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PHYSICIAN'S FINGER COT

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Fig. 1

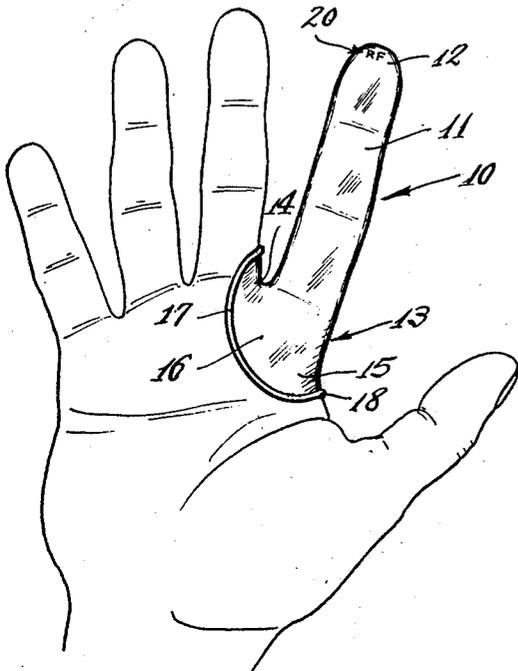


Fig. 4

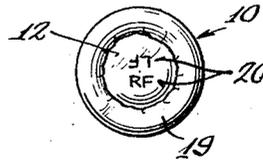


Fig. 2

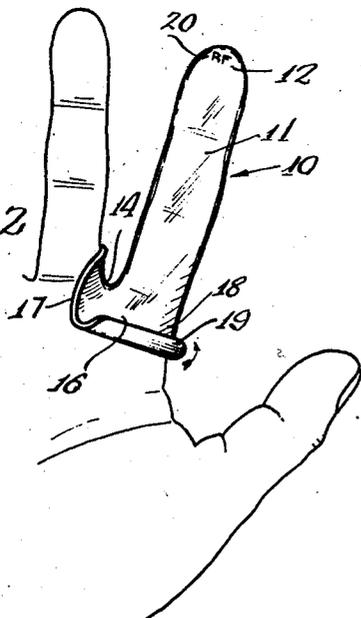
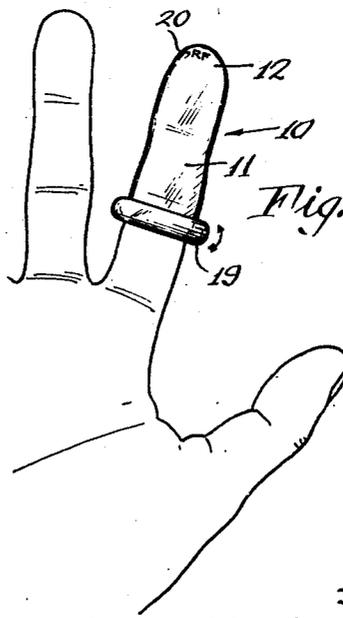


Fig. 3



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PHYSICIAN'S FINGER COT

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2 Claims. (Cl. 2—21)

1

This invention relates to finger cots or shields for use by physicians in conducting tactile examinations of bodily orifices.

In the past it has been the general practice of physicians to employ hand coverings such as gloves of rubber or the like during physical examination of a patient. Finger cots, of course, have been well known for other purposes, but the only types available for the present purpose, which are convenient to use, cover only the finger itself and have proved to offer insufficient protection against contamination of the hand of the user. Rubber gloves, on the other hand, are extremely inconvenient in that they are difficult to apply and remove, and due to their cost, must be washed, sterilized and reused many times in order to avoid excessive expense.

It is an object of this invention to provide a finger cot for physician's use which will be sufficiently small and inexpensive to be disposable, and which at the same time adequately provides for the protection of the physician's hand from contamination. It is also an object of the invention to provide a finger cot having both of the foregoing features, and which is at the same time suited to easy and convenient application and removal by rolling in such a way that the major portion of the surface of the cot is covered and protected when the cot is in rolled condition.

