

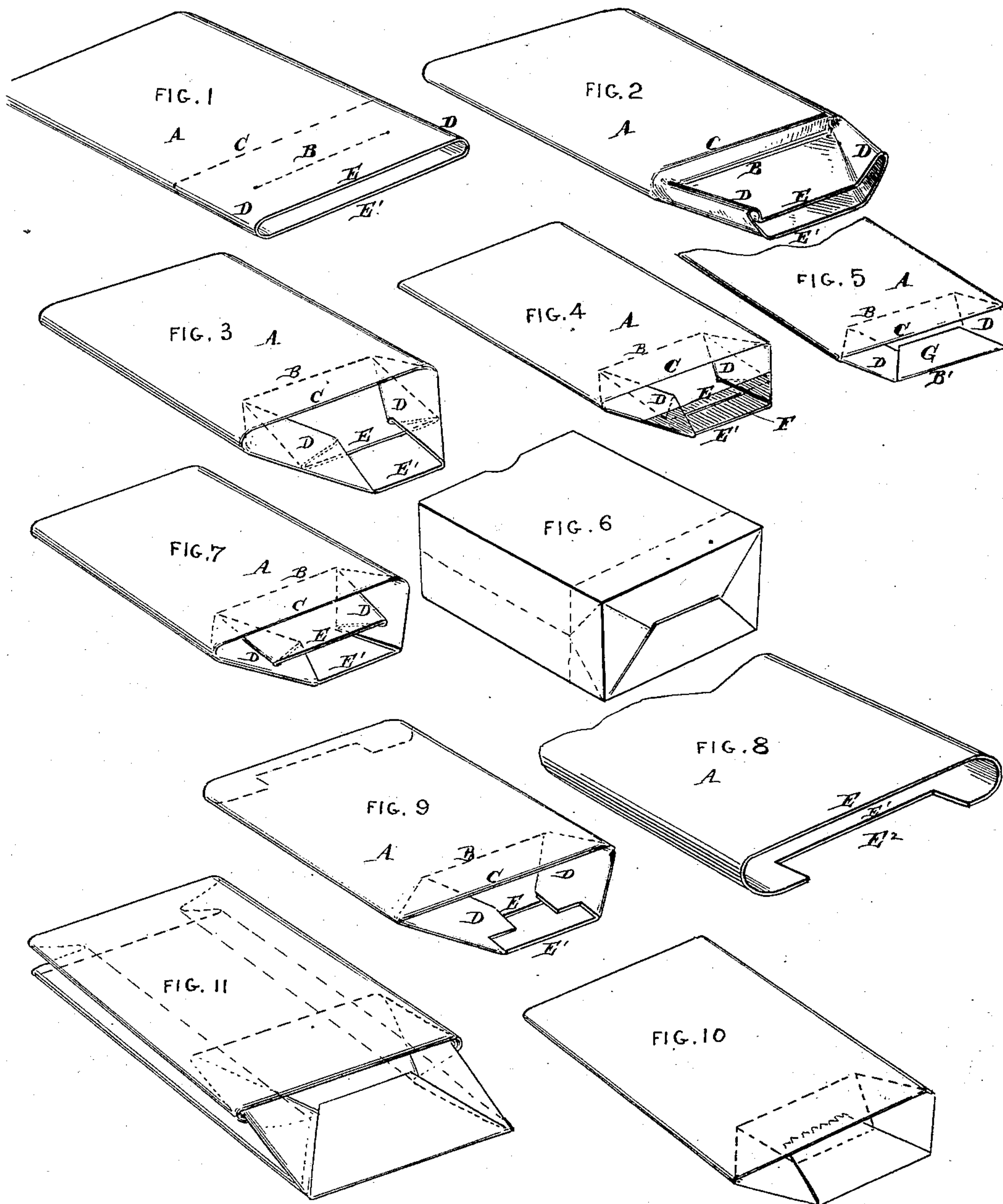
(No Model.)

J. P. ONDERDONK.

MANUFACTURE OF PAPER BAGS.

No. 333,537.

Patented Jan. 5, 1886.



Attest

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UNITED STATES PATENT OFFICE.

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MANUFACTURE OF PAPER BAGS.

SPECIFICATION forming part of Letters Patent No. 333,537, dated January 5, 1886.

Application filed March 5, 1885. Serial No 157,797. (No model.)

