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T. J. THOMPSON

2,943,623

SKIN PLASTER

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Fig. 1.

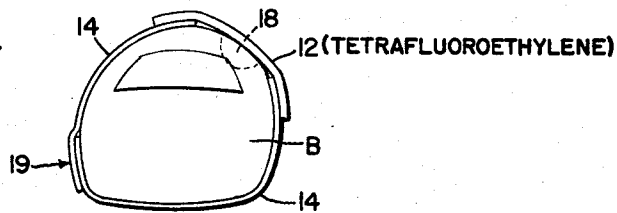


Fig. 2.

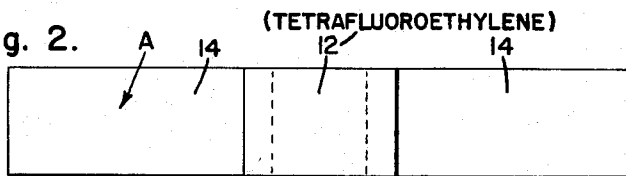


Fig. 3.

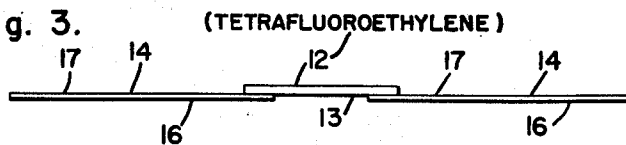


Fig. 4.

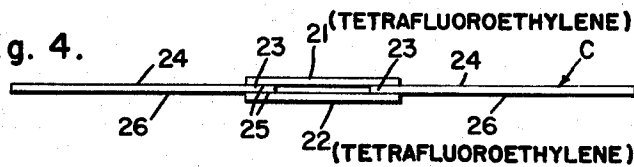
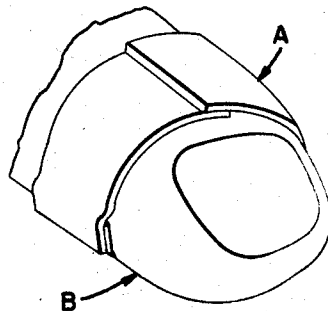


Fig. 5.



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2,943,623

SKIN PLASTER

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4 Claims. (Cl. 128—153)

This invention relates to new and useful improvements in skin plasters and is a further application of the friction reducing principles set forth in my Patent No. 2,755,800 and co-pending application Serial No. 514,683, now Patent No. 2,817,335.

Most, if not all indurations of the skin, as for example corns and callouses, are the result of frictional irritation. The induration results as a natural protection against the tearing or lacerating effect of the friction and also as protection against the frictional heat created. Accordingly, it is desirable to reduce and minimize friction between the induration and the shoe or other afflicting object, and to this end my invention is specifically designed to employ a material of recent manufacture having an exceptionally low co-efficient of friction, namely, polymerized tetrafluoroethylene.

A particular object and feature of this invention resides in the provision of a skin plaster having an exceptionally low coefficient of friction to minimize painful rubbing and resulting frictional heat.

Another object resides in the utilization of an extremely thin and lightweight material for maximum comfort and avoiding any unnecessary bulk which would serve only to increase the pressure. Polymerized tetrafluoroethylene may be manufactured in thicknesses ranging from .001 to .005 inch, but despite this microscopic dimension is quite durable and may be used over a substantial period of time without deterioration. As a consequence of the lightweight thinness and durability the plaster may comfortably be worn both as an aid in the relief of existing indurations and to forestall reformation of new induration.

A further object resides in a plaster of sufficient length for the outer ends to overlap when secured in position forming an effective lock.

The foregoing and other objects of my invention will become apparent from a reading and understanding of the following specification and accompanying drawings wherein:

Fig. 1 is a front view of an indurated toe employing one embodiment of the invention;

Fig. 2 is a plan view of the embodiment of Fig. 1;

Fig. 3 is a side elevation of Fig. 2;

Fig. 4 is a side elevation showing a second embodiment of my invention; and

Fig. 5 is a perspective view showing the first embodiment applied to a toe.

Referring now to the drawings and in detail, the invention comprises a plaster having a strip 12 of polymerized, tetrafluoroethylene mounted between two lengths of flexible tape 14. The underside of both tapes 14 and strip 12 are provided with a skin adhering adhesive as at 16 and 13 respectively. The ends of polymerized, tetrafluoroethylene strip 12, are attached to the top surface 17 of the inside ends of each length of tape 14.

Plaster A is particularly suited for indurations of the feet, such as corns and calouses, but it will be readily appreciated, the plaster may be applied to any portion of

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the body where it is desirable to reduce friction. The dimension of strip 12 and length of tape 14 will of course vary depending on the induration to be covered. In all cases polymerized tetrafluoroethylene strip 12 should be large enough to cover the frictional area of the particular induration.

