

Oct. 16, 1945.

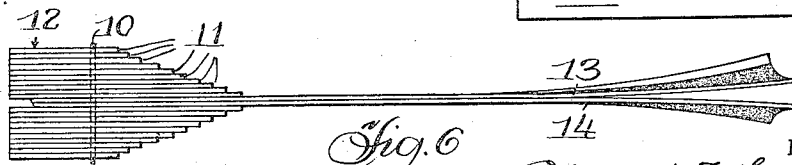
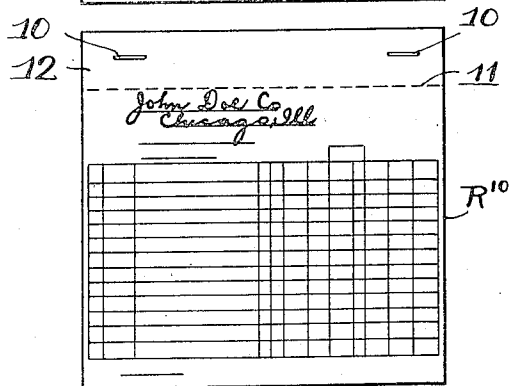
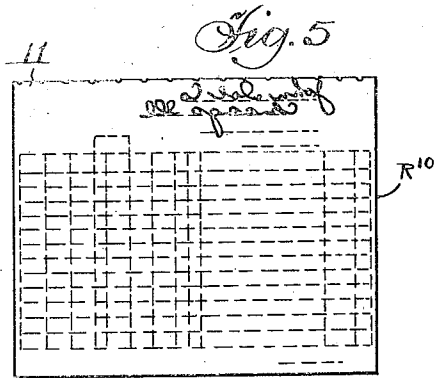
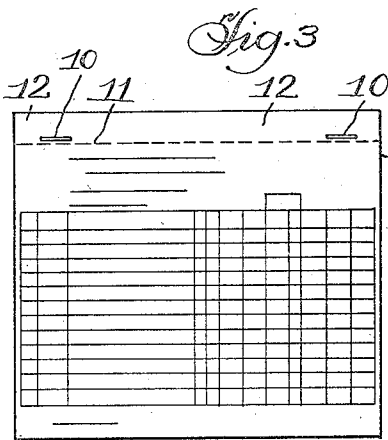
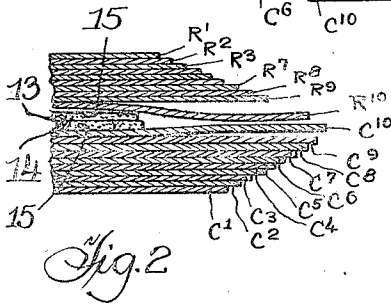
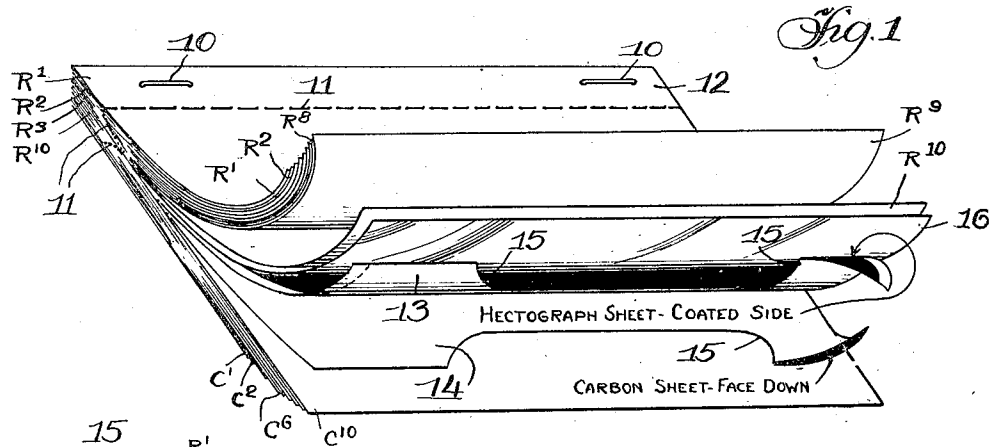
E. Z. LEWIS

