

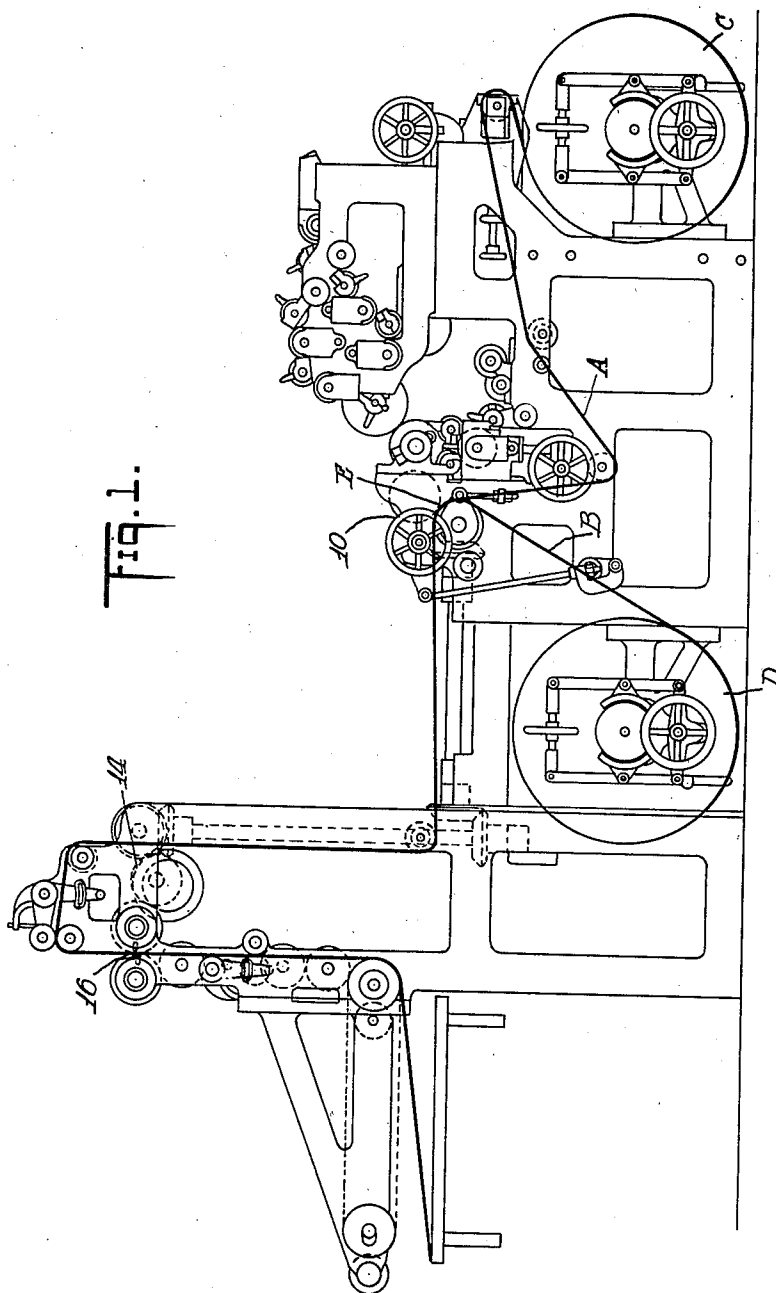
Jan. 9, 1934.

L. M. SNYDER

1,943,264

METHOD OF MAKING MANIFOLD PAPER WEBS

Original Filed Oct. 29, 1929 2 Sheets-Sheet 1



INVENTOR

Louis M. Snyder

BY

BY
Franklin J. Foster
ATTORNEY

ATTORNEY

Jan. 9, 1934.

L. M. SNYDER

1,943,264

METHOD OF MAKING MANIFOLD PAPER WEBS

Original Filed Oct. 29, 1929

2 Sheets-Sheet 2

Fig. 2.

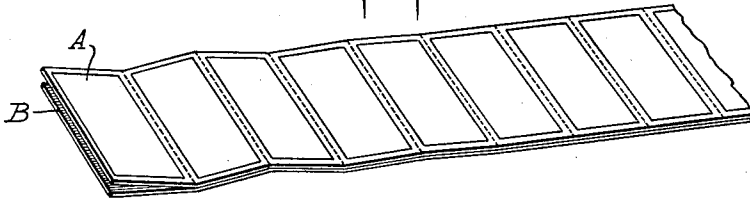


Fig. 3.

