

Feb. 17, 1942.

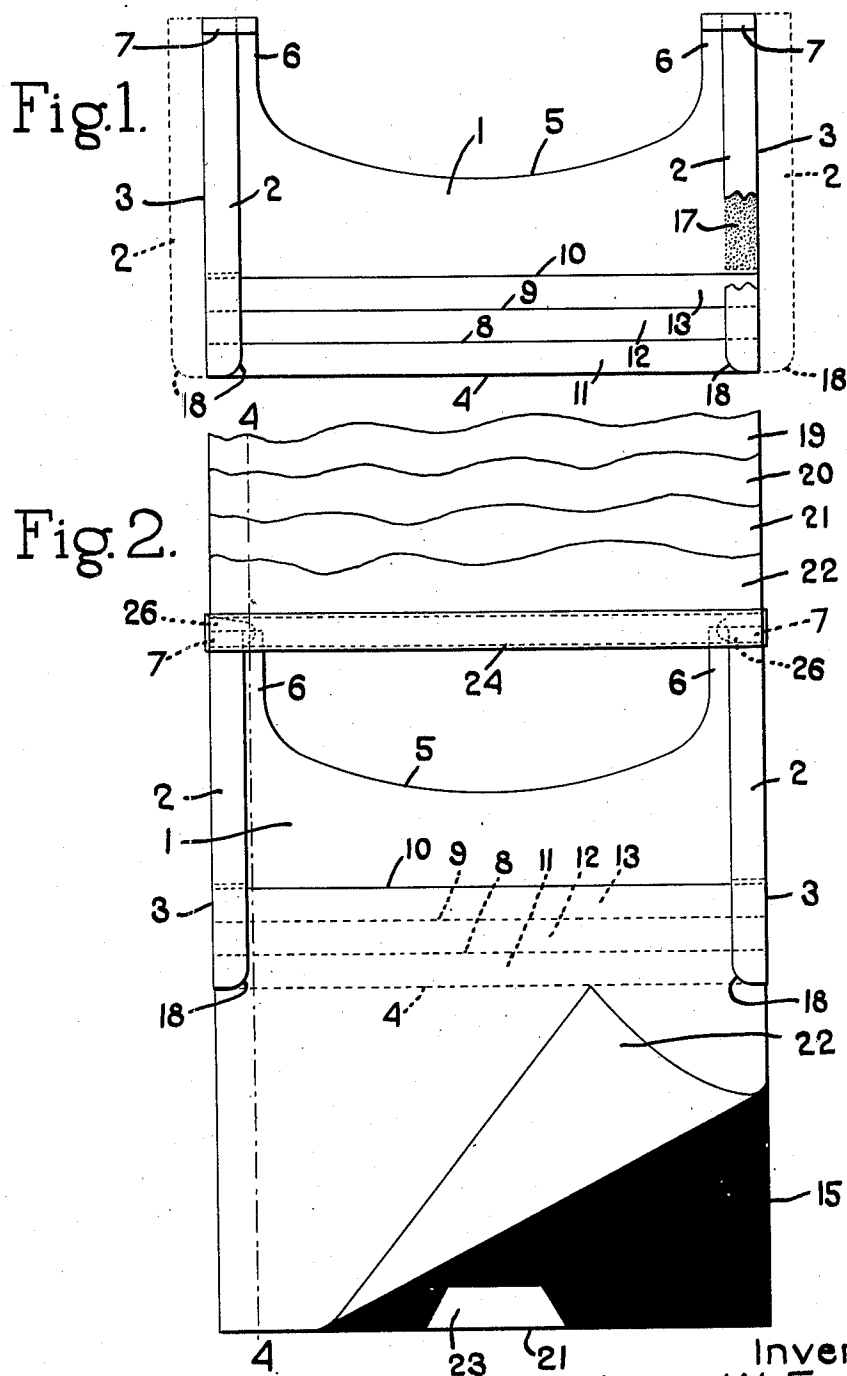
J. W. FADER

2,273,255

MANIFOLDING MECHANISM FOR TYPEWRITERS

Filed March 11, 1941

2 Sheets-Sheet 1



Inventor.
James W. Fader
by *Heard Smith & Tennant.*
Attys.

