

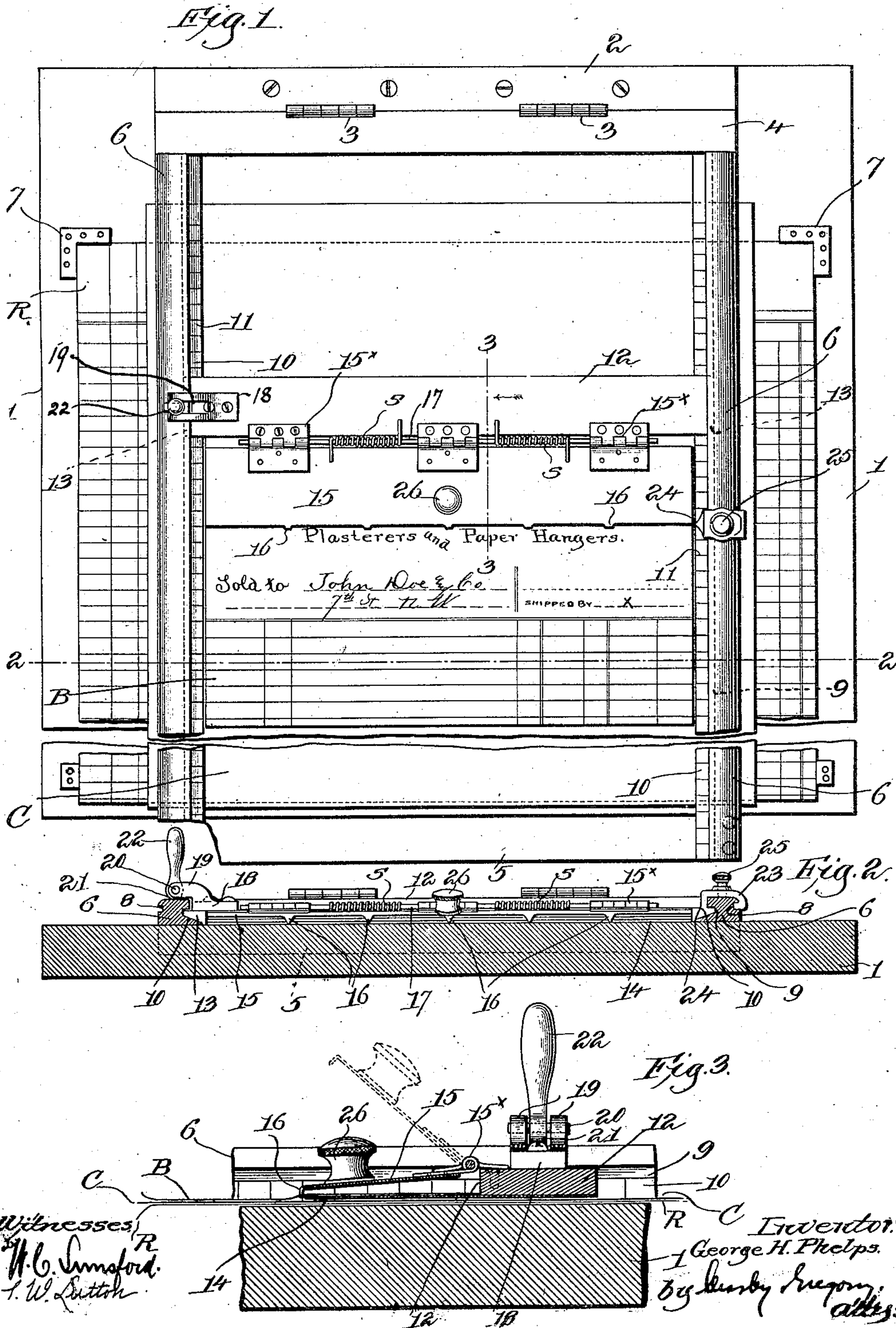
No. 762,938.

PATENTED JUNE 21, 1904.

G. H. PHELPS.
MANIFOLDING APPARATUS.

APPLICATION FILED MAR. 9, 1904.

NO MODEL.



UNITED STATES PATENT OFFICE.

GEORGE H. PHELPS, OF BOSTON, MASSACHUSETTS.

MANIFOLDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 762,938, dated June 21, 1904.

Application filed March 9, 1904. Serial No. 197,279. (No model.)

To all whom it may concern:

Be it known that I, GEORGE H. PHELPS, a citizen of the United States, and a resident of Boston, county of Suffolk, State of Massachusetts, have invented an Improvement in Manifolding Apparatus, of which the following description, in connection with the accompanying drawings, is a specification, like characters on the drawings representing like parts.

