Dec. 1, 1959 A. J. LANGDON 2,915,173

WRAP FOR SURGICAL GLOVES

Filed June 9, 1958 2 Sheets-Sheet 1

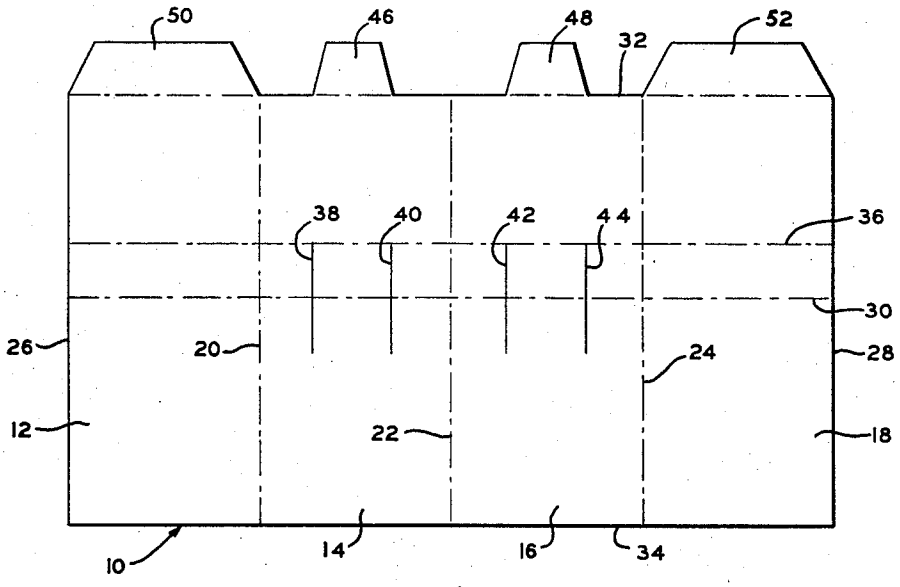


Fig. 1

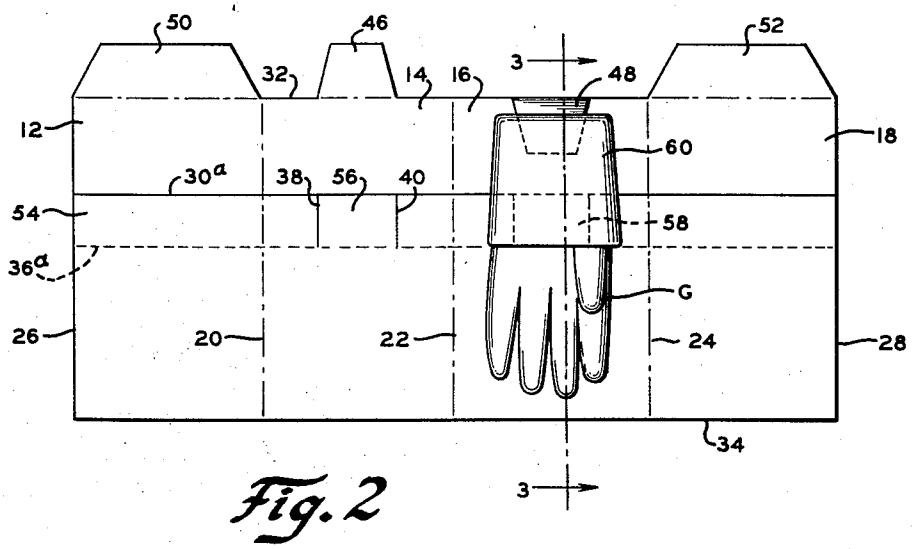


Fig. 2

INVENTOR
ARTHUR J. LANGDON

BY
Willard S. Curtis

AGENT

Dec. 1, 1959 A. J. LANGDON 2,915,173

WRAP FOR SURGICAL GLOVES

Filed June 9, 1958 2 Sheets-Sheet 2

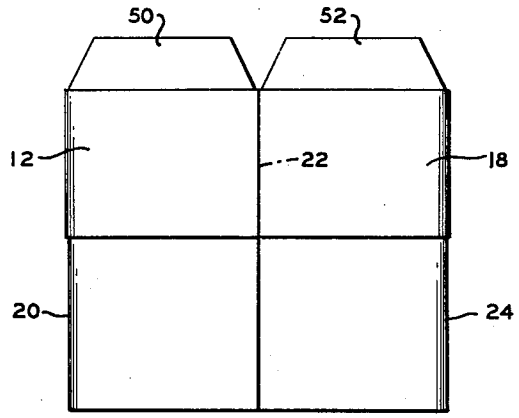


Fig. 4

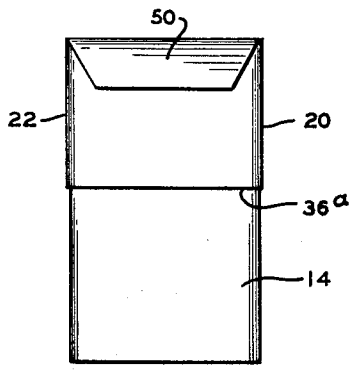


Fig. 5

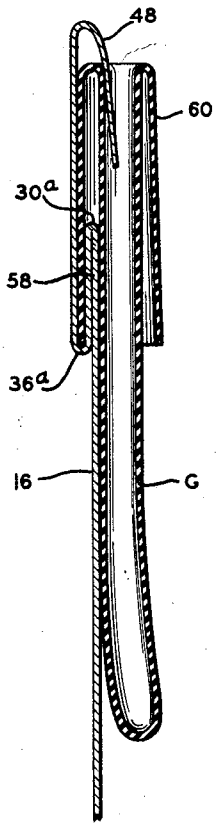


Fig. 3

INVENTOR
ARTHUR J. LANGDON

BY

Willard S. Curtis

AGENT

United States Patent Office 2,915,173
Patented Dec. 1, 1959

2,915,173

WRAP FOR SURGICAL GLOVES

Arthur J. Langdon, East Hampton, Conn., assignor to Sterling Precision Corporation, Brooklyn, N.Y., a corporation of Delaware

Application June 9, 1958, Serial No. 740,756

7 Claims. (Cl. 206—7)

This invention relates to a wrap for surgical rubber gloves which is adapted to receive the latter prior to sterilizing and thereafter maintains the gloves in a sterile condition.

Heretofore, it has been the usual practice to wrap surgical rubber gloves in a paper, wallet-like structure having two pockets arranged at opposite sides of a central full line and opening toward the latter so that, when the two pockets are folded on each other, the openings thereof are more or less sealed to protect or maintain the sterile condition of the surgical rubber gloves contained in such pockets. However, the described existing wrap is unsatisfactory in that it is necessary to handle the outer surfaces of the surgical rubber gloves in order to effect their removal from the pockets and the sterile condition of the