Feb. 17, 1942.

J. W. FADER

2,273,255

MANIFOLDING MECHANISM FOR TYPEWRITERS

Filed March 11, 1941

2 Sheets-Sheet 2

Fig. 5.

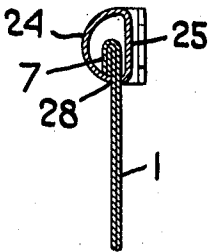


Fig. 3.

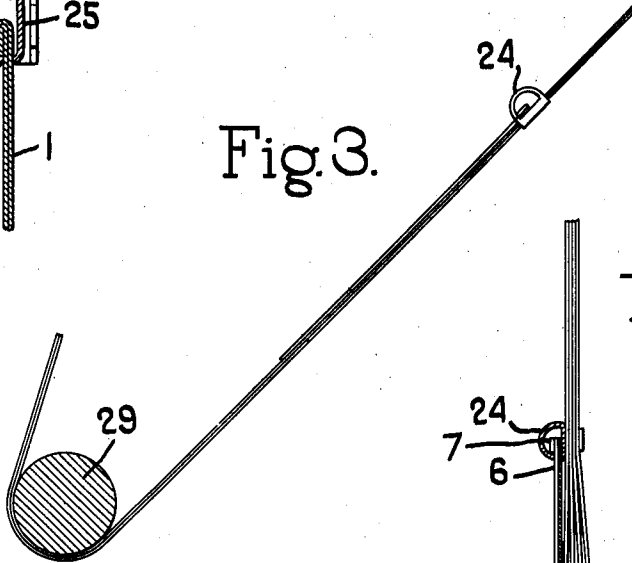


Fig. 4.

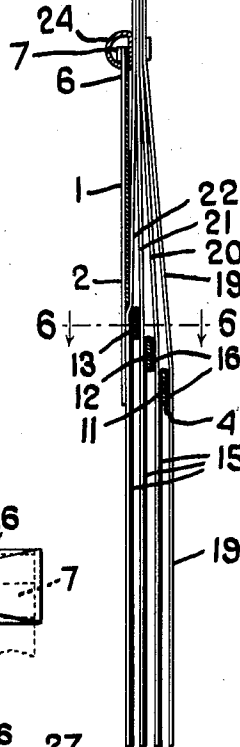


Fig. 6.

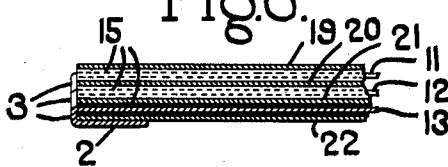


Fig. 7.

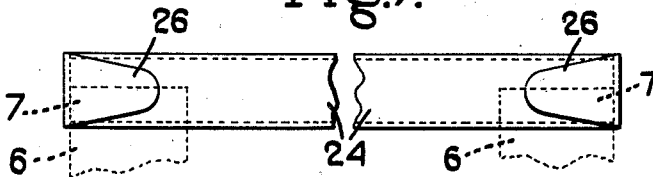
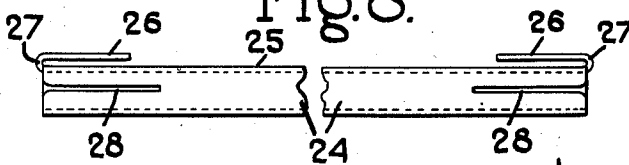


Fig. 8.



Inventor.
James W. Fader
by *Harold Smith & Tennant.*
Attys.

UNITED STATES PATENT OFFICE

2,273,255

MANIFOLDING MECHANISM FOR
TYPEWRITERS

James W. Fader, Dorchester, Mass.

Application March 11, 1941, Serial No. 382,709

7 Claims. (Cl. 282—1)

This invention relates to improvements in carrier mechanisms for transfer sheets for manifold-
ing a series of forms on a typewriter.