2,386,872

DUPLICATING PAD OR SALES BOOK

Filed July 2, 1941

2 Sheets-Sheet 1



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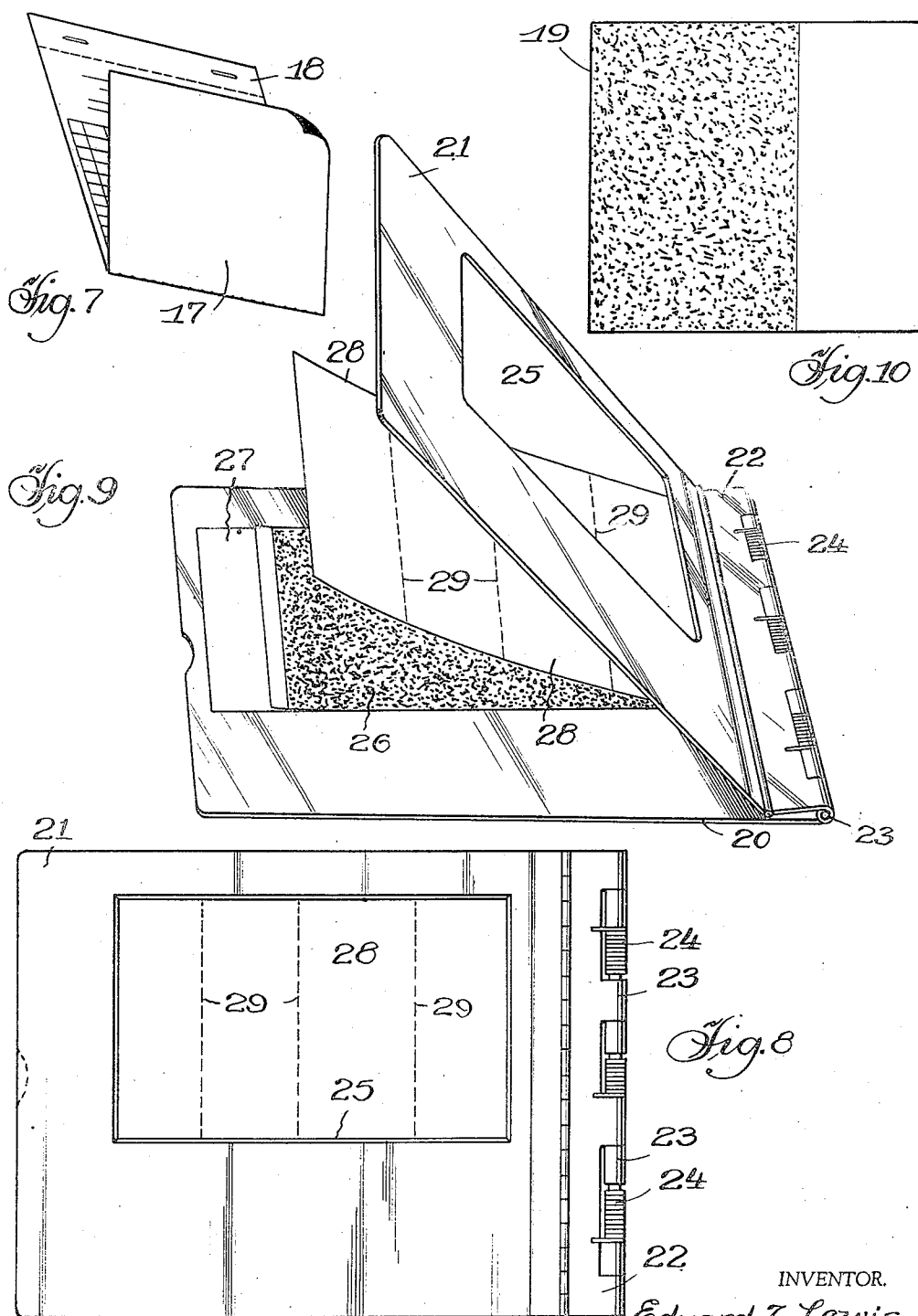
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DUPLICATING PAD OR SALES BOOK

