or base of the glove is shown in cross-section, Fig. 1. Having this base or body, which is already complete as a glove, I convert the same into an elastic rubber glove by coating the same on both sides with rubber, and in order that the glove so fashioned may be made further adaptable to the hand I form it with a series of flutes or alternating ribs and depressions 7 and 8, respectively, running lengthwise of the glove and, as here shown, on the back thereof, though they may be at the front or at the sides or all around. The said ribs and depressions or flutes are deepest where the wrist is smallest, so as to take up more of the stock at this point than at others, and they taper or run out at both ends, substantially as shown in the drawings. As thus shown and made, I have what is practically a gauntlet; but I might cut the glove short at its narrowest portion, and in that case the ribs 8 would extend to the end of the glove. One peculiarity of this construction of a glove—I mean with elastic flutes—is that it is adapted to produce a glove elastic in its wrist or narrowed portion even if a non-elastic primary glove or base be used. However, it is to be understood that I use a glove that is knit instead of being woven and which is elastic in every direction and seamless.

In the manufacture, having the seamless primary glove or body 2, I proceed in the manufacture of the finished article by covering with a coating of rubber of the right

quality and thickness to coat or cover the inside of the glove. Then I draw the primary glove over the form and press the portion at the said ribs and grooves down into the
 5 grooves their full length and depth, when the same is further dipped and the glove as such is finished and withdrawn from the form. The glove thus produced has a reproduction of the ribs and grooves of the mold and marked
 10 7 and 8 on the glove, and these being made permanent by molding the glove will naturally contract at the wrist to afford a close and comfortable fit, but yet has room enough
 15 by this formation to be easily taken off and put on the hand. Elasticity of the base 2 contributes to conformity and comfortable-ness in the use of the glove, and the fact that it is seamless throughout wholly avoids the
 20 objection of seams to the wearer, as well as in their effect upon the life of the glove. As already described, a glove made with a knit base is uniformly elastic in every direction, and thus it readily adapts itself to
 25 what in size, as well as comfortably adapting itself in use, so as not to cramp the hand when closed or when an article is gripped for use. Of course there is not a large degree of elasticity required for a glove that fits fairly
 30 well, and yet without the unnoticeable adaptation which a suitable elastic glove gives there is a strained effect, which always is disagreeable and sometimes highly objection-

able. It will also be observed that by forming a glove with ribs and grooves or chan- 35 nels and getting the fluted effect shown the fluted or ribbed portion becomes set or fixed and normal. Hence when the hand has passed through this portion the ribs natu- 40 rally restore themselves to original form and position and are calculated to draw the glove close about the wrist.

What I claim is—

1. As a new article of manufacture, a rubber glove having grooves and ribs alternately 45 lengthwise on both sides in its wrist portion, substantially as described.

2. As a new article of manufacture, a rubber glove having a textile base covered on both sides with rubber and provided in its 50 wrist portion with a series of ribs and grooves alternately forming flutes lengthwise of the glove on both sides, whereby a laterally expanding and contracting wrist portion is produced, substantially as described. 55

3. In gloves, an elastic glove having a knit seamless textile base and a coating of rubber on both sides without rib or seam, thereby producing a rubber glove of uniform elasticity at all points, substantially as described. 60

Witness my hand to the foregoing specification this 26th day of December, 1900.

JACOB PFEIFFER, Jr.

Witnesses:

H. T. FISHER,
 R. B. MOSER.