April 22, 1930. C. C. BENEDICT ET AL 1,755,764

POSTING TRAY

Filed Nov. 2, 1927 2 Sheets-Sheet 1

Fig. 1.

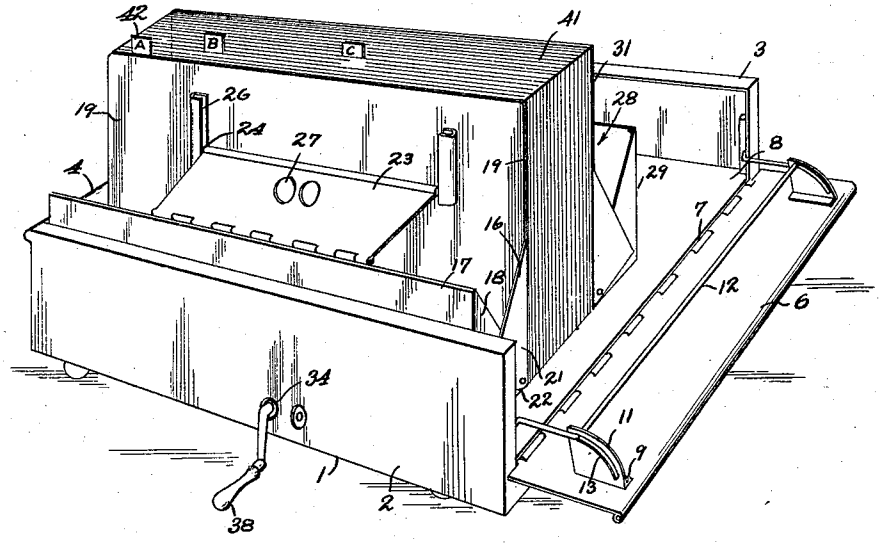
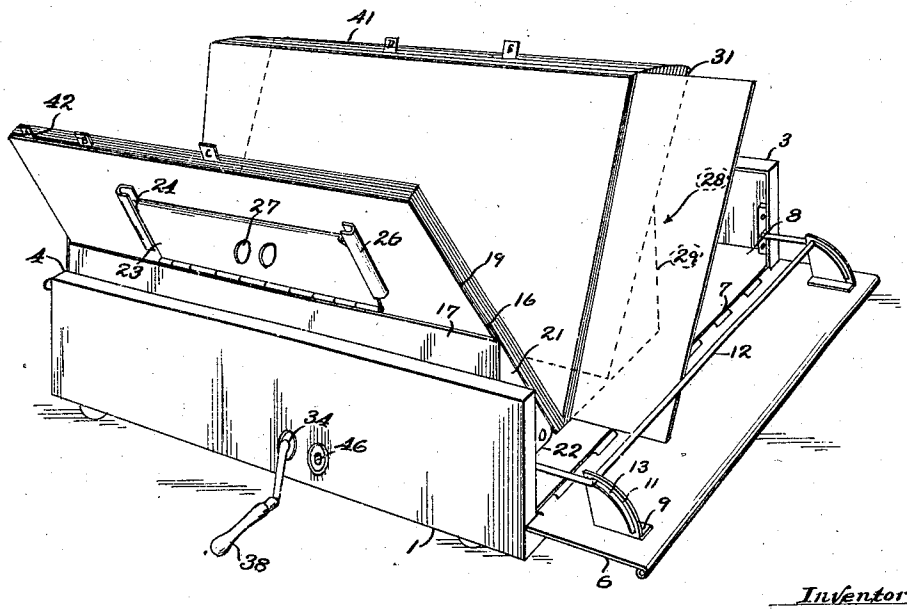


Fig. 2.



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Filed Nov. 2, 1927 2 Sheets-Sheet 2

Fig. 3.

