

Feb. 24, 1953

V. J. ST JOHN

2,629,612

CARBON PAPER HOLDER

Filed June 11, 1949

2 SHEETS—SHEET 1

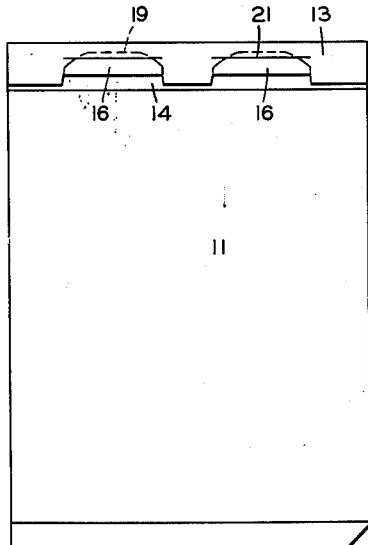


FIG. 1 29

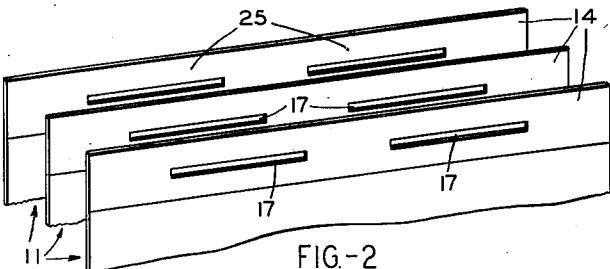


FIG. 2

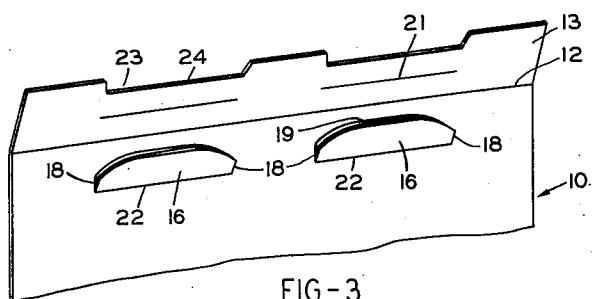


FIG. 3

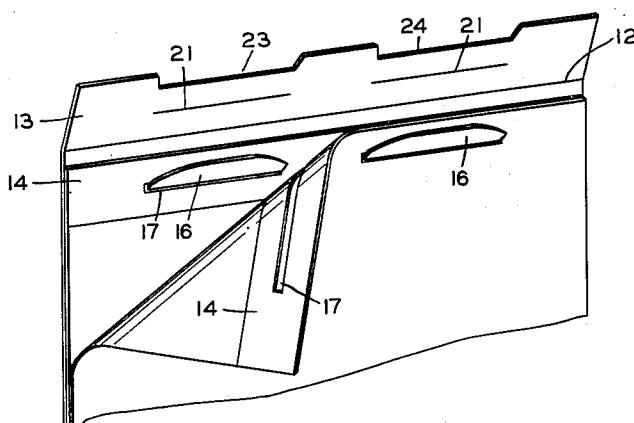


FIG. 4

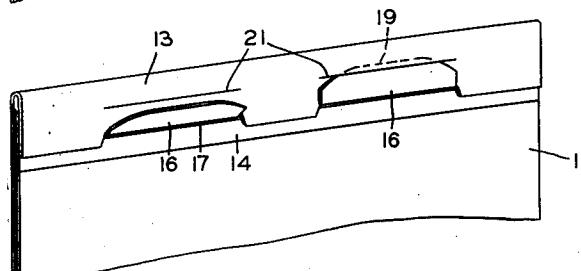


FIG. 5

INVENTOR.

