

Oct. 19, 1926.

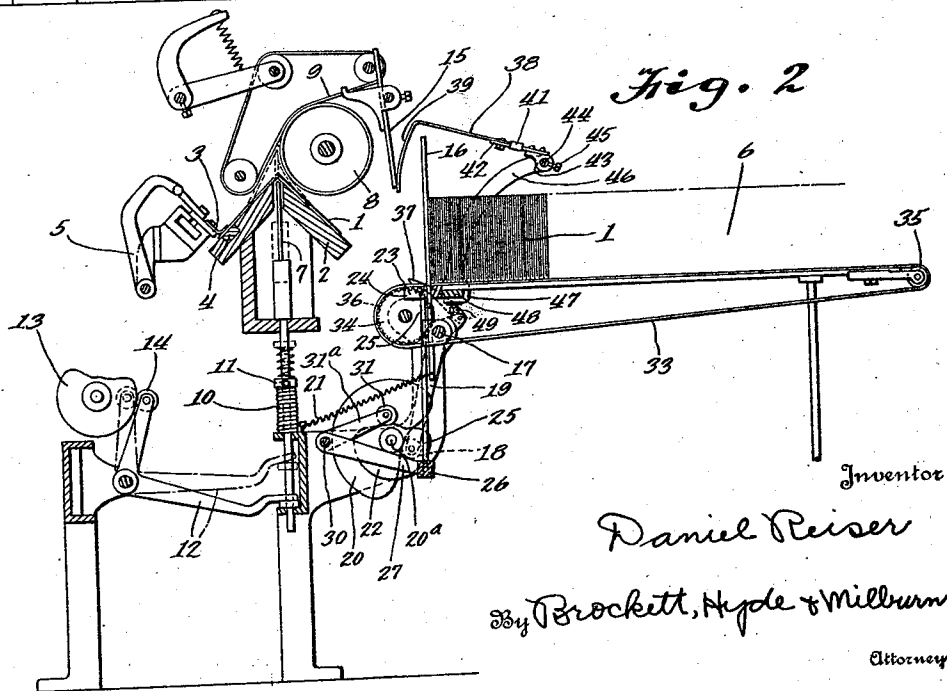
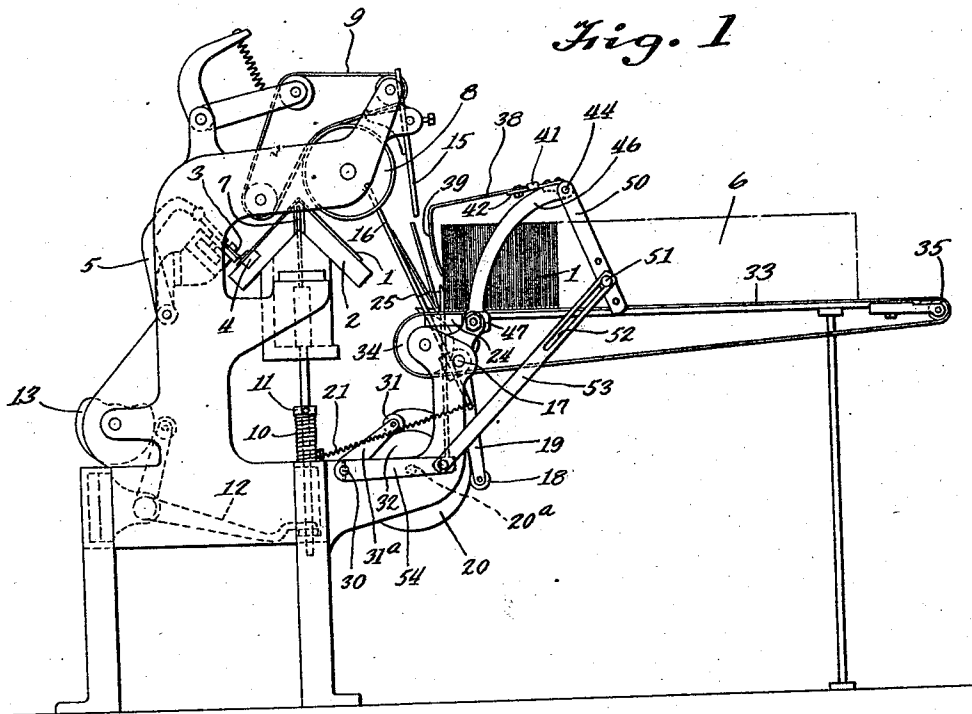
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PAMPHLET STACKER

