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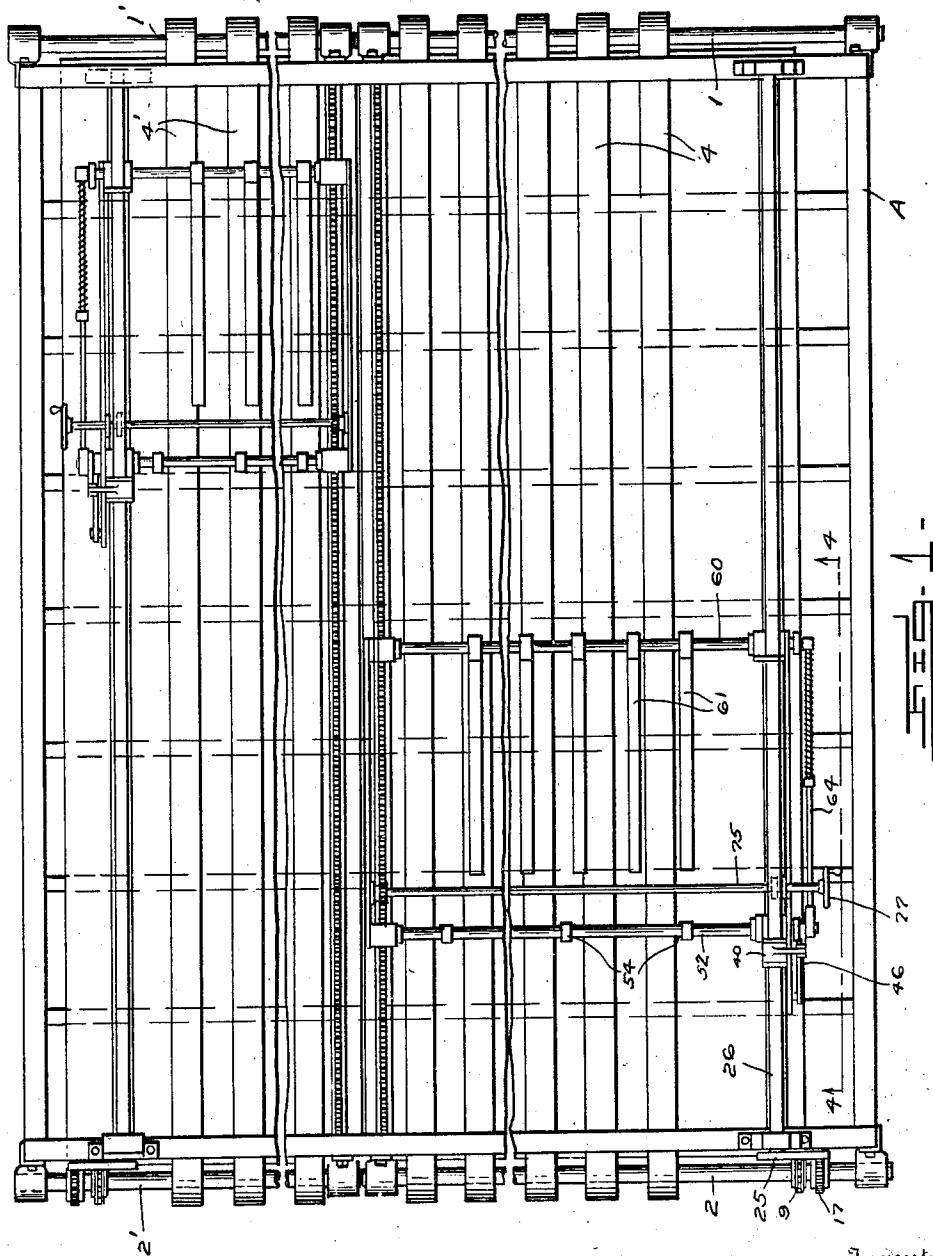
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2,373,532