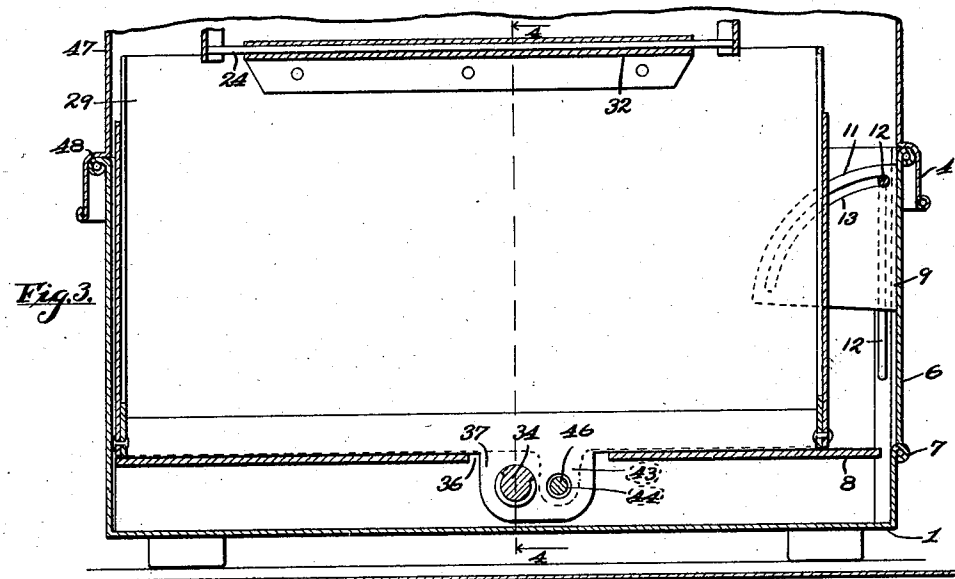
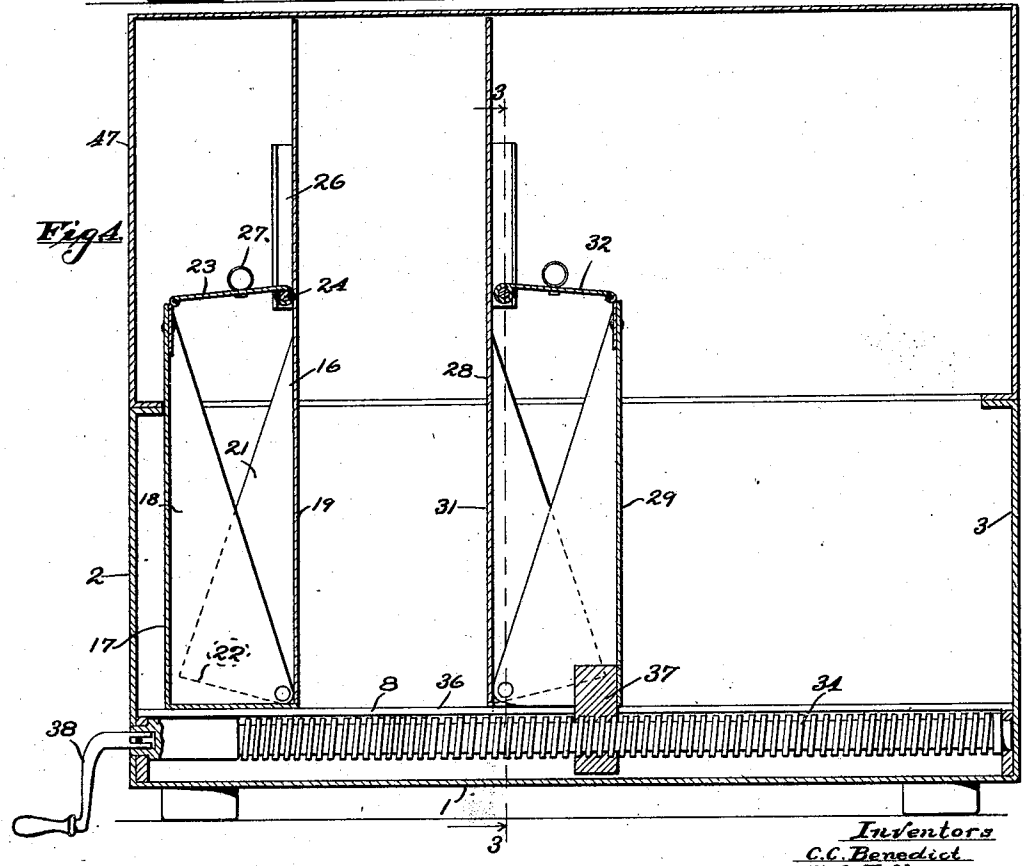


Fig. 4



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UNITED STATES PATENT OFFICE

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POSTING TRAY

Application filed November 2, 1927. Serial No. 230,547.

This invention relates to office furniture, and more especially to a tray for holding sheets having data thereon, to which access is frequently necessary.