Modern business methods require manifold
copies of various instruments or forms, such as
bills of lading, shipping orders, bills of accounts,
specifications, etc., and continuous sheets have
been produced having successive forms with
transverse perforations between adjacent forms
thereby enabling the typist to fill out successive
forms in multiple, progressively tearing off each
set of multiple forms when they are completed.

The present invention relates to a carrier for
the transfer sheets which, when the transfer
sheets are connected to it, will permit a plurality
of superposed form sheets to be interleaved with
the transfer sheets and progressively moved rear-
wardly to the adjacent form sheet when the typ-
ing of one form is completed.

In constructions of this character such as that
disclosed in my prior Patent No. 2,141,064, grant-
ed December 20, 1938, the rear edges of the re-
spective transfer sheets are connected respective-
ly to superposed bars or strips, and the strips
are connected at their ends together in such man-
ner as to permit the form sheets to be inter-
leaved therebetween. The ends of the bars or
strips are secured together and to rearwardly
extending connectors having means detachably
to engage a follower having means for guiding
the edges of the form sheets. When one set of
forms has been manifolded upon a typewriter
the platen of the typewriter is rotated in a direc-
tion reverse to the feeding direction until the
form sheets and transfer sheets have been re-
moved therefrom. The typist then grasps the
form sheets centrally, the transfer sheets hav-
ing a central recess to permit the form sheets
only to be grasped, and the typist then grasping
the follower draws the superposed transfer sheets
longitudinally of the form sheets until the trans-
fer sheets are interleaved with the next succes-
sive forms, then tears off the completed sheets
and re-introduces the assembled forms and
transfers into the typewriter for further opera-
tions. By properly manipulating the carrier
the transfer sheets can be so positioned that the
type will not impinge upon the same area of the
transfer sheet during the manifolding of suc-
cessive sheets, thereby insuring plain impressions
of the type upon the several manifolded sheets.

The principal object of the invention is to pro-
vide a novel simplified form of carrier for a plu-
rality of transfer sheets which can be sold as a
unit and to which the transfer sheets may be

readily connected in superposed relation by the
user.

A further object of the invention is to provide
a simplified transfer carrier of the character de-
scribed herein upon which the transfer sheets
may be assembled at the factory and sold as a
carbon pack. The carbon carrier and the carbon
pack of the present invention is of such compact
construction that a large number can be pack-
aged in a single container together with a suit-
able novel follower and guide which can be
repeatedly used in connection with the carriers
or with the transfer pack and new carriers and/or
transfer packs repeatedly ordered for the con-
tinued use of the follower.

More specifically the invention comprises a
carrier for a plurality of transfer sheets com-
prising a single integral sheet of thin flexible
tough material provided with means for inde-
pendently supporting the members of a plural-
ity of transfer sheets in superposed relation and
so constructed that the superposed form sheets
may be readily interleaved with the transfer
sheets.

A further object of the invention is to provide
a carrier for a plurality of transfer sheets com-
prising a single integral carrier sheet of the
character described having means for guiding
the edges of the form sheet during their inter-
leaved assemblage with the transfer sheets and
which is adapted in conjunction with the guide
upon the follower to maintain the transfer sheets
in registry during the typing of the forms.

A further object of the invention is to provide
a carrier for a plurality of transfer sheets of the
character described with connectors at the sides
of the carrier sheet extending rearwardly there-
from and having thickened end portions, which
may be formed of superposed folds of the sheet
itself, adapted to engage suitable recesses in the
end portions of the follower and guide.

Another object of the invention is to provide a
novel form of follower which can be readily de-
tachably connected to the connectors of trans-
fer sheet carriers of the character described.

These and other objects and features of the
invention will more fully appear from the follow-
ing description and the accompanying draw-
ings and will be particularly pointed out in the
claims.