SELECTIVE STACKING MACHINE

Filed Dec. 22, 1943

3 Sheets-Sheet 1



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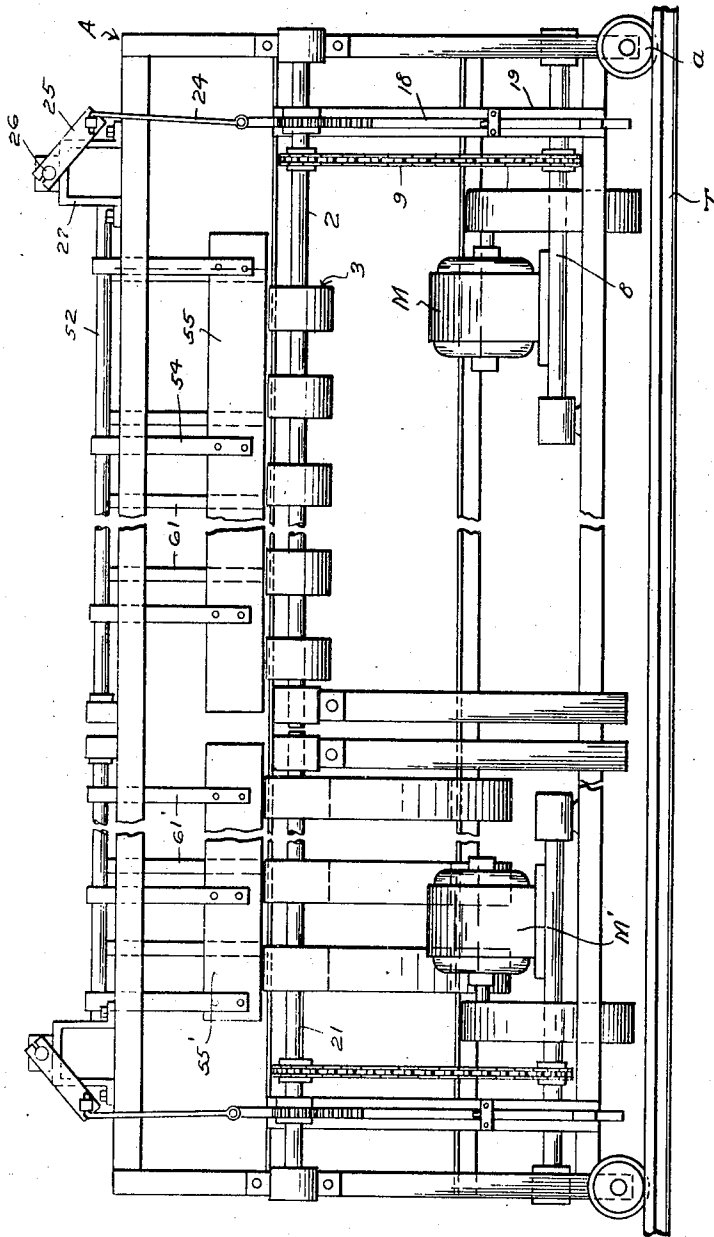
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3 Sheets-Sheet 2



