

March 18, 1947.

MEANS FOR FACILITATING THE WRAPPING AND
TYING OF BUNDLES OF NEWSPAPERS
Filed Jan. 30, 1946

2,417,643

2 Sheets-Sheet 1

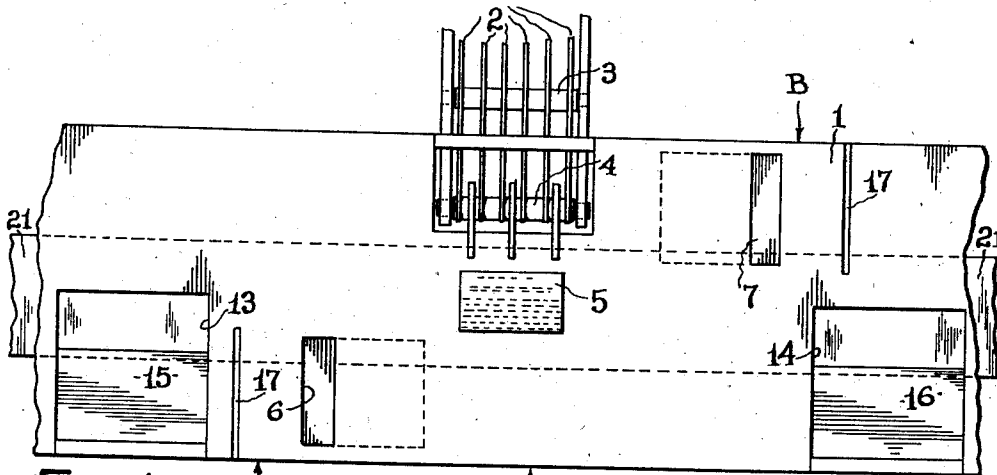


FIG. 1

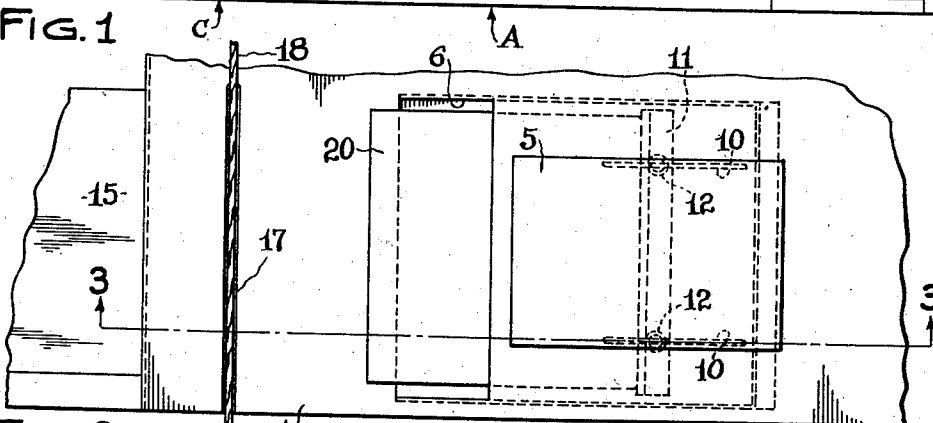


FIG. 2

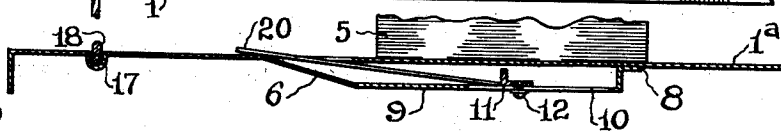


FIG. 3

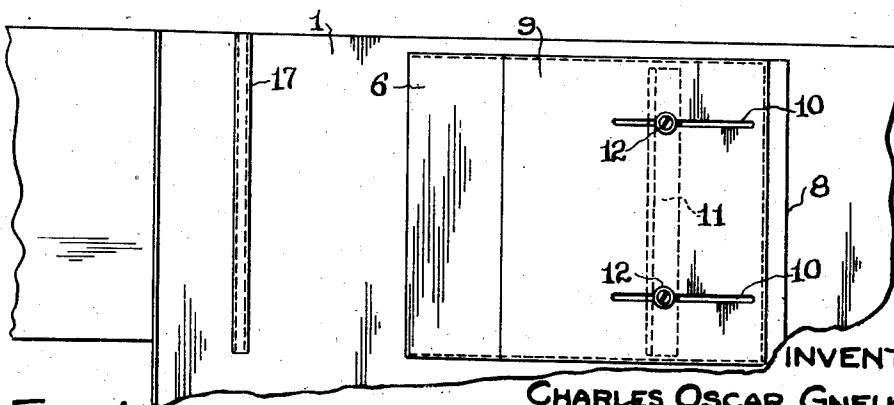


FIG. 4

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2 Sheets-Sheet 2

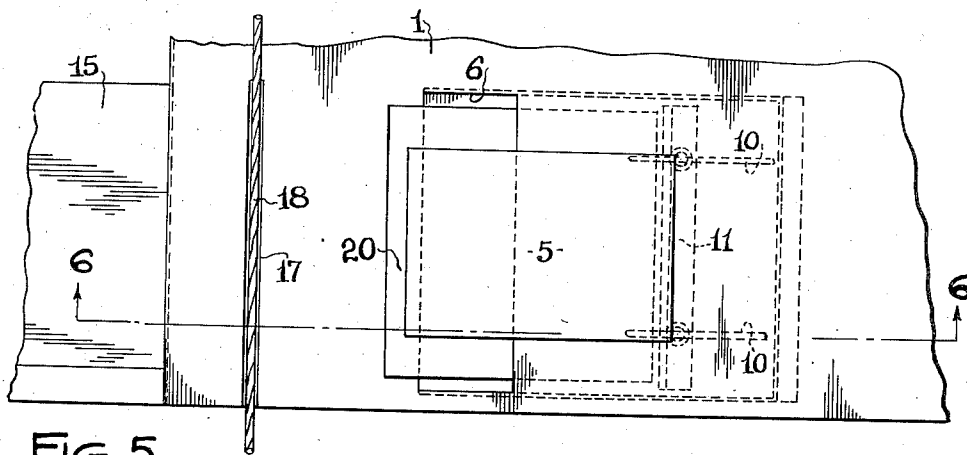


FIG. 5

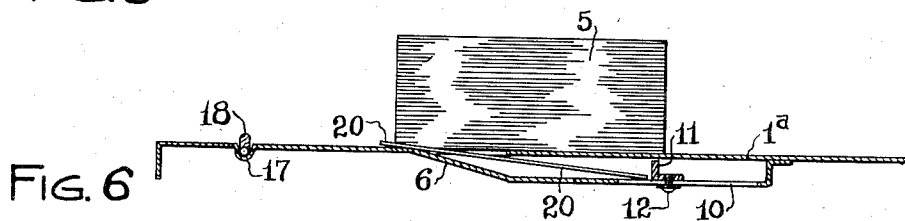


FIG. 6

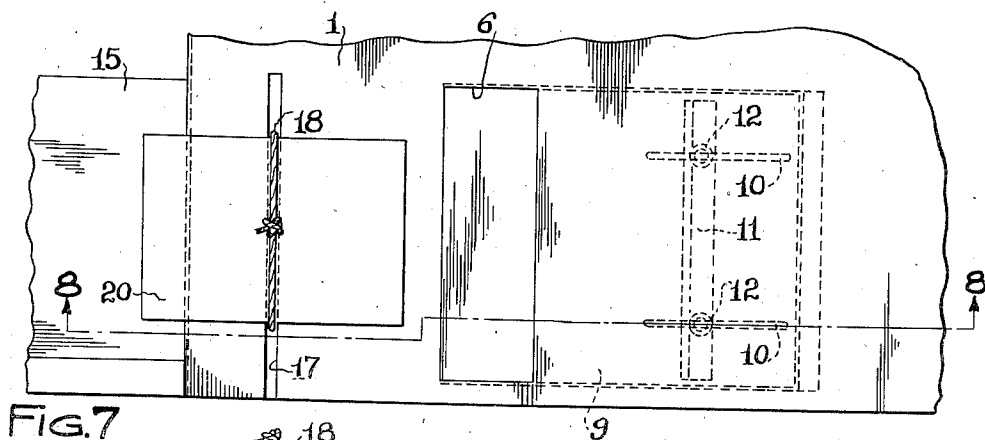


FIG. 7

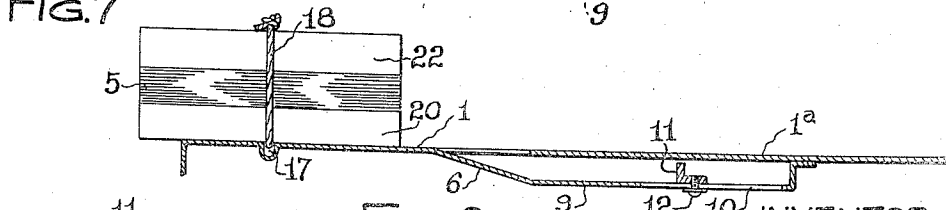


FIG. 8

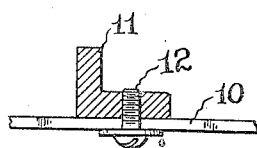


FIG. 9

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UNITED STATES PATENT OFFICE

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MEANS FOR FACILITATING THE WRAPPING
AND TYING OF BUNDLES OF NEWSPAPERS

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Application January 30, 1946, Serial No. 644,307

7 Claims. (Cl. 93—2)

1

This invention relates to a table which is particularly adapted for use in wrapping and tying newspapers into bundles which papers are delivered from the printing press by a conveyor which delivers the papers at a rapid rate of the order of 375 to 600 papers per minute. These papers are then arranged in bundles of 35 to 55 pounds, depending upon the weight of the papers.

Heretofore it has been customary for an operator to manually arrange the papers into bundles or stacks which averaged 35 to 55 pounds per bundle or stack. In the case of a Sunday edition each bundle of papers weighs about 55 pounds. The operator who