J. K. TOLES.

METHOD OF FORMING SACKS FOR SUSPENSORY BANDAGES.

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924,294.

Patented June 8, 1909.

Fig. 1.

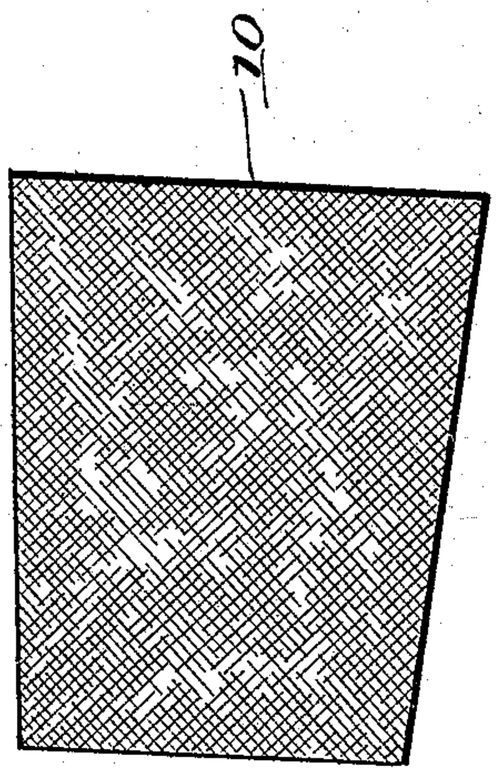


Fig. 4.

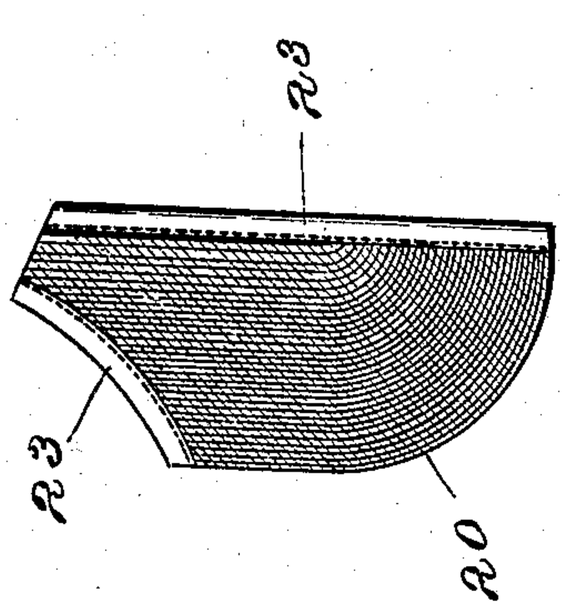


Fig. 2.