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2 Sheets-Sheet 2



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## UNITED STATES PATENT OFFICE

2,386,872

## DUPLICATING PAD OR SALES BOOK

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Application July 2, 1941, Serial No. 400,837

5 Claims. (Cl. 101—149.4)

This invention relates to improvements in duplicating pads or sales books, and more particularly to manifolding devices of this character by means of which, in addition to making the usual carbon copy of the marks or entries on the record sheet, an additional record thereof in reverse may be made with hectograph transfer material on the back of said record sheet, so that said sheet may be used as a master copy sheet in a spirit duplicating machine. This makes it possible to hand the customer immediately a carbon copy of the order and to send in the original order to master copy sheet to headquarters where any desired number of additional copies, possibly ten, twenty or more, may be made rapidly and inexpensively on a duplicating machine, thus avoiding the delay and expense incident to re-typing the order with the required carbon copies, as in the prior practice.

The general object of the invention is to obtain the advantages and avoid the disadvantages, just enumerated.

Contributory objects are:

To provide a duplicating pad having a hectomaster sheet positioned face up at the bottom of the record sheets, and a carbon transfer sheet immediately beneath said hectomaster sheet and positioned face downwardly on top of the copy sheets.

To provide a pad of this character in which the record sheets and the copy sheets are reversely fanned at the lower edges thereof, to facilitate locating the record sheet to be written on, even without looking at the pad, and without touching the transfer sheets.

To provide a pad of this character in which the hectograph sheet has its upper edge concealed between the adjacent edges of the record and copy sheets to prevent spread of the hectograph transfer material over said edges.

To provide a pad of this character in which the hectograph coating terminates short of the side edges of the transfer sheet and in which said transfer sheet is covered with a sheet of non-absorbent material.

To provide a pad of this character in which the record sheets or printed forms have lines of weakening at the same distance from the bottom edge in each case to provide for record sheets of uniform height when detached, said lines of weakening being at progressively greater distances from the top of the pad to give the lower edges of said sheets a fanned arrangement, insuring more uniform wear over the face of the hectomaster sheet.

To provide a pad of this character with a blank area on the hectograph transfer sheet to prevent transferring to the back of the order sheet those entries which are subject to correction or amplification later.

To provide a pad of this character having one or more extra copy record sheets attached to each of said record sheets at the edge opposite the binding edge and provided with carbon transfer material on the back thereof.

To provide auxiliary means for making additions and corrections on the master sheets in a certain area intended for the purpose, and protecting other portions against additional marks or writing.

Other objects and advantages will be apparent from the description hereinafter given.

In the drawings—

Fig. 1 is a perspective view of a commercial form of pad embodying the invention;

Fig. 2 is a fragmentary end view of the lower edges of the sheets, greatly enlarged;

Fig. 3 is a plan view of the top record sheet;

Fig. 4 is a plan view of the bottom record sheet;

Fig. 5 is a rear view of said bottom record sheet, detached from the stub;

Fig. 6 is an enlarged side elevation of the pad after all the record sheets and copy sheets have been torn out, showing only the stub and the two transfer sheets;

Fig. 7 is a perspective view of one of the record sheets with a transfer sheet attached thereto, as a modification;

Fig. 8 is a top plan view of a holder or frame used in making additions and corrections on the master sheet;

Fig. 9 is a perspective view thereof with the cover swung upwardly; and

Fig. 10 is a plan view of the preferred form of hectomaster sheet with a considerable portion thereof uncoated.

The pad shown in Figs. 1 and 2 is made up of an upper group of record sheets and a lower group of copy sheets, all fastened together at or near one end, with the edges at the opposite end of the upper group projecting in a step-like or fanned arrangement, and with the edges at the opposite end of the lower group of sheets arranged in an inverted, step-like or fanned position. The lower group, i. e. the copy sheets, correspond preferably in number to the record sheets in the upper group. In addition there are two intervening sheets, coated with transfer material, positioned between the upper group and the lower group, and arranged back to back.