received these papers has heretofore stacked them and lifted the bundle onto the bottom wrapper and then tied them with a cord or rope, and then slid the bundles into an opening which delivered the same onto a conveyor or belt which conveyed the papers to the exit or delivery outlet. This requires lifting bundles of considerable weight which is very tiring upon the workmen particularly in view of the fact that the papers are delivered at a very rapid rate. The papers are delivered to the wrapping table at the rate of 200 to 600 papers per minute, depending upon the speed of the press. In view of the rapid rate which the papers are delivered and bundled, and the lifting of the bundles, the workmen become tired and exhausted in a very short time and have to be relieved at frequent intervals.

I have provided a table for use in wrapping and tying papers into bundles and in which the lifting is practically eliminated, thus enabling the workman to package and tie a large number of bundles without being relieved and without injuring his health, and eliminating the necessity for frequent relief.

I have also provided a table for use in wrapping and tying newspapers into bundles in which the manual effort is reduced to a minimum and substantially eliminating the necessity for the workmen lifting bundles weighing from 35 to 55 pounds thereby decreasing the efforts of the workmen and thus enabling them to work longer periods of time without relief.

One of the objects of the invention is to provide a table for use in wrapping and tying newspapers into bundles in which the manual labor and effort is reduced to a minimum and in which the bundles of papers are tied and delivered at a much more rapid rate, thereby relieving the workmen of much effort.