VINCENT J. ST. JOHN

BY

*Hoge, Meyer, Baldwin & Doran*  
ATTORNEYS

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2 SHEETS—SHEET 2

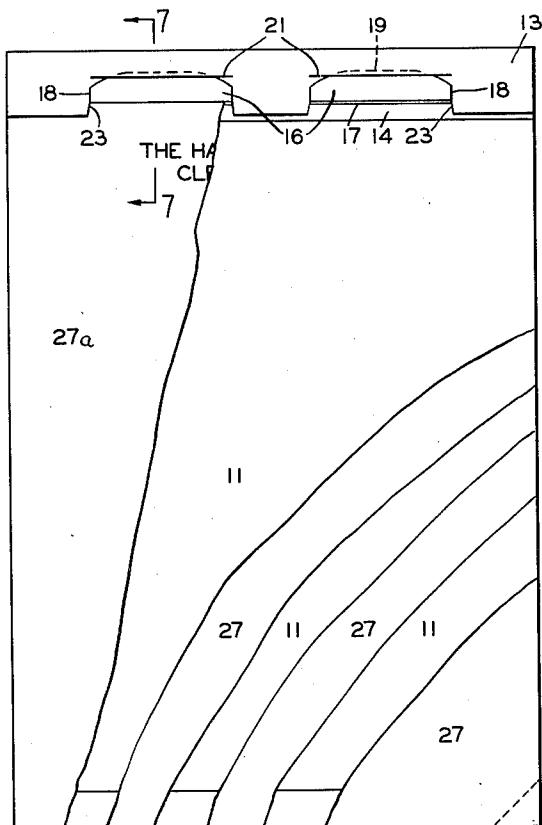


FIG.-6

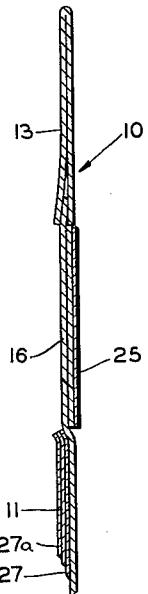


FIG.-7

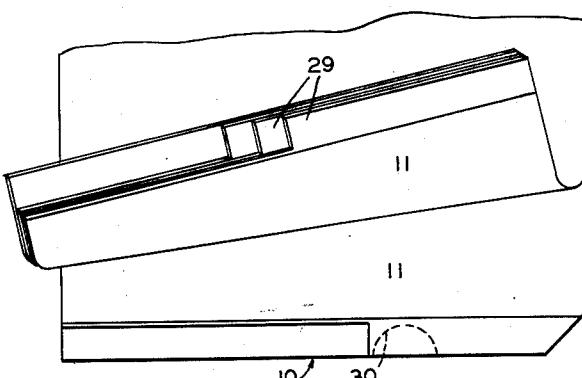


FIG.-8

INVENTOR.  
VINCENT J. ST. JOHN

BY

*Hyde, Meyer, Baldwin & Doran*  
ATTORNEYS

## UNITED STATES PATENT OFFICE

2,629,612

## CARBON PAPER HOLDER

Vincent J. St. John, Brecksville, Ohio

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2 Claims. (Cl. 282—29)

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This invention relates to carbon paper holders, for use in typewriters or equivalent machines, when one or more carbon copies of typed matter are to be made. More particularly, the invention relates to a carbon paper holder which comprises a flexible backing sheet and a plurality of superposed carbon paper sheets detachably interlocked with said backing sheet, the copy paper sheets being interleaved or alternately arranged with the carbon paper sheets in the use of the holder, with the paper sheet which is to be the "original or ribbon" copy being positioned, of course, over the topmost carbon paper sheet.

The invention has for one of its objects the provision of a carbon paper holder in which the carbon paper sheets are detachably interlocked with the backing sheet, the nature or character of the interlocking means being such as to effectively maintain the carbon paper sheets in registry or alignment and yet permit the carbon paper sheets to be easily, quickly and conveniently detached from and reattached to the backing sheet, even when the holder is in use in a typewriter or equivalent machine. As a result, typographical errors can be readily corrected, without removal of the holder from the machine in which it is being used.

A further object of the present invention is the provision of a carbon paper holder in which the carbon paper sheets have carbon coatings of varying thickness or hardness, the coatings being of diminishing thickness or hardness from the topmost carbon sheet, which in use of the holder is subjected to the greatest wear, to the lowermost carbon sheet, which is subjected to the least wear. As the result of this gradation in the thickness or hardness of the carbon sheet coatings, there is a uniformity in the wear of the various carbon sheets, which materially prolongs their useful life, and further, a uniformity in the carbon deposit on the copy sheets so that they are alike in appearance as to the typing thereon.