Fig. 1 illustrates the invention applied to a toe B having an induration or corn 18. Plaster A is mounted on the toe so that polymerized tetrafluoroethylene strip 12 overlies corn 18 and tape 14 encircles the remainder of the toe.

It will be observed tapes 14 are of sufficient lengths to overlap at their outer ends as at 19 to firmly secure or lock the plaster to the toe.

Plaster A is formed with the combination of tape and polymerized tetrafluoroethylene to economize on tetrafluoroethylene, so that the more expensive product need be used only at the point where it is desirable to reduce friction.

More important the tape on the ends of the polymerized tetrafluoroethylene can form an overlapping lock as viewed at 19. The non-adhesive surface of polymerized tetrafluoroethylene is substantially non-reactive chemically or physically over a wide range of temperatures whereby substantially nothing will adhere to the non-adhesive surfaces. Accordingly a single tape of polymerized tetrafluoroethylene unilaterally provided with an adhesive could not form an effective lock at overlapping ends.

In operation the substantially friction-free, non-adhesive surface of member 12 gives very little resistance to the rubbing of the afflicting footgear or shoe and accordingly, friction and frictional heat is minimized. The induration is materially relieved and over a period of time in many cases the induration will slough off and disappear.

Polymerized tetrafluoroethylene is unusually durable and will last over a substantial period of time. Its exceptionally thin construction renders increased pressure between the induration and the afflicting footgear due to the insertion of additional material therebetween, substantially nil. Due to its lightweight construction and durability the plaster may comfortably be worn over an extended period of time both to relieve existing indurations and to prevent reformation of new indurations.

Fig. 4 discloses a plaster C similar to plaster A except that plaster C is provided with two juxtaposed strips of polymerized tetrafluoroethylene. Plaster C comprises an upper strip 21 and a lower strip 22 of polymerized tetrafluoroethylene with the adjacent ends 23 of two tapes 24 sandwiched between strips 21 and 22. The inside faces of strips 21 and 22 are provided with an adhesive as at 25 to permanently attach the tape to the strips and the two tapes 24 are provided with a unilateral coating of pressure sensitive adhesive as at 26 so the plaster can be attached to a person's body as hereinabove described.

In this embodiment the substantially friction-free and non-adhesive surfaces of polymerized tetrafluoroethylene are juxtaposed both against the afflicting footgear and also against the induration. Accordingly, this embodiment has the advantages of the first embodiment and also provides a very low co-efficient of friction in contact with the induration. Thus, stresses on the induration which might result from movement and pull on the polymerized tetrafluoroethylene where the polymerized tetrafluoroethylene is adhesively secured to the induration, is further minimized by the non-adhesive surface of member 22 permitting slidable movement relative to the induration but with a minimum of friction.

The two embodiments of the plaster have been described only with respect to a single corn on a toe. As previously mentioned, however, the plaster may be applied

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to any portion of the body when it is desirable to reduce friction. Thus it could be applied to body sores of a bed-fast patient. Or in the case of one or more corns between adjacent toes one plaster may be positioned over the afflicted area and a second plaster secured to the adjacent toe with the polymerized tetrafluoroethylene positioned at the point where rubbing occurs substantially nullifying friction at this point.

Although the foregoing invention has been described in some detail by way of illustration and example for purposes of clarity of understanding, it will be understood that certain changes and modifications may be practiced within the spirit of the invention and the scope of appended claims.

I claim:

1. In a skin plaster, the combination including a pair of first strips, at least one strip of polymerized tetrafluoroethylene, said first strips being secured in spaced, end to end relation by said strip of tetrafluoroethylene.

2. In a skin plaster the combination including at least one member composed of polymerized tetrafluoroethylene, at least one tape member, a marginal edge of said polymerized tetrafluoroethylene member joined to one end of said tape member whereby said marginal edge only of said polymerized tetrafluoroethylene member opposes said tape member, each of said members provided with an adhesive on one face thereof.

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3. In a skin plaster the combination including a pair of tape members, a pair of opposed polymerized tetrafluoroethylene members, the opposed surfaces of said polymerized tetrafluoroethylene members provided with a pressure sensitive adhesive securing said tape members in spaced substantially co-planar position, said tape members unilaterally provided with a skin adhering adhesive.

4. A skin plaster securable to a member of a human body comprising at least one member composed of polymerized tetrafluoroethylene, at least one tape member, a marginal edge of said polymerized tetrafluoroethylene member joined to one end of said tape member whereby said marginal edge only of said polymerized tetrafluoroethylene member opposes said tape member, each of said members unilaterally provided with a skin adhering adhesive, the longitudinal dimension of the plaster being greater than the circumference of the body to which it is to be secured whereby the opposite ends of the plaster are arranged partially to overlies each other to lock the plaster on the body.

References Cited in the file of this patent

UNITED STATES PATENTS

2,254,883	Boyle	Sept. 2, 1941
2,703,083	Gross	Mar. 1, 1955
2,755,800	Thompson	July 24, 1956
2,781,552	Gray	Feb. 19, 1957