

Aug. 15, 1933.

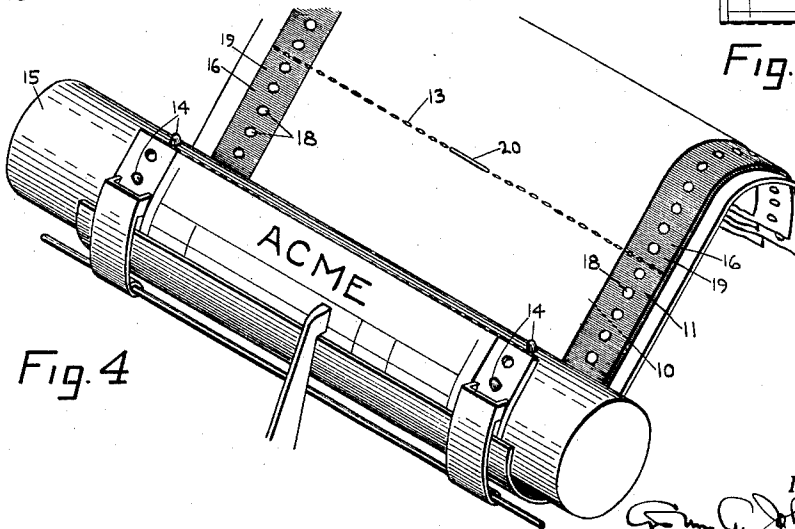
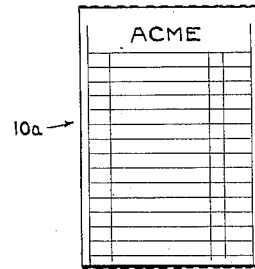
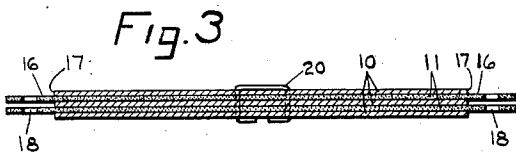
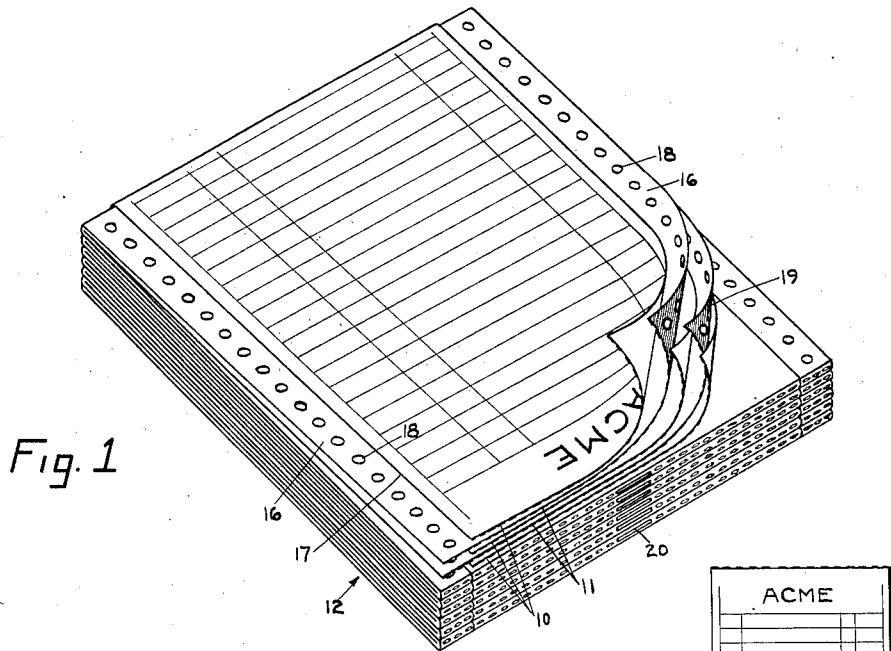
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1,922,296