A preferred embodiment of the invention is
illustrated in the accompanying drawings, in
which,

Fig. 1 is a plan view of a carrier for a plural-
ity of superposed transfer sheets showing mar-

ginal side portions folded over adjacent portions of the sheet and illustrating in dotted lines the position of the marginal portions before the same is folded and also having a broken-away section illustrating the adhesive by which the marginal sections are secured to the sheet;

Fig. 2 is a similar plan view of the transfer carrier with a series of form sheets interleaved with the transfer sheets and also illustrating the follower which is detachably secured to connectors integral with and extending from the rear of the body of the transfer sheet;

Fig. 3 is a diagrammatic view illustrating the manner in which the superposed form sheets and carrier sheets extend around the platen of a typewriter machine when in use;

Fig. 4 is a greatly enlarged view partially in section, on line 4—4 Fig. 1, illustrating the carrier, the manner in which the form sheets are interleaved with the transfer sheets, and also illustrating the manner in which the carrier is connected to the follower and guide;

Fig. 5 is a detail view of a preferred detachable connection between the connectors of the carrier and the follower;

Fig. 6 is a greatly enlarged horizontal view on line 6—6 Fig. 4, of one end portion of the carrier for the transfer sheets, viewed downwardly, and illustrating the manner in which the folded edges of the marginal portion of the carrier guide the superposed form sheets;

Fig. 7 is an underneath plan view of a preferred form of follower and guide, the end portions of the connectors being shown in dotted lines; and,

Fig. 8 is a side elevation of the follower and guide.

The carrier for the transfer sheet is formed entirely from a thin sheet of suitable tough flexible material, such as preferably tough paper, and is cut from the sheet to form a blank, the outline of which is illustrated in full and dotted lines in Fig. 1, to provide a body 1 having at its sides marginal portions 2 adapted to be folded on lines 3 into parallelism with the body of the sheet. The forward edge 4 of the carrier sheet is a straight line normal to the fold lines 3 for the margins 2. The rear portion of the rectangular blank desirably is cut away along a preferably curved line 5 to provide rearwardly projecting connectors 6 having thickened ends 7 adapted to engage suitable recesses in the follower, as hereinafter described. The thickened ends 7 desirably are formed by reversely folding the end portions of the connectors 6, as illustrated in Fig. 5, which also shows the manner in which they engage recesses in the end portions of the follower.

The forward portion of the sheet is provided with a plurality or series of slits 8, 9, 10, etc., which are parallel to the straight forward edge of the carrier 4, and are preferably spaced from said edge and also from each other suitable, preferably equal, distances. These slits are of a length slightly greater than the width of the sheets to be manifolded and preferably extend to the fold lines 3 for the marginal portions 2 and provide therebetween parallel strips 11, 12, 13, etc. integral with the marginal portions of the sheet to which the rear edge portions of transfer sheets, such as carbon sheets, may be secured.

The rear edges of the carbon sheets 15 preferably have their upper ends 16 folded over and adhesively secured to a strip 11, 12 or 13, as

illustrated in Fig. 4. The marginal portions 2 are suitably secured to the face of the body 1 by adhesive 17 from a position slightly above the upper most slit 10 to the end of the connector portions 6 and also desirably the folded ends forming the thickened portions 7, as illustrated in Fig. 7, are similarly adhesively connected to each other and to the face of the sheet. The portions of the folded over margins are not connected by adhesive, or otherwise, to the ends of the strips 11, 12, 13, and the marginal portions 2 are provided with rounded corners 18 to avoid curling of the corners.

A suitable number of the carriers, as illustrated in Fig. 1 and above described, may be packaged and delivered to the user who may then attach the transfer sheets in superposed relation to the several strips 11, 12, 13, or if desired the transfer sheets may be secured to the strips 11, 12, 13, at the factory, thereby forming what is usually known to the trade as "carbon packs," any number of which may be suitably packaged together with a suitable follower preferably of the character hereinafter described.

The desired number of superposed form sheets may be introduced in interleaved relation to the transfer sheets, as illustrated in Fig. 2 which illustrates an original form sheet 19 which is printed directly by the type of the typewriter and copy sheets 20, 21, and 22, which are introduced through the respective slits 8, 9, and 10 in the carrier. The fold 3 of the forward free marginal portions serves as guides for the side edges of the form sheets when they are inserted through the respective slits 8, 9, and 10, and not only serve to facilitate the introduction of the form sheets into the carrier, but also serve in combination with the follower to maintain the form sheets in proper registry during the typing operation.

