Nov. 13, 1934. W. D. CATON 1,980,319

MANIFOLDING RECORD

Original Filed June 15, 1932 2 Sheets-Sheet 1

Fig. 1.

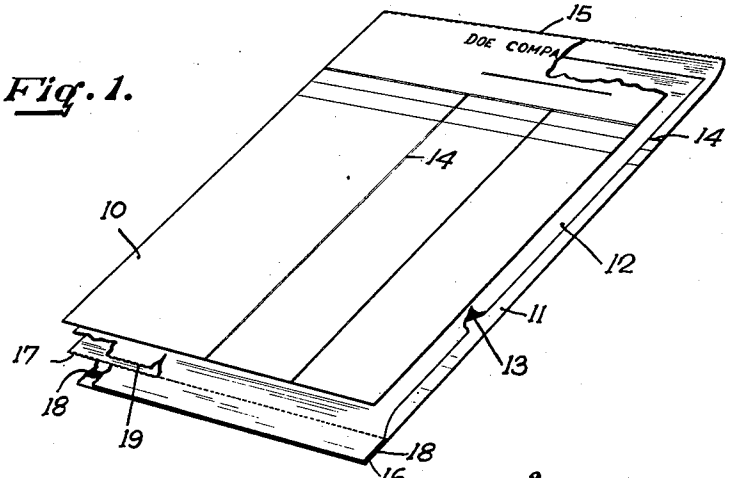


Fig. 2.

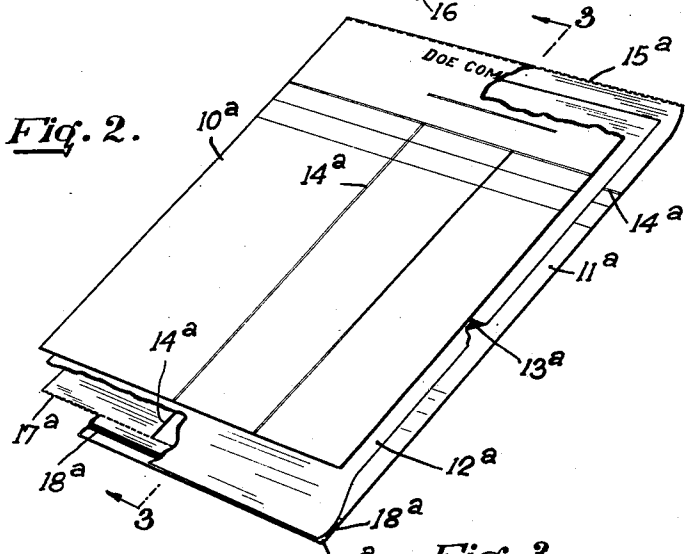
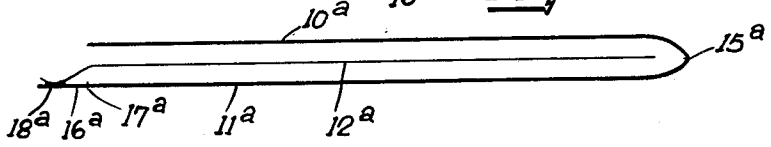


Fig. 3.



INVENTOR.
WILLIAM D. CATON,
BY Lull, Dunn & Anderson
ATTORNEYS.

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Fig. 4.