This invention has for its object the production of simple and conveniently-used apparatus for facilitating the making of manifold autographic book entries simultaneously with the preparation of an invoice or bill in such a manner that no space is wasted on the leaf of the record or invoice book.

It is common to use books having one or more bill-heads to the page bound in with each leaf of the book, a sheet of carbon-paper being inserted between the bill-head and the companion leaf before making out the bill with pen or pencil, and afterward the bill-head is detached, leaving a carbon copy thereof on the leaf of the book. Manifestly a very considerable space is wasted on every leaf, corresponding to the space occupied by the usual printed heading on the bill, and additional space is wasted because of the irregularity in the number of lines used for the several entries on the bill. If a book of the character specified has, say, three bill-heads to the page and there may be only one or two entries made on each bill, it will be obvious that not only is there much unnecessary waste space on the record-page between the several sets of entries, but frequently more blank space will intervene between sets of entries than is required for the entries themselves. As manifold systems are generally used by business concerns having a large number of daily entries to be made, it follows that the more numerous the entries in a book such as described the greater will be the daily waste caused by the unnecessarily large blank spaces left on the record-pages between the entries. There is no elasticity about a manifold-entry book of the character referred to, because it is impossible in any business to determine beforehand how many entries will fall to different bills, as one bill may have but one or two

entries; the next fifteen or twenty, then one of seven, and so on, and if a certain number of bill-heads are bound in with every record-leaf such bill-heads must be used as best they can without regard to waste space. Such waste in a large business means in a year an expenditure for paper which is absolute loss.

My present invention has for its object the production of simple and efficient apparatus whereby autographic manifold entries may be made with a minimum of waste space on the record-leaves and which is self-adapting to the size of the bill—that is, to the number of entries thereon.

In the use of my invention I prefer to use loose record-leaves, which may, if desired, be blank; but I prefer, and it will generally be found more convenient, to have the leaves ruled on both sides with horizontal and vertical lines arranged to meet the requirements of the business for which they are to be used, the leaves being subsequently bound in book-form for preservation. Bill-heads of different lengths are prepared, preferably ruled with horizontal and vertical lines to exactly correspond with the ruling of the record-leaves. The printed heading is suitably worded, care being taken to have on all sizes of bill-heads the same spacing for the blank lines (for customer's name, date, &c., to be written therein) and with the same arrangement relative to the top edge of the bill-head and the top line of the horizontal ruling in the body of the bill-head. By means of the apparatus hereinafter to be described and which constitutes the gist of my invention each loose record-leaf and several successive bill-heads are so arranged or combined temporarily that the entry clerk can choose a bill-head of a size suitable for the number of lines of the entry, place it upon the record-leaf with a carbon-sheet interposed, and make out the bill. A duplicate thereof as to name of purchaser, date, &c., and the entry is made simultaneously upon the record-leaf, and by a simple device the application of the next bill-head to the record-leaf is so regulated that after the entry thereof is made there will be only so much space left between two successive invoices on the record-sheet as is necessary to

distinctly separate them. As a matter of fact the separating-spaces between successive invoice entries on the record-leaf are so regulated that they can be exactly the same as if such entries were written directly and independently upon the leaf. After one side of a record-leaf is filled it is removed from the apparatus, turned over and reinserted, and its other side filled, after which it is removed and bound into book form with other filled leaves. By the manifold system the making out of a bill effects simultaneously the corresponding invoice entry on the record-leaf, such entry being a duplicate of the bill, so that the separate operation of invoice entries is obviated, the ledger being posted from the completed record-leaves.

The various novel features of my invention will be fully described in the subjoined specification and particularly pointed out in the following claims.

Figure 1 is a top or plan view of an autographic manifolding apparatus embodying one form of my invention, showing the apparatus in use, the lower portion of the same being broken out to economize space. Fig. 2 is a transverse sectional detail on the line 2-2, Fig. 1, the record-leaf and the carbon-sheet being omitted to avoid confusion in the drawing; and Fig. 3 is an enlarged detail, in longitudinal section, on the line 3-3, Fig. 1, looking toward the left.

In the present embodiment of my invention the same is shown as adapted for use in connection with loose record-leaves, and referring to Fig. 1 a rectangular base 1 is provided, and conveniently the base is a board of sufficient size to sustain a record-leaf and the parts of the apparatus to be described. At its upper end the base has an attached transverse rib 2, to which is pivotally connected, as by hinges 3, Fig. 1, a swinging support shown as an open frame comprising top and bottom bars 4 5 and parallel elongated sides 6. This frame can be swung up away from the base or it can be brought down to rest thereon, as shown in the drawings, and when swung up a record-leaf R can be positioned on the base, the latter being provided with corner-gages 7, Fig. 1, to maintain the leaf in a certain position with relation to the frame, and in practice a carbon-sheet C is superposed upon the record-leaf before the frame is swung down into operative position. At such time the under faces of the sides 6 hold the carbon-sheet and record-leaf firmly and smoothly upon the base. The sides 6 of the swinging frame or support are shown as rail-like in cross-section, Fig. 2, each side having an external longitudinal groove 8 and an inner groove 9, the inner face of the side below the groove 9 being beveled, as at 10, and either or both of these beveled faces may be graduated, as at 11, Fig. 1, to correspond with the transverse ruling of the record-leaf for a purpose to be described. In

