March 24, 1936. R. M. FLORANCE 2,035,310

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Fig. 1

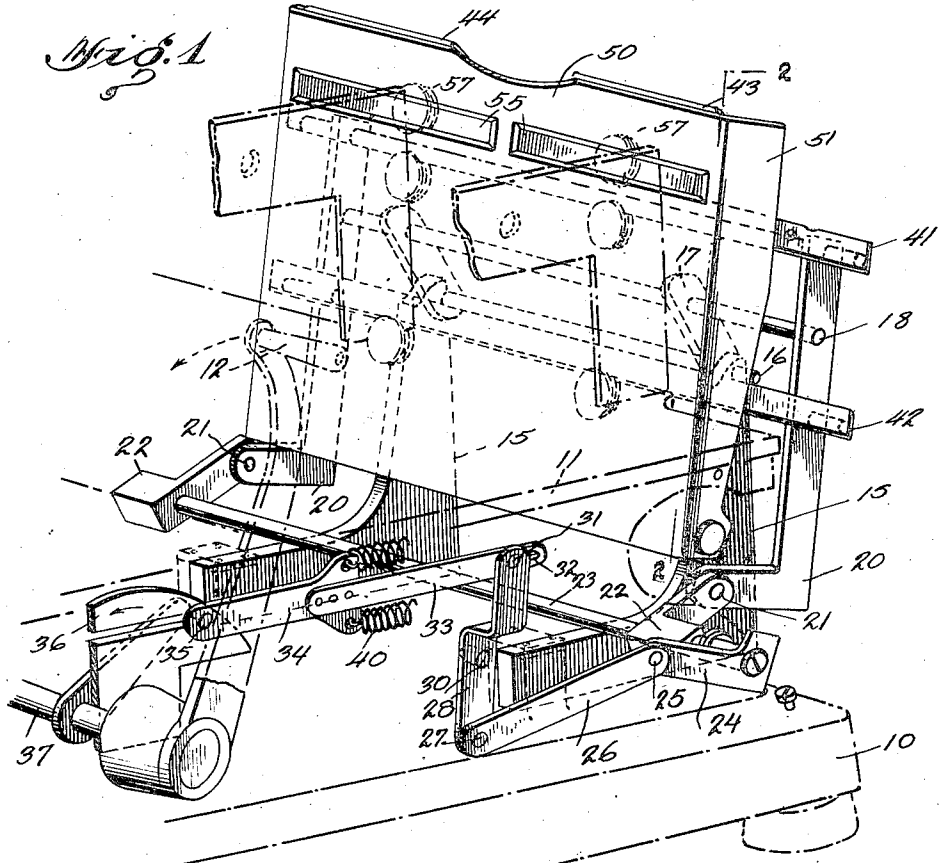


Fig. 4

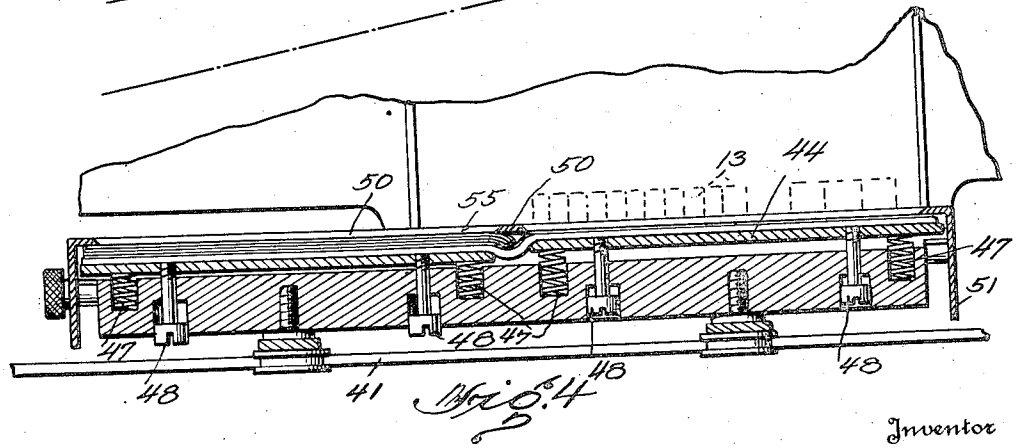
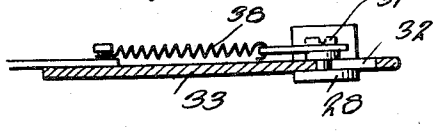