In the preferred form, shown in part in Fig. 2 and on a greatly enlarged scale, there are ten record sheets and ten copy sheets, the record sheets being designated  $R^1, R^2 \dots R^{10}$ , and the copy sheets being designated  $C^1, C^2 \dots C^{10}$ . This figure also shows clearly the fanned arrangement of the two groups, which means that the lower edge of each record sheet extends beyond the outer edge or lower edge of the next sheet which in this case is immediately above it, providing a progressive series of exposed margins. Also, the copy sheets are likewise fanned but in the reverse order, i. e. each sheet projects beyond the outer edge of the sheet immediately beneath it, in a progressive series.

The sheets in the two groups are bound together in the form of a single pad, by any suitable means, as for example the wire staples 10, although they may be otherwise secured. Each of the record sheets has a series of perforations or cuts 11 or other line of weakening near the top thereof to permit ready detachment of the sheet from the pad, except for an upper margin in each case, which unused margins will collectively form part of the stub to be discarded, after all the sheets of the group have been detached. The copy sheets likewise are provided with lines of weakening near the top to permit ready detachment. One record sheet and a corresponding copy sheet are torn out at the same time, in the manner hereinafter described.

In the case of the record sheets, the lines of weakening are all at the same distance from the bottom of each sheet so that each of the torn out sheets will be the same length from the top to the bottom. This results in a stepped arrangement of the lines of weakening also, as shown in the upper half of the stub 12 illustrated in Fig. 6. In like manner the lower half of said stub also illustrates the stepped arrangement of the lines of weakening of the copy sheets. The copy sheets are all of the same length from top to bottom but said copy sheets are preferably a little longer than the record sheets, as for example about a quarter of an inch longer, the advantage of which is explained later.

Immediately below the bottom record sheet  $R^{10}$  is a transfer sheet 13, the upper surface of which is coated with so-called hectograph transfer material suitable for making a master copy for use in a spirit duplicator machine, in which the typed material appearing on the master copy sheet must be in reverse.

Immediately beneath the coated sheet 13, which may be called the hectomaster sheet, is positioned another sheet 14 coated with transfer material, preferably a sheet of ordinary carbon paper arranged face downwardly. It will be noted that said two transfer sheets are arranged back to back between the group of record sheets and the group of copy sheets with the hectograph coating facing upwardly and the carbon coating facing downwardly.

Said transfer sheets are provided preferably with a cut-out or notch 15 at their lower edges, in addition to which said transfer sheets are preferably of such size that they do not extend as far downwardly as the edges of the record sheets or of the copy sheets, to avoid unnecessary contact with the fingers of the hand and possible smudging of the transfer material. Insofar as the use of the device is concerned, however, said transfer sheets may extend to or beyond the lower edges of the record and copy sheets, as long as the cut-out or notch 15 is sufficiently

deep to extend well within the lower edges of all of these other sheets. Also, said transfer sheets and particularly the hectomaster sheet are positioned preferably so as to terminate short of the upper edges of the adjacent sheets whereby the transfer material on said sheets is inaccessible, the upper edges being concealed between the adjacent sheets. See Fig. 6. This is a desirable arrangement not only to prevent direct contact with and soiling of the fingers by the coating of the hectomaster sheet which is particularly objectionable, but to prevent the aniline coating on said sheet from working its way over the edges of the adjacent sheets, as may happen in warm weather when said coating softens. Furthermore, when said coating is brought in contact with more or less porous material, said coating is absorbed by capillary action, which in time renders the master sheet much less effective in making reproductions. As a further protection against this deleterious action, a protective sheet 16 may be interposed between the bottom record sheet  $R^{10}$  and the face of the hectomaster sheet 13, as shown in Fig. 1. This protective sheet is optional and where provided it is torn out and discarded before any entries are made on the pad or may be replaced in position.

