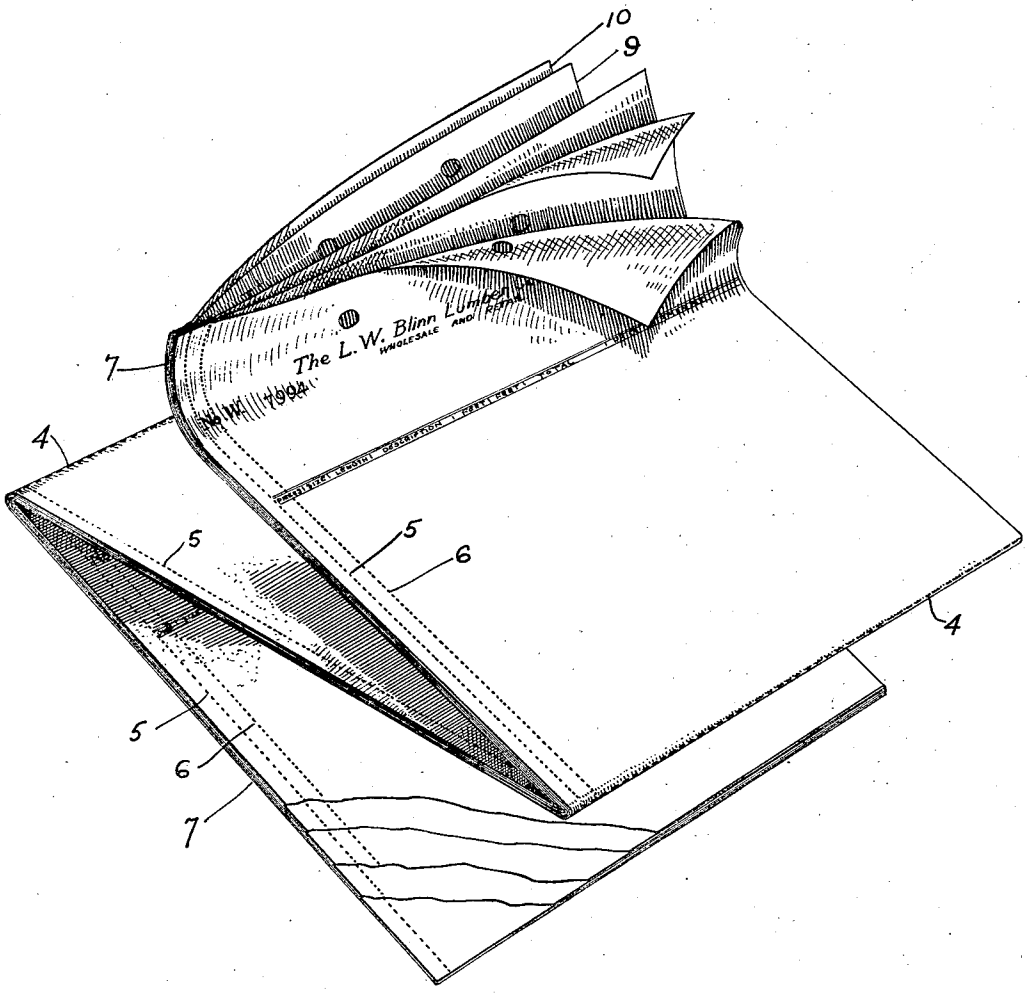
Dec. 10, 1929. H. P. BROWN 1,738,633

MANIFOLDING BOOK

Filed May 28, 1925 2 Sheets-Sheet 1

Fig. 1.



INVENTOR.
Horace P. Brown.