A further object of the present invention is the provision of a carbon paper holder in which the lower or bottom edge portions of the carbon paper sheets not only are free of carbon coatings, so that such portions may be gripped in the interleaving of the copy sheets with the carbon sheets without soiling the fingers, but also, are of laterally stepped form to facilitate and expedite the interleaving operation.

A further object of the present invention is the provision of a carbon paper holder which is characterized by its structural simplicity, the

economy of its manufacture, its strong and sturdy nature, and the ease and convenience of its use.

Further objects of the present invention, and certain of its practical advantages, will be referred to or will be evident from the following description of a carbon paper holder embodying one form of the present invention, as illustrated in the accompanying drawings, in which:

10. Fig. 1 is a front elevational view of said carbon paper holder;

Fig. 2 is a front perspective view, on an enlarged scale, of the upper or top edge portions of three carbon paper sheets of the holder;

15. Fig. 3 is a similar view of the upper or top edge portion of the backing sheet of the holder;

Fig. 4 and 5 are front perspective views, on the scale of Figs. 2 and 3, showing the manner in which and the means by which the carbon paper sheets are detachably interlocked with the backing sheet;

20. Fig. 6 is a front elevational view of the carbon paper holder, as supplied with copy sheets for use in a typewriter or equivalent machine, parts of certain sheets being broken away to show underlying sheet;

Fig. 7 is a detail longitudinal sectional view on the line 7—7 of Fig. 6, but with only a single carbon paper sheet and two copy paper sheets being shown for simplicity of illustration; and

25. Fig. 8 is a front perspective view of the lower or bottom edge portion of the holder, showing the lateral stepped arrangement of the lower or bottom edge portions of the carbon paper sheets to facilitate the interleaving of the copy sheets with the carbon paper sheets.

Before the carbon paper holder here chosen for illustration is specifically described, it is to be understood that the invention here involved is not limited to the structural details or the specific arrangement of parts here shown, as carbon paper holders embodying the present invention may take various forms. It also is to be understood that the terminology or phraseology herein used is for purposes of description and not of limitation, as the scope of the present invention is denoted by the appended claims.

The carbon paper holder here illustrated, for the disclosure of one embodiment of the present invention, comprises a generally rectangular backing sheet 10, of any suitable flexible material of thin and durable character, such as heavy paper, cardboard or the like, and a plurality of carbon paper sheets 11, generally corresponding in size and shape with the backing

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sheet, and arranged in superposed registering relation on the backing sheet, with the upper end portion of the carbon paper sheets being detachably interlocked with the upper end portion of the backing sheet in the manner and by the means hereinafter described.

As best shown in Figs. 3 and 4, the backing sheet 10 is provided at its upper end with a transverse fold or hinge line 12 to provide a top flap 13 which normally is folded downwardly to overlie the top edge portions 14 of the carbon paper sheets 11, portions which preferably are not coated with carbon to reduce their thickness.

Below the fold line 12, the backing sheet is die cut to provide a pair of laterally spaced upwardly extending tabs 16, upon which the carbon paper sheets are hung or removably suspended, the uncoated top edge portions 14 of the carbon paper sheets being die cut to provide each of them with a pair of transverse slots 17 of a size to more or less snugly receive the tabs 16, said slots being laterally spaced in accordance with the spacing of said tabs.

In the present embodiment of the invention, the tabs 16 have straight and generally parallel side edges 18 and an arcuate or crown-shaped top edge portion 19. As shown in Figs. 1, 5, 6 and 7, the tabs 16 normally overlie the depending top flap 13 of the backing sheet, and to releasably interlock said tabs with said flap, a pair of transverse, laterally spaced slots 21 are die cut in the flap to receive the middle parts of the top edge portions of the tabs, as in Figs. 1, 5, 6 and 7.