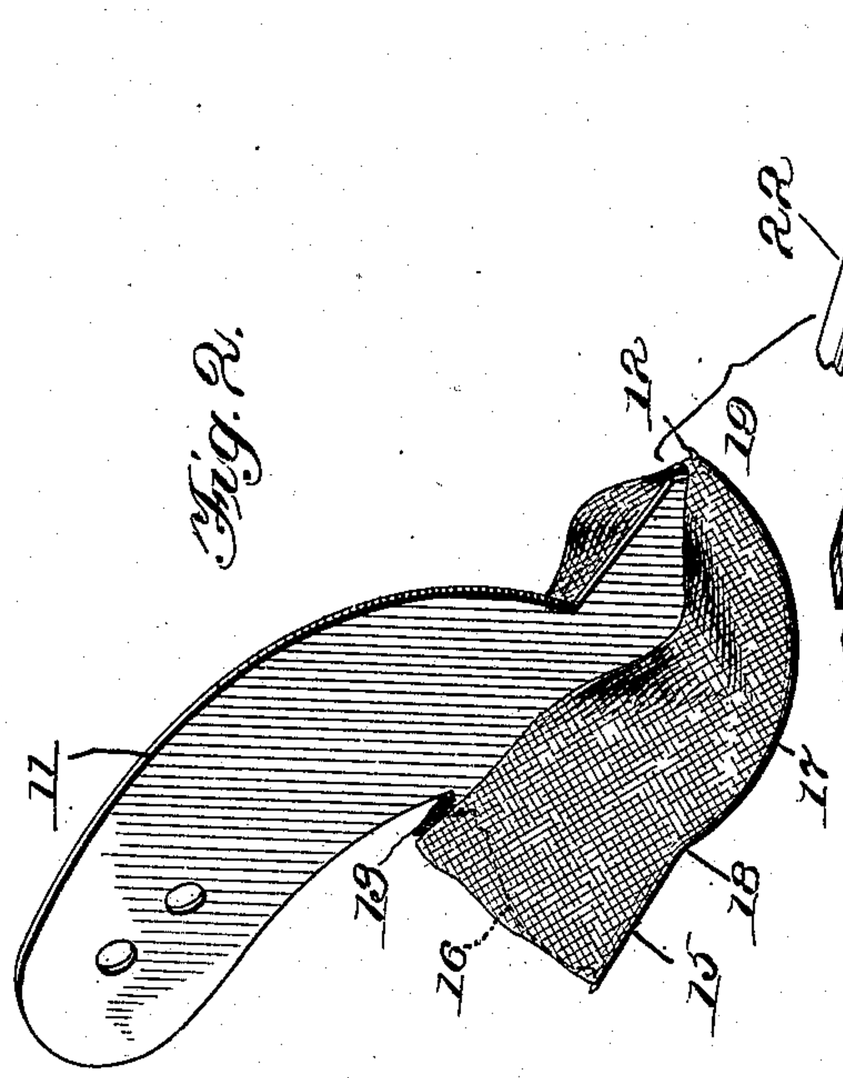
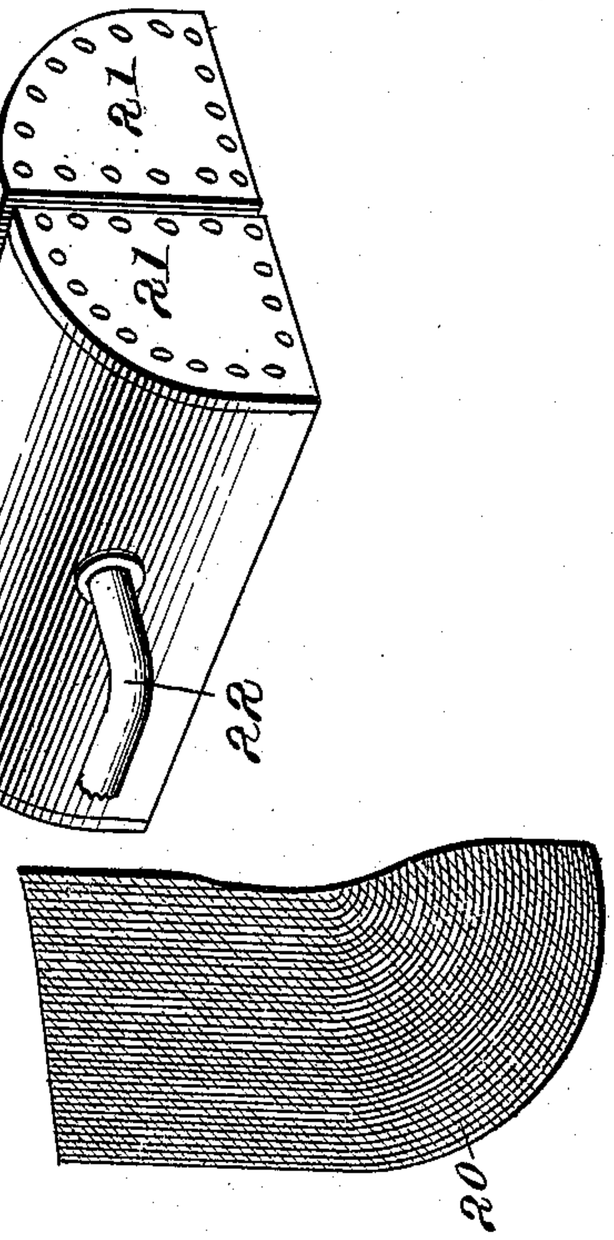


Fig. 3.



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UNITED STATES PATENT OFFICE.

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METHOD OF FORMING SACKS FOR SUSPENSORY BANDAGES.

No. 924,294. Specification of Letters Patent. Patented June 8, 1909.

Application filed August 11, 1902. Serial No. 119,309.

To all whom it may concern:

Be it known that I, JUSTIN K. TOLES, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Methods of Forming Sacks for Suspensory Bandages, of which the following is a specification.

This invention relates to a novel method of forming sacks for suspensory bandages, and has for its object to prepare in a simple and expeditious manner a seamless sack of the proper shape for bandages of this character and formed so that the direction of strain on the sack in use will be lengthwise of the fabric.

Another object of the invention is to treat the fabric while the sack is being formed so that it will preserve its proper shape in use at all times.