Fig. 7



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Fig. 2

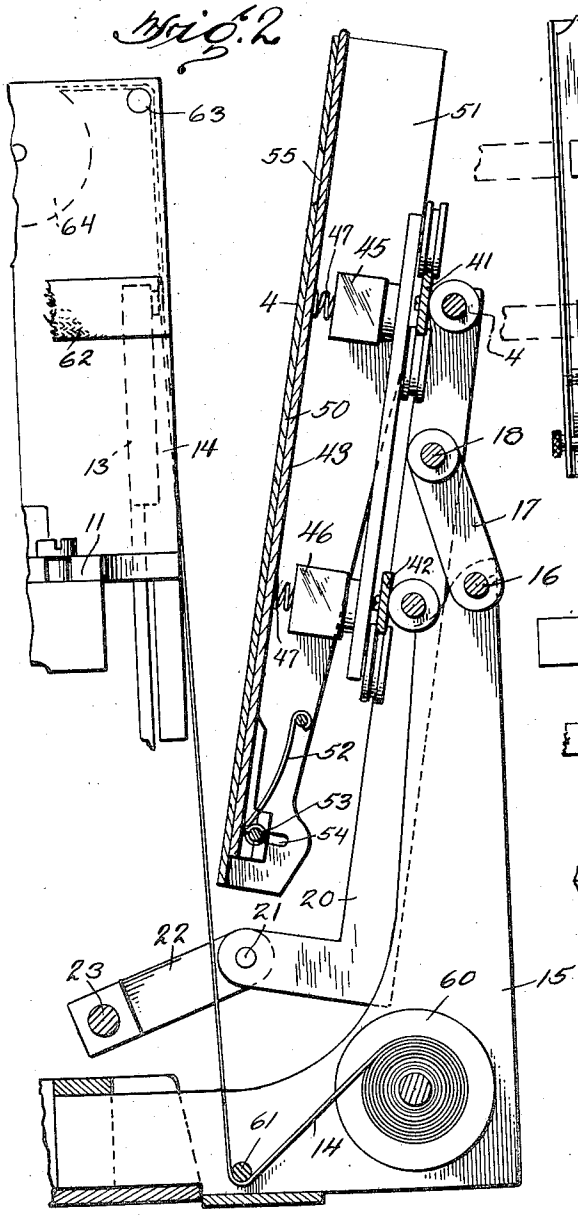


Fig. 5

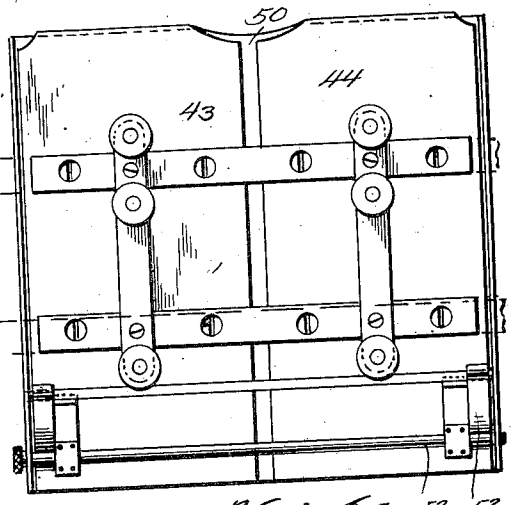
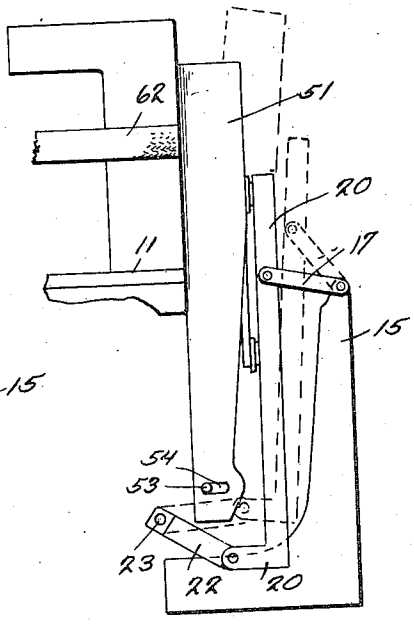