Each of the carbon or transfer sheets is provided with a recess 23 midway of its forward end portion so that the forward end portions of the form sheets may be grasped by the hand of the operator without pinching the transfer sheets between them for purposes which will hereinafter be described.

One of the objects of the invention is to provide a novel form of follower and guide which will serve for the double purpose of maintaining the form sheets in proper registry and also provide means for moving the carrier with the transfer sheets to the successive forms upon the superposed form sheets. The follower is illustrated in Figs. 5, 7, and 8, and comprises a tubular member 24, preferably of light material, such as aluminum or suitable plastic, having a substantially flat face 25 which is provided at its ends with extensions 26 bent over in parallelism with the flat face. The follower 20 is slightly greater in length than the width of the form sheets and the inner curved walls 27 of the bent-over edge portions serve as edge guides for the superposed form sheets. The tubular follower is provided at its ends with slots 28 extending inwardly from the ends a distance equal to or slightly greater than the width of the connectors 6 of the carrier and of a width just sufficient to permit the connectors 6 of the carrier to be easily inserted therein so that the thickened end 7 will lie within the barrel or tubular recess of the carrier and thereby lock the carrier to the follower.

When the form sheets have been interleaved with the transfer sheets in the manner described the forward edge of the assemblage is inserted

into the typewriter and bent around the platen 29 thereof, as illustrated in Fig. 3. The typist thereupon successively fills in the forms and progressively removes the manifolded units in the usual manner above described.

By reason of the present invention a carrier for the transfer sheets is provided which comprises only an integral sheet of thin tough material several of which may be assembled with an equal number of followers for storage or for sale to persons or concerns who prefer to apply transfer sheets of their own selection to the carriers. Alternatively transfer sheets may be assembled upon the carriers in the manner above described at the factory to form transfer or "carbon packs" and assembled in small packages together with a single follower for shipment or sale. Where the carbon packs are thus assembled other packages containing the carbon packs only may be supplied to customers who have previously obtained a pack containing the follower as the follower will last indefinitely. The form sheets can be assembled in the carrier or carbon pack speedily and with minimum effort. The packages containing the carriers and/or carbon packs will occupy a minimum amount of space for storage and shipment.

These and many other advantages of the invention will be apparent to users as will be readily understood by those familiar with the art.

It will be understood that the particular embodiment of the invention disclosed herein is of an illustrative character, that the carrier may be made of integral sheets of any suitable material, and that the sheet may be provided with any suitable number of slits at equal or other desired widths of spacing, and that various changes in construction may be made within the spirit and scope of the following claims.

Having thus described the invention, what is claimed as new, and desired to be secured by Letters Patent, is:

1. A carrier for a plurality of superposed manifold transfer sheets comprising a thin sheet of tough flexible material having a straight front edge and provided with a series of slits parallel to and suitably spaced from said front edge and from one another and of a length slightly greater than the width of the forms to be manifolded and terminating short of the side edges of the carrier sheet and providing strips therebetween to which the rear edge portions of the respective transfer sheets may be attached, and having narrow marginal side portions so folded over the ends of the slits that the folds provide guides for the side edges of superposed form sheets to be manifolded when said form sheets are inserted in interleaved relation to said transfer sheets.

2. A carrier for a plurality of superposed manifold transfer sheets comprising a thin sheet of tough flexible material having a straight front edge and provided with a series of slits parallel to and suitably spaced from said front edge and from one another and of a length slightly greater than the width of the forms to be manifolded and terminating short of the side edges of the carrier sheet and providing strips therebetween to which the rear edge portions of the respective transfer sheets may be attached, and having narrow marginal side portions having rounded corners and so folded over the ends of the slits that the folds provide guides for the side edges of superposed form sheets to be manifolded when said form sheets are inserted in interleaved relation to said transfer sheets, the rear central

portion of the carrier sheet being cut away to provide connectors adapted to be secured to a follower and guide for the edges of the form sheets.