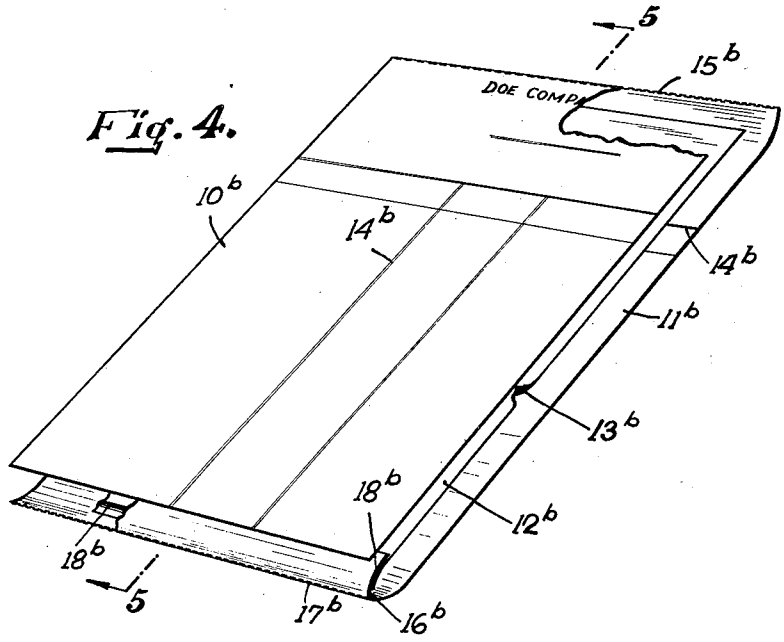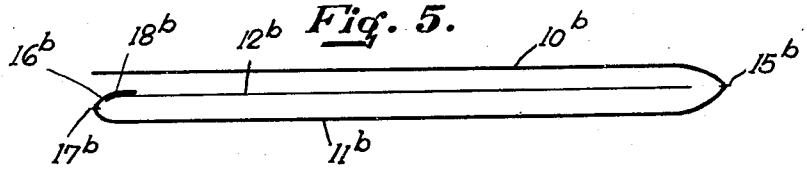


Fig. 5.



INVENTOR.
WILLIAM D. CATON,
BY Duell, Dunn & Anderson
ATTORNEYS.

Patented Nov. 13, 1934

1,980,319

UNITED STATES PATENT OFFICE

1,980,319

MANIFOLDING RECORD

William Donovan Caton, Elmira, N. Y., assignor to American Sales Book Company, Limited, Toronto, Ontario, Canada, a corporation of Ontario, Canada

Application June 15, 1932, Serial No. 617,324
Renewed April 4, 1934

5 Claims. (Cl. 282—26)

This invention relates to improvements in manifolding record devices and more especially to such record devices including a single unitary set or assembly of record and carbon leaves attached together in manifolding relation and adapted for insertion in typewriters and similar manifolding machines.

It is a general object of the invention to provide an improved manifolding assembly of the class mentioned which is pliable throughout its extent and free from obstructing projections and of small bulk or thickness, thus facilitating its entry into the manifolding machines.

Another object of the invention is to provide an improved attaching arrangement for the record and carbon leaves of the assembly holding them in correctly superposed manifolding relation with each other yet providing a convenient means for detaching the leaves from each other when the inscriptions have been completed.

Still another object of the invention is to provide an improved attaching arrangement for the leaves of the assembly whereby the forward end is not only thin and free from excess bulk, but is also free from puckers, wrinkles, bulges or semilar irregularities which tend to impede its free entry into the writing machine.

According to another improved feature of the invention the binding or attachment between the carbon and record leaves is positioned at the bottom or rear end of the assembly, whereas the top or forward end is free from such attachment, thus avoiding objectionable puckers or irregularities at the latter end.

Another object of the invention is to provide an improved arrangement of record and transfer leaves in the assembly whereby the forward end of the transfer leaf is enclosed in a protective fold or envelope and is free from attachment at this end with the record leaves, thus permitting all the leaves to lie smooth and flat at the forward end.

Another object is to provide an improved arrangement whereby the record and transfer leaves may be selectively gripped for detachment from each other and separated from their interleaved relation.

Other objects of the invention will be in part pointed out in the following detailed description of certain illustrative but preferred embodiments of the invention and will be in part obvious in connection therewith.

The invention accordingly comprises an article of manufacture possessing the features, properties, and the relation of elements which will be exemplified in the article hereinafter described and the scope of the application of which will be indicated in the claims.

For a more complete understanding of the nature and objects of the invention, reference is had to the following detailed description and to the accompanying drawings in which

Fig. 1 is a top perspective view of a manifolding assembly embodying the invention.

Fig. 2 is a view similar to Fig. 1 but showing a slightly modified arrangement.

Fig. 3 is a longitudinal section substantially on the line 3—3 of Fig. 2.

Fig. 4 is a view similar to Fig. 1 showing a further modified embodiment, and

Fig. 5 is a longitudinal section on the line 5—5 of Fig. 4.

Referring to the embodiment of Fig. 1, there is an original record leaf 10 and a duplicate or copy record leaf 11 between which is a carbon or transfer leaf 12 provided with carbon or transfer material 13 on its under surface so as to transfer inscriptions made upon the original to the record surface of the duplicate leaf 11. Each record leaf may have any appropriate ruling or blank form 14, these forms being registered with each other. The end of the assembly having the heading is referred to as the top or forward end and the other end as the bottom or rear end. It will be understood that the top end of the assembly is ordinarily entered into a typewriter or other manifolding machine.

The original and duplicate record leaves are made from a single sheet of paper of any desired quality or color, this sheet being folded transversely as at 15 intermediate its ends to bring the leaves into registry with each other. The fold line 15 is preferably weakened as by perforating, as indicated, so as to facilitate severance along this line. The transfer sheet 12 is enclosed within this fold which thus provides a protective envelope for the top end of the transfer sheet, which is free from attachment to the record sheets at this end. It will thus be seen that there is no excess bulk or thickness at this point and that all of the leaves lie flat in contact with each other and are free from any bulging or wrinkles or similar irregularities which would be caused by pasting or otherwise attaching the leaves together at this end. Also, the top end is free from projecting or unprotected leaf edges. This structure is well adapted to facilitate the entry of the assembly into the writing machine.

