Aug. 7, 1928.

J. MENTGES

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PAPER FOLDING MACHINERY

Filed Nov. 8, 1926

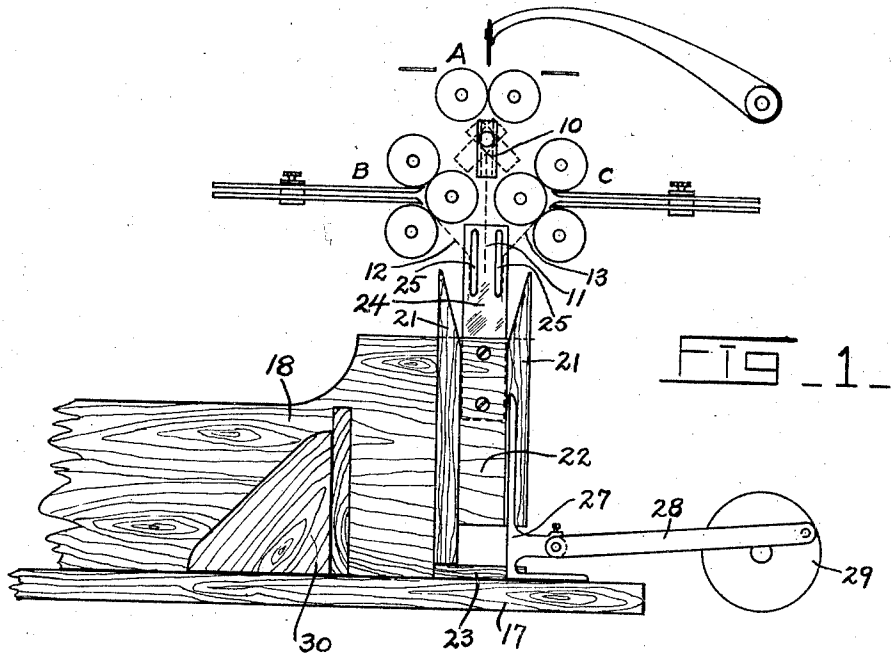


FIG. 1.

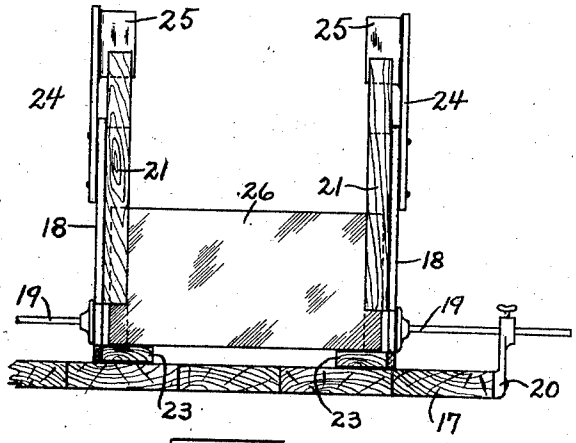


FIG. 2.

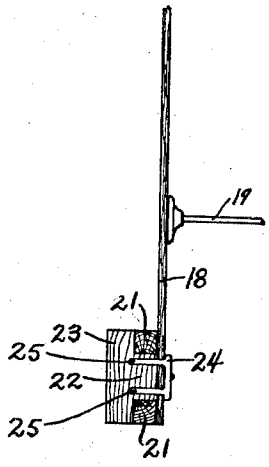


FIG. 3.

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UNITED STATES PATENT OFFICE.

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PAPER-FOLDING MACHINERY.

Application filed November 8, 1926. Serial No. 146,935.

My present invention relates to folding machines; and more particularly to means adapted to direct folded papers, which are delivered by the folding machine, in any of three directions, into a paper receptacle.

The object of my invention is to insure the proper entrance of papers into the receptacle.

In order to more clearly understand the invention reference may be had to the accompanying drawing which illustrates one embodiment of the inventive idea and wherein Fig. 1 is a side elevation of a packer box embodying the invention, showing the same installed on a folding machine indicated diagrammatically, one wall of the box being removed to more clearly show the opposite wall thereof. Fig. 2 is an end view of the packer box, showing the position of a sheet of paper delivered therein from the folding mechanism, and Fig. 3 is a plan view of one of the vertical side walls of the packer box shown in Figs. 1 and 2.

I shall now describe my invention by referring first to Fig. 1, in which folders A, B and C correspond respectively to folders A, B and B shown and described in my application, Serial No. 30,149, filed May 14, 1925. A hollow deflector 10, adapted to occupy any one of three positions, corresponds to the deflector 30 in the above mentioned application.

Since the purpose of the arrangement of these folders and the deflector forms no part of my present invention, suffice it to say that in making the various folds for which this machine is designed, papers may be delivered by the machine in any one of three directions. In other words, papers from the folder A may be delivered thru the hollow deflector 10, along a path indicated by the vertical dotted line 11; or when the deflector 10 is tilted to one or the other of the dotted portions, papers may be deflected to folders B or C, after leaving folder A, and will then be delivered along paths indicated either by the dotted line 12 leading from folder B, or the dotted line 13 leading from folder C.