Fig. 6



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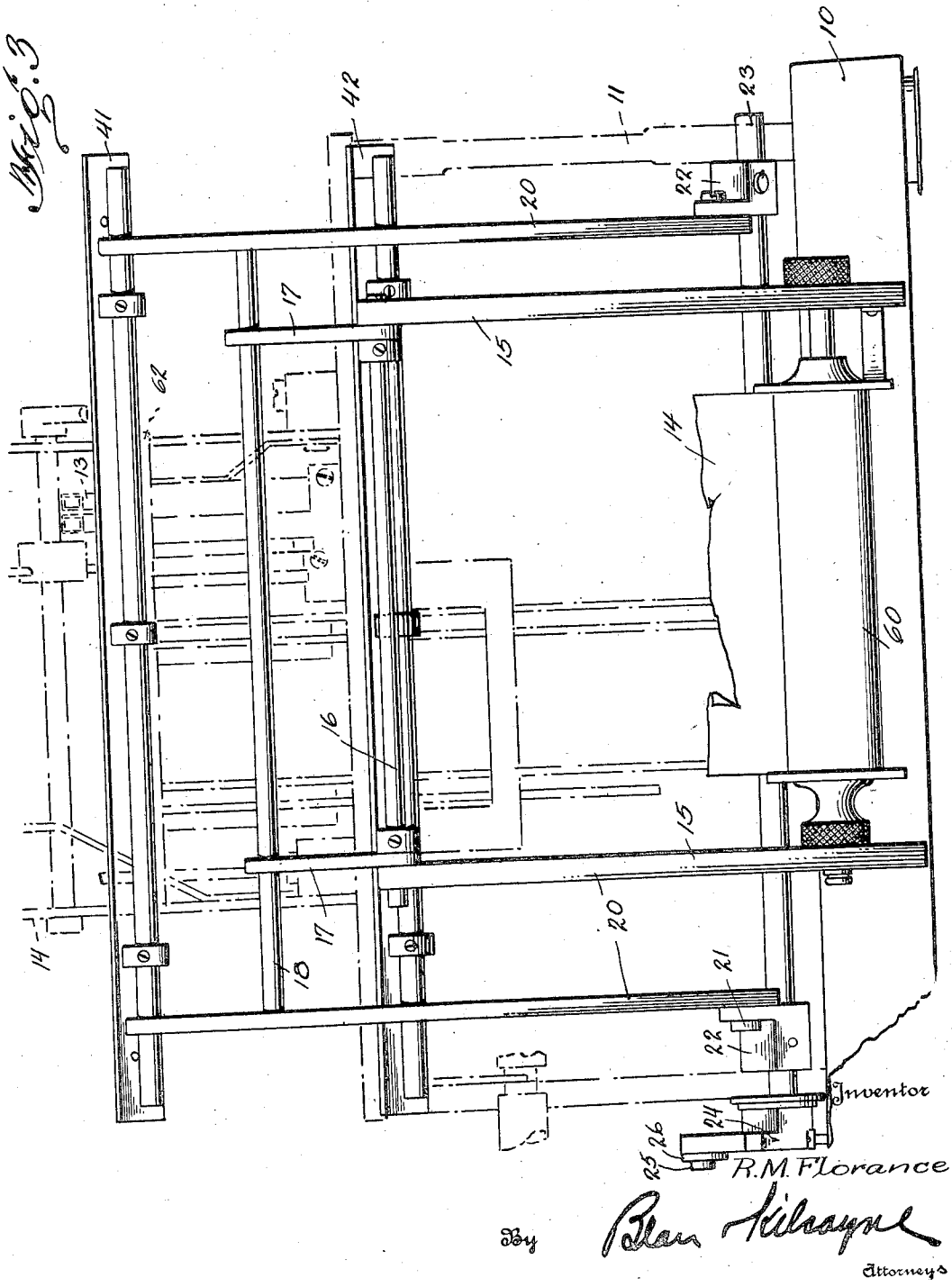
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Fig. 3



Patented Mar. 24, 1936 2,035,310

UNITED STATES PATENT OFFICE

2,035,310

RECORDER

Raymond M. Florance, Washington, D. C.