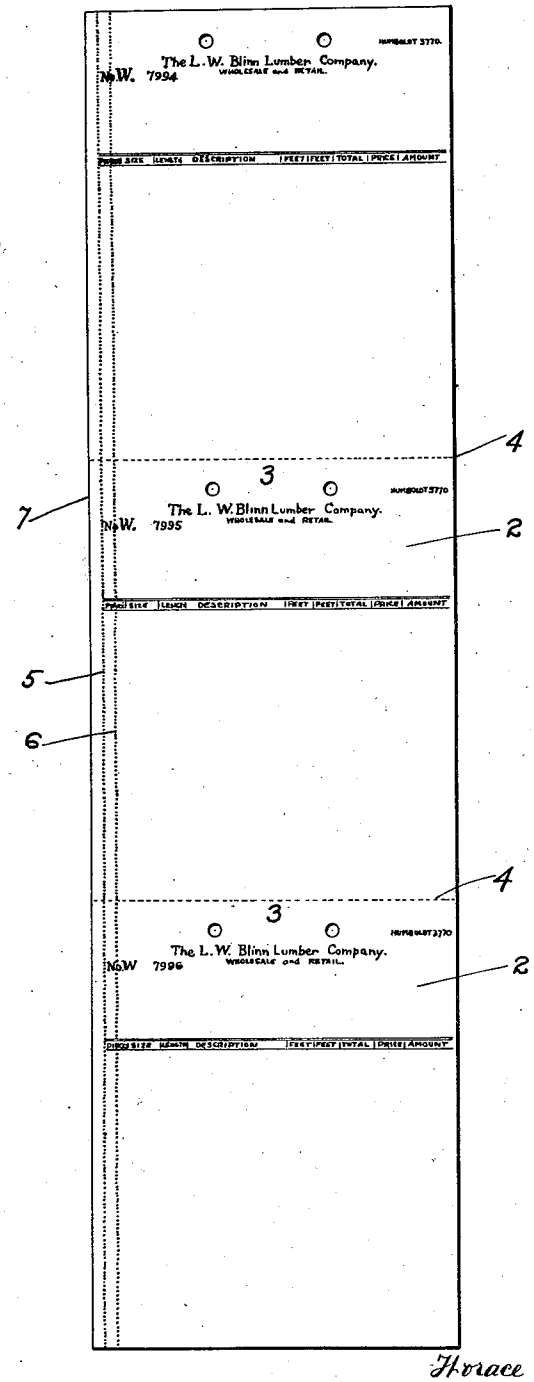
BY
Dewey, Strong, Jenseud & Loftus
ATTORNEYS.

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MANIFOLDING BOOK

Filed May 28, 1925 2 Sheets-Sheet 2

Fig. 2.



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Patented Dec. 10, 1929 1,738,633

UNITED STATES PATENT OFFICE

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MANIFOLDING BOOK

Application filed May 28, 1925. Serial No. 33,404.

This invention relates to a manifolding book generally referred to in the art as a work-web or multiform book adapted for use in billing machines, registers and the like, and which consists of a plurality of continuous superposed strips of paper folded in zig-zag formation and each having interspaced successive forms printed thereon and so positioned and secured with relation to each other that absolute register and alignment of the forms is maintained when the sheets are fed through a machine.

In a book of this character, the uppermost sheet or original is filled in by writing, typing, printing, etc., and a transfer or duplication on the underlying forms is obtained by interposed carbon sheets or the like. An original form is thus obtained and two or more duplicates are simultaneously filled out which are adapted for use as records or for any other purpose desired.

The printed matter on the uppermost sheet or strip must register with similar printed matter on each and all of the underlying sheets so as to insure proper register of the spaces left blank for typing, writing, etc. Such register is difficult to obtain and one of the objects of the present invention is to attach the superposed sheets along one side or edge so that perfect registration may be insured.

Another important feature to be considered in connection with manifolding books of the character referred to arises when shipping, factory data, or the like must be duplicated on several copies; that is, data which is not obtainable when the forms are first written or filled in. The name, address, description, etc., is in most instances filled in on the original and all copies in one department, but other data which is supplied later may be filled in by another department, and if the several copies must contain the same or duplicate data it is important that the several copies be retained intact so that registration is maintained and separation or loss of any individual copy is prevented.

Another object of the present invention is therefore to so attach or connect the several superposed sheets or strips forming the manifolding book that a group or set of duplicate forms may be detached from the book without being individually separated and further to so connect the sheets that when a set of forms is detached it is possible to divide the set into groups of forms of duplicates which will also remain connected with relation to each other until final separation is required. One group of forms may thus be retained by one department and another group or number of copies transferred to another department, and as the individual forms or sheets in each group remain connected it is possible to fill in data obtained later which will be duplicated on the underlying sheets or forms in the correct places as perfect registration is maintained until all data is supplied and the sheets are finally separated for mailing to customers and for filing, or otherwise.

One form which the manifolding book may assume is described in the accompanying specification and illustrated in the drawings, in which—

Fig. 1 is a perspective view of a portion of a manifolding book showing printed forms on the respective sheets and also showing the manner in which the sheets are connected with relation to each other so that they may be separated individually and/or in groups.

Fig. 2 is a plan view of one strip showing the position of the successive forms with relation to each other.