At its bottom or rear end, the assembly is provided with an attaching stub 16 shown as form-

ing a continuation of the duplicate leaf 11 and separated therefrom by a transverse weakened severance line 17. This binding stub preferably, as shown, projects beyond the adjacent end of the original leaf and the transfer leaf 12 extends across the severance line 17 to overlap the stub, being attached to the latter in any preferred manner as by stitching with thread, or stapling with light wire, or by a light line of adhesive 18 as shown. If adhesive is used, the carbon or transfer material may be removed from the surface so as to promote adhesion. In Fig. 1 the transfer sheet is also formed with a weakened severance line 19 which may be aligned approximately with the severance line 17. It will be noticed that the top end of the transfer leaf terminates a short distance from the fold line 15. Thus, both record leaves may be selectively gripped at the top end of the assembly to the exclusion of the transfer leaf, while at the other end the stub 16 may be selectively gripped without at the same time gripping the original record leaf 10. In Fig. 1, as in the other forms illustrated, it will be noted that the showing is partially diagrammatic, the leaves being separated from each other to some extent for the purpose of revealing the structure and arrangement.

Referring to Figs. 2 and 3, it will be seen that the general structure of the manifolding assembly is similar to that of Fig. 1, corresponding parts being designated by the same references with the addition of the index "*a*". However, in this structure, the transfer leaf 12*a* is unprovided with a transverse weakened severance line adjacent to its attachment 18*a* with the binding stub 16*a*. In other words, the transfer leaf is of its full original strength right up to the attachment 18*a*. Said attachment may be light in character such as a light line of adhesive or spot adhesive, whereby the transfer leaf may be readily detached from the assembly by breaking the bond of the adhesive. Or the transfer leaf may be left permanently attached to the stub 16*a* and the detachment thereof from the assembly made on the weakened line 17*a* of the copy leaf 11*a*, the transfer leaf in this case being left permanently attached to the binding stub.

According to the embodiment of Figs. 4 and 5, the record and transfer leaves are attached together in a unitary pliable manifolding assembly as in the other embodiments, corresponding elements being designated by the same reference numerals with the addition of the index "*b*". The binding stub 16*b* of this embodiment instead of being extended in the plane of the copy leaf 11*b* as in the other forms is folded forwardly of the assembly as clearly shown. This fold is preferably made upon the weakened severance line 17*b*. This provides a forwardly extending fold or binding stub to which the transfer leaf 12*b* is attached at 18*b* in a manner above described. In this form as in the others previously described, it will be understood that additional record and transfer leaves may be supplied in case it is desired to make a larger number of transfer copies. These additional leaves may be attached to the binding stub 16, 16*a* or 16*b* in a manner already described, the transfer leaves being interleaved between the record leaves so as to effect the desired transfer inscription. The additional record leaf or leaves may thus be inserted loosely between the adjacent transfer leaves which are attached to the binding stub. A unitary manifolding assembly pliable throughout its entire extent may thus be made to produce any desired number of copies.

In each embodiment of the invention, it will be noticed that the attachment between the record and transfer leaves is at the bottom or rear end of the assembly. Also, the attachment or binding stub itself is pliable and free from projections as is the entire assembly; the complete unit is thus well adapted for use in writing machines. Due to the fact that the attachment is at the rear end of the assembly and that there is no like attachment between the record and transfer leaves at the forward end, there is no warping, bulging, creasing or like deformation of the leaves at the forward end of the unit. Furthermore, the forward fold between the original and duplicate record leaves lodge a protective envelope for the forward end of the transfer leaf and avoids all projection or free leaf edges at this end. All of these factors contribute to make a composite manifolding assembly which is easily entered into the manifolding machine with little expenditure of time and energy. This is of importance because entries are made on units of this nature at different times to record series of transactions over a period of time. Statements covering transactions scattered over a week or month may be made up in this manner. It will, therefore, be seen that the saving of time with this improved assembly is considerable.

When all the entries have been made, the record and transfer leaves may be readily detached and separated from each other. In the form of Fig. 1 this may be done by selectively gripping the record leaves to the exclusion of the transfer leaf at the top end of the assembly and gripping the binding stub 16 at the other end to the exclusion of the original leaf 10. The leaf 11 may thus be easily severed along its weakened line 17 from the binding stub and at the same time the transfer leaf 12 is removed from its interleaved position. These two operations are thus accomplished at one movement. The transfer leaf may be afterwards detached from the stub along its weakened line 19, whereupon it may be used for other purposes. The form of Fig. 2 is similarly used but the transfer leaf 12*a* is detached from the stub by separating it at the adhesive line 18*a*. Or if it is not desired to use the transfer leaf further, it may be discarded with the stub without detaching it from the latter.