In using the pad, as for example where a salesman writes an order on one of the record sheets and wishes to retain a carbon copy thereof (using one of the copy sheets), the first order is written on the bottom record sheet  $R^{10}$ , the carbon copy thereof appearing on the top copy sheet  $C^{10}$ . Both sets of sheets being fanned outwardly at the lower edges, as shown in Fig. 2, it is an easy matter to locate the middle of the pad where the first entries are to be made. All that is necessary is to place the thumb on the protruding edge of the bottom record sheet  $R^{10}$ , and open the pack, to expose practically the full surface of said record sheet. As the items are written in longhand, the hectomaster sheet causes a copy of the order to appear in reverse on the back of the record sheet and simultaneously a carbon copy appears on the top of the copy sheet. The user then grasps the two sheets near the middle of the lower edges, between the thumb and one or more fingers, and holding the upper part of the pad, or stub, in the other hand, the two sheets are readily pulled out or torn from the pad leaving the two transfer sheets in place. During the act of pulling these two parts away from the binding edge, the other record sheets are allowed to drop down on top of the transfer sheets. The fact that said transfer sheets have a large cut-out at the middle, as shown in Fig. 1, makes this tearing out operation readily possible, without exercising any particular care. Various other arrangements may be employed if desired, to permit said record sheet and copy sheet to be grasped at a predetermined area and torn out without tearing out the transfer sheets.

Heretofore it has been the practice, where the original orders are sent to headquarters and where a large number of copies are required for the different departments, as in the meat packing business for example, to make a typed copy of each order with as many carbons as are needed for said departments. This extra typing operation and the attendant delay and expense, are entirely eliminated in using my invention, as the original order, after being sent to headquarters, may be reproduced on a spirit duplicator, making a large number of copies, considerably in excess of the number of considered fea-

sible on a typewriter, in some cases as many as forty or fifty.

As shown in Fig. 1, the hectograph coated sheet 13 has an uncoated margin on both sides or edges or it may have a much larger uncoated area, on one side as is shown for example in Fig. 10 hereinafter described. Also, the carbon coated sheet 14 need not be completely covered with transfer material on its under side and preferably has an uncoated area corresponding to that of the hectomaster sheet.

It will be seen that in writing the original order and making a carbon copy thereof, the lowermost record sheet and the uppermost, copy sheet are necessarily the ones used, and hence constitute a pair of superimposed sheets ready to be torn out together. The next pair used comprise the lowermost remaining record sheet and the uppermost remaining carbon sheet as before, and thus all the sheets are pulled out in pairs, beginning at the middle of the pad and working toward the top and bottom, the uppermost record sheet and the lowermost copy sheet being the last sheets to be used and torn out, leaving a stub having the appearance of that shown in Fig. 6.

The hectograph coating is not adapted to make a very large number of impressions, as for example if a single line were drawn on the record sheet and the same torn out and then a similar line drawn on each of the remaining record sheets, one at a time, with said record line in exact registration with the impression on the transfer sheet, the amount of material transferred to the under side of said record sheets from the same narrow area on the transfer sheet would prevent good reproduction of all of said lines on the spirit duplicator. In other words, it is not desirable to apply repeated pressure to the same identical area of the hectograph sheet, particularly where it is desirable to make twenty, thirty or more copies of what is written, by means of the spirit duplicator. Also, the hectograph transfer material is costly, much more so than that used on ordinary carbon paper, and, therefore, it is desirable to use as much of the material on a sheet, and to discard as small a proportion of the coating, as possible.

To meet this situation I have provided the step-like arrangement of the lines of weakening, as shown clearly in Figs. 2 and 6. Assuming that the record sheets are printed forms and that the salesman writes fairly accurately on each line rather than between the lines, it will be seen that the lines of writing are a little nearer the top of the hectograph sheet as the successive lowermost sheets are torn out. This insures more even distribution of the pressure over the hectograph sheet and makes for more even wear. The same is true with respect to the sheet of carbon paper used for each of the transfer sheets. Referring to the printed form, as shown by the top record sheet R<sup>1</sup> shown in Fig. 3 and the bottom record sheet R<sup>10</sup> shown in Fig. 4, these sheets have their top edges on the same horizontal line, and each has the same horizontal lines printed thereon and at the same distance from the bottom of each sheet, but all the printed lines on the right hand or bottom sheet are displaced downwardly with respect to the corresponding lines on the left hand or top sheet. Assuming that ten record sheets are provided, as shown by way of illustration in the drawings, the line of writing may, if desired, be shifted about one-tenth of the space between two consecutive horizontal lines, as successive

record sheets are written on. With some hectograph material it is not practical or desirable to make many more than ten or twelve impressions from the same area or closely adjacent areas, and hence a pad of ten record sheets is a good commercial compromise. Obviously, however, the number either of the record sheets or of carbon sheets may be varied.