As here shown, the backing sheet flap 13 extends downwardly below the fold or hinge lines 22 of the upwardly extending tabs 16, and to enable said tabs to overlie said flap, a pair of laterally spaced notches or recesses 23 are provided in the lower or free edge portion of said flap. Preferably, the lower edges 24 of the flap portions which underlie the tabs 16, the transverse edges of the notches or recesses 23 in the present embodiment of the invention, are so located with respect to the tabs 16 that such edges must be more or less "crowded" down alongside the fold or hinge lines 22 of the tabs. As shown in Fig. 7, this causes those portions 25 of the carbon paper sheets which are above the slots 17 thereof to be pushed rearwardly into the backing sheet openings formed by the provision of the tabs 16, thus additionally interlocking the carbon paper sheets with the backing sheet and further insuring the maintenance of the carbon paper sheets in registry with one another and with the backing sheet.

In the use of the present holder, copy sheets 27, of a number to provide the desired number of carbon copies of the matter to be typed, are interleaved or alternately arranged with the carbon paper sheets, as indicated in Fig. 6. Each copy sheet is so inserted that its top edge portion is in engagement with the bottom edge portions of the tabs 16, the tabs thus forming guiding stops for the copy sheets, as will be readily understood. The paper sheet 27a, such as a letterhead or the like, which is to constitute the "original or ribbon" copy of the typed matter, is arranged, of course, over the topmost carbon paper sheet, with the top edge portion of the sheet 27a being positioned beneath the portions of the backing sheet flap 13 at the sides of the notches or recesses 23, and with the tabs 16 forming guiding stops for such sheet 27a.

The holder with its associated copy sheets 27, 27a is inserted into a typewriter or equivalent machine in the usual manner, the thinness of the

top edge portion of the holder enabling its ready insertion into the machine, even though the holder contains a relatively large number of carbon sheets and associated copy sheets.

Should a typographical error be made, the removal of the holder from the machine for the correction of said error is wholly unnecessary. All that is required is that the operator remove the tabs 16 from the flap slots 21, turn the flap upwardly, and remove from the tabs, in the manner indicated in Fig. 4, the top portions of the several carbon paper sheets. Upon the correction of the error, the carbon paper sheets are again hung on the tabs, the flap 13 turned down beneath the tabs, and the tabs reinserted into the flap slots 21. This can all be done while the holder is in the machine and without disturbing the original registering relationship of the carbon paper sheets and the copy sheets. The removal of the tabs 16 from the flap slots 21 and their reinsertion into said slots is an exceedingly simple and convenient operation, requiring but a few seconds, and the removal of the carbon paper sheets from the tabs 16 and their remounting thereon are equally easy and rapid operations.

To enable the copy sheets 27, 27a to be simultaneously removed from the holder, the lower right hand corner portions of the backing sheet 10 and the carbon paper sheets 11 are cut away, as shown in Figs. 1, 6 and 8. The lower right hand corner portions of the copy sheets thus project beyond the holder, and by gripping such projecting corner portions, the copy sheets may be easily and quickly removed from the holder as a group or unit.

In the interleaving of the copy sheets 27 with the carbon paper sheets 11, the lower edge portions 29 of the carbon paper sheets are manually gripped, and the carbon paper sheets lifted for the successive insertion of the copy sheets. To prevent soiling of the fingers in the interleaving operation, the lower edge portions 29 of the carbon paper sheets are not coated with carbon, and to facilitate and expedite the interleaving operation, the bottom edge portions 29 of the carbon paper sheets are of progressively varying lengths, as shown in Fig. 8. This lateral stepped arrangement of the carbon sheet portions 29 enables the carbon paper sheets to be lifted as a unit, and the sheets successively dropped as the copy sheets are inserted. All that the operator needs to do is to slide her thumb along the lower surfaces of the carbon sheet portions 29, with a carbon paper sheet being dropped for every half inch of thumb movement if that distance is used, as here, in the provision of the stepped arrangement. To enable the carbon paper sheets to be lifted as a unit, the bottom edge portion of the backing sheet may be provided with a suitable notch or recess 30, as shown in Fig. 8.

In order to obtain uniform wear of the carbon paper sheets, with consequent prolongation of their useful life, and in order that the carbon copies will be of uniform appearance as to the typed matter thereon, the carbon paper sheets are of different grades, as to their carbon coating, in the arrangement of such sheets on the backing sheet. As the top carbon paper sheet is subjected to the greatest wear, and the bottom sheet to the least, the carbon coatings on the sheets are of progressively diminishing thickness or hardness from the topmost sheet to the lowermost sheet. Thus, the carbon coating of each sheet is of a thickness or hardness to enable it to withstand the wear to which it is sub-

jected, and as the order of arrangement of the carbon paper sheets is not changed in the use of the holder, maximum life of the carbon paper sheets and the production of uniform carbon copies are always assured.