A further object of the invention is to provide a table which will overcome the difficulties here-

2

inbefore mentioned and enable the workmen to deliver a larger number of tied bundles in a given period of time and thus reducing to a minimum the physical effort required by reason of lifting heavy bundles of papers.

Further and more limited objects of the invention will appear as the description proceeds and by reference to the accompanying drawings in which

Fig. 1 is a fragmentary view of a top elevation of a table embodying the hereinbefore described distinguishing features and characteristics;

Fig. 2 is a fragmentary view in elevation showing a portion of the table which is so constructed as to enable the workmen to wrap and tie bundles of papers with a minimum effort;

Fig. 3 is a vertical sectional view on the line 3—3 of Fig. 2;

Fig. 4 is a fragmentary bottom plan view of the portion of the table immediately opposite and adjacent the conveyor leading from the printing press;

Fig. 5 is a fragmentary top plan view of a section of the table showing the bottom wrapper in place;

Fig. 6 is a vertical sectional view taken on the line 6—6 of Fig. 5;

Fig. 7 is a view similar to Fig. 5 showing the bundle of papers in a different position;

Fig. 8 is a transverse sectional view taken substantially on the line 8—8 of Fig. 7; and

Fig. 9 is a view partly in section and partly in elevation showing the adjustable stop for determining the position of the bottom wrapper.