It is evident that the inverted, stepped arrangement of the copy sheets with respect to the record sheets serves a double function. Not only does it provide for more even wear of the sheets coated with transfer material, but it facilitates the handling of the pad so that it may be opened quickly in order to write on the lowermost record sheet, regardless of how many sheets may have been detached previously. Also, it makes it very easy to seize the next pair of sheets to be torn out, i. e. the record sheet and the corresponding carbon sheet. In fact, this may be done without even looking at the pad and also without touching the transfer sheets.

As a modification, some or all of the record sheets may have extra copy record sheets attached to the edge thereof opposite the binding edge. This addition to one sheet only is shown in Fig. 7 in which the extra sheet 17 constitutes an extension of the record sheet 18 and is folded over with carbon transfer material on the under side thereof and scored, to permit the same to be torn off. Thus an extra copy is obtained of the original order in addition to the other copies made in the manner previously described. If the original order on the top or back of said carbon coated sheet 17 is written with a Hecto pencil, said sheet may be used as a master sheet on a gelatin type machine. In addition, the hectomaster sheet may be used on the spirit duplicator machine, as previously described.

In some cases, certain entries made by the salesman are subject to change or correction at the home office, as for example the prices quoted by the salesman. In other words, after the original order sheet has been delivered to the pricing clerk the latter writes certain final, corrected entries to complete the order before it goes to the copying machine. To meet this requirement the hectomaster sheet may be provided with a blank column or uncoated area so that any entries made in a correspondingly placed column on the order sheet will not be reproduced in reverse on the back of said sheet. Such a hectomaster sheet 19 is shown in Fig. 10. By way of illustration only, the uncoated area is shown at the right hand side of the sheet but it may be elsewhere located and otherwise shaped, depending on the printed form used. Either or both of the two transfer sheets may be partially coated so that some entries may show on either the record or the copy sheet without appearing on the other.

In order to facilitate the step of filling in the final prices where the hectomaster sheet has a vertical blank area as in Fig. 10, I provide a holder or frame such as shown in Figs. 8 and 9, on which the order sheet is placed by the clerk who writes in the prices or the other items in the blank column. Said frame, which may conveniently be made of metal, has a base 20 and a cover 21 hinged to an extension 22 which in turn is hinged to the base at 23 and is provided with coiled springs 24. The frame, as thus far described, may be of conventional design, but is modified by having an opening 25 cut therein. In order to reproduce on the back of the order

sheet, the prices or other data which are written in as a final step on the face thereof, a sheet or strip of hectograph material 26 is placed under the opening or window. Said strip may have a backing sheet or a stop card 27 under it. Protection is provided by an overlying sheet 28, preferably a waxed sheet secured to the hecto sheet at one of the edges and having perforations or lines of weakening 29 to permit the end sections to be torn off, one at a time. The two sheets 26 and 27 thus are assembled so that they may be handled as a unit, without soiling the fingers, and clamped between the base 20 and the extension or panel 22 by swinging back the cover 21, in a manner which is well known. Before closing the cover, the left hand panel is torn off so that when the sheets, which have been clamped in place, are viewed through the opening, the appearance presented is that shown in Fig. 8, i. e. a vertical column of exposed hectograph material seen at the left hand side of the opening. The clerk then places the original order sheet over the frame and holds it in such position that the column in which he is to write, registers with the exposed hectograph column, whereupon any entries which are made, in said column, on the face of the order, are reproduced in reverse on the back thereof. After a number of order sheets have been used successively in this manner and the hectograph material is somewhat depleted, the user merely lifts the cover 21 and tears off another protecting panel, thus exposing a hectograph area twice as wide as the one exposed in Fig. 7. The clerk then places the next order sheet over the frame in such position as to make use of the freshly exposed hectograph column, and as continued use is made of the frame the remaining panel or panels may be torn off until full use is made of all of the hectograph material, after which the clamped sheets may be discarded and a new set of sheets containing a fresh hectograph strip, inserted. Thus the frame and perforated protecting sheet, visible through the opening, constitute in effect means for shifting the writing area when the original order is used therewith. While the frame may be used with its hinged end, either at the left or the right, it is preferable positioned with the hinge and clamping members at the right so that as the successive panels are torn from the free end, at the left of the sheet, the remaining untorn panels will protect the hand from contact with the hectograph coating. Also, in this position it is easier to place the order sheet over the frame in the proper position with respect to the freshly exposed hectograph area. The protecting panels are preferably secured to each other so lightly as to be torn off by the mere pressure of the finger thereon sideways. As a result it is not even necessary to lift the cover high enough to permit the left hand panel to be seized between the thumb and the finger.

