

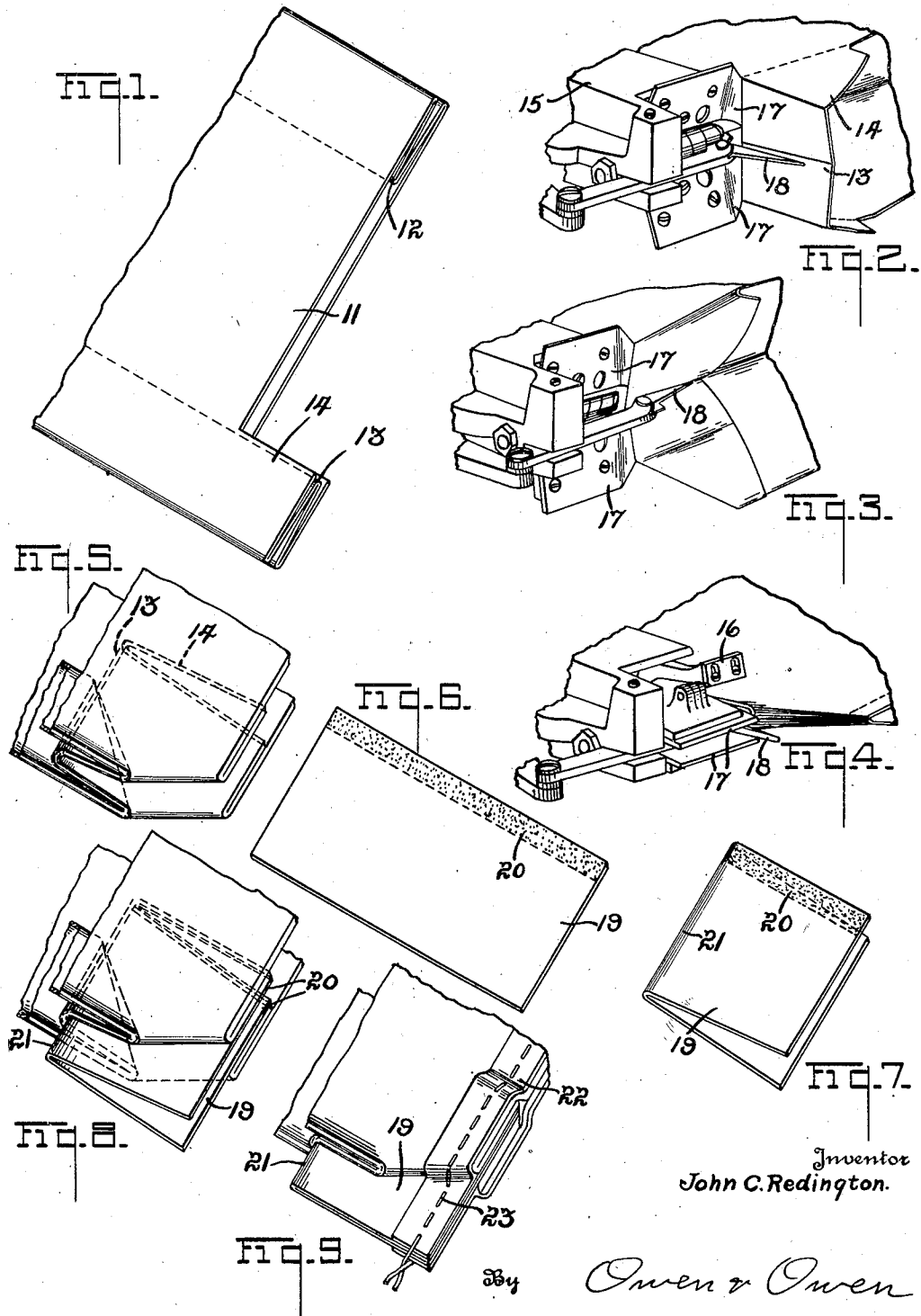
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J. C. REDINGTON

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METHOD OF FORMING VALVE BAGS

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UNITED STATES PATENT OFFICE

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METHOD OF FORMING VALVE BAGS

Application filed September 17, 1928. Serial No. 306,323.

This invention relates to forming a valve bag and more particularly to the method of inserting a sleeve-forming sheet in a valve bag.

5 For some purposes it has been found desirable to insert in the filling valve of a bag a sleeve-forming sheet and, after the bag has been filled, to close the outer end of the sleeve so as to seal the valve opening and completely prevent the escape of material therefrom. 10 In dealing with bags formed of a plurality of relatively movable plies of paper it has been found that the attachment of such a sleeve-forming sheet is apt to be accompanied 15 by disarrangement of the proper relation of the several plies, which disarrangement results in a serious weakening of that corner of the bag where the valve is located.