Referring now to the drawings, the reference character 1 designates a flat top table which may extend any desired distance depending upon the number of printing presses used. The table 1 is supported by legs or by any other suitable means, not shown. Leading from each printing press is a conveyor made up of a plurality of cords or belts 2 which pass over a roller 3 and thence around a power driven pulley indicated by the reference character 4. This conveyor delivers papers to the top of the table at a rapid rate of the order of 375 to 600 papers per minute. These papers are delivered in the flat condition onto the top of the table and are stacked by the operator at a point immediately opposite the conveyor indicated by the reference character A. Another operator is positioned at the station indicated by the reference character B while a third operator stands at the position indicated by the reference character C in Fig. 1. These papers are ordinarily stacked in bundles contain-

ing about 50 or 60 papers depending upon the weight of each paper. The operator at station A stacks the papers one upon the other into a stack which is indicated by the reference character 5. Preferably about one-half of the bundle is arranged with the rough edge of the paper toward the left while the other half of the bundle is arranged in the opposite position with the rough edge toward the right.

The top of the table has a pair of transverse slits or openings therein and the adjacent portion thereof is bent downwardly as shown in Figs. 2 and 6. The top portion of the table extends downwardly and then horizontally, as shown in Fig. 3, and is bent upwardly at the end thereof and secured to the bottom side of the top of the table by being welded or otherwise fastened thereto, as indicated by the reference character 8. If desired, the chamber which receives the bottom wrapper therein may be in the form of a separate piece shaped as shown in Figs. 3 and 4 and welded to the bottom side of the table top at each end. The adjacent portion of the table top, indicated by the reference character 1^a, may also be a separate piece, if desired. The horizontal portion 9 has a pair of slots 10 therein and secured in these slots and extending transversely of the table is a bar or angle iron 11 which is adjustably secured in the slots by means of screws 12 the purpose of which will hereinafter appear.

The table is also provided along one side thereof with a plurality of openings 13 and 14 which are formed by cutting a generally rectangular piece from the top of the table along three sides and then bending the cut-out portion downwardly to provide inclined slides 15 and 16. Formed in the top of the table immediately adjacent the openings 13 and 14 are a pair of grooves 17 which are preferably disposed on opposite sides of the table and which are adapted to receive therein respectively a cord or rope 18 by means of which the papers are tied into bundles.

Disposed adjacent and in easy reach of the operators at stations B and C are a stack of wrappers (not shown), which may be old newspapers or any suitable wrapper. One of these wrappers which is indicated by the reference character 20 in Fig. 3 is inserted into the slot in the top of the table, as shown most clearly in Fig. 3, the stop bar 11 having been previously adjusted so that the edge of the wrapper extends upwardly and outwardly as shown.

The operator at station A stacks the papers and then slides the stack toward the operator at station C. The operator at station C has previously inserted the bottom wrapper in place, as shown in Figs. 2 and 3. The stack of papers is then slid across the slot and frictionally engages the wrapper and moves it across the top of the table to the position shown in Figs. 7 and 8 in which position the stack of papers is disposed over and immediately opposite the groove 17. The operator at station C then applies a top wrapper to the bundle and ties the rope or cord securely as will appear from Fig. 8. The tied bundle of papers is then slid over the opening 13 and slides down the inclined surface 15 onto a conveyor belt 21 which conveys the bundles to a suitable exit or outlet. The operator at station A then slides a stack of papers toward the operator at station B who does likewise, and tips the tied bundle of papers into the opening 14 and the bundle slides down the incline indicated by the reference character 16 onto the conveyor 21.