3. A carrier for a plurality of superposed manifold transfer sheets comprising a thin sheet of tough flexible material having a straight front edge and provided with a series of slits parallel to and suitably spaced from said front edge and from one another and of a length slightly greater than the width of the forms to be manifolded and terminating short of the side edges of the carrier sheet and providing strips therebetween to which the rear edge portions of the respective transfer sheets may be attached, and having narrow marginal side portions having rounded corners and so folded over the ends of the slits that the folds provide guides for the side edges of superposed form sheets to be manifolded when said form sheets are inserted in interleaved relation to said transfer sheets, the rear central portion of the carrier sheet being cut away to provide connectors adapted to be secured to a follower and means adhesively connecting the folded-over marginal side portions of said sheet intermediate of the uppermost slit and the end of the connector acting to reenforce and stiffen the connector.

4. A carrier for a plurality of superposed manifold transfer sheets comprising a thin sheet of tough flexible material having a straight front edge and provided with a series of slits parallel to and suitably spaced from said front edge and from one another and of a length slightly greater than the width of the forms to be manifolded and terminating short of the side edges of the carrier sheet and providing strips therebetween to which the rear edge portions of the respective transfer sheets may be attached, and having narrow marginal side portions having rounded corners and so folded over the ends of the slits that the folds provide guides for the side edges of superposed form sheets to be manifolded when said form sheets are inserted in interleaved relation to said transfer sheets, the rear central portion of the carrier sheet being cut away to provide connectors adapted to be secured to a follower and means adhesively connecting the folded-over marginal side portions of said sheet intermediate of the uppermost slit and the end of the connector acting to reenforce and stiffen the connector, the rear ends of the connectors being provided with superposed folds adapted to enter recesses in the end portions of a follower and guide for the superposed form sheets.

5. A carbon pack, for manifolding a series of forms on a typewriter, having a carrier comprising a thin sheet of tough flexible material having a straight front edge and provided with a plurality of slits parallel to and suitably spaced from said front edge and from one another and of such length as to permit the respective form sheets to be inserted through the respective slits and providing therebetween parallel strips integral with the marginal portions of said sheets, transfer sheets having their rear edge portions wrapped around and adhesively secured to said strips, thereby reinforcing the same, the rear edge portions of said sheet being cut away to provide connectors and thickened end portions on said connectors adapted to engage recesses in the end portions of a follower and guide for the superposed sheets.

6. A carbon pack, for manifolding a series of

forms on a typewriter, having a carrier comprising a thin sheet of tough flexible material having a straight front edge and provided with a plurality of slits parallel to and suitably spaced from said front edge and from one another and of such length as to permit the respective form sheets to be inserted through the respective slits and providing therebetween parallel strips integral with the marginal portions of said sheets, transfer sheets having their rear edge portions secured to said strips, the marginal side portions of said carrier sheets having rounded front corners and being folded at the ends of said slits to form guides for the side edges of the form sheets when being inserted through the respective slits, the central rear portions of the carrier sheet being cut away to provide relatively narrow connectors reenforced by the folded marginal portions, the rear ends of said connectors being provided with thickening means adapted detachably to engage recesses in the end portions of a follower and guide for the superposed sheets.

7. A carbon pack, for manifolding a series of forms on a typewriter, having a carrier comprising a thin sheet of tough flexible material having a straight front edge and provided with a plu-

5 rality of slits parallel to and suitably spaced from said front edge and from one another and of such length as to permit the respective form sheets to be inserted through the respective slits and providing therebetween parallel strips integral with the marginal portions of said sheets, transfer sheets having their rear edge portions secured to said strips, the marginal side portions of said carrier sheets having rounded front corners and being folded at the ends of said slits to form guides for the side edges of the form sheets when being inserted through the respective slits, the central rear portions of the carrier sheet being cut away to provide relatively narrow connectors reenforced by the folded marginal portions, the rear ends of said connectors being provided with thickening means adapted detachably to engage recesses in the end portions of a follower and guide for the superposed sheets, and a tubular follower provided with a substantially flat under surface and having extensions bent into parallelism with said flat under surface and provided with end slots adjacent said flat surface to receive the thickened ends of said connectors.

JAMES W. FADER.