June 12, 1945. C. M. CHATTERTON 2,378,185

ADJUSTABLE STEP GUIDE ATTACHMENT FOR PAPER FEED TRAYS

Filed April 9, 1943 2 Sheets-Sheet 1

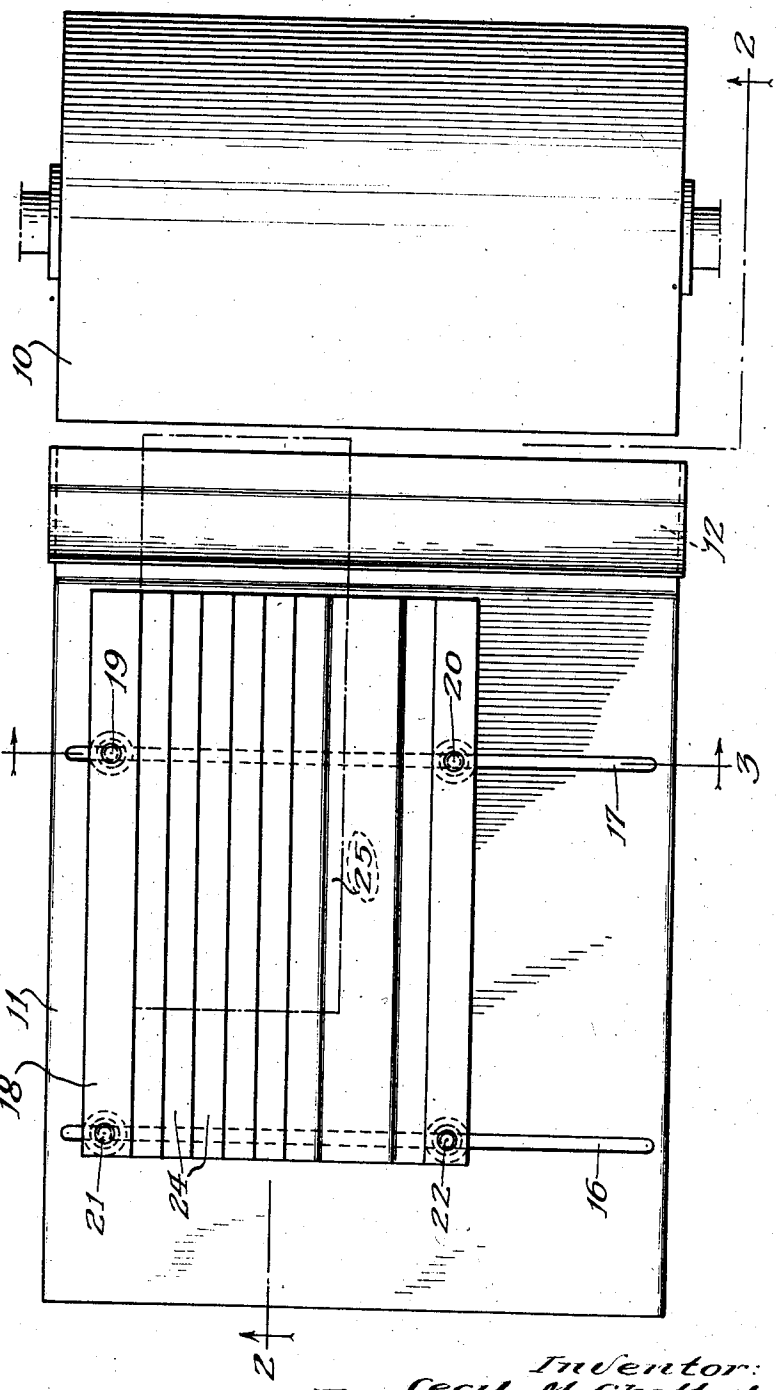


Fig. 1.

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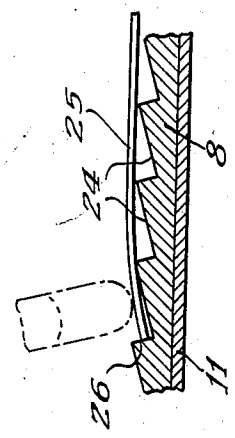


Fig. 4.