The hecto transfer material may be of a different color from that used in the sales pad, to show readily which figures were added to the sheet and were corrected later, as compared to the entries initially made on the back of the order sheet.

I claim:

1. A sales pad comprising a multiplicity of record sheets having tabs bound together with the upper edges in registration with one another, said tabs being progressively longer from the top to the bottom of the series and said record sheets being of the same length from top to bottom with

the lower edges thereof protruding in each case beyond the edge of the sheet immediately above, in progressive order, a multiplicity of copy sheets beneath said record sheets and also bound together in top registration, a sheet of hectograph transfer material and a sheet of carbon paper positioned back to back between the group of record sheets and the group of copy sheets with the hectograph coating facing upwardly and the carbon coating facing downwardly, whereby data written on the face of the lowermost record sheet after lifting the sheets above it, will appear also on the back of said record sheet in reverse, and will appear on the face of the uppermost copy sheet, the lower edges of said copy sheets also protruding progressively, but from the bottom to the top of said group, whereby the adjacent record sheet and copy sheet may be grasped and pulled from the middle of the combined groups leaving said transfer material sheets in place for further use.

2. A sales pad as in claim 1 in which the coating on the hectograph transfer sheet terminates short of the side edges and in which the lower margin of said sheet has a notch to provide a clearance when said adjacent record and copy sheets are grasped.

3. A sales pad comprising a plurality of superimposed printed forms each having a line of weakening at the same distance from the lower edge, said lower edges being arranged in an inclined plane and said lines of weakening also defining an inclined plane, substantially parallel to said first plane, resulting in having the same effective length from top to bottom said forms being secured to each other between the upper edges and said lines of weakening, whereby the same corresponding horizontal lines on said printed forms are out of registration with each other, and a sheet of transfer material arranged face up at the bottom of said pad of forms, whereby items written on the lowermost form appear also in reverse on the back thereof when said form is torn out and whereby the impression made by writing on successive forms from the bottom to the top form, is distributed over the surface of said transfer material sheet.

4. A sales pad comprising superimposed printed forms each having a line of weakening, spaced from the upper edge to form a tab, said tabs increasing in length from top to bottom, the usable portions of all of said forms being of the same size whereby the lower edges thereof present a beveled appearance, said tabs being secured to each other, and additional duplicate printed copy forms below said first mentioned forms but slightly longer from top to bottom, having their lower edges beveled in the opposite direction, said copy forms being secured to each other and to said first mentioned forms, two transfer sheets arranged back to back between the upper printed forms and the lower copy forms, the face of the upper transfer sheet having hectograph material thereon and the face of the lower transfer sheet having a carbon coating thereon whereby by writing on the record sheet immediately above said hectograph sheet and tearing out the same and the copy sheet immediately beneath, leaving said transfer sheets in place, a master hectograph sheet and a carbon copy of the writing is provided, the remaining sheets being in position to permit additional master sheets and copy sheets to be filled in and torn out, with the writ-

ten material in proper registration on the two sheets.

5. A unitary pad for making spirit duplicator master sheets comprising a series of record sheets, a sheet having hectograph transfer material thereon face up beneath said series of record sheets, tabs detachably connected with said record sheets and with said transfer sheet forming extensions of said record sheets for holding

the same successively in position with respect to said transfer sheet, with the upper edge of one record sheet arranged higher on the transfer sheet than the upper edge of the next sheet by a distance corresponding to a small fraction of the normal spacing of successive lines of writing on the sheets.

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