Below the folders A, B and C is a receptacle adapted to receive folded papers. This receptacle comprises a packing floor 17, mounted on the frame of the machine in a manner not shown, and two adjustable vertical side walls 18. Rods 19, secured to the side walls, provide for the lateral adjustment of the side walls, being adapted to slide thru brackets 20 mounted on the packing floor wherein they may be secured by thumb screws in any desired position.

A pair of vertical cleats 21, which I shall hereinafter refer to as guide members, are mounted on the inside of each side wall 18 with a comparatively narrow space, 22, between them. At their upper ends the guide members are sloped off so as to make the upper ends of the space 22 flare. Blocks 23 below the spaces 22 are also secured to the side walls 18. Two vertical plates 25, hereinafter referred to as deflectors, are situated at the upper end of each space 22. These deflectors are preferably of metal and cast integral with a plate 24, the plates 24 in turn being secured to the sides 18 of the receptacle. These deflectors are therefore located in the path of papers emerging from folders B and C, respectively, and the deflectors change the course of the papers from an oblique to a vertical path while the sheet is still under the control of the folding machine, as illustrated by the dotted lines 12 and 13, and direct the papers into the space 22. The papers preferably come to rest on blocks 23 and occupy a position in the receptacle at right angles to the floor 17 thereof as shown by the paper marked 26 in Fig. 2. By means of a pusher 27 and a pitman 28 connected to a crank wheel 29 driven by any suitable means, the papers are pushed out of the receptacle to the packing floor 17 and are confined in a vertical position between the support 30 and the adjacent cleats 21.

Papers which pass thru the deflector 10, after emerging from the folder A, pass between the deflectors 25 and into the space 22 as before described.

While I have illustrated and described what I now regard as the preferred embodiment of my invention, it is evident that modifications may be made without departing from the spirit of my invention or exceeding the scope of my claims.

What I claim is as follows:

1. In a machine for folding paper, a guide comprising two vertical members mounted with a comparatively narrow space between them, by which members papers are guided downwardly, means whereby papers are carried from either of two opposite directions

to the upper end of said space, at an angle to said members, and means at the upper end of said space whereby to deflect the papers downwardly thereinto and thereby prevent the papers striking the member at the side of the space opposite to the point from which the papers come.

2. In a machine for folding paper, a guide comprising two vertical members mounted with a comparatively narrow space between them, by which members papers are guided downwardly, means whereby papers are carried from either of two opposite directions to the upper end of said space at an angle to said members, and deflectors situated at the upper end of said space, each of which deflectors is adapted to direct papers downwardly into said space and prevent their impinging on the member at the side of the space opposite to that from which the papers come, said deflectors being separate, so papers descending vertically can pass between them and enter said space.

3. In a machine for folding paper, a guide comprising two vertical members mounted with a comparatively narrow space between them, by which members papers are guided downwardly, means whereby papers are carried to the upper end of said space at an angle to said members, and a deflector situated at the upper end of said space whereby the papers are directed downwardly into the space and prevented from impinging on the member at the opposite side of said space as the paper enters the space.

4. In a machine for folding paper, a receptacle for the folded papers, comprising two vertical side walls, a pair of vertical guide members secured to the inside of each side wall with a comparatively narrow space between them, whereby the folded papers are guided into said receptacle, means whereby to deflect papers approaching said spaces at an angle to said guide members and direct them downwardly in the spaces, to avoid the papers striking the guide members at the side of the spaces opposite to the point from which the papers come.

5. In a paper folding machine, a packer for the folded papers, means for feeding said papers obliquely to said packer, and a deflector interposed between the packer and said means and adapted to deflect obliquely fed papers so that they are delivered into the packer substantially at right angles to a paper supporting surface thereof.

6. In a paper folding machine, a packer for the folded papers, devices for feeding said papers obliquely in two directions to the packer, and deflecting means interposed between the packer and said devices and adapted to deflect the obliquely fed papers so that they are delivered into said packer at right angles to a paper supporting surface thereof.

7. In a paper folding machine, a packer for the folded papers, a plurality of devices thereover for feeding said papers obliquely in different directions to said packer, and a deflector engaged by the papers while they are under control of said devices, said deflector being adapted to deflect the obliquely fed papers so that the same are delivered vertically into the packer.

8. In a paper folding machine, means for feeding the folded papers obliquely, a packer receiving the papers from said means, and a deflector arranged to deflect the obliquely fed papers so that they are delivered into said packer at right angles to a paper supporting surface thereof.

9. In a paper folding machine, a plurality of devices for feeding the folded papers obliquely in different directions, a packer receiving the papers from said devices, and a deflector arranged in the path of travel of the obliquely fed papers so that they are delivered into the packer at right angles to a paper supporting surface thereof.

10. In a paper folding machine, two spaced sets of devices for feeding the folded papers obliquely thereunder toward a common point, a packer adjacent said point and receiving the obliquely fed papers from said devices, and a deflector arranged in the path of travel of the obliquely fed papers and adapted to deflect them so that said papers are delivered into the packer vertically.

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