The method employed by me consists essentially in arranging a blank of textile fabric on a forming die of the proper shape and then removing the wrinkles from that part of the fabric which is to form the sack by ironing the fabric transversely across the threads of the fabric, thereby shrinking the textile fibers then setting the fabric by applying heat and pressure; and finally trimming the edges of the shaped sack to reduce it to the proper form.

In the accompanying drawings Figure 1 illustrates a fabric blank from which the sack is to be formed. Fig. 2 shows the blank on the forming die and the latter arranged in its relative position to the ironing and setting devices. Fig. 3 shows the sack after it is removed from the forming die. Fig. 4 is a side elevation showing the completed sack.

In the practice of my method I provide a blank 10 of suitable fabric material such as elastic knit or woven material. The blank is preferably dampened at that part where it is to be curved and is then placed on the forming die 11 in the manner shown in Fig. 2, this forming die being preferably provided with hooks or pins 12 at the toe and corresponding hooks or pins 13 at the heel, or other suitable devices, by means of which the fabric can be readily secured thereon. The forming die is then caused to travel between the heated ironing surfaces 14 which are adjusted close together and effectually shrink the fabric to conform to the shape of the die and remove the wrinkles so that when the sack is completed it will be properly shrunk and entirely free of wrinkles.

The forming die illustrated in the drawings is constructed and especially shaped to make a sack for suspensory bandages, but it will be understood that the shape of the die may be changed to make sacks of other shapes and for other purposes without departing from the method which constitutes the invention sought to be protected in this application. This forming die has a short straight edge 15 at the heel 16 and a curved edge 17 which connects with the straight edge at 18 and extends entirely around the toe 19. The fabric is shaped on the curved edge 17 of the die to produce the full portion 20 of the completed sack (Fig. 4) and as the die travels between the ironing surfaces in a diagonal direction, the fabric will be shrunk and ironed crosswise of its length and in a direction extending approximately from the lowest point of the curved edge of the die back to the pins 13. By proceeding in this manner the fabric will be thoroughly shrunk and shaped in the desired sack form and all wrinkles will be removed by the irons. The irons may be heated in any manner, but are shown in the form of chests 21 provided with pipes 22 through which steam is admitted for heating them and these heated irons are caused to clamp the fabric under considerable pressure after the die has come to rest at the downward limit of its movement and thus permanently set the fabric in the shape to which it has been shrunk and ironed. The ironing operation is preferably conducted rapidly by causing the die to travel quickly into its lowest position between the ironing surfaces and then pressure of the heated ironing surfaces on the fabric is preferably applied slowly in order to permit the escape of the steam which is created by contact of the heated surfaces with the fabric.

When the fabric is removed from the forming die it will be curved and shrunk and smoothly ironed in the shape illustrated in Fig. 3 and it is then trimmed to produce the completed sack shown in Fig. 4, the edges 23 being bound with tap or other material to prevent stretching. The sack thus formed will preserve its shape indefinitely as the direction of strain in actual use will extend substantially lengthwise of the fabric.

The fabric will generally contain sufficient moisture to enable it to be shrunk, but I may dampen the whole blank before it is arranged on the former, although I have found that it is sufficient to dampen that part only which is arranged over the curved edge of the forming die.

The means employed for carrying my improved method into effect may be changed as found desirable and I do not in any way limit the invention to use in connection with any particular means.

It will thus be observed that I prepare the suspensory sack, or other article, in a very simple and expeditious manner and without requiring any preliminary sewing or treatment except that I prefer to dampen the material, when it is too dry, to facilitate the shrinking operation.

A suspensory sack made in accordance with my method is free from seams and thereby much heating and chafing is avoided.

Having thus fully described my invention, what I claim and desire to secure by Letters Patent is:—

1. The method of forming a sack from knit or woven fabric by loosely folding a blank of such fabric over the convex edge of a forming die so as to leave it in wrinkles thereon, thrusting the die with the wrinkled blank thereon edgewise between ironing surfaces in suitable proximity to each other to iron out the wrinkles and to give a sack shape to the blank, and then clamping the so ironed blank in place on the die in order to set the fabric in its said sack shape by a pressure in excess of that of the ironing operation, substantially as described.

2. The method of forming a sack from knit or woven fabric by folding a blank of such fabric over the convex edge of a forming die, attaching it to the latter at the edge thereof at two widely separated points, the intermediate portion being left unattached, ironing the blank on said forming die on opposite sides thereof by a movement oblique to the line connecting said points of attachment, in order to remove wrinkles and to give a sack shape to the blank, and clamping the so ironed fabric between the ironing surfaces in order to set it in said sack shape, substantially as described.

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