gloves is thus compromised. Further, with the described existing wrap, the surgical rubber gloves are frequently creased upon insertion in the pockets prior to sterilization so that the steam used for sterilizing the gloves cannot reach all portions thereof. It is also necessary, with the existing wrap, to insert a sponge in the hand opening of each glove in order to ensure that the inner surfaces of the rubber glove will not stick together during sterilizing thereof and thereby make difficult the donning of the gloves.

Accordingly, it is an object of the invention to provide an improved wrap for surgical rubber gloves adapted to receive the gloves prior to sterilizing and thereafter to maintain the gloves in a sterile condition, and wherein the wrap is constructed and arranged so that the sterile rubber gloves may be removed from the wrap and donned in the usual manner without requiring the handling of the outer surfaces of the gloves.

Another object is to provide a wrap for surgical rubber gloves which avoids the possibility of the creasing thereof so that the steam used for sterilizing the gloves may contact all portions thereof.

A further object is to provide a wrap of the described character which is constructed and arranged in order to separate the inner surfaces of the surgical rubber gloves at the hand openings thereof so that the sponges inserted in the gloves, as mentioned above, may be eliminated.

A still further object of the invention is to provide a paper wrap for surgical rubber gloves which is open at the top and bottom thereof in order to permit the free passage of steam through the wrap when sterilizing the gloves contained therein.