The finger cot of the present invention may be used on either hand and is provided with suitable indicia to aid in properly positioning the cot thereon.

Additional features and advantages will hereinafter appear.

In the accompanying drawing:

Figure 1 is an elevation of a finger cot according to the invention, shown as applied to the index finger of the physician's right hand.

Fig. 2 is a view similar to Fig. 1 but in which the first stage in rolling of the cot for donning purposes is illustrated.

Fig. 3 is a view similar to Figs. 1 and 2 but showing the cot in half rolled condition.

Fig. 4 is a plan of the cot of Figs. 1 to 3 shown in completely rolled condition as it appears either before application to the physician's hand or after removal therefrom.

In carrying out the invention there is provided a member 10 as shown in Fig. 1 having a tubular finger-receiving portion 11, one end of which is closed by an integrally formed end portion 12, and the other end of which carries as an integral extension thereof a molded skirt 13. The cot 10 may be made from any suitable flexible film material and preferably of any suitable natural or synthetic elastomer capable of casting a film which is at the same time continuous, very thin and very strong, for example coagulated rubber latex.

2

The configuration of the skirt is such as to protect vulnerable areas of the skin on the physician's hand from contact with and possible contamination by bodily secretions of the patient.

Particularly susceptible to such infection are the tender areas of the skin located in the crotch portions between fingers. In the form of the invention shown in the drawing, wherein the cot is intended for use on the index finger, the skirt 13 includes an upwardly directed portion or lateral saddle-shaped extension which rests against the adjacent finger in the ulnar direction and protects the crotch skin from possible contact with infectious matter. The skirt also includes a depending flap 15 at the opposite side. The flap 15 extends down onto the hand towards the thumb for a substantial distance and thus protects that portion of the hand at the radial side of the index finger from danger of contact with body secretions even when the finger is fully inserted into the orifice. Saddle portion 14 and flap 15 are connected by similar flat portions 16 which may be either volar or dorsal depending upon whether the right hand or left hand is having the cot applied to it. The portions 15, 16, 16 are preferably formed as continuations of the tube 11 and extend generally parallel to the tube axis, being only slightly flared if at all. The skirt 13 is preferably molded to provide a shape such that it will snugly fit the hand, and such that the skirt will remain properly disposed in approximately the position shown in Fig. 1 at all times during use. A small strengthening bead 17 is preferably formed around the periphery of the skirt 13 to prevent inadvertent tearing of the cot during placement.

The skirt not only protects the hand during use but it provides a means whereby the cot can be removed with a minimum of danger of contamination of the other hand in removing the same. In doffing the cot from the finger, the procedure illustrated in Figs. 2 and 3 is employed. The lowermost point of flap 15, designated 18 in Fig. 1, is engaged with the opposite hand, and rolled upwardly. As the rolling progresses portions 16 of the skirts are also rolled and the periphery of the skirt is progressively involved, as seen in Fig. 2, and eventually the saddle portion 14 automatically folds and becomes incorporated in the toroidal rolling rim 19 which now encircles the finger. The rolling is continued upwardly until the finger tip is approached at which time the cot drops readily from the finger and may be discarded. It will be seen that this removal can be effected with very little necessity for touching the exterior of the cot which may be possibly contaminated with infectious matter. The point 18 which is well removed from the zone of contact during use of the cot is the only point where any necessity for exterior contact during

removal exists, and once the roll 19 has begun to form, all the contact necessary to continue rolling is made with that portion which was formerly the inside surface of the cot when in place on the finger.

When the cot is completely rolled it appears as illustrated in Fig. 4, and this is the condition in which the same will normally be supplied to the user, for it is not only more economical of storage space, but is also suited to the protection of a large area of the surface of the cot from contamination.