MANIFOLDING

Filed Dec. 10, 1930

2 Sheets-Sheet 1



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2 Sheets-Sheet 2

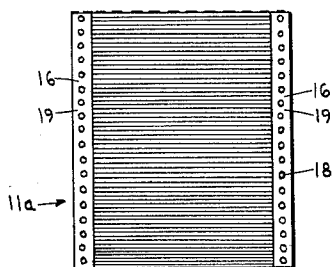


Fig. 5

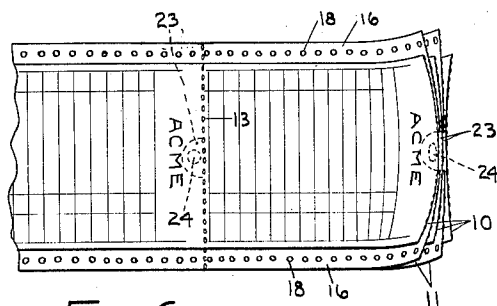


Fig. 6

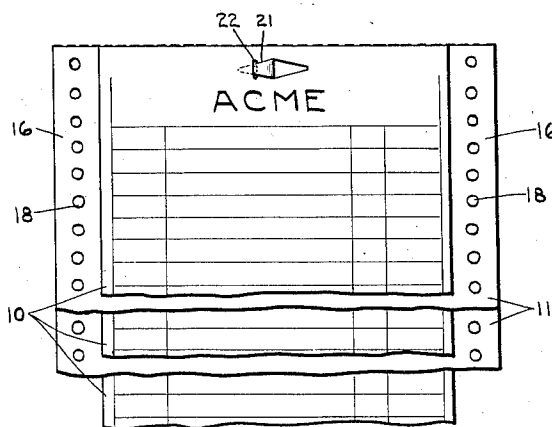


Fig. 7

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UNITED STATES PATENT OFFICE

1,922,296

MANIFOLDING

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Serial No. 501,349

17 Claims. (Cl. 282—12)

This invention relates to manifolding, and more particularly, to the provision of a pile of superposed record and interleaved transfer strips for use in typewriting machines and the like.

Heretofore, it was proposed to control the feeding of such a pile of manifolding strips in a typewriter by pin-wheels and for this purpose the record strips were provided with rows of holes at their lateral edges for engagement by the pin-wheels which maintain the record strips in registration with each other and in alignment and in coordination with the feeding mechanism of the machine.

It was also proposed to reduce the number of papers engaging the pin-wheels by making the carbon strips narrow enough to lie entirely within the space between the pins on pin-wheels which lie at opposite ends of the platen, and with this arrangement it has been found advantageous to secure all the record and carbon strips together to travel through the typewriter or other machine as a unit.

As stated, the record strips as heretofore provided, had lateral feeding bands provided with rows of pin holes. The presence of these on the record strips has proven objectionable in many instances, and to avoid this criticism the feeding bands were separated from the main body of the record strip by longitudinally extending lines of perforations so that they could be torn from the record sheets after the latter were written upon.

An object of this invention is to so arrange the pile of interleaved record and carbon strips that the record strips need not be thus mutilated and will produce regular rectangular sheets when severed transversely along lines of severance defining the top and bottom edges of the record sheets, and still provide for controlling the feeding of the pile of strips by pin-wheels.

This is accomplished, according to the present invention, by reversing the arrangement at present employed. That is to say, instead of the record-strips being provided with the apertured feeding bands as heretofore, the present invention provides the apertured feeding bands on the carbon strips which thus become the carrier strips by which feeding of the record strips is controlled and regulated.

Other features and advantages will hereinafter appear.

In the accompanying drawings—

Figure 1 is a perspective view of a manifolding pack made in accordance with this invention.

Fig. 2 shows the unmutated record sheet re-

sulting from severing the record strips transversely.

Fig. 3 is a transverse sectional view of a pile of manifolding strips made in accordance with this invention.

Fig. 4 is a perspective view of the manifolding pile shown in Figs. 1 and 3, showing it supported on the platen of a typewriter in writing position.

Fig. 5 shows a modified form of carbon strip.

Fig. 6 is a plan view of a modification of this invention wherein the record-strips are held together and to the carbon strips by adhesive, the carbons being apertured where the strips are secured together.

Fig. 7 is a plan view of a pile of strips showing another means for securing them together.

As shown in the accompanying drawings, the pile of manifolding strips may comprise record strips 10 with interleaved carbon strips 11 which are continuous in form and which are placed one above the other in superposed relation. For convenience, in shipping and handling, this pile of strips may be zig-zag folded to form a pad or block 12 as shown in Figs. 1, 4 and 7, from which the leading end may be lifted and inserted in a typewriting machine or the like.

The zig-zag folding of the pile of strips 10 and 11 is facilitated by transverse weakening lines 13, preferably perforations, in some or all of the strips and these further serve as lines of severance along which the pile of strips may be severed to form sets of interleaved record sheets 10a and carbon sheets 11a.

In cases where it was desired to use the pile of strips 10 and 11 in a telegraphic typewriter having pin-wheel feeding devices for keeping the pile in strict coordination with the platens of the sending and receiving machines, it was heretofore customary to provide the record strips 10 with lateral margins projecting beyond the adjacent edges of the carbon strip so as to constitute feeding bands having apertures for engaging pins 14 on the typewriter platen 15, see Fig. 4.