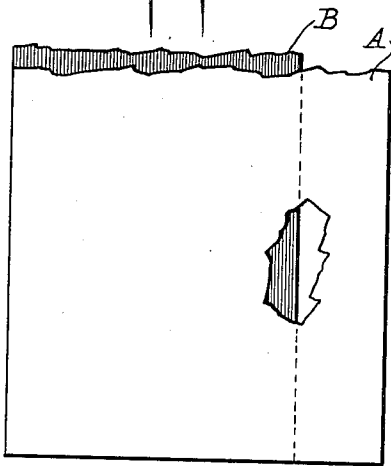


Fig. 4.

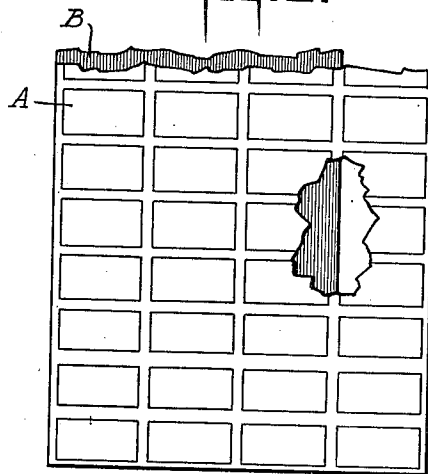


Fig. 5.

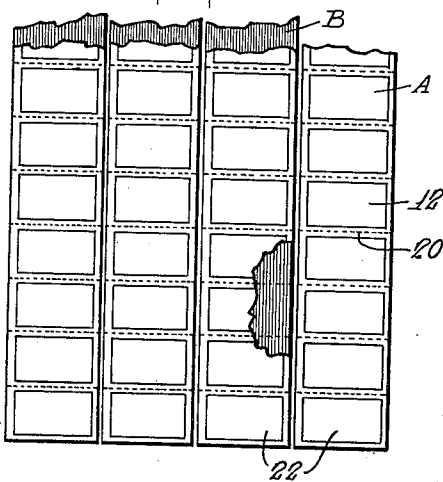
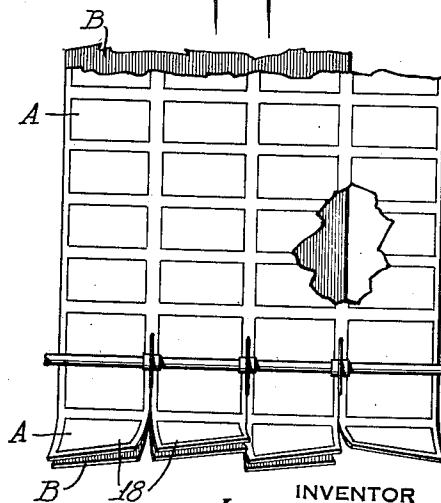


Fig. 6.



INVENTOR
Louis M. Snyder

BY

Franklin J. Foster
ATTORNEY

UNITED STATES PATENT OFFICE

1,943,264

METHOD OF MAKING MANIFOLD PAPER
WEBSLouis M. Snyder, Brooklyn, N. Y., assignor, by
mesne assignments, to George Schorling,
Woodridge, N. J.Application October 29, 1929, Serial No. 403,184
Renewed April 20, 1933

13 Claims. (Cl. 270—18)

This invention relates to improvements in manifold writing strips and assemblies, and more particularly it pertains to a new and improved method of forming such strips and assemblies.

The generally practiced method of forming manifold writing assemblies consists in superposing a plurality of copy receiving strips and transfer strips to the number to produce the desired number of copies.

The commonly practiced method, however, presents many difficulties, in gaining and maintaining proper alignment of the copy receiving and transfer strips, both during and after assembly thereof, since these strips are manufactured separately and when assembled no provision is made for preventing movement of the strips relative to one another.

It is one of the objects of this invention to provide a manifold writing strip which includes a copy receiving strip and a transfer strip associated together in such manner that relative movement of the strips under ordinary handling of the strips will be prevented.

It is a further object of the invention to provide a novel method of forming manifold writing assemblies whereby a copy receiving strip and a transfer strip may be secured together.

It is a further object of the invention to provide a novel method whereby a plurality of copy receiving and transfer strips may be simultaneously formed, preferably in a single machine which if desired, may be so constructed as to print a plurality of spaced forms upon the copy strips.

With the above and other objects in view, the new and improved method contemplates the simultaneous feeding through a suitable machine of a web of copy receiving material such as paper, and a web of transfer paper preferably of the type which has its opposite faces carbonized. At one point in the machine, the two webs are brought into contact with each other and subjected to sufficient pressure to cause the webs to adhere together. This pressure may be produced by a suitable printing mechanism which prints upon the exposed face of the copy receiving web, a plurality of spaced forms, for example, bill heads. After the pressure has been applied the webs are severed into a plurality of strips, each of which includes a copy receiving strip and a transfer strip adhering together. The strips are next perforated to form a plurality of detachable sheets after which they are arranged in superposed relation in the proper

number to provide a manifold assembly of the desired number of copies.