In use, the form of Fig. 4 is operated in a manner which will be understood from the foregoing description. If it is desired to detach the original leaf from the assembly leaving the transfer leaves and the other record leaves attached, this may be done by first severing along the line 15*b*. Additional inscription could then be made to the remaining record leaves, utilizing the attached transfer leaves. The remaining leaves may then be detached from the last or bottom leaf 11*b* by detaching the stub along the weakened line 17*b*. If addition record leaves are employed and attached to the binding stub as above suggested, they, as well as the transfer leaves, may be provided with weakened severance lines adjacent to the binding stub, whereby they may be detached from the latter. Since the transfer leaf of each embodiment is ordinarily intended to be used for a single complete transfer inscription, it is preferably made of thin, light material having a light coating of carbon on its surface.

Since certain changes may be made in the

above article and different embodiments of the invention could be made without departing from the scope thereof, it is intended that all matter contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense.

Having described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A pliable manifolding assembly including, in combination, a plurality of record leaves attached together and positioned in superposed manifolding relation, a pliable binding stub positioned near the bottom or rear end of the assembly and separated from one of said record leaves by a weakened severance line, and a transfer leaf positioned in transfer relation with the record leaves and attached to said stub at points positioned wholly beyond said severance line from the forward end of the assembly, and being otherwise free from attachment with the assembly, whereby the transfer leaf is freed from attachment with the assembly upon severance of the stub along said severance line, said record leaves including a single sheet transversely folded to form a protective envelope at the forward end of the assembly in which the forward end of the transfer leaf is received.

2. A pliable manifolding assembly including, in combination, a plurality of record leaves attached together and positioned in superposed manifolding relation, a pliable binding stub positioned near the bottom or rear end of the assembly and separated from one of said record leaves by a weakened severance line, and a transfer leaf positioned in transfer relation with the record leaves and attached to said stub at points positioned wholly beyond said severance line from the forward end of the assembly, and being otherwise free from attachment with the assembly, whereby the transfer leaf is freed from attachment with the assembly upon severance of the stub along said severance line, said record leaves including a single sheet transversely folded to form a protective envelope at the forward end of the assembly in which the forward end of the transfer leaf is freely received and protected, said sheet being weakened for severance substantially on the fold line thereof.

3. A pliable manifolding assembly including, in combination, a plurality of record leaves attached together and positioned in superposed manifolding relation, a pliable binding stub positioned near the bottom or rear end of the assembly and separated from one of said record leaves by a weakened severance line, and a transfer leaf positioned in transfer relation with the record leaves and attached to said stub at points positioned wholly beyond said severance line from the forward end of the assembly, and being otherwise free from attachment with the assembly, whereby the transfer leaf is freed from attachment with the assembly upon severance of the stub along said severance line, the transfer leaf being free from weakening at points thereof corresponding to said weakened severance line of the record leaf, said record leaves including a single sheet transversely folded to form a protective envelope at the forward end of the assembly in which the forward end of the transfer leaf is freely received and protected, said binding stub projecting beyond the adjacent or bottom end of the upper record leaf and said transfer leaf terminating short of the top end of the record leaves so as to provide selective grip formations at the top and bottom ends of the assembly for effecting separation of the record and transfer leaves from each other upon severance along said weakened line.

4. A pliable manifolding assembly including, in combination, a plurality of record leaves attached together and positioned in superposed manifolding relation, a pliable binding stub positioned near the bottom or rear end of the assembly and separated from one of said record leaves by a weakened severance line, and a transfer leaf positioned in transfer relation with the record leaves and attached to said stub outside of said severance line, said binding stub being folded forwardly substantially upon said severance line and enclosing the attached end of said transfer leaf.

5. A pliable manifolding assembly including, in combination, a plurality of record leaves attached together and positioned in superposed manifolding relation, a pliable binding stub positioned near the bottom or rear end of the assembly and separated from one of said record leaves by a weakened severance line, and a transfer leaf positioned in transfer relation with the record leaves and attached to said stub outside of said severance line, said record leaves including a single sheet transversely folded to form a protective envelope at the forward end of the assembly in which the forward end of the transfer leaf is received, said transfer leaf being free from attachment with the assembly except at its attachment to said stub, said binding stub being folded forwardly substantially upon said severance line and enclosing the attached end of the transfer leaf.

WILLIAM DONOVAN CATON.