It is the purpose of this invention to provide a method whereby a sleeve-forming sheet may be inserted in the valve of a bag and secured therein expeditiously, cheaply, and without any unnecessary disarrangement of the several plies of paper which may form 25 the bag.

The preferred manner of carrying out this method is illustrated in the accompanying drawings and will be described in connection therewith.

30 Figure 1 shows one end of a bag length which is to be formed into a valve bag; Figs. 2, 3 and 4 show successive steps during the tucking in of the valve corner of the bag; Fig. 5 shows the valve corner of the bag with 35 the valve tucked in; Fig. 6 shows a sleeve-forming sheet; Fig. 7 shows the sleeve-forming sheet folded ready for placing within the valve; Fig. 8 shows the sleeve placed within the tucked-in valve corner of the bag, 40 and Fig. 9 shows the completed valve corner of the bag with the sleeve in place therein and the end of the bag closed.

In the construction shown, a section of a tube 11, provided with gusset folds 12 and 13, 45 is cut with one corner 14 extending so as to form an extra length at the valve corner. This corner of the bag is placed in operative relation with a valve forming device, such as shown somewhat diagrammatically in 50 Figs. 2, 3 and 4. This device comprises a

casing 15, clamps 16 adapted to clamp the gusset fold of the bag near one end thereof, spreading members 17 adapted to enter the gusset fold of the bag between the end of the bag and the clamp and to spread apart the 55 gusset fold at this point, and a finger 18 adapted to tuck in the end of the gusset fold between the spread apart sides of the bag. This operation is similar to that disclosed and described in Patent No. 1,682,107, issued to 60 Bates and Dorr August 28, 1928, and need not be further described in this specification.

After the valve has been tucked in by mechanism similar to that disclosed, it assumes an appearance such as indicated in Fig. 5. 65 Thereafter a sheet 19 is provided with adhesive along one side 20 and is folded across its middle portion, as indicated at 21 in Fig. 7. Thereafter the sheet is slipped into the tucked-in corner of the bag, as indicated in 70 Fig. 8, with the adhesive along edge 20 in contact with the tucked-in edges of the valve flap. Thereafter an end closing seam is formed by providing reinforcing strips 22 and sewing a seam 23 therethrough, or by 75 other analogous means.

From the foregoing, it will be seen that the sleeve-forming sheet 19 is placed in the tucked-in corner of the bag and secured in place therein without disturbing this corner 80 of the bag more than is necessary to tuck it in to form a valve. As a consequence the valve corner of the bag is not weakened by disarranging the relation of the several plies of paper therein.

The resultant bag is similar to that disclosed in the application of John C. Redington for a valve bag and method of closing the same, Serial No. 260,436, filed March 9, 1928. No claim is made herein to subject-matter disclosed in the said application of John C. 85 Redington or the above identified patent to Bates and Dorr.

What I claim is:

1. A method of providing a bag, comprising 95 a plurality of relatively movable walls, with a tucked-in valve and a sleeve in that valve, which comprises first tucking in the corner of the bag to provide a valve, folding a sheet, slipping the sheet between the walls 100

of the bag at said tucked in corner with the ends of the sheet parallel with the end of the bag, and thereafter forming an end closure across the ends of the bag and the ends of the sheet.

2. A method of providing a bag, comprising a plurality of relatively movable walls, with a tucked-in valve and a sleeve in that valve, which comprises first tucking in the corner of the bag to provide a valve, folding a sheet, slipping the sheet between the walls of the bag at said tucked in corner with the ends of the sheet parallel with the end of the bag, and thereafter adhering the edge of the sheet to the edges of the valve flap formed by tucking in the corner and forming an end closure across the ends of the bag and the ends of the sheet.

3. A method of providing a bag, comprising a gusset folded tube formed from a plurality of relatively movable plies, with a tucked-in valve and a sleeve in that valve, which comprises first tucking in the corner of the bag to provide a valve, folding a sheet, slipping the sheet between the walls of the bag at said tucked-in corner with the ends of the sheet parallel with the end of the bag, and thereafter forming an end closure across the ends of the bag and the ends of the sheet.

4. A method of providing a bag, comprising a gusset folded tube formed from a plurality of relatively movable plies, with a tucked-in valve and a sleeve in that valve, which comprises first tucking in the corner of the bag to provide a valve, folding a sheet, slipping the sheet between the walls of the bag at said tucked-in corner with the ends of the sheet parallel with the end of the bag, and thereafter adhering the edge of the sheet to the edges of the valve flap formed by tucking in the corner and forming an end closure across the ends of the bag and the ends of the sheet.

In testimony whereof I have hereunto signed my name to this specification.

JOHN C. REDINGTON.