In many offices, and particularly in those in which machine posting is done, the accounting is carried out by means of a large number of similar sheets, each being allotted to a customer or client, and having posted thereon in columnar form, lists of all the debits and credits entered against each client. As an example of this procedure, consider the method of handling bank statements. Such statements are generally filed on edge in drawers or trays; and when it is desired to make up a report of the condition of any account, or to have access to the data entered upon the various sheets, the operator places the selected tray near the adding machine or other machine to which he intends applying the information gained when the desired sheet is located. Usually, the credit column and the debit column are both positioned closely adjacent one side of the sheet, usually the right; and it is a purpose of our invention to provide a tray for such sheets having one side adapted to be opened to permit a selected sheet to be displaced to one side of the others contained in the tray, a sufficient distance to enable the operator to observe the desired column or columns of data without interference.

Another object of our invention is the provision of a posting tray of the above described nature, provided with a guide to limit the displacement of the sheets so as to obviate the liability of the sheet being inadvertently withdrawn from its proper position in respect to the other sheets within the tray, the said stop being pivotally mounted on the tray and operatively connected to the movable side so as to be automatically returned to its retracted position thereby, when the side is closed, with the result that the tray may be stored in a space substantially the same as that required for trays of the customary design.

Another object is the provision of a tray provided with a pair of sheet-retaining carriages, one or both of which are movable to securely clamp the sheets therebetween, and the opposing faces of which may be positioned optionally parallel to each other so as to clamp the sheets together throughout their entire surface; or, with their upper edges further apart than their lower edges, so that access may be had to the data on any sheet while still clamped tightly in place at its bottom edge.

A further object is the provision of means for readily separating the carriages to release the sheets so as to permit any of them to be displaced to one side of the others, or to be completely removed therefrom.

Another object is the provision of means for retaining certain of the sheets, e. g., sheets having index tabs thereon, after the remainder of the sheets have been releasd.

With the foregoing and other objects in view which will be made manifest in the following detailed description and specifically pointed out in the appended claims, reference is had to the accompanying drawings for an illustrative embodiment of the invention, wherein:

Figure 1 is a perspective view of the posting tray of our invention, after the cover has been removed, the pivoted side and guide rail extended, and with a set of data sheets clamped between the carriages.

Fig. 2 is a perspective view of the tray of Figure 1, showing the carriages in position to permit access to the data sheets, one of which is displaced so that the operator can observe whatever columns of data might be upon its right-hand side.

Fig. 3 is a transverse vertical sectional view of our tray showing its cover in position, the plane of section being indicated by the line 3—3 of Figure 4. Parts are broken away to reduce the size of the figure.

Fig. 4 is a longitudinal vertical sectional view of the tray and cover of Figure 3, the plane of section being indicated by the line 4—4 of Figure 3.

Referring to the accompanying drawings wherein similar reference characters designate similar parts throughout, the posting tray of our invention comprises a casing having a bottom 1, front 2, back 3, and sides 4

and 6, the latter of which is pivotally mounted upon the casing as indicated at 7. A false bottom 8 spaced from the bottom 1 is also provided in the same plane as the hinge joint 7, so that when the side 6 is turned to a horizontal position, the side 6 and the false bottom 8 will present a substantially unbroken surface. Rigid with the inner face of the side 6 and adjacent each of its ends, is a bracket 9 having an arcuate edge 11 extending inwards and downwards from the side 6. A folding guide rail 12 is pivotally mounted on the front 2 and back 3 of the casing, and this rail 12 is received within an arcuate slot 13 adjacent the edge 11 of the brackets 9. The proportionate arrangement of the parts is such that as the side 6 is extended, the guide rail 12 is also extended by the brackets 9, and sliding longitudinally of the slots 13, assumes a position substantially horizontal. When the side 6 is returned to its normal position, the reverse action takes place. That is, the guide rail 12 slides in a reverse direction longitudinally of the slots 13 and assumes a position substantially vertical and closely adjacent the closed side 6.

Fixed within the casing adjacent the front 2 thereof is a carriage designated in its entirety by the reference numeral 16, and comprising a rigid back plate 17, at each end of which is a projecting flange 18 at substantially 90° therewith. Pivoted to the forward lower corners of the flanges 18 is a clamping plate 19 also provided at each end with an extending flange 21, the lower edges 22 of which are relieved to permit the clamping plate 19 to be inclined backwards against the top of the back plate 17. Means for optionally moving the clamping plate to either of its extreme positions, are provided, and comprises a locking plate 23 hinged preferably throughout its entire length to the upper edge of the back plate 17 and slidably engaged with the back of the clamping plate 19 by means of a rod 24 rigidly secured to the upper edge of the locking plate 23, but having its ends extending therefrom to be engaged in a pair of vertical channels 26 secured to the back of the clamping plate 19, a pair of raised flanges 27 providing a finger-hold for lifting the locking plate 23.