Filed July 26, 1923

2 Sheets-Sheet 1



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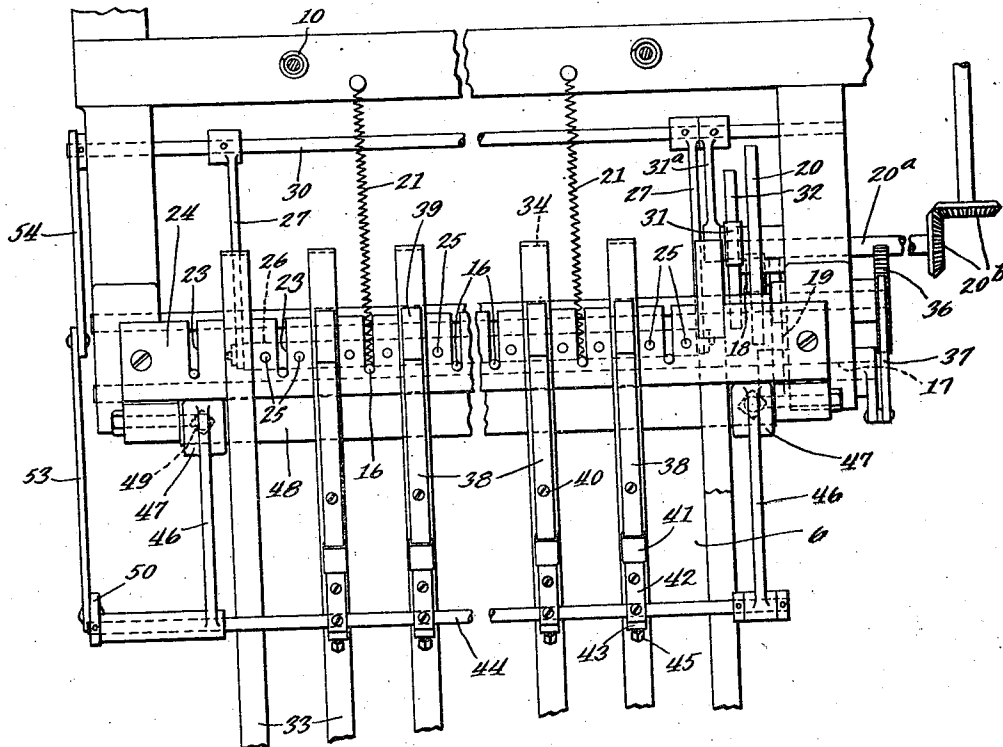


Fig. 3

Fig. 4

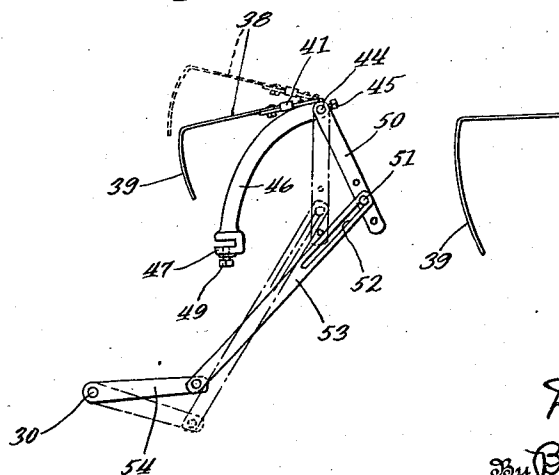
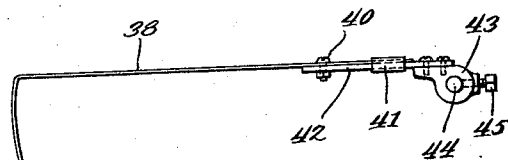


Fig. 5



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UNITED STATES PATENT OFFICE.

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PAMPHLET STACKER

Application filed July 26, 1923. Serial No. 653,976.

This invention relates to improvements in magazine so as to maintain the same in devices for stacking pamphlets and the like. closed position and out of the path of the

In the machines of this type, as for instance the well known Christenson machine, in front of the other pamphlets already

5 pamphlets after being bound are fed along stored.

automatically to a position where they are raised by a blade engaging within the

opened pamphlet and are carried about a roller by means of an endless apron to a

10 position above the front or receiving end of a magazine to be deposited therein. A

number of fingers are automatically tilted forward in front of the receiving end of

15 the magazine and just under the pamphlet as it is ready to be deposited so as to assist

the same in finding its way into the front end of the magazine. At the same time

means are provided for engaging the lower portions of the pamphlets already stacked

20 in the magazine and are so held while another pamphlet is being placed against the

front end of the pamphlets in the magazine. The last pamphlet is then moved back

25 against the front end of the stored pamphlets, the pamphlets being deposited in the

magazine by dropping each one on its folded or back edge. This type of machine is

illustrated in the drawings and represents in a general way the well known Christenson

30 machine above referred to. A number of endless belts also extend along the bottom

of the magazine rearwardly so as to assist in storing of the same.