The operator at station A can stack the papers sufficiently rapidly to enable him to deliver stacks of papers to the operators at stations B and C. There is disposed within reach of the operators at stations B and C a stack of wrappers which are used both as top and bottom wrappers 22 and 20. If the size of the bundle of papers is larger or smaller than the standard size, the stop bar 11 may be adjusted within the slots 10 in order that the edge of the bottom wrapper may extend slightly over the top of the table so as to be picked up by the bundle of newspapers 5 which frictionally engage the bottom wrapper so as to move it to the position shown in Figs. 7 and 8. In Fig. 6 the bundle of papers is shown as it is picking up the bottom wrapper as the stack of papers is being slid longitudinally of the table.

It will therefore be clear that with the table above described there is no necessity for lifting heavy bundles of papers as they may be slid over the top of the table which has a polished surface. The top of the table immediately adjacent the conveyor may be covered with talc or other suitable material which will facilitate sliding of the bundle of papers without the necessity for lifting the bundles, thus greatly reducing the labor and effort required for this operation.

It will be understood that the table may extend any desired length depending upon the number of printing presses in use. Each station opposite the conveyor leading from the press is constructed as hereinbefore described and there are as many stations as there are presses.

It will now be clear that I have provided a table for use in wrapping and tying newspapers into bundles and which will accomplish the objects of the invention as hereinbefore stated. It is contemplated that various changes may be made in the details of construction and arrangement of parts without departing from the spirit of the invention. The embodiment of the invention herein disclosed is therefore to be considered merely as illustrative and not in a limiting sense as the invention is limited only in accordance with the scope of the appended claims.

Having thus described my invention, what I claim is:

1. A table for use in wrapping and tying newspapers into bundles, the table having therein a pair of oppositely disposed slots, the portions of the table top adjacent said slots being deflected downwardly at an angle and thence horizontally and secured to the bottom of the table top, thus providing a chamber to receive a wrapper therein, said table also having a pair of oppositely disposed grooves therein adjacent said slots respectively and adapted to receive a tying cord therein, said table being also provided with a pair of openings through which the tied bundles are ejected.

2. A table for use in wrapping and tying newspapers into bundles having a flat top and a central portion for receiving the papers, a slot disposed at each side of said central portion and adapted to receive a wrapper therein which projects slightly beyond the edge of said slots, said table also having a pair of transverse grooves therein disposed adjacent said slots and adapted to receive tying cords therein whereby a predetermined number of papers may be slid over said slots and thence over one of said grooves without lifting the bundles.

3. A table for use in wrapping and tying bundles of newspapers having a flat central portion

5

at the adjacent side of which is disposed a slot for receiving a wrapper, a groove disposed outwardly of and adjacent said slot and adapted to receive a tying cord, an opening disposed adjacent said groove and through which the tied bundles of papers may be ejected, a conveyor for delivering papers to the central portion of said table.

4. An apparatus for wrapping and tying newspapers into bundles comprising a flat top table, means for delivering papers onto said table, means for positioning a bottom wrapper on said table with the front edge thereof disposed so as to be frictionally engaged by a bundle of papers being slid thereover, a groove extending transversely of said table top adapted to receive a tying cord therein and over which the bundle of papers may be moved, said table having a delivery opening in the top thereof through which the tied bundle of papers may be ejected.

5. A table for use in wrapping and tying newspapers into bundles having a flat top and a central portion for receiving the papers, a slot disposed at each side of said central portion and adapted to receive a wrapper therein which projects slightly beyond the edge of said slots, said table also having a pair of transverse grooves

6

therein disposed adjacent said slots and adapted to receive tying cords therein whereby a predetermined number of papers may be slid over said slots and thence over one of said grooves without lifting the bundles, and an opening in the table adjacent each of said grooves through which the tied bundles of papers may be ejected.

6. In a device of the character described, the combination of a flat top table adapted to receive newspapers from a press, a chamber beneath said table, a slot through the table top above said chamber through which the end of a wrapper is adapted to project, and a groove in the top of said table adjacent said slot adapted to receive a wrapping cord.

7. In a device of the character described, the combination of a flat top table adapted to receive newspapers from a press, a chamber beneath said table, a slot through the table top above said chamber through which the end of a wrapper is adapted to project, a groove in the top of said table adjacent said slot adapted to receive a wrapping cord, and an opening through the top of said table adjacent said groove through which tied bundles of papers may be ejected.

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