The backing sheet 10 preferably is made with smooth and hard finished surfaces, at least as to its upper surface, and as a result, the type impressions on the copy sheets are not only sharper than they would be without such a backing sheet but also, of uniform sharpness. Thus, with the present holder, more and sharper copies can be made than would otherwise be possible.

If desired, the carbon paper sheets may be of the well known treated type, such as wax treated carbon sheets. Sheets of this type are, of course, stronger than untreated sheets, with little or no tendency to curl, and further, provide a reinforcement of the uncoated upper and lower edge portions 14, 29 of the sheets, a reinforcement which desirably stiffens the lower edge portions 29 of the carbon sheets and minimizing any tendency of the tab-receiving slots 17 in the top edge portions 29 from becoming enlarged.

As will be readily understood, the number of carbon sheets of the holder may be varied, as desired. For convenient identification, the outer surface of the top flap 13 of the backing sheet may be marked with the number of the carbon sheets, and by providing an operator with holders of differing numbers of carbon sheets, the holder containing the number of sheets for the desired number of carbon copies can be selected.

To those skilled in the art to which the present invention relates, further features and advantages of carbon paper holders embodying the present invention will be evident from the foregoing description of one such embodiment.

What I claim is:

1. A carbon paper holder, comprising a flexible backing sheet, and a plurality of carbon paper sheets arranged in superposed registering relation on said backing sheet, said backing sheet being provided adjacent its upper end with a pair of laterally spaced upwardly extending hinged tabs and each of said carbon paper sheets being provided adjacent its upper end with a pair of corresponding spaced slots through which said tabs extend, said backing sheet also being provided with a depending hinged flap underlying said tabs and having a pair of laterally spaced slots into which the upper end portions of said tabs are inserted to detachably interlock said tabs and said flap, said tabs being integral parts of and having their free edges cut from said backing sheet and their formation providing a pair of openings in said backing sheet, the top edges of said carbon paper sheets terminating just below the top edges of said openings and portions of said carbon paper sheets being pressed into said openings by the engagement of said tabs with the backing sheet flap to additionally interlock the carbon paper sheets with said backing sheet, substantially the whole free edge of each tab being arcuate and convex in shape, said flap extending downwardly below said tabs and

the lower edge portion of said flap being provided with notches, each notch of a width to snugly receive one of said tabs, the upper edge of each notch substantially overlying and coinciding with the fold line of its associated tab, whereby said tabs are readily inserted into or removed from said slots without excessively bending said tab by grasping the flap hinge line and pressing forwardly on said backing sheet to bend the portions of said flap between said hinge line and each slot for opening the slots and whereby said tabs and notches serve as a locating surface for the top edges of the original and copy sheets to be placed on top of and between said carbon paper sheets.

2. A carbon paper holder, comprising a flexible backing sheet for releasably holding a plurality of carbon paper sheets arranged in superposed registering relation on said backing sheet, said 15 backing sheet being provided adjacent its upper end with a pair of laterally spaced upwardly extending hinged tabs for engaging a pair of corresponding spaced slots in the upper ends of said carbon paper sheets, said backing sheet also being provided with a depending hinged flap underlying said tabs in assembled position and having a pair of laterally spaced slots into which the upper end portions of said tabs are inserted to detachably interlock said tabs and said flaps, each 20 slot being approximately the same width as the fold line of its associated tab, the upper end portion of each tab insertable into its associated slot having a convex curve outline and having the curve starting at approximately the tab fold line, said flap extending downwardly below said tabs and the lower edge portion of said flap being provided with notches, each of a width to snugly receive one of said tabs, the upper edge of each notch substantially overlying and coinciding with 25 the fold line of its associated tab, the length of each tab from its fold line to its outer edge being only slightly greater than the distance between its associated slot and bottom of its associated notch, whereby said tabs can be readily inserted 30 into or removed from said slots and notches without excessively bending said tabs.

VINCENT J. ST. JOHN.

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