Application March 9, 1933, Serial No. 660,185

8 Claims. (Cl. 101—113)

This invention relates to recorders and more particularly to a combined recorder and totalizer especially adapted for use where duplicate records are desired, one on separate card sheets or books, and the other on a tally strip, together with a total of the various individual entries.

While the invention is susceptible to various uses, applications and modifications, it will, for convenience of illustration, be hereinafter described with relation to use in banks where a record of total deposits for the day by any individual receiving teller is desired, as well as the simultaneous entry of the separate deposits upon a card sheet, or bound book for the depositors. The invention as herein illustrated is particularly useful in keeping a record on a tally strip of all of the entries, which may be totaled at the end of the day, as well as the simultaneous entry of the deposits in the depositor's pass-book. The invention therefore comprehends the use of any desired form of adding machine of that general type in which a predetermined number or amount is set up on actuating keys prior to the actuation of a handle which records the number or amount upon a tally strip. This individual step is repeated any desired number of times, and when the totalizing key is actuated at the end of a predetermined time the sum of all previous entries appears on the strip.

With this adding machine is associated an attachment particularly adapted for holding pass-books in a flat open position together with mechanism for moving the pass-book adjacent the printing point, thereby to receive the impression of the type which records the individual items upon the tally strip.

It is therefore one of the objects of the present invention to provide a simple and practical attachment for standard forms of adding machines, which will carry pass-books or the like in a flat open position and move either page of the book to a point adjacent the type at their printing position.

A further object is to provide an attachment of the above character adapted to be relatively movable to the type and hold the book in flat position for receiving the impression.

A further object is to provide a book holder attachment of the above character, which may be readily positioned for printing upon either open page.

A further object is to provide a book holder attachment of the above character, which will automatically compensate itself to the position at which the book is opened, whereby the type having a standard or uniform range of travel will impact with the printing surface at the end of the path of travel thereby to produce even uniform printing.

Other objects will be in part obvious from the annexed drawings and in part hereinafter indicated in connection therewith by the following analysis of this invention.

This invention accordingly consists in the features of construction, combination of parts and in the unique relation of the members and in the relative proportioning and disposition thereof, all as more completely outlined herein.

To enable others skilled in the art fully to comprehend the underlying features of the invention that they may embody the same by the numerous modifications in structure and relation contemplated by this invention, drawings depicting a preferred form of the invention have been annexed as part of this disclosure, and in such drawings like characters of reference denote corresponding parts throughout all of the views, in which—

Fig. 1 is a perspective view of the attachment with certain parts shown in dotted lines, as well as certain parts of the frame and actuating mechanism of the adding machine proper;

Fig. 2 is a side elevational view of the attachment and such parts of the adding machine as may be necessary to understand the same;

Fig. 3 is a rear elevational view of the carriage supporting mechanism, the carriage being removed and certain parts of the adding machine being shown in dotted lines;

Fig. 4 is a sectional view substantially on the line 4—4, Fig. 2;

Fig. 5 is a rear elevational view of the carriage removed from its supporting means illustrated in Fig. 3;

Fig. 6 is a side elevational view showing the carriage when moved from its dotted line normal position to full line printing position; and

Fig. 7 is a detail sectional view of a part of the compensating mechanism.

Referring now to the drawings in detail and more particularly to Fig. 1, 10 indicates the base of the adding machine and 11 one of the upper side bars of the frame. This machine is of any desired type, but preferably the well known commercial Allen-Wales adding machine of that character in which a number is set up on a plurality of keys and then an actuating handle 12 is swung towards the operator to cause the type bars 13 (Fig. 2) to be raised the desired amount to engage a tally strip 14 at the moment of

impact. In this machine there is substituted for the usual cylindrical platen a flat platen or book carrier shown in the present drawings. This adding machine itself is of such well known character that a detailed description thereof is unnecessary.

Mounted upon the frame 10 are two L-shaped brackets 15, Fig. 1, the upwardly extending arms of which are provided with a rock shaft 16 carrying links 17, the opposite end of these links being secured to a rock shaft 18 constituting a part of the carriage supporting frame. This frame also includes two floating L-shaped end members 20, the lower ends of which are pivotally connected at 21 to short arms 22 mounted upon a rock shaft 23 in the side walls of the frame and so connected with the actuating handle 12 as to be rotated in a clockwise direction (Fig. 6) when the handle 12 is actuated.