Referring to Figs. 1 and 2, a manifolding book is shown which consists of a plurality of strips of paper, there being two, three, four, or more employed, as desired. Each strip has a succession of duplicate forms printed thereon as indicated at 2. The forms are interspaced with relation to each other as at 3 and lines of perforations are formed between the printed interspaced sections as at 4 to form a weakened portion or line which will permit each individual printed form or a group of forms to be torn or separated with relation to the continuous strip. The individual strips forming the book may be printed in a single machine as individual strips, they may be printed in separate machines, and they may be printed at different times and on dif-

ferent grades or colors of paper. For instance, it is often desirable to provide a fairly high grade quality of paper for the original and poorer grades of paper for the duplicates or copies, and it is also often desirable to provide sheets of different colors.

In actual practice the separate single-play webs or strips of a variety of colors and grades may be printed simultaneously in a press in such a manner that the forms printed upon the several webs will register accurately with one another. While such registry is being maintained one side or edge of each sheet is glued. The glue or adhesive material may be applied in any suitable manner, as, for example, by means of a brush or roll which may be supplied with an adhesive from a font. After the application of the adhesive material to all the several webs or strips, the webs are assembled and are then run through pressure rolls and drying rolls which causes them to adhere together where glued, and thus provide a general stub portion for all the strips. From the drying rolls the several assembled and superposed strips or webs may be led into a packaging device by which the webs may be given a zig-zag cross fold (see Fig. 1) whereby they are compacted and then separated into packages suitable for marketing. A multiple web consisting of continuous strips of paper of different qualities and often of different colors is thus obtained upon which a series of duplicate registering forms are printed. This work web may be readily employed in any billing, typewriting, or registering machine without any danger of individual webs or sheets creeping, as all the strips are attached along one edge. This is only one of the features of the present invention.

By referring to Fig. 2 it will be noted that two weakening lines of perforations are formed along the glued edge as indicated at 5 and 6. It will further be noted that five strips are employed and that the uppermost three strips are glued from the edge 7 to the innermost line of perforation indicated at 6, thus to form part of the stub portion for all assembled strips. It will further be noted that the lowermost strips forming a group, or set, indicated at 9 and 10, are also glued together so as to be adhesively attached along a longitudinal line, but that the glue merely extends from the outer edge 7 to the first line of perforation indicated at 5. As this is the case it is possible to remove the group or set of three uppermost forms by tearing them along the first line of perforation indicated at 5. These set of three detached forms will remain intact or united with relation to each other as a unit, as they are still glued from the torn line indicated at 5 to the innermost line of perforation shown at 6. The three forms may thus be transferred as a unit to another department and additional data may be added thereto when obtained. This additional data is written in on the topmost sheet of the removed set and is duplicated on the underlying sheets thereof in the correct places, as the three printed forms are maintained in absolute register by the glued edge or stub. After all the data has been filled in and the sheets of this unit are ready for final separation, it is only necessary to tear off the glued stub portion of the unit, this tearing being effected along the perforated, or severance line 6. The sheets of the unit will thus be completely separated and may be mailed to the customer, filed away, or otherwise disposed of. But it is important to note that they are not separated until all data is supplied. It is therefore impossible to lose any single copy or to displace the same or obtain bad register. It will be seen that each of the group of three uppermost strips extends to one side of the glued line embraced between the weakening lines 5 and 6, thus forming an extension of the upper group, which extension is attached to the lower group of two strips 9 and 10. It will also be seen that the line of attachment between the upper and lower groups is to one side of the glued line embraced between these same weakening lines 5 and 6. In this wise, free detachment, of the unit group to be detached from the whole assemblage of strips, is facilitated, the glue in one unit group being superposed directly opposite the glue in the other unit group outside the weakening line 5.

What has been said of the uppermost sheets, which are three in number, is also true of the lowermost sheets, which are two in number. They remain intact as they are glued along one edge from the outermost edge to the line of perforation indicated at 5. They may also be retained for insertion of further data or they may be separated whenever desired for final disposal by merely tearing them from the glued strip along the perforated line 5.

In actual operation, the continuous work web consisting of several superposed sheets attached along one edge by an adhesive or otherwise is fed into a billing machine or the like. The name, address, description of goods, etc., is in most instances filled in on the original and all copies in one department. When this data and other data obtainable has been applied it is only necessary to separate the forms with relation to the continuous work web by tearing them along the perforated line 4. The forms thus separated from the continuous web remain intact as they are still united by the glued edges. If all data required has been obtained the original and the several copies may be separated and sent to the different departments for filing or otherwise. But if other data is to be supplied later and must be supplied by two or more departments, it is only necessary to so glue

the sheets that two or more may be separated by tearing along the perforated line 5. These sheets united by the second glued strip formed between the perforations 5 and 6 thus remain intact and may be sent to their department for further data. Other groups similarly united may be separated also and sent to their several departments, and when all data is finally filled in the several sheets are individually separated and mailed or otherwise disposed of.