Since the cot of the invention must be properly oriented when placed on the hand, suitable indicia 20 are provided to indicate the proper position of the cot during application in order that the lateral saddle portion 14 which is hidden in the roll 19 will be properly disposed after unrolling. In the form shown the indicia 20 consists of the initials RF and LF, indicating "right front" and "left front" respectively, properly disposed to be positioned erect for reading when the cot is placed on the index finger of the right hand or left hand, respectively. Such indicia may of course be placed at any suitable point on the cot 10 which will be exposed when the cot is in rolled condition. For example, points on the interior surface at locations which become exposed on the outer surface of roll 19 at the termination of rolling would be suitable.

In order to place the cot on the finger, it is removed from a sterilizing compartment by engaging the fingers with the roll 19 only. The cot is then placed on the tip of the finger in properly oriented position by reference to the indicia 20, and roll 19 is forced downwardly with the fingertips of the other hand, reversing the order of steps shown in Figs. 2 and 3. The tubular portion 11 unrolls first, lateral saddle portion 14 falls into place between the fingers, and then the portions 16 flatten against the hand while the downwardly extending flap 15 unrolls into place. If necessary a slight tug may be given on the lower end 18 of flap 15, to seat the cot firmly in place, by grasping the flap so that only a very slight portion of the exterior surface adjacent point 18 is touched by the fingers.

While the preferred form of the invention is that shown for use on either index finger, the invention may also take the form of a middle finger cot provided with two lateral saddle portions if desired. In some instances the physician may prefer to employ two fingers in the examination in which case the cot would be constructed to provide for both the index and middle fingers with a lateral saddle portion similar to 14 protecting the crotch between the middle and ring fingers and a flap similar to 15 at the radial side of the cot. In the latter instance however the resulting device, although retaining its advantageous protective features, would be somewhat more expensive and correspondingly less disposable and would be incapable of rolling and storage in the manner of the preferred form shown in the drawings.

From the foregoing discussion it will be seen that the invention provides a finger cot which adequately protects the physician's hand from contact with infectious secretions of the patient, which can also be compactly rolled and stored so as to protect most of its surface from contaminating contact with other articles, which is so

designed that it can be readily handled and applied in a manner such that the surfaces which must engage the doctor's hands and those which are to come into contact with the patient's body may be easily maintained distinct and separate during handling and use, and which is also inexpensive enough to serve as a disposable item, thereby doing away with much annoying detail work and contributing further to the maintenance of antiseptic conditions.

Variations and modifications may be made within the scope of the claims and portions of the improvements may be used without others.

I claim:

1. A physician's finger cot comprising a single finger-receiving tube having a closed end for use on the index finger; and a continuous skirt integrally connected to the other end of said tube for snugly fitting, covering and protecting only those portions of the hand immediately adjacent the base of the index finger, said skirt including a preformed lateral saddle portion adapted to extend upwardly from one side of the finger tube when in place for engaging the crotch portion of the hand between the fingers and extending up onto the side of the middle finger and terminating slightly above said crotch, said skirt further including at the other side of the finger tube a depending flap portion with the edge thereof on each side of the saddle portion being convexly curved from a central point at the top of the saddle portion for covering portions of the hand between the index finger and thumb.

2. A physician's finger cot comprising a single finger-receiving tube having a closed end for use on the index finger; a continuous skirt integrally connected to the other end of said tube for snugly fitting, covering and protecting only those portions of the hand immediately adjacent the base of the index finger, said skirt including a preformed lateral saddle portion adapted to extend upwardly from one side of the finger tube when in place for engaging the crotch portion of the hand between the fingers and extending up onto the side of the middle finger and terminating slightly above said crotch, said skirt further including at the other side of the finger tube a depending flap portion with the edge thereof on each side of the saddle portion being convexly curved from a central point at the top of the saddle portion for covering portions of the hand between the index finger and thumb, the skirt and tube being readily rollable into a compact toroidal roll; and indicia located on said cot at a point exposed to view when the cot is in rolled condition for indicating the proper orientation of the cot on the finger whereby the crotch portion can be accurately located.

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