The invention also contemplates the employment of a transfer web of less width than that of the copy receiving web, whereby, when the webs are severed into strips, there will be one copy receiving strip to which no transfer strip is attached, which strip will provide the copy receiving strip for the last transfer strip when a plurality of said strips are arranged in superposed relation to provide a manifold assembly.

Referring to the accompanying drawings, wherein is illustrated one form of the invention,

Figure 1 illustrates a portion of a machine of a type well known in the art, upon which the method of the present invention may be carried out,

Figure 2 is a perspective view of a manifold strip constructed in accordance with the present invention,

Figure 3 is a fragmentary plan view showing a blank copy receiving web and a transfer web illustrating their relative positions before they have been subjected to pressure to cause adhesion between the two.

Figure 4 is a similar view showing the copy receiving web after it has been printed,

Figure 5 is a similar view showing the step in the method which severs the webs into strips, and

Figure 6 is a similar view showing the severed strips perforated to provide a plurality of separable sheets.

In Figure 1, is illustrated in side elevation, a portion of a machine known in the art as the "Funk offset press", and this machine is herein employed for the purpose of illustrating the present invention, and it is to be understood that the invention may be successfully carried out on other machines.

In the machine herein illustrated, the web of copy receiving paper is designated A, and the web of transfer paper is designated B. These webs A and B are fed from rolls C and D located respectively at one end, and substantially centrally of the machine. The webs come together at the point E where they receive the pressure of a printing mechanism 10 which causes the webs to adhere together by reason of the fact that the opposite faces of the transfer paper are carbonized as heretofore described.

The printing mechanism is employed to print the copy receiving web in any manner desired, such as a plurality of forms 12 illustrated in Fig-

ures 2, 4, 5 and 6, and also to provide the necessary pressure to cause adhesion of the webs.

From the printing mechanism, the webs pass around suitable guide rollers and are presented to a severing mechanism 14 which divides them into a plurality of strips 18 as shown in Figure 5. From the severing mechanism, the strips pass around suitable guide rollers to a perforating mechanism 16 which perforates said strips as at 20 in Figure 6 to provide a plurality of separable sheets 22. Upon the completion of the several steps of the method as heretofore described, the webs will be divided into a plurality of strips each consisting of a copy receiving strip and a transfer strip adhering together, said strips being perforated to provide a plurality of separate printed sheets. In addition to dividing the strips into a plurality of separable sheets, the perforations provide additional means for preventing relative displacement of the copy receiving and transfer strips due to the interlocking engagement of the perforations, it being remembered that the strips are perforated after they have been brought in contact with one another.

In Figures 3 to 6 inclusive, is illustrated a copy receiving web A and a transfer web B associated together and by reference to said figure, it will be noted that the copy receiving web is wider than the transfer web by approximately the width of a severed copy receiving strip, and by reference to Figure 5, it will be noted that when the webs are severed into strips, there will be a copy receiving strip which has no transfer strip associated therewith. This provides a single copy receiving strip which is adapted for use as the last copy receiving strip when a plurality of the strips with the transfer strips adhering thereto, are arranged in superposed relation to provide a manifold writing assembly.

It will thus be seen that there is herein described apparatus in which the several features of this invention are embodied, and which apparatus in its action attains the various objects of the invention and is well suited to meet the requirements of practical use.

As many changes could be made in the above construction, and many apparently widely different embodiments of this invention could be made without departing from the scope thereof, it is intended that all matter contained in the drawings shall be interpreted as illustrative and not in a limiting sense.

I claim:

1. The method of forming manifold writing strips which consists in superposing a copy receiving strip with relation to a strip of transfer paper, printing a plurality of form blanks upon said copy receiving strip while in superposed relation with the carbon strip, and subsequently perforating said strips simultaneously between the forms printed thereon.

2. The method of forming manifold writing strips which consists in superposing a copy receiving web upon a transfer web, each of which webs are of greater width than the finished strips, printing said copy receiving web to present a plurality of form blanks thereon, severing said webs longitudinally between the printed forms to provide a plurality of copy receiving strips, each having an associated transfer sheet and transversely perforating the severed strips between the printed forms.

3. The method of forming manifold writing strips which consists in superposing a web of copy receiving paper of a greater width than the strips

ultimately to be formed upon a web of transfer paper less in width than the web of copy receiving paper, severing said webs to provide a plurality of copy-receiving strips each having a transfer strip associated therewith, and a single copy receiving strip having no transfer strip associated therewith and perforating said webs transversely along predetermined lines.