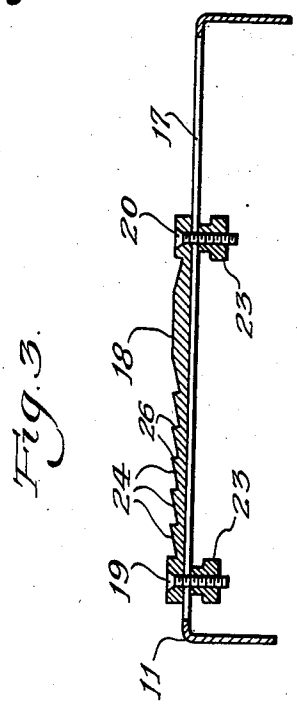


Fig. 3.

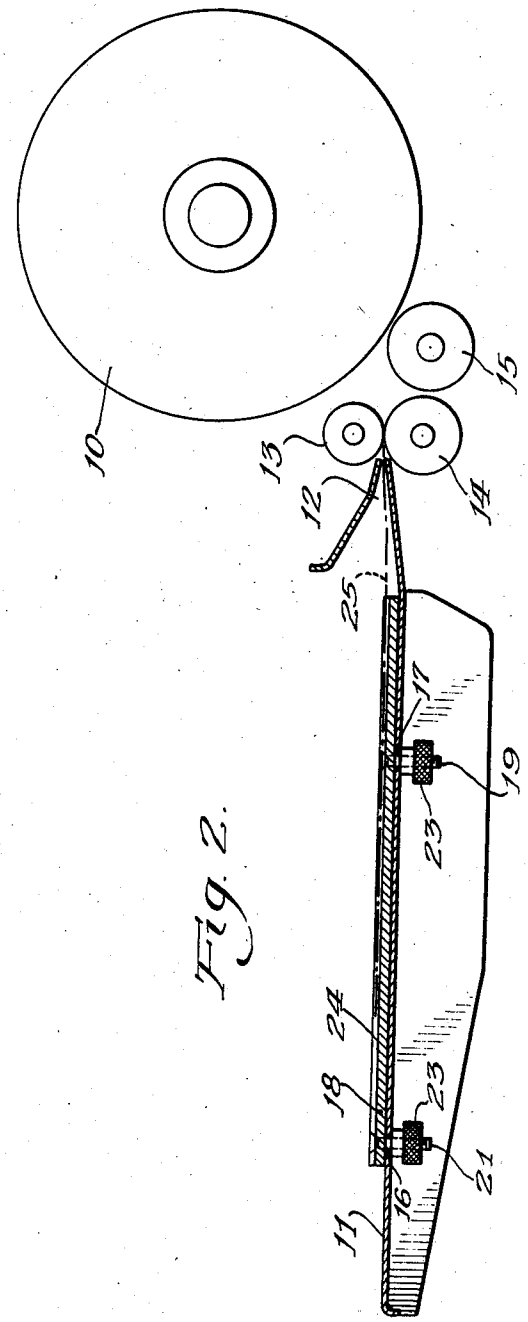


Fig. 2.

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UNITED STATES PATENT OFFICE

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ADJUSTABLE STEP GUIDE ATTACHMENT FOR PAPER FEED TRAYS

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Application April 9, 1943, Serial No. 482,390

3 Claims. (Cl. 271—59)

The present invention relates to an attachment for paper feed trays of duplicating machines wherein a master sheet or pad is carried on a drum and copy sheets are fed to the drum and pressed against it to receive the information which is imprinted in reverse on the master sheet or pad.

It is the principal purpose of the present invention to provide a simple guide attachment for the feed tray which permits the operator to accurately position small sheets or cards at different distances from one side edge of the tray and feed them to the drum so as to take off from the master sheet on the drum different lines of information that are imprinted thereon.

The present invention is particularly applicable in connection with various business systems where it is desired to produce and record on certain cards only a part of the information that is accumulated upon a master or summary sheet. In order to duplicate the selected information from the summary master the copy sheet or card must be guided and fed to the duplicating drum in such a manner as to align it with the desired line of information on the drum.

I am aware that heretofore guiding devices have been provided on the feed trays of duplicating machines but such guiding devices are usually manually movable or automatically movable by the operator or by the rotation of the drum, and because of this are necessarily somewhat complicated and not readily applicable to a simple existing machine. The device of the present invention is an attachment which may be positioned upon the feed tray of a duplicating machine where it will serve its function as an aid to the operator in guiding the sheets without in any way limiting the use of the machine for feeding sheets in a general way. The present device however does provide the operator with a series of guides correctly spaced so that he may place the copy sheets or cards upon the guide and by placing them on the guide easily position them with respect to the printed matter to be duplicated.