practice the bottom cross-bar 5 is preferably arranged to depend below the sides 6 to just clear the lower edge of the base 1 when the frame is in operative position, and in Fig. 2 the dotted lines indicate this relative position of the cross-bar 5.

Upon the support or frame I mount a bill-head holder, herein shown as a member 12, extended transversely of the frame and slidably connected therewith to move lengthwise thereof, and by reference to Fig. 2 it will be seen that the ends of the member 12 are shaped at 13 to enter the grooves 9 and slide upon the beveled faces 10. The member 12 is a flattened bar, of wood or metal, preferably the latter, as is also the frame, and a thin blade-like foot 14 is rigidly secured to the under face of the member, projecting beyond the same and slightly above the surface of the carbon-sheet, as in Fig. 3. A sheet-metal holding device or flap 15 is hinged, as at 15^x, to the top of the member 12 at its lower edge viewing Fig. 1, the device 15 having downturned prongs 16 at its free edge, the prongs clearing the edge of the foot 14. (See Fig. 3.) The pintle 17 extends through the leaves of the several hinges 15^x, and springs s are coiled around the pintle, one end of each spring bearing against the top of the member 12 and the other end against the flap 15, the winding of the springs being such that the flap is normally held in the position shown in the drawings. At one side of the member 12 a bracket 18 is secured, having ears 19 overhanging the top of the adjacent side 6, and in said ears is pivoted at 20 a clamping-cam or eccentric 21, having a finger-piece or handle 22. When the latter is in the position shown in the drawings, the cam bears upon the top of the side 6 and clamps the bill-holder from movement relatively to the support, as will be manifest from an inspection of Fig. 2.

An indicating device or pointer is preferably used in connection with the apparatus to indicate the position at which the bill-head holder is to be set after one or more bills have been entered, and such pointer may be mounted on either side of the frame.

As shown in Figs. 1 and 2, a slide 23 is shaped to embrace the head of one of the sides 6 of the frame and fit into the opposite grooves 8 and 9 thereof, said slide having a pointer or index 24, adapted to travel over the beveled face 10, and a set-screw 25 clamps the slide on the side of the frame.

The printed "heading" of the bill-head is worded to suit the requirements of the business, and whether the blank portion of the bill-head is long or short the heading will be the same and so arranged that when the bill-head is placed in the holder the spaces for the customer's name, date, address, &c., will be displayed below the free edge of the flap 15. When the top edge of the bill-head is pushed against the upright face 12^x of the mem-

her 12, the bill-head will be properly positioned with the top line of the entry ruling on the bill-head at a fixed distance from the face 12^x, which serves as a positioning-stop. Sup-
 5 posing the frame is in position upon a record-leaf R and a superposed carbon-sheet C, the entry clerk chooses a bill-head of a suitable size for the desired entry and inserts it in the bill-head holder, lifting up the flap 15 for this
 10 purpose by means of a knob 26 into dotted-line position, Fig. 3. The heading is slid in upon the foot 14 until its top edge touches the stop-face 12^x, as in Fig. 3, and when the flap is released the prongs 16 engage and in-
 15 dent the bill-head sufficiently to hold it firmly in the holder. The latter is then slid upward on the supporting-frame far enough to properly position it with relation to the record-leaf in order to make out the first bill, the
 20 clamp 21 being set to lock the bill-holder in position. In practice the graduations 11 correspond to the ruling of both record-leaves and bill-heads, so that the latter can be readily set by means of the graduations. The
 25 bill is then made out with pen or pencil, as desired, the items or entries being made one after another on the ruled part of the bill-head B, and by means of the carbon-sheet C everything written upon the bill-head will be
 30 duplicated upon the record-leaf, serving as the record of the entry. The bill may be a long one, occupying one entire side of a record-leaf, or if the bill contains a small number of items several bills can be entered on
 35 the same record-leaf. When a bill has been completed, the clerk moves the slide 23 down until the pointer or index 24 is opposite the line on which the last entry has been written and clamps the slide thereat. The completed
 40 bill is removed and a fresh bill-head of proper length for the next billing is inserted in the holder, which is then unclamped and slid down the frame until some part thereof is opposite the pointer 24. In Fig. 1 the free edge of the
 45 flap 15 is taken as the gage-mark, it being supposed that one bill has been previously made out and that the apparatus is in readiness for a second billing. This arrangement leaves sufficient space on the record-leaf between the
 50 last item of the preceding entry and the name of the customer to whom the next bill is to be made out, and by regulating the position of the pointer the operator can control at will the spacing between invoices on the record-leaf in order to use the same most economic-
 55 ally. From the foregoing it will be seen that the length of a billing—that is, the number of entries thereon—is of no moment, as a long bill can follow one or more short ones, or there may be any order in which the billings are entered and recorded upon the record-leaf without any unnecessary waste of paper by the spacing. After one side of a record-leaf is full the supporting-frame is swung up and the
 65 leaf removed and turned over and reinserted