However, with this arrangement, the record strips produced by severing the strips along the lines of severance 13 had at each lateral margin a row of pin-wheel engaging apertures. These made the record sheet unsightly and unsuitable for some uses, especially if it were to be sent to a customer. These apertured feeding bands were of no use after the record strips were fed and written upon, and hence in some cases longitudinal lines of perforations were provided to permit the feeding bands to be torn off the main body of the record sheet. This obviated the

difficulty somewhat but required an added operation and often this arrangement did not suit certain classes of trade because of the rough lateral edges which would be left on the record sheet.

All this is avoided according to the present invention by reversing the previously proposed arrangement, that is to say, the feeding bands are provided on the transfer strips instead of on the record strips.

Accordingly, in the forms of the invention herein shown, the transfer strips 11 are made wider than the record strips 10 and each has a lateral margin 16 projecting beyond the adjacent edge 17 of the record strips 10. These lateral margins constitute feeding bands and may be employed to feed or control the position of the pile of superposed strips 10 and 11 by any suitable means. In the form of the invention shown, the projecting margins 16 are provided with rows of apertures 18 to engage the pins 14 on the type-writer platen 15.

Hence, when the pile of superposed strips 10 and 11 are severed along the lines of perforations 13, the record sheets 10a (Fig. 2) will be a plain rectangular sheet without the unsightly perforated feeding bands while the resulting carbon sheet 10b which is discarded will contain the feeding bands 16.

As shown in Figs. 1 and 4, the transfer strips 11 may be formed by slitting a wide roll of carbon paper or the like in which case the under surface 19 of the feeding band 16 would contain a coating of transfer material. However, if desired and as indicated in Fig. 5, the transfer strips 11 may be formed from a roll having stripes of transfer material so that the strips 11 which form the under surface 19 of the feeding band 16 will be clean, that is uncoated with transfer material.

In previous proposals where the record strips were provided with the feeding bands, the narrow carbon strips were drawn along with the record strips by the binding action produced between the record strips and carbon strips due to the bending of the pile around the platen, and in such cases also it was proposed to secure the strips of the pile together. According to the present invention in its preferred forms, the record strips are secured to the carbon strips to move in unison therewith. In the form shown in Figs. 1, 3 and 4, the strips 10 and 11 are connected together by staples 20 which pass through all the strips and are preferably located on the lines of severance 13 so as to be rendered inoperative to hold the strips together when the pile of strips is severed along the perforations 13.

In the form of the invention shown in Fig. 7, the strips are held together by tongues 21 cut from the strips and threaded through slots 22.

If desired, and in some cases it is preferable, the carbon strips may be provided with apertures 23 located at spaced points longitudinally of the pile so as to permit the adjacent surfaces of the record strips to be directly secured together by spots of gum 24 lying in the apertures 23. These apertures 23 and spots of gum 24 may be at any desired place with respect to the record sheet 10a. However, it is preferable to have one side of each aperture 23 constituted by part of the line or perforations 13 so that when a set of superposed record strips and transfer strips are severed from the pile, the record sheets which are secured together may be separated en bloc from the transfer sheets, the side of the aper-

ture 23 disappearing so as to convert the aperture into an open notch in the tearing-off operation. When the strips are so arranged, if the operator grips the record strips at a point where they are secured together by adhesive 24 with the fingers of one hand and grips the transfer strips by one of its feeding bands 16 with the fingers of the other hand, by moving the hands apart, the transfer sheets and record sheets will be separated or stripped from each other.

Thus, the form of the invention shown in Fig. 6 not only has the advantage of producing plain rectangular record sheets from the strips 10, but also has the advantages of holding the record sheets together preparatory to, during and after the writing operation and severance, and facilitating the separation or stripping of the transfer sheets from the record sheets.

The arrangement shown in Fig. 6, for securing the strips of the pile in registration and holding the carbon strip captive between them, is claimed in my copending application Serial No. 674,680, filed June 7, 1933.

Variations and modifications may be made within the scope of this invention and portions of the improvements may be used without others.

Having thus described the invention, what is claimed as new and for which it is desired to obtain Letters-Patent, is:—

1. Superposed record strips and interleaved transfer strips for use with feed-regulating pin-carrying devices, the transfer strips having lateral marginal portions projecting beyond the adjacent edges of the record strips each projecting margin being provided with a row of apertures in its projecting portion for engagement by said pin-carrying devices, and means for securing the record strips and transfer strips together to feed as one.

2. Superposed record strips and interleaved transfer strips for use with feed-regulating pin-carrying devices, the transfer strips having lateral marginal portions projecting beyond the adjacent edges of the record strips each projecting margin being provided with a row of apertures in its projecting portion for engagement by said pin-carrying devices, and means for securing the uppermost and lowermost record strips to the transfer strips to feed therewith.