In the operation of the type of machine

35 above described, there has been considerable difficulty due to the fact that the pamphlets, as they are dropped into the front end of

the magazine, naturally tend to open, and the pamphlet which is being dropped into

40 the magazine from above is apt to lodge in between the leaves of the pamphlet which

was last placed in the magazine. Such a condition entails additional labor in separating the pamphlets and tends also to obstruct

45 the proper operation of the mechanism. The object of the present invention, therefore, is to provide a means for maintaining

the pamphlets closed after having been deposited in the magazine so as to prevent the

50 new pamphlets from lodging within the leaves of the other pamphlets already stored.

More particularly, it is the object of this invention to provide automatic means for

engaging the upper portions of the pamphlets which have already been stored in the

A still further object is to provide such means in the form of an attachment which

can be readily applied to the type of machine already now in use, thereby improving

the efficiency of such a machine without en-

60 tailing a great deal of expense. Fig. 1 is an end view of a device embodying my improvement. Fig. 2 is a similar

view with parts removed at the end and corresponds to a view taken on line 2-2 of

70 Fig. 3; Fig. 3 is a plan view of a portion of a device embodying my improvement; and

Figs. 4 and 5 are detail views of my improved attachment.

In the Christenson machine above de-

75 scribed in a general way, the pamphlets as illustrated for instance by reference numeral

1 are fed in open condition along the track or runway 2 by means of the automatic

feeding means comprising the arm 3 engaging

80 the upper side of the pamphlet and the bar 4 engaging the lower side thereof. The

arm 3 and bar 4 are operated automatically by means of the mechanism indicated in a

general way by reference numeral 5. A

85 stitching mechanism (not shown) is provided for binding the pamphlet. Upon arriving at a position directly in front of the

90 magazine 6 the blade 7 is automatically raised so as to engage the inside of the

pamphlet and move the same upwardly between the roller 8 and the endless belt or

95 apron 9 which engages about the roller and forms therewith a means of carrying the

pamphlet in closed condition about the roller

100 in a clockwise direction as viewed in Fig. 1, to be deposited in front of the other

105 pamphlets which have already been stored in the magazine. The blade 7 is normally

forced upwardly by means of the spring 10

engaging a collar 11 on the lower end of the blade holder member and is forced

110 downwardly by means of a lever arm 12. This lever arm is actuated by means of a

cam 13 engaging the roller 14 mounted upon

downwardly and the pamphlet, as illustrated in the drawing, drops on its closed edge. As the pamphlet is deposited in the front end of the magazine, as illustrated in Fig. 1, the arms or fingers 16, which are mounted for movement upon the rock shaft 17, are swung to open or receiving position as shown in Fig. 1, by means of cam-actuated roller 18 on the lower end of the lever arm 19 carried by shaft 17. The roller 18 is actuated by means of the cam 20 carried by shaft 20^a, which shaft is operated from any suitable source of power through the gears 20^b. The springs 21, which are secured at one end to the bottom ends of the fingers 16 and suitably anchored at their other ends in the frame work of the machine, normally tend to force the fingers 16 to closed position as illustrated in Fig. 2. These fingers 16 work in the slots 23 provided in the edge of the plate 24 which is suitably secured across the frame of the machine. The fingers 25 are also provided as a means of engaging the lower portion of the front end of the stack of pamphlets which have already been stored in the magazine so as to maintain the same in such stacked position while the fingers 16 are swung to open position as shown in Fig. 1. Fingers 25 are carried by the strip 26 and are adapted to work up and down through openings in the plate 24. The strip 26 is actuated in its up and down movement by means of the lever arms 27 carried by rock shaft 30 which is actuated by the roller 31 carried by arm 31^a which in turn is fixed on shaft 30. The shaft 30 is operated by means of the cam 32 fixed on the same shaft as cam 20. The endless belts 33, which receive the pamphlets as they are deposited in the magazine and serve to move the same slowly toward the rear end of the magazine, extend about the rollers 34 and 35 and are operated by means of the ratchet 36 fixed upon the shaft of roller 34. The ratchet 36 is actuated by means of the pawl 37 carried by the shaft 17. This mechanism is so timed in its operation that each time a new pamphlet is deposited in the magazine the belts 33 are advanced one step so as to move the nest of pamphlets to the rear.