The features and advantages of the present invention will appear more fully as the description proceeds, reference being had to the accompanying drawings wherein a preferred form of the invention is shown. It should be understood however that the drawings and description are illustrative only and should not be considered as limiting the invention except insofar as it is limited by the claims.

In the drawings:

Fig. 1 is a somewhat diagrammatic plan view of the duplicating machine showing the feed tray thereof with my invention applied thereto;

Fig. 2 is a sectional view taken on the line 2—2 of Fig. 1;

Fig. 3 is a sectional view taken on the line 3—3 of Fig. 1; and

Fig. 4 is an enlarged fragmentary sectional view illustrating the manner in which sheets are guided by this attachment.

Referring now in detail to the drawings, the invention is adapted to be embodied in a duplicating apparatus of the character described wherein the numeral 10 refers to a duplicating drum and the numeral 11 refers to a feed tray adapted to receive copy sheets which are to be fed to the duplicating drum through a guide channel 12. The showing of the duplicating drum and its associated moistening and platen rollers is diagrammatic in the drawings since they form no part of the present invention. The moistening rollers are indicated at 13 and 14 in Fig. 2 of the drawings and the platen roller is indicated at 15 in the same figure.

The feed tray such as the feed tray 11 illustrated herein is customarily provided with transversely running slots 16 and 17 in which side guides of the conventional type are mounted. These side guides are usually adjustable so that they may be moved inwardly and outwardly to accommodate the copy sheets placed therebetween. The construction thus far described is well known in the art.

The present invention comprises an attachment 18 which is a plate that rests on the top of the feed tray 11, the plate being provided with screws 19, 20, 21 and 22 which extend down through the slots in the feed tray and which receive knurled lock nuts 23 by which the plate 18 is secured in position. By loosening the lock nuts 23 it is possible to slide the plate transversely of the tray for properly aligning it with a master positioned upon the drum 10. The plate is provided with a plurality of longitudinally running grooves 24. One wall of each groove is directed at a slight angle to the horizontal while the other wall is at substantially right angles to the first wall and serves to provide a shoulder against which a copy sheet or card of narrow width may engage. The dot and dash lines in Fig. 1 outline a card 25 which is also shown in position in Fig. 4.

It will be noted that by pressing the finger at one edge of the card as illustrated in Fig. 4 the

operator can bring the edge of the card into engagement with the wall **26** of a groove and thus readily guide the card to the duplicating machine in a predetermined aligned position with respect to the master sheet on the duplicating drum. When the operator has fed one card to the duplicating drum he can position the next card against the next wall **26** and in this manner feed the cards successively to the duplicating drum spacing each succeeding card farther away from the side edge of the master sheet to thus copy different lines of information on the different cards.

It is believed to be evident that the attachment permits the operator to accomplish the same results as are accomplished with an automatically or manually adjustable side guide, but of course the present device is an attachment which is particularly applicable to existing machines without the necessity of revising or remodeling the plain feed trays with which such machines may be equipped.

The present invention, as described hereinbefore, comprises a simple auxiliary feed table having a plurality of longitudinally running steps in the top face thereof. These steps act as guides for feeding cards to the duplicating drum of the machine, yet they do not in any way prevent the feeding of wider sheets to the duplicating drum while the guide is in place.

It is believed that the manner in which the present invention is carried out and the advantages thereof will be readily apparent to those skilled in this art.

While there have been shown and described certain embodiments of the invention, it is to be understood that it is capable of many modifications. Changes, therefore, may be made without departing from the scope of the invention as described in the appended claims, in which it is the intention to claim all novelty inherent in the invention as broadly as possible, in view of the prior art.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. A feed tray attachment for duplicating machines, comprising a plate having grooves in the upper surface thereof, said grooves extending parallel to each other toward the duplicating mechanism of the machine and providing upwardly extending ridges at only one side edge thereof against which sheets may be held and guided as they are advanced to the duplicating apparatus.

2. A feed tray attachment for duplicating machines having in its upper surface a series of parallel two walled angular grooves, one wall of which begins at the top of the attachment and is tipped slightly to the horizontal and the other wall of which extends upwardly from the lower part of the first named wall to the top of the attachment to provide a shoulder against which copy sheets may be guided.

3. In combination, a feed tray having transversely extending slots therein, a plate resting on said tray and having depending members extending through said slots together with means engaging said depending members for clamping the plate to the tray in any desired adjusted position, said plate having grooves in the upper surface thereof spaced at regular intervals and providing guide shoulders at one side only of said grooves against which sheets may be held as they are advanced along the tray.

CECIL M. CHATTERTON.