In accordance with an aspect of the invention, a wrap for surgical rubber gloves is formed of a single sheet of paper having a transverse pleat folded upwardly therein and being divided into four substantially equal sections by vertical fold lines, with each of the central sections having a pair of spaced apart vertical slits cut in the pleat thereof to define a flap portion between the slits adapted to be extended upwardly under the turned down cuff portion of a rubber glove, and with the upper edges of the central sections having tabs extending therefrom in vertical alignment with the flap portions and adapted,

when the related flap portions are positioned under the turned down cuff portions of rubber gloves, to be inserted downwardly into the hand receiving openings of the gloves so that the latter are securely held in position against the central sections of the wrap by the coaction of the flap portions and the related tabs. In order to enclose the surgical rubber gloves in the above described wrap, the outer sections of the latter are folded inwardly over the central sections so that each glove is positioned between a central section and an outer section of the wrap and, thereafter, the two opposite halves of the wrap are folded together along the central vertical fold line. In accordance with the invention, the upper edges of the outer sections of the paper wrap are provided with tabs extending therefrom which can be folded over the central sections following the above described folding operations, thereby to hold the outer sections in covering positions over the rubber gloves supported by the flap portion and tabs of the central sections.

The above, and other objects, features and advantages of the invention will be apparent in the following detailed description of an illustrative embodiment thereof which is to be read in connection with the accompanying drawing forming a part hereof and wherein:

Fig. 1 is a plan view of a paper blank from which a wrap for surgical rubber gloves may be formed in accordance with the present invention;

Fig. 2 is a plan view of the wrap formed from the blank of Fig. 1, and shown in its open position for receiving surgical rubber gloves to be sterilized, or for permitting the removal of sterilized gloves from the wrap;

Fig. 3 is an enlarged sectional view taken along the line 3—3 of Fig. 2;

Fig. 4 is a view similar to that of Fig. 2, but illustrating an initial folding operation during the closing of the wrap; and

Fig. 5 is a view similar to that of Fig. 2, but showing the wrap in its closed position.

Referring to the drawing in detail, and initially to Fig. 1 thereof, it will be seen that a wrap for surgical rubber gloves is, in accordance with this invention, formed of a generally rectangular sheet **10** of paper or the like. The sheet **10** is divided into four approximately equal sections **12**, **14**, **16** and **18** by three spaced apart vertical fold lines **20**, **22** and **24**, with the fold line **22** being centered with respect to the opposite side edges **26** and **28** of the sheet **10**, and with the fold lines **20** and **24** being laterally centered between the central fold line **22** and the side edges **26** and **28**, respectively.

The sheet **10** forming the blank of Fig. 1 further has a fold line **30** extending laterally thereacross approximately midway between the top and bottom edges **32** and **34**, respectively, of the sheet, and a fold line **36** extending parallel to fold line **30** and spaced upwardly from the latter.

The central sections **14** and **16** of sheet **10** are formed with pairs of laterally spaced apart slits **38** and **40**, and **42** and **44**, respectively, extending parallel to the fold lines **20**, **22** and **24**, and reaching from the lateral fold line **36** to points below the fold line **30** which are spaced from the latter by a distance equal to the spacing between the lateral fold lines **30** and **36**. The sheet **10** further has tabs **46** and **48** extending from its upper edge **32** at the sections **14** and **16**, such tabs being vertically aligned with the spaces between the parallel slits **38** and **40** and the parallel slits **42** and **44**, respectively, and having substantially the same lateral extent as the lateral distance between the related pairs of slits. The blank of Fig. 1 is completed by tabs **50** and **52** extending from the upper edge **32** along the top of the sections **12** and **18**, respectively.

In forming a wrap for surgical rubber gloves from

the single sheet **10** described above, the sheet **10** is folded in opposite directions along the lateral fold lines **30** and **36**, respectively, in order to form a transverse pleat **54** having an upper edge **30***a* which is defined by the fold line **30** of the previously described blank. When the sheet **10** is folded to form the pleat **54**, the parts of the pleat between the slits **38** and **40** and the slits **42** and **44** define flap portions **56** and **58**, respectively, which are free of the remainder of the pleat along their opposite side edges.