and filled on the other side, as has been described.

The base 1 rests conveniently on a desk or table, and as the frame is open there is nothing in the way of the operator's hand as the bill-
 70 ing is performed.

If duplicate bills are desired in addition to the entry on the record-leaf, two or more bill-heads, with interposed carbon-sheets, are in-
 75 serted in the holder and the billing is effected as described.

I have found it more convenient to have the record-leaves ruled both horizontally and vertically to correspond exactly with similar
 80 ruling on the bill-heads; but such ruling is not necessary, as my invention is equally well adapted for use when the record-leaves are unruled.

My invention is not restricted to the precise construction and arrangement herein shown
 85 and described, as the same may be modified or changed in various particulars by those skilled in the art without departing from the spirit and scope of my invention.

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

1. In apparatus of the class described, a support, a holder mounted thereupon and movable lengthwise thereof, to hold and position
 95 a bill-head with its body portion exposed, and a device mounted on the support and movable independently of the holder to indicate the proper position of the holder for the next billing.

2. In apparatus of the class described, a support adapted to rest upon a record-leaf having a carbon-sheet superposed thereon, a holder mounted upon said support and movable lengthwise thereof, to hold and position a bill-
 105 head with its body portion exposed and resting upon the carbon-sheet, whereby matter written upon the said bill-head will be duplicated upon the record-leaf, means to fix position the holder while entries are made
 110 upon the bill-head held thereby, and a device movable on the support to indicate the proper position of the holder for the next billing.

3. In apparatus of the class described, an open supporting-frame hinged at its upper end
 115 and adapted to rest upon a record-leaf having a carbon-sheet superposed thereon, a holder mounted upon the sides of the frame and slidable lengthwise thereof, to hold and position a bill-head with its body portion resting upon
 120 the carbon-sheet, whereby entries upon the bill-head will be duplicated upon the record-leaf, a clamp to position the holder on the frame while entries are made upon the bill-head, a line-gage on the frame corresponding
 125 to the transverse ruling of said record-leaf, and a pointer slidable on the frame to indicate the proper position of the holder for the next billing.

4. In apparatus of the class described, an 130

open supporting-frame adapted to rest upon a record-leaf, a member extended transversely of and slidably mounted on the sides of the frame, means carried by said member to support and hold the "heading" of a bill-head, a stop for the top edge of the bill-head, the body portion thereof being exposed above the record-leaf, and a manually-controlled device to indicate the proper position of the said member for the next billing, entries upon a bill-head being duplicated upon the record-leaf by an interposed carbon-sheet.

5. In apparatus of the class described, an open frame, a holder slidably mounted thereon and movable lengthwise thereof, said holder having a blade-like foot to sustain the "heading" of a bill-head, means to detachably secure a bill-head to the holder with the body portion of the bill-head exposed and projecting beyond the foot, and a device to clamp the holder to the frame.

6. In apparatus of the class described, a base, means to position a loose record-leaf thereon, an open frame pivotally connected at its top to said base and having parallel sides, a bill-head holder extended from side to side of and slidably mounted on the frame, and a pointer longitudinally movable on one of the sides of the frame to indicate the proper position of

the holder for successive billings, a bill-head when held in the holder having its body portion extended upon a carbon-sheet superposed upon the loose record-leaf, the frame serving to hold them flat upon the base, whereby entries upon a bill-head will be duplicated upon the record-leaf.

7. In apparatus of the class described, a base, means to position a loose record-leaf thereon, an open frame pivotally connected at its top to said base and having parallel sides, a bill-head holder extended from side to side of and slidably mounted on the frame, to hold and position a bill-head with its body portion exposed and resting upon a carbon-sheet superposed upon the record-leaf, a line-gage on one of the frame sides, and a manually-movable pointer carried by the frame to indicate the proper position of the holder for successive billings and thereby regulate the spacing on the record-leaf between successive billings.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GEORGE H. PHELPS.

Witnesses:

JOHN C. EDWARDS,
MARGARET A. DUNN.