From the above, it is understood that when the locking plate 23 is pressed downwards, the clamping plate 19 will be forced to a position substantially vertical as best shown in Figure 1; and when the locking plate 23 is lifted, the upper edge of the clamping plate 19 will be pulled backwards as best shown in Figure 2. A second carriage 28 similar to the carriage 16, is also positioned within the tray. This carriage 28 comprises a back plate 29, clamping plate 31 pivoted thereto, and locking plate 32 hinged to the back plate 29 and similarly in sliding engagement with the back of the clamping plate 31. The two carriages 16 and 28 are arranged with their clamping plates 19 and 31 respectively, facing each other. The carriage 28 however, is not fixed to the tray, but mounted for sliding movement longitudinally thereof. For this purpose, a feed screw 34 is mounted for rotation within a slot 36 in the false bottom 8, and a nut 37 rigid with the back 29 of the carriage 28, is threadedly engaged upon the feed screw 34 so that when the screw 34 is rotated by means of the operating handle 38, the carriage 28 may be slid backwards or forwards, depending upon the direction of rotation of the feed screw 34.

It is thus seen that a plurality of data sheets 41 may be placed between the carriages 16 and 28; and then, by rotating the feed screw 34 in the proper direction, the carriage 28 advanced to securely clamp the data sheets 41 in position. Now, if it be desired to have access to any of the data sheets 41, the operator has but to lift the locking plates 23 and 32, swinging the clamping plates 19 and 31 respectively, backwards upon their pivotal mounting, permitting access to the data sheets 41 but still retaining them in position because of their being securely clamped at the bottom. If it be desired to have access to columns of data upon the side of any of the sheets 41 adjacent the folding side 6, the operator has but to extend the side 6 as previously described, pulling the guide rail 12 into operating position. Now, by turning the feed screw 34 a small amount, the carriage 28 can be receded, releasing the data sheets 41 and permitting any of them to be displaced from the rest, either by sliding until stopped by the guide rail 12, or by complete removal from the posting tray.

Frequently, it is desirable to have interspersed among the data sheets 41, a set of sheets provided with alphabetized or other index tabs 42. Of course, the occasion for removing these sheets from the tray will not arise as frequently as in the case of the other sheets 41. For this reason, the index sheets having the tabs 42, are also provided with a retaining tab 43 indicated in dotted lines in Figure 3. Each of these tabs 43 is provided with an aperture 44 to receive a locking rod 46 threaded to the front 2 of the casing and extending parallel to, and adjacent the feeding screw 34. When the occasion does arise for the removal of the index sheets, the locking rod 46 may be withdrawn, releasing all of the index sheets.

When the posting tray is not desired for use, the clamping plates 19 and 31 should be locked vertically, and the data sheets 41 securely clamped; then, with the side 6 folded back out of the way, the top 47 placed in position over the tray and its contents. The top 47 is preferably provided at its opposite sides with a shoulder 48 to seat upon the top of the tray, and a flange 49 extending down-

wards therefrom to provide a dust-proof seal between the tray and its top 47.

It will be understood that various changes in the details of construction may be made without departing from the spirit or scope of the invention as defined by the appended claims.

We claim:

1. In a posting tray, a casing comprising a bottom, a false bottom and sides, one of said sides being pivoted in the plane of the false bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the same plane as the false bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back, and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, and the other of said carriages being mounted for movement longitudinally of the tray, a feed screw mounted for rotation between said bottom and false bottom, a nut carried by said movable carriage within a slot in the false bottom and threadedly engaged with said feed screw, means for rotating said screw, a tab-engaging rod removably secured to said tray adjacent said feed screw, a cover for said tray, and flanges on said cover adapted to extend past the line of contact of said tray and cover.

2. In a posting tray, a casing comprising a bottom, a false bottom and sides, one of said sides being pivoted in the plane of the false bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the same plane as the false bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back, and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, and the other of said carriages being mounted for movement longitudinally of the tray, a feed screw mounted for rotation between said bottom and false bottom, a nut carried by said movable carriage within a slot in the false bottom and threadedly engaged with said feed screw, means for rotating said screw, a tab-engaging rod removably secured to said tray adjacent said feed screw, and a cover for said tray.