When surgical rubber gloves are to be enveloped in the wrap embodying this invention, as illustrated in Fig. 2, the wrist cover part of each glove G is folded or turned down to form a cuff portion **60**, and the flap portion **56** or **58** of the wrap is bent forwardly out of the plane of the remainder of the pleat **54** and extended upwardly under the cuff **60** so that the bottom edge of the cuff **60** will seat against the lower ends of the slits **38** and **40** or the slits **42** and **44** and also against the fold **36***a* of the wrap corresponding to the fold line **36** of the blank at the part of such fold **36***a* extending along the lateral width of the flap portion **56** or **58**. Accordingly, the flap **56** or **58** engaging under the cuff **60** of the glove G will limit the downward displacement of the latter relative to the wrap.

After a glove has been mounted on the flap portion **56** or **58**, the related tab **46** or **48**, respectively, is folded downwardly, as in the case of the tab **48** in Fig. 2, and extended into the hand receiving opening of the glove G so that the inserted tab **46** or **48** limits the upward movement of the glove with respect to the wrap and thereby avoids inadvertent removal of the turned down cuff **60** of the glove from the related flap portion **56** or **58**.

After gloves have been mounted against the central sections **14** and **16** of the wrap and are there held in place by the flap portions **56** and **58** and the tabs **46** and **48**, the outer sections **12** and **18** are folded inwardly, about the fold lines **20** and **24**, respectively, to overlie the central sections **14** and **16** and the gloves mounted thereon, as shown in Fig. 4. Then, one folded half of the wrap, for example, the folded half formed by the sections **12** and **14** with a glove embraced therebetween, is folded about the central fold line **22** over the other folded half of the wrap, that is, the half formed by the sections **16** and **18** with a glove embraced therebetween, so that the back surfaces of the sections **12** and **18**, as viewed in Fig. 2, come into confronting relationship, while the central sections **14** and **16** form the outer surfaces of the folded wrap, as in Fig. 5. Thereafter, the tabs **50** and **52** annexed to the sections **12** and **18**, respectively, may be folded downwardly over the upper edges of the sections **14** and **16**, respectively, as illustrated in Fig. 5, in order to hold the sections **12** and **18** in folded relation to the sections **14** and **16**, respectively, or, alternatively, the tabs **50** and **52** may be folded together and then tucked between either the sections **12** and **14** or the sections **16** and **18** in order to maintain the folded halves of the wrap against each other, as in Fig. 5.

Since the sections **14** and **16** of the wrap embodying the invention are fully exposed during the mounting of the surgical rubber gloves thereon, as in Fig. 2, the gloves can be easily mounted without the folding or creasing thereof, as is frequently the case when the rubber gloves are inserted in the pockets of the previously described existing wrap which is intended to be replaced by the invention. Thus, when the gloves are sterilized while positioned or enveloped within the wrap, the steam used for that purpose can contact all portions of the gloves. Further, since the sections **12** and **14** and the sections **16** and **18** between which the gloves are positioned are free of each other at the upper and lower edges of the folded wrap when subjected to steam sterilizing, the steam can pass freely through the open top and bottom of the wrap for ensuring efficient sterilizing of the gloves. It will be apparent from Figs. 2 and 3 that the tabs **46** and **48** inserted into the hand receiving openings of the gloves for preventing inadvertent upward removal of the latter also perform the function of separating the inner surfaces of the gloves and thereby avoid the necessity of providing the usual sponge for that purpose. Similarly, the flap portions **56** and **58** extending under the down turned cuffs **60** of the gloves G perform the function of separating the back of the glove from the down turned cuff as well as acting to hold the glove on the section **14** or **16**, as previously described. Thus, sticking together of the confronting surfaces of the rubber gloves is avoided.

When the surgical rubber gloves sterilized in the wrap embodying the invention are to be used, the sections of the folded wrap are successively unfolded from the condition of Fig. 5 to the condition of Fig. 4, and finally to the condition of Fig. 2, and it is apparent that there is no need for contacting the gloves held upon the wrap during such unfolding of the sections. With the wrap in the condition of Fig. 2, the gloves can be offered to the scrubbed surgeon by supporting the central sections **14** and **16** of the wrap on upwardly turned palms, or the unfolded wrap in the condition of Fig. 2 may be simply laid upon a table or other supporting surface. The surgeon then simply removes the tabs **46** and **48** from the hand receiving openings of the gloves whereupon the latter can be freed from the flap portions **56** and **58** by mere upward displacement with respect to the wrap. Such upward displacement of the gloves can be effected by handling only the exposed surface of the down turned cuff **60** which, when the gloves are put on, are disposed at the inside of the gloves, thereby to avoid contamination of the sterile gloves. Since the gloves are completely visible when the wrap is unfolded, as in Fig. 2, rather than being hidden in pockets, as in the previously existing wrap for surgical rubber gloves, it is apparent that the removal of the gloves from the wrap is greatly facilitated and may be performed with less chance of contaminating the sterile gloves.