This actuating mechanism is shown in Fig. 1 and includes a link 24 pivotally connected at 25 with a second link 26 pivotally connected at 27 with a rocking lever 28 pivoted at 30 to the frame and having at its upper end a pin 31 traveling in a slot 32 of a link 33. The opposite end of this link 33 is connected to a member 34 pivoted at 35 to a disc 36 mounted upon a main rock shaft 37 to which is secured the handle 12. Thus, when this handle 12 is moved in a counter-clockwise direction, the link 33 is moved towards the left and the motion is transmitted to the parts 28, 26, 24 to the rock shaft 23, thereby to cause the arm 22 to swing downwardly and move the L-shaped members 20 downwardly, forwardly, and towards the type.

It will be noted, by reference to Fig. 7, that when the link 33 moves towards the left, the motion is first transmitted through a spring 38 to the stud 31, thereby to move the carriage to printing position, but a further movement of the handle is essential in this type of adding machine to release the type hammers for effecting the printing only after the carriage is brought to rest. Therefore, the slot 32 in the link 33 is provided to permit this final printing operation after the book has reached its printing position. When the handle is released, springs 40 aid in restoring the parts to normal position, and the spring 38 brings the pin 31 to the left end of the slot 32, as shown.

The carriage supporting frame also includes two parallel disposed rails 41 and 42, having a fixed position upon the frame, and the carriage is adapted to travel in either direction along these rails according to the page upon which the printing is to be made. There is therefore provided, as shown in Fig. 5, two relatively flat platens 43 and 44 individually mounted upon transverse bars 45 and 46, each of which is recessed, as shown in Fig. 4, to receive springs 47 and counter-sunk screws 48, whereby a limited relative movement of the two-part platen 43—44 is permitted. A guard or shield 50 overlies these platens and is provided with end walls 51 bent at right angles to the plane of the book or sheet. Spring means 52, as shown in Fig. 2, cooperate with a pin 53 resting in a slot 54 so as to hold the shield 50 in normal relative position adjacent the platen 43, but permit a relative separation of these two parts for the insertion of the book. Thus, when the book is opened and placed in the holder behind the separated shield 50, as shown in Fig. 4, the thick side will, when the shield 50 is released, be urged against the platen 43 which moves inwardly against the action of the springs 48, thus providing a smooth plane surface to be engaged by the type 13 as clearly indicated. The type 13 are driven forward by the type hammers (not shown) to engage the book leaves through either one or the other of the sighting slots 55, according to the position of the carriage.

In Fig. 2, there is shown a reel 60 at the bottom of the L-shaped members 15 carrying the tally tape 14 which passes under a roller 61, up past the printing point of the type 13, which is normally covered by a ribbon 62, thence over a roller 63 to a top reel 64. The records of all entries are kept upon this tape, and the top reel is preferably housed securely to prevent removal or alteration except by an authorized person.

The operation of this machine is as follows: When a customer of the bank makes a deposit, the various checks, with the usual deposit slip and pass-book, are presented to the receiving teller. He first actuates the desired keys of the adding machine to set up the total amount of the deposit. He then moves the shield 50 forwardly, thereby to open the space between the shield 50 and the platens 43 and 44, and inserts the pass-book until the next clear line on the page is visible or appears through the slot 55, whereupon he actuates the handle 12, thus swinging the book holder forwardly and downwardly to the printing position shown in Fig. 6, and the final movement of the handle 12 over and above the lost motion provided for by slot 32 causes a release of the type hammers which produce an impression on the tally strip in a well known manner. This strip, which is translucent, is on one side of the ribbon 62, thereby simultaneously to print the same amount in reverse as is impressed upon the page of the pass-book. A release of the handle 12 restores the parts to normal position, whereupon the pass-book is removed from between the shield 50 and the platen and returned to the depositor with the amount of his deposit duly entered thereon. At the end of the day, an authorized person, such as the cashier, actuates a totalizer key on the adding machine, which may also be under lock and key, and removes the tally tape with all of the entries and the totalized amount appearing thereon. It is then incumbent upon the teller to deliver an amount in cash and checks equal to this total amount. Theft is thus prevented to a large degree.