A work web or manifolding book of this character has numerous advantages. First of all, it will be noted that a composite book may be formed. That is, a continuous web consisting of several superposed sheets may consist of sheets of different quality or may consist of sheets of different quality and different colors; secondly, registration between the forms is maintained due to the fact that they are united along one edge; and, third, separation of individual groups after they have been partially filled in may be resorted to without separating the sheets detached, thus permitting groups of copies to be sent to other departments for final filling in and disposal. Loss or displacement of individual copies or sheets is prevented and perfect registration is maintained until the originals and duplicates are ready for mailing, filing, or otherwise.

While five superposed sheets are shown in the accompanying drawings, it is obvious that two or three sheets may be employed or a greater number. For instance, eight, nine, or ten may be employed, and while two lines of perforations and gluing are illustrated in the accompanying drawing, to permit the duplicate forms to be separated into two groups, it is obvious that three or more lines of perforations may be employed if it is desired to separate the duplicate copies and original into more groups.

While certain features of the present invention are more or less specifically illustrated, I wish it understood that various changes in form and proportion may be resorted to within the scope of the appended claims. I similarly wish it understood that the materials and finish of the several parts employed may be such as the experience and judgment of the manufacturer may dictate or various uses may demand.

Having thus described my invention, what I claim and desire to secure by Letters Patent is—

1. A work web of the character described having a plurality of relatively superposed strips and a stub portion, each of the strips of which extends transversely of the web from the said stub portion which is formed by attaching all the strips together at the side of the web, certain of said strips being attached together and detachable as one from the web while maintaining attachment of the stub portions of all said strips, said certain attached strips having weakened lines for ready detachment from their portions which are attached together, said strips having weakened lines for ready detachment from said stub portion.

2. A work web of the character described having a plurality of relatively superposed strips and a stub portion, each of the strips of which extends transversely of the web from the said stub portion which is formed by attaching all the strips together at the side of the web, certain of said strips being attached together and having detachable attachment with the other strips of the web so as to be detachable as an attached group from the web while maintaining attachment of the stub portions of all said strips, said strips having weakened lines for ready detachment from said stub portion.

3. A work web of the character described and including two sets of superposed strips, the strips of each set being adhesively attached together along longitudinal lines, said longitudinal lines being out of superposed registry with each other, and means for attaching said sets together along a line parallel to said longitudinal lines, said strips having weakened lines for ready detachment from said means and from each other.

4. A work web of the character described having a plurality of relatively superposed strips and a stub portion, each of the strips extending transversely of the web from the said stub portion which is formed by attaching all of the strips together at the side of the web, a plurality or group of said strips having attachment with each other aside from said stub portion and having detachable attachment with the respective stub portions thereof whereby said group of strips may be detached as an attached group from the remainder of the web.

5. A work web of the character described having a plurality of relatively superposed strips and a stub portion, each of the strips extending transversely of the web from the said stub portion which is formed by attaching all the strips together at the side of the web, a plurality or group of said strips having attachment with each other aside from said stub portion, the strips of said group having weakened lines of attachment with the respective stub parts thereof positioned respectively between said stub parts and said attachment of the group so as to facilitate detachment of said group from said stub portion.

6. A work web having a plurality of relatively superposed strips and having a stub in which all the strips are adhesively attached together, a plurality of said strips having weakened juxtaposed severance lines and having attachment together along a line parallel with and adjacent to, said severance lines

and at the opposite side thereof from said stub whereby said plurality of strips may be detached as an attached unit from the remainder of the web.

7. A work web including two groups of strips, the groups of each series in superposed relation and adhesively attached to each other, one of said groups having an extension to one side of the line of attachment of its strips to each other, said extension being adhesively attached to the other group.

8. A work web including two groups of strips, the groups of each series in superposed relation and adhesively attached to each other, one of said groups having an extension to one side of the line of attachment of its strips to each other, said extension being adhesively attached to the other group, the line of adhesive attachment of one group to the other extending to one side of the line of attachment between the strips of one group.

9. A work web including two groups of strips, the groups of each series in superposed relation and adhesively attached to each other, one of said groups having an extension to one side of the line of attachment of its strips to each other, said extension being adhesively attached to the other group, the line of adhesive attachment of one group to the other extending to one side of the line of attachment between the strips of one group, the attaching adhesive between strips of one group being superposed directly opposite the attaching adhesive between the strips of the other group.

HORACE P. BROWN.