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MEDICAL EXAMINER'S RUBBER GLOVE AND FINGER COT

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Fig. 1.

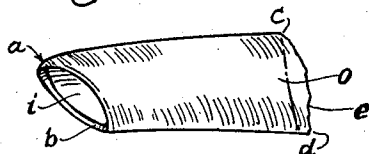


Fig. 2.

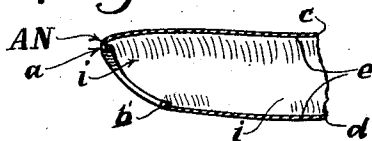


Fig. 3.

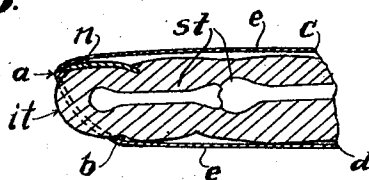


Fig. 4.

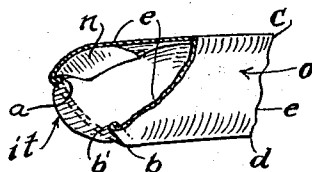
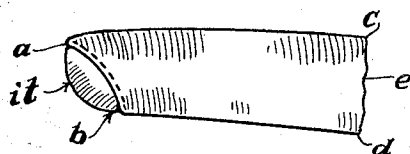


Fig. 5.

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MEDICAL EXAMINER'S RUBBER GLOVE AND FINGER COT

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One of the most frequently used devices by surgeons, obstetricians and other medical diagnosticians is the thin, soft rubber glove or the finger cot. But the finger stall of the "diagnosing," or exploring finger of all of these now in use forms a sack, or covering, which completely encases and covers that finger, including the tip end, or "outer" end of the finger. It is this "outer" or tip end of the exploring, or "diagnosing" finger upon which the diagnostician must rely for his information when exploring with that finger the inner surfaces of the cavities of the human body, and his success in making the exploration depends entirely upon the full use of the sensitiveness of touch in the ball and the tip end of that finger. Therefore, with the use of the surgeon's gloves and finger cots now in use, the finger stalls of which extend down and completely cover the ball and tip end of the "diagnosing" finger, this sensitiveness of touch in the ball and tip end of that finger is greatly hindered, obscured and obliterated by that complete end-covering of that finger found in these gloves and finger cots. It is highly desirable that the fingers of these gloves and cots should be so constructed that the medical examiner's exploring finger tip will have no covering, but will be left bare and fully exposed, that it may come directly in contact with the surface the finger is examining within the cavity that is being explored, thus affording the examiner the full benefit of the sensitiveness of touch which he has cultivated at the tip end of his exploring finger and upon which sensitiveness of touch he relies. Also, with this feature made available in the glove-finger or finger cot, it is equally important that the intended purpose of the surgeon's glove and finger cot, that is, complete asepsis of the exploring finger, should be maintained during the examination.

The purpose of my invention is to maintain complete asepsis of the diagnostician's exploring finger and at the same time afford him the full benefit of the sensitiveness of touch which he has cultivated in the tip end, or "outer" end of that finger.

I have discovered that it is possible and practical to permit this direct contact of finger tip and explored surface by constructing the glove-finger or finger cot with an opening at its "outer" end, or tip end. The opening is to be just large enough to expose and leave bare the tip end and the ball of the finger end when the glove-finger or finger cot is in position upon the exploring finger ready for making the medical examination. I have also discovered that the entire remaining portion of the finger, including the entire finger nail can be kept completely covered and inclosed within the glove-finger or finger cot and that no part of these may become exposed during the exploration, by constructing around and within the said proposed opening at the "outer" end of the finger cot a border, of the same material of the glove or cot—soft rubber—and which is to be made considerably thicker than are the walls of the glove or cot and which thickened border is "built in," so to speak, on the "inside" of the walls of the said opening. I designate this thickened border as "the thickened annular, or circular border."

The following is a description of what I consider the best means of carrying out the invention. The accompanying drawings form a part of this specification.

Fig. 1 illustrates a perspective view of the finger cot.

Fig. 2 represents a sectional view of the finger cot showing the reenforcement around the edges of the opening.

Fig. 3 illustrates a diagrammatic view of the finger cot positioned upon the finger.

Fig. 4 represents a side elevational view of the finger cot in position upon the finger and disclosing the sensitive portion of the finger extending through the opening.

Fig. 5 illustrates a diagrammatic view of a portion of the finger cot broken away in order to disclose the particular form of reenforcement around the opening in the finger cot, and the sensitive portion of the finger extending there through.

Referring to the drawings *o* indicates the cot; *a* the top or finger nail side of the opening; *i* the opening; *b* the bottom or ball of the

finger side of the opening; the line *c—d* indicates where the cot is broken away from a glove or conventional end part of a cot not shown; *AN* indicates a groove between the edge seal *b'* and the body of the cot adapted to receive the edge of a finger nail *n*; *ST* indicates a vertical cross section of a finger positioned within the cot; *it* indicates the front and ball of the finger projecting beyond the cot; *e* indicates the upper and lower walls of the cot.

I attach importance to the "thickened circular border" of the said opening, at the said outer edge of the said opening, because this border, being somewhat thicker than are the walls of the finger cot, "grips" the surface of the finger more firmly than the border would if it were of the same thickness of the walls; also, this extra thickness will not permit a tearing of the border's edges, thus preserving the cot for a longer period of usefulness and service.

In construction of my improved finger cot or glove finger the walls of same will be of the same material and same thickness that now obtains in the similar articles now in use. The opening to be left in the "outer" end of the cot is cut from before backward and from above downward, is therefore elliptical in shape; and the "thickened circular border" constructed just within this opening is approximately one-sixteenth ($\frac{1}{16}$) of an inch in thickness and in its antero-posterior cross-section is circular, and is solid, not tubular. Otherwise the entire structure and construction of my glove-finger or finger cot does not differ from those now in use.

The "thickened circular border" is held firmly back against the surface of the end of the finger at all points by the tension of the rubber walls of the cot, and it is thus made to firmly "grip" the finger and in that way it prevents escape of possibly infectious material from the covered parts of the finger and its nail.

These improved gloves and cots are, of course, to be produced in various sizes, as similar articles are now produced and to be had on the market; and the medical examiner will therefore be enabled to purchase and use them in proper size for his finger.

The surgeon's glove and finger cot with my improvement added thereto can be produced in the same identical manner and by the same method as are those now in use; and the additional cost is comparatively nothing. The only additional cost will be the cost of the added mold for forming the "thickened circular border", or had rather say, the cost of that part of the mold, which part of the mold is made necessary for adding this "thickened circular border" to the improved product. The small extra amount of rubber to form this "thickened border" is easily taken care of by the small lesser amount used in

the finger because of the absence of the end of the finger where I leave the opening. Once the molds for producing my improved gloves and cots are obtained the actual method, means, and expense of producing the improved product will be identical in every particular with these in the production of the similar articles now in use and on the market.

I claim as my invention—

An aseptic finger cot comprising a rubber section for receiving the finger having a single downwardly and inwardly extending opening at the outer end of the cot through which the tip of the finger extends, a reinforcement and sealing element around the inner face of the periphery of the opening provided with a groove extending about the upper part of the opening, between the reinforcement element and the body of the cot, adapted to receive the forward edge of the nail of the finger.

In testimony that I claim this as my invention I have hereto affixed my signature.
DANIEL W. B. KURTZ, JR.