From the above it will be seen that the present invention embodies a simple and practical mechanism particularly adapted for the purpose hereinafter described, although it is to be understood that various other uses and applications will be obvious to those skilled in the art, wherever a duplicate record of a series of transactions or entries are desired simultaneously with the recording of a receipt slip or the like for the benefit of the other party to the transaction. The invention involves relatively few parts which may be inexpensively manufactured and assembled, and the complete device is well adapted to accomplish, among others, all of the objects and advantages herein set forth.

Without further analysis the foregoing will so fully reveal the gist of this invention that others can by applying current knowledge readily adapt it for various applications without omitting certain features that, from the standpoint of the prior art, fairly constitute essential characteristics of the generic or specific aspects of this invention, and therefore such adaptations should and are intended to be comprehended within the

meaning and range of equivalency of the following claims.

I claim:

1. In combination with a recorder of the character herein described and having recording instrumentalities or type at the rear thereof, a holder for record sheets, and means for relatively moving the holder to a position in which the record sheet is to be engaged by the recording instrumentalities, said holder comprising a two-part flat platen, said parts being relatively movable with respect to each other thereby to accommodate a book in such a manner as to hold the exposed pages in the same plane regardless of the point at which the book is opened, said holder having a flat shield adapted to overlie the open book, said shield being bodily movable with respect to the book holder, and spring means normally holding the shield adjacent the platen.

2. In combination with a recorder of the character described having recording instrumentalities at the rear thereof, a book holder, and means for moving the holder to a position to be engaged by the recording instrumentalities, said book holder having two flat platens normally lying in the same plane but movable towards and from the plane when the book is placed thereon to present the exposed leaves of the book in the same plane, spring means urging the platens in one direction, and a yielding shield adapted to be laid over the open book normally urged in a counter-direction.

3. In combination with a recorder of the character described having recording instrumentalities at the rear thereof, a book holder, and means for moving the holder to a position to be engaged by the recording instrumentalities, said book holder having two flat platens normally lying in the same plane but movable towards and from the plane when the book is placed thereon to present the exposed leaves of the book in the same plane, spring means urging the platens in one direction, and a yielding shield adapted to be laid over the open book normally urged in a counter direction, said carriage being laterally movable from one side to the other to present either page of the book to the recording instrumentalities.

4. In combination with a recorder of the character described having recording instrumentalities at the rear thereof, a book holder, and means for moving the holder to a position to be engaged by the recording instrumentalities, said book holder having two flat platens normally lying in the same plane but movable towards and from the plane when the book is placed thereon to present the exposed leaves of the book in the same plane, said holder moving means including an actuating handle for moving the book holder to a position adjacent the printing instrumentalities prior to the printing operation.

5. In combination with a recorder of the character described having recording instrumentalities at the rear thereof, a book holder, and means for moving the holder to a position to be engaged by the recording instrumentalities, said book holder having two flat platens normally lying in the same plane but movable towards and from the plane when the book is placed thereon to present the exposed leaves of the book in the same plane, said holder moving means including an actuating handle for moving the book holder to a position adjacent the printing instrumentalities prior to the printing operation, said means including a lost motion device allowing the book to be brought to a position of rest prior to the actual printing.

6. In combination with a recorder of the character herein described and having recording instrumentalities or type at the rear thereof, a holder for record sheets and means for relatively moving the holder to a position in which the record sheet is to be engaged by the recording instrumentalities, said holder comprising a two-part platen, said parts being relatively movable with respect to each other, their surfaces remaining constantly parallel thereby to accommodate a book in such a manner as to hold the exposed pages in the same plane regardless of the point at which the book is opened, said holder having a flat shield adapted to overlie the open book, having a small opening in said shield and a duplicating web adapted to pass between said recording instrumentalities and said opening in said shield.

7. In combination with a recorder of the character herein described and having recording instrumentalities or type at the rear thereof, a holder for record sheets, and means for relatively moving the holder to a position in which the record sheet is to be engaged by the recording instrumentalities, said holder comprising a two-part platen, and a duplicating web carried by said holder.

8. In combination with a recorder of the character herein described and having recording instrumentalities or type at the rear thereof, a holder for record sheets, and means for relatively moving the holder to a position in which the record sheet is to be engaged by the recording instrumentalities, said holder comprising a two-part platen, and a duplicating web carried by said holder, said web adapted to pass between said recording instrumentalities and said platen.

RAYMOND M. FLORANCE.