4. The method of forming manifold writing strips which consists in superposing a web of copy receiving paper of sufficient width to provide when cut a plurality of manifold writing strips of the desired width upon a web of transfer material of less width than said first mentioned web, printing a plurality of forms upon the copy receiving web while superposed upon the web of transfer material to cause an adhesion between said webs, and subsequently severing said webs between the forms to provide a plurality of copy receiving strips with a transfer strip associated with each of said copy receiving strips, and a copy receiving strip having no transfer strip associated therewith.

5. The method of forming manifold writing assemblies which consists in superposing a web of copy receiving paper of a greater width than that of the strips ultimately to be formed, upon a web of transfer material of less width than said first mentioned web, severing said superposed webs to provide a plurality of copy receiving strips with a transfer strip associated with each, and a copy receiving strip having no transfer strip associated therewith, superposing said copy receiving strips having transfer strips associated therewith upon one another with the transfer strip of one adjacent the copy receiving strip of the next adjacent, and subsequently superposing said thus assembled strips upon that strip having no transfer strip associated therewith.

6. The method of forming manifold writing strips which consists in superposing a web of copy receiving paper upon a web of transfer paper, suitably printing one of said superposed webs and thereby cause adhesion between the webs, severing said webs to provide a plurality of manifold writing strips and subsequently transversely perforating said webs to cause further adhesion between them.

7. The method of forming manifold writing assemblies which consists in superposing a web of copy receiving paper upon a web of transfer paper, suitably printing the copy receiving web while the webs are superposed, and thereby cause adhesion between the webs, severing said webs to provide a plurality of manifold writing strips, perforating said strips to cause further adhesion between the copy receiving paper and the transfer paper, and subsequently superposing a plurality of said writing strips to provide the manifold writing assembly.

8. The method of forming manifold writing strips which consists in superposing a copy-receiving web upon a transfer web, each of which webs are of greater width than the finished strips, said copy-receiving web being printed to present a plurality of form blanks thereon, severing said webs longitudinally between the printed forms to provide a plurality of copy-receiving strips having associated transfer strips, and transversely perforating the severed strips between the forms.

9. The method of forming manifold writing assemblies which consists in superposing a web of copy-receiving paper of a greater width than that of the strips ultimately to be formed upon a web of transfer material of less width than said first-

mentioned web, causing said webs to adhere to each other and thus maintain their superposition, severing said superposed webs to provide a plurality of copy-receiving strips with the transfer strip associated with each, and a copy-receiving strip having no transfer strip associated therewith, superposing said copy-receiving strips having transfer strips associated therewith upon one another with the transfer strip of one adjacent the copy-receiving strip of the next adjacent, and subsequently superposing said thus assembled strips upon that strip having no transfer strip associated therewith.

10. The method of forming manifold writing assemblies which consists in superposing a web of copy-receiving paper of a greater width than that of the strips ultimately to be formed upon a web of transfer material of less width than said first-mentioned web, subjecting the superposed webs to pressure to cause adhesion between them, severing said superposed webs to provide a plurality of copy-receiving strips with the transfer strip associated with each, and a copy-receiving strip having no transfer strip associated therewith, superposing said copy-receiving strips having transfer strips associated therewith upon one another with the transfer strip of one adjacent the copy-receiving strip of the next adjacent, and subsequently superposing said thus assembled strips upon that strip having no transfer strip associated therewith.

11. The method of forming manifold writing strips which consists in bringing together from separate sources of supply a single-ply copy-re-

ceiving web and a single-ply transfer web, advancing said superposed single-ply webs as one along a predetermined path of travel, concomitantly at an advanced portion of said webs perforating said two superposed single-ply webs on transverse lines simultaneously, and at another portion of the webs slitting said webs longitudinally to form strips.

12. The method of forming manifold writing strips which consist in bringing together from separate sources of supply a single-ply copy-receiving strip and a single-ply transfer strip, causing said strips to adhere to each other upon being brought together, advancing said superposed single-ply strips as one along a predetermined path of travel, and concomitantly at an advanced portion of said strips perforating said two superposed single-ply strips on predetermined lines simultaneously.

13. The method of forming manifold writing strips which consists in bringing together from separate sources of supply a single-ply copy-receiving web and a single-ply transfer web, causing said webs to adhere to each other upon being brought together, advancing said adhering superposed single-ply webs as one along a predetermined path of travel, concomitantly at an advanced portion of said webs perforating said two superposed single-ply webs on transverse lines simultaneously, and at another portion of the webs slitting said webs longitudinally to form strips.

LOUIS M. SNYDER.