The present improvement, which I have embodied in the Christenson machine as above described, consists of a plurality of fingers 38 having downwardly extending curved portions 39 for engaging the upper portions of the pamphlets as soon as they are deposited in the magazine and moved to stacked position by the fingers 16. These fingers 38 serve to maintain the last deposited pamphlet closed while the fingers 16 occupy open position for receiving the next pamphlet, as clearly illustrated in Fig. 1. The fingers 38 which may be formed of any suitable metal are secured by means of bolt

40 and strap 41 to the plate 42 which in turn is screwed on to the casting 43. The casting 43 is secured upon the rock shaft 44 by means of the set screw 45. The shaft 44 is supported in position by means of the bracket arms 46 which are provided at their lower ends with the clamps 47 for engaging the rear edge of the strip 48 extending across the frame of the machine just below the magazine. Thus the supporting arms 46 can be readily attached to or detached from the machine by means of the clamping screws 49. Secured also to the rock shaft 44 is the lever arm 50 which is provided with a series of pins 51 for engagement in the slot 52 in the end of lever arm 53. The last named lever 53 has pivotal connection with one end of lever arm 54 whose other end is fixedly mounted upon the shaft 30. The parts are so constructed and arranged as to operate in the time relation as above described, the engagement of the pin 51 with upper end of the slot 52 causing the fingers 38 to be raised, that is upon lowering of the lever arm 53. Upon raising movement of the lever arm 53, the fingers 38 will fall by gravity. By means of the series of pins 51 the extent or throw of the fingers 38 by the lever arm 53 can be varied according to conditions.

Briefly stated the operation of my improved attachment is as follows:

At the time when the pamphlet is about to be deposited from the roller 8, the fingers 16 are in open position, as illustrated in Fig. 1, the rods or pins 25 occupy raised position so as to engage the lower portion of the front end of the nest of pamphlets and at the same time the fingers 38 occupy lowered position so as to engage also the front end of the nest of pamphlets but at the upper portion of the same, so as to prevent the leaves of the pamphlet from falling open. Then as the pamphlet is deposited to the position illustrated in Fig. 1, the fingers 16 are automatically brought to closed position so as to place the pamphlet in closed condition against the front end of the nest of pamphlets in the magazine; and at the same time the pins 25 are lowered and the fingers 38 are raised to the position illustrated in Fig. 2 so as to permit such operation. Then the fingers 16 again move to open position and at the same time the fingers 38 are lowered to again occupy the position illustrated in Fig. 1, thereby completing the cycle of operations.

What I claim is:—

1. A stacking device, comprising a receiving magazine, means for feeding articles of flexible sheet material in succession to said magazine so as to stand on edge, and automatic means including a pivotally mounted article engaging portion for maintaining each article, upon being fed to said maga-

zine, out of the path of the succeeding article as it is fed into said magazine, said maintaining means being free of engagement with said articles as they are fed into said magazine.

2. A pamphlet stacking device, comprising a receiving magazine, means for feeding pamphlets in succession to said magazine, and automatic means including a pivotally mounted pamphlet engaging portion for maintaining each pamphlet closed upon being fed into said magazine, said maintaining means being free of engagement with said pamphlets as they are fed into said magazine.

3. A stacking device, comprising a receiving magazine, means for feeding pamphlets in succession to and depositing the same in said magazine on edge with the open side of the same extending upwardly, and automatic means for engaging the upper part of each succeeding pamphlet so as to maintain the same closed upon being fed into said magazine, said automatic means being free of engagement with said pamphlets as they are fed into said magazine.

4. A stacking device, comprising a receiving magazine, means for feeding pamphlets in succession to and depositing the same in said magazine on edge with the open side of the same extending upwardly, and automatic means for engaging the upper and lower parts of each succeeding pamphlet so as to maintain the same closed and in stacked arrangement upon being fed into said magazine, the automatic means for engagement with the upper parts of said pamphlets being free of engagement with said pamphlets as they are fed into said magazine.

5. A stacking device, comprising a receiving magazine, means for feeding pam-

phlets in succession to and depositing the same in said magazine on edge with the open side of the same extending upwardly, and separate means for automatically engaging the upper and lower parts respectively of each succeeding pamphlet so as to maintain the same closed and in stacked arrangement upon being fed into said magazine, both of said automatic means being out of engagement with said pamphlets as they are fed into the magazine.

6. A stacking device, comprising a receiving magazine, means for feeding articles of flexible sheet material in succession to said magazine so as to stand on edge, and rockably mounted means for automatically engaging each article, upon being fed to said magazine, out of the path of the succeeding article as it is fed into said magazine, said automatic means being out of engagement with said articles as they are fed into said magazine.

7. A stacking device, comprising a receiving magazine, means for depositing articles of flexible sheet material in succession to the receiving end of said magazine so as to stand on edge, means for positioning each succeeding article in stacked arrangement, and automatic means for maintaining each article in proper stacked position while said positioning means is bringing a succeeding article to stacked position, so as to maintain each article, upon being fed to said magazine, out of the path of the succeeding article as it is fed into said magazine, said automatic maintaining means being out of engagement with said articles as they are fed into said magazine.

In testimony whereof I hereby affix my signature.

DANIEL REISER.