3. A connected pile of superposed record strips and interleaved transfer strips, the latter having at each side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips and constituting feeding bands by means of which the pile may be fed.

4. A connected pile of superposed record strips and interleaved transfer strips, the latter having feeding bands at each side projecting beyond the adjacent edges of the record strips.

5. A pile of superposed record strips and interleaved transfer strips, the latter having at each side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips and constituting feeding bands by means of which the pile may be fed, and means connecting the uppermost and lowermost record strips to the transfer strips.

6. A pile of superposed record strips and interleaved transfer strips, the latter having at each side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips and constituting feeding bands by means of which the pile may be fed; and staples at intervals along the pile of strips for connecting the record strips and transfer strips together.

7. A pile of superposed record strips and interleaved transfer strips, the latter having at each side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips and constituting feeding bands by means of which the pile may be fed, said transfer strips having registering apertures at spaced points longitudinally thereof; and means for securing said record strips together in the zones defined by the apertures in the transfer strips.

8. A pile of superposed record strips and interleaved transfer strips divided at intervals by registering transverse lines of severance, the transfer strips having on at least one side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips and constituting feeding bands by means of which the pile may be fed, said transfer strips each having an aperture, one side of which is defined by the line of severance thereof said apertures in the respective strips being in substantial registry depthwise of the pile, and means for securing said record strips together in the zones defined by the apertures in the transfer strips, said means holding the record sheets together for removal en bloc from the transfer sheets after the strips are severed along said lines of severance.

9. A pile of superposed record strips and interleaved transfer strips divided at intervals by registering transverse lines of severance, the transfer strips having on at least one side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips and constituting feeding bands by means of which the pile may be fed, said transfer strips each having an aperture, one side of which is defined by the line of severance thereof said apertures in the respective strips being in substantial registry depthwise of the pile, and means for securing said record strips together in the zones defined by the apertures in the transfer strips, said means holding the record sheets together for removal en bloc from the transfer sheets after the strips are severed along said lines of severance, the secured portions of the record sheets and the feeding bands of the transfer sheets constituting finger grips in the record sheets and transfer sheets respectively for use in the separation of the transfer sheets from the record sheets.

10. A connected pile of superposed record strips and interleaved transfer strips, the latter having apertured feeding bands at each side projecting beyond the adjacent edges of the record strips.

11. Superposed record strips and interleaved transfer strips for use with feed-regulating pin-carrying devices, the transfer strips having lateral marginal portions projecting beyond the adjacent edges of the record strips each projecting margin being provided with a row of apertures on its projecting portion for engagement by said pin-carrying devices, the record strips being devoid of feeding bands on either lateral margin, and means for securing the record strips and transfer strips together to feed as one.

12. Superposed record strips and interleaved transfer strips for use with feed-regulating pin-carrying devices, the transfer strips having lateral marginal portions projecting beyond the adjacent edges of the record strips each projecting margin being provided with a row of apertures in its projecting portion for engagement by said pin-carrying devices, the record strips being devoid of feeding bands on either lateral margin, and means for securing the uppermost and lowermost record strips to the transfer strips to feed therewith.

13. Superposed record strips and interleaved transfer strips for use with feed-regulating pin-carrying devices, the transfer strips having at each side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips each projecting margin being provided with a row of apertures in its projecting portion for engagement by said pin-carrying devices, and means for securing the record strips and transfer strips together to feed as one.

14. Superposed record strips and interleaved transfer strips for use with feed-regulating pin-carrying devices, the transfer strips having at each side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips each projecting margin being provided with a row of apertures in its projecting portion for engagement by said pin-carrying devices, and means for securing the uppermost and lowermost record strips to the transfer strips to feed therewith.

15. A pile of superposed record strips and interleaved transfer strips adapted to be severed into superposed sets of record and transfer sheets, the transfer strips having on at least one side of the pile lateral marginal portions projecting beyond the adjacent edges of the record strips and constituting feeding bands by means of which the pile may be fed and the transfer sheets of a severed superposed set of record and transfer sheets gripped for stripping purposes, the record strips having at least a portion of another margin projecting beyond the adjacent edges of the transfer sheets by means of which the record sheets may be gripped for stripping purposes.

16. A pile of superposed record strips and interleaved transfer strips, the latter having at at least one side of the pile lateral marginal portions projecting beyond the adjacent lateral edges of the record strips and constituting feeding bands by means of which the pile may be fed.

17. A pile of superposed record strips and interleaved transfer strips, the latter having at at least one side of the pile lateral marginal portions projecting beyond the adjacent lateral edges of the record strips and constituting feeding bands by means of which the pile may be fed, each projecting marginal portion being provided with a row of apertures in its projecting portion for engaging pin-carrying devices.

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