3. In a posting tray, a casing comprising a bottom, a false bottom and sides, one of said sides being pivoted in the plane of the false bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the same plane as the false bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, and the other of said carriages being mounted for movement longitudinally of the tray, a feed screw mounted for rotation between said bottom and false bottom, a nut carried by said movable carriage within a slot in the false bottom and threadedly engaged with said feed screw, means for rotating said screw, and a tab-engaging rod removably secured to said tray adjacent said feed screw.

4. In a posting tray, a casing comprising a bottom, a false bottom and sides, one of said sides being pivoted in the plane of the false bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the same plane as the false bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back, and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, and the other of said carriages being mounted for movement longitudinally of the tray, a feed screw mounted for rotation between said bottom and false bottom, a nut carried by said movable carriage within a slot in the false bottom and threadedly engaged with said feed screw, and means for rotating said screw.

5. In a posting tray, a casing comprising a bottom, a false bottom, and sides, one of said sides being pivoted in the plane of the false bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the

same plane as the false bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back, and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, and the other of said carriages being mounted for movement longitudinally of the tray, a feed screw mounted for rotation between the bottom and false bottom, a nut carried by said movable carriage and threadedly engaged with said screw, and means for rotating said screw to effect movement of said last mentioned carriage.

6. In a posting tray, a casing comprising a bottom, a false bottom, and sides, one of said sides being pivoted in the plane of the false bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the same plane as the false bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back, and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, the other of said carriages being mounted for movement longitudinally of the tray, and means for moving said last-mentioned carriage.

7. In a posting tray, a casing comprising a bottom and sides, one of said sides being pivoted thereto adjacent the bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the same plane as the bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back, and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, the other of said carriages being mounted for movement longitudinally of the tray, a feed screw mounted for rotation adjacent the bottom of the tray, a nut carried by said movable carriage and threadedly engaged with said feed screw, means for rotating said feed screw to effect movement of said last-mentioned carriage, and a tab-engaging rod removably secured to said tray adjacent said feed screw.

8. In a posting tray, a casing comprising a bottom and sides, one of said sides being pivoted thereto adjacent the bottom, a pair of brackets on said pivoted side, a folding guide rail pivotally mounted on said casing and engaged by said brackets, said guide rail being adapted to retain the folding side when extended in the same plane as the false bottom, a pair of opposed carriages within the tray, each carriage comprising a back, a sheet-retaining plate pivotally connected at its lower edge to said back, and a locking plate pivoted to the back and in sliding engagement with said sheet-retaining plate, whereby the sheet-retaining plate may optionally be locked in vertical position or permitted to slant away from the other carriage, one of said carriages being fixed in the front of the tray, the other of said carriages being mounted for movement longitudinally of the tray, and means for moving said last-mentioned carriage.

9. In a posting tray, a casing, a pair of carriages therein, each comprising a back plate having offset portions, a sheet-retaining plate pivoted adjacent its lower edge to said offset portions, and a locking plate pivoted to one of said plates and in sliding engagement with the other of said plates, said locking plates being adapted to optionally lock their associated sheet-retaining plates in parallelism with each other, or to release the sheet-retaining plates for movement away from each other about their respective pivotal mountings, one of said carriages being fixed within the casing and the other of said carriages being mounted for movement longitudinally of the casing, a feed screw mounted for rotation within the casing, a nut on said movable carriage threadedly engaged with said feed screw, and means for rotating said screw to effect movement of said last-mentioned carriage.

10. In a posting tray, a pair of carriages, each comprising a back plate having offset portions, a sheet-retaining plate pivoted adjacent its lower edge to said offset portions, and a locking plate pivoted to one of said plates and in sliding engagement with the other of said plates, said locking plates being adapted to optionally lock said sheet-retaining plates in parallel relationship to each other or to release the sheet-retaining plates for movement away from each other about their respective pivotal mountings.

11. In a posting tray, a casing, a carriage mounted for longitudinal movement within said casing and comprising a back plate having offset portions, a sheet-retaining plate pivoted adjacent its lower edge to said offset portions, and a locking plate pivoted to one

of said plates and in sliding engagement with the other of said plates, said locking plate being adapted to optionally lock said sheet-retaining plate in perpendicularity with the bottom of said casing or to release it to allow it to be moved to a position in oblique relationship thereto, a nut carried by said carriage, a feed screw in threaded engagement with said nut and mounted for rotation within said casing, and means for rotating said feed screw to effect movement of said carriage.

In testimony whereof we have signed our names to this specification.

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HARLEY A. TULLIS.