To all whom it may concern:

Be it known that I, JOHN P. ONDERDONK, of the city and county of Philadelphia, and State of Pennsylvania, have invented a new and useful Improvement in the Manufacture of Paper Bags, of which the following is a specification.

My invention has reference to the manufacture of paper bags; and it consists in the method of forming the bottom so that a part of that portion which forms the bottom shall be tucked up on the inside or under the printing field of the bag, as set forth hereinafter.

Heretofore it has been customary to make bags having square, rectangular, or satchel bottoms in such a manner that one of the sides or folds formed in making the bottom is always caused to lie upon or in the direction of the printing surface or field. In some bags—as, for instance, the regular satchel-bottom bag having a diamond fold—it is excessive, while in others—for instance the bag described in the patent to Stocking, No. 223,959—the printing field is not covered to so great an extent; and this defect has two main objections, viz: It interferes with the proper printing of the bag, and is also objectionable in packing and handling, as it causes the bags to catch, tear, and hold upon each other.

My object is therefore to overcome these existing objections to this class of bags by so forming the same that the bottom fold which turns up toward the printing field shall be tucked in or under that portion of the side or face of the tube which constitutes the said printing field, thereby forming a bag which exposes the printing field, and may be drawn in or out of a bundle of bags without catching or becoming torn.

My object is also to so make the bag that the method employed shall accomplish the object sought in a speedy and perfect manner.

In the drawings, Figure 1 is a perspective view of a tube ready to be formed into a bag. Fig. 2 is a similar view showing the tube in process of formation into the bag. Fig. 3 is a similar view showing a further stage in the creasing or forming manipulations. Fig. 4 is a similar view showing where the paste is applied. Fig. 5 is a similar view showing the bottom complete. Fig. 6 shows a perspective view of the bag when opened. Fig. 7 is a

perspective view illustrating a modified step in the formation of the bottom. Figs. 8 and 9 are views similar to Figs. 1 and 3, in which the tube is somewhat modified. Fig. 10 is a perspective view showing an ordinary satchel-bottom bag having one of its bottom flaps or folds tucked in according to my invention; and Fig. 11 is a similar view of what is known as the bellows-fold bag, also having a tucked-in fold.

In the method illustrated by the first six figures the bag is formed in the manner desired—that is to say, having one of its bottom folds tucked in; but it is immaterial to my invention, so far as the article *per se* is concerned, how or in what manner the bag is made or folded, as it may be done by machinery or by hand.

A machine for making this bag forms subject-matter of another pending application of mine; hence in this application I will simply explain the various successive steps required for accomplishing the desired result.

The tube A, while stationary or in motion, has one of its faces caught, as on the dotted line B, Fig. 1, and forced downwardly or inwardly and back under the dotted line C. The result of this is to form the side or diagonal folds D D, Fig. 2, which, as the operation is completed, are caused to lie down flat, as shown in Fig. 3, the two edges E E' being separated a distance equal to the distance from dotted line B to C. When this is done, paste is applied to the edges E E' and folds D D, as indicated at F, Fig. 4, and the edge E' is then folded over, as at G, Fig. 5, forming a fold, B', substantially corresponding to the fold B, and forming a bag which, when opened, as shown in Fig. 6, is very similar to the regular and well-known satchel-bottom bag. This bag-bottom can be formed rapidly and almost at a single operation, thus embodying cheapness as well as desirability, due to its having no free folds or flaps, and by its exposure of the printing field.

In place of causing the diagonal folds D D to come on top of the edge E, they may readily be caused to fold in under the said part, as indicated in Fig. 7. If desired, the edge E' may be cut away, as at E², Figs. 8 and 9, to shorten the free or paste receiving edge and allow of its being folded over to the requisite

degree without reaching the folding-line C. The folds may be formed from above or from below, upon the plain smooth face of the tube or upon the side having the seam, as desired.

5 The size or shape of the bottom is immaterial to my invention, and while I prefer to form the bag with the flap or fold tucked in in the process of making it, yet a bag made in any other manner and having its fold tucked
10 in subsequent to its manufacture, as indicated in Figs. 10 and 11, would be included in my invention.

Having now described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

15 The step in the method of forming the bottom of a paper bag which consists in tucking in between the two faces of the tube a portion of one face thereof, substantially as and for the purpose specified.

20 In testimony of which invention I hereunto set my hand.

JNO. P. ONDERDONK.

Witnesses:

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