It is also to be noted that the above described wrap embodying the invention may be repeatedly reused for holding surgical rubber gloves during the sterilizing thereof and for maintaining the gloves in sterile condition until use.

Although an illustrative embodiment of the invention has been described in detail herein with reference to the accompanying drawing, it is to be understood that the invention is not limited to that precise embodiment, and that various changes and modifications may be effected therein wihout departing from the scope or spirit of the invention, except as defined in the appended claims.

What is claimed is:

1. A package comprising a pair of surgical gloves each having a downturned cuff, and a wrap for said gloves including a sheet having two equal central sections which are foldably joined to each other along a central fold line therebetween and two equal outer sections foldably joined to said central sections along the edges of the latter remote from said central fold line, each of said central sections having a flap portion extending in the direction toward one end of the central section and engaging under said downturned cuff of one of said gloves, and each of said central sections further having a tab extending from said one end and folded in the direction toward said flap portion, said tab extending into the hand receiving opening of the glove having its cuff engaged by the related flap portion so that said tab and flap portion of each central section hold one of said pair of gloves against the latter, said outer sections being folded over said gloves on the central sections and the latter being folded toward each other about said central fold line to envelop said gloves in said wrap.

2. A wrap for surgical rubber gloves comprising a sheet having a pleat extending laterally thereacross and

divided into two equal central sections foldably joined to each other along a central fold line extending perpendicular to said pleat and two outer sections foldably joined to said central sections along the edges of the latter remote from said central fold line, each of said central sections having a pair of laterally spaced slits extending parallel to said central fold line in said pleat to define a flap portion between said slits extending toward one end of the central section, and each of said central sections further having a tab extending from said one end and folded in the direction toward said flap portion.

3. A wrap as in claim 2; wherein each of said outer sections has a tab at the end thereof adjacent said one end of the contiguous central section and adapted to be folded over said one end of said contiguous central section following the folding of said outer sections over the central sections to hold said outer sections in folded relation to said central sections.

4. A wrap as in claim 2; wherein said flap portion of each central section is substantially centrally located with respect to said central fold line and said remote edge of the related central section, and said tab extending from said one end of the central section has a lateral extent substantially equal to the lateral distance between said pair of slits and is laterally aligned with said flap portion defined between the latter.

5. A package comprising a pair of surgical rubber gloves having downturned cuffs, and a paper wrap for said gloves including a sheet having a pleat extending laterally thereacross and being divided into two equal central sections foldably joined to each other along a central fold line extending perpendicular to said pleat and two outer sections foldably joined to said central sections along the edges of the latter remote from said central fold line, each of said central sections having a pair of laterally

spaced slits in said pleat extending parallel to said central fold line to define a flap portion between said slits extending toward one end of the central section and engaging under the downturned cuff of one of said gloves, and each of said central sections further having a tab extending from said one end in the direction toward said flap portion and engaging in the hand receiving opening of the glove having its cuff engaged by the related flap portion so that the tab and flap portion of each central section hold one of said pairs of gloves against the latter, said outer sections being folded over said gloves held against the central sections and the latter being folded toward each other about said central fold line to envelop said gloves in said wrap.

6. A package as in claim 5; wherein each of said outer sections has a tab at the end thereof adjacent said one end of the contiguous central section and which is folded over said one end of said contiguous central section to hold said outer sections in folded relation to said central sections.

7. A package as in claim 5; wherein said flap portion of each central section is substantially centrally located with respect to said central fold line and said remote edge of the related central section, and said tab extending from said one end of the central section has a lateral extent substantially equal to the lateral distance between said pair of slits and is laterally aligned with said flap portion defined between the latter.

References Cited in the file of this patent

UNITED STATES PATENTS

Re. 20,899	Scholl	Oct. 25, 1938
325,107	Merrell	Aug. 25, 1885
2,833,399	Hartman	May 6, 1958