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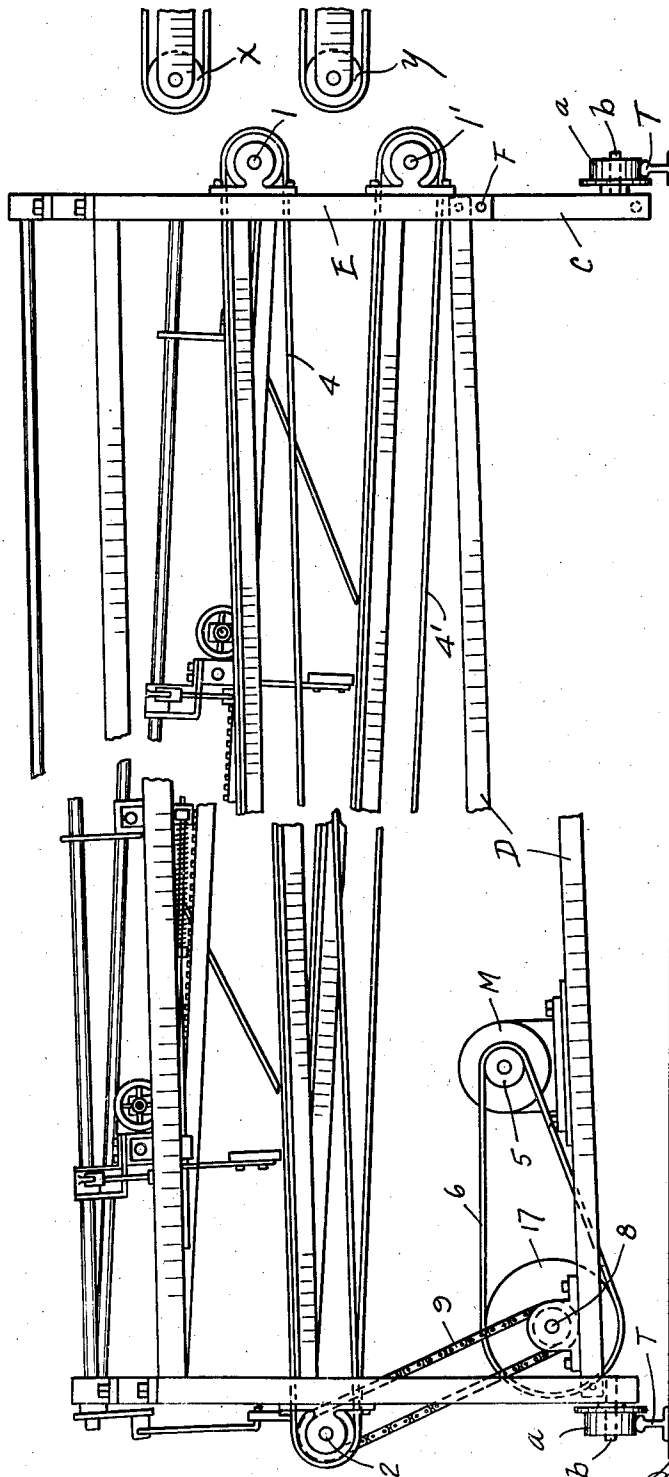
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3 Sheets-Sheet 3



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UNITED STATES PATENT OFFICE

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SELECTIVE STACKING MACHINE

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Application December 22, 1943, Serial No. 515,273

2 Claims. (Cl. 271-75)

This invention relates to a sheet stacking machine of the character generally disclosed in the original Patent No. 2,231,179 dated February 11, 1941, and now the subject of Reissue Patent No. 22,395 dated November 30, 1943.

As disclosed in the aforesaid patent, one purpose or object of said device is to simultaneously receive, accumulate and stack sheets from a duplex cutting or corrugating machine, and usually, but not always, such sheets are of dissimilar widths.

The stacks can be independently discharged or simultaneously discharged. Such a machine, accordingly, receives the sheets at different horizontal levels and preferably discharges the stacks at a common level.

The primary purpose of the present invention is to modify a machine of the character as disclosed in said patent and made a part hereof for a detailed understanding of the machine of this invention, so that such machine has broader application.

The patented structure was described as being a machine having dual structures and wherein one had its intake end below the level of the other intake end. In most board plants, a duplex cutter, etc., simultaneously produced wide and narrow board.

It has been found that with this general practice of producing wide and narrow board the stacker with dual structures can be reduced in width by a fourth by making the lower level intake arrangement approximately half as wide as that of the upper level intake arrangement. This is a material saving in production, operation and maintenance cost.

However, while a desirable simplification, this full and half width duplex stacker has this disadvantage: When for any reason the upper cutter, etc., is down and hence full width board cannot be run upon the upper corrugator, such full width board could not be made by the lower corrugator and handled by the stacker from and by the lower intake end stacker, because same was only half width.

The chief object of the present invention is to so arrange a duplex stacker wherein the stacking portions are of dissimilar widths, so that the widest stacker can handle the widest board from any part of a multiple corrugator and a second object is to arrange a multiple stacker so that one stacking portion can handle board from any portion of a multiple corrugator.

The chief feature of the present invention

resides in modifying a multiple stacking machine, so that the one level intake end of one portion can be positioned at the intake level of another portion.

5 This is effected by bodily lowering the intake ends of both portions of the duplex stackers and herein preferably the simplest embodiment is illustrated and described.

Other objects and features of the invention will be set forth more fully hereinafter, it being understood, for the preferred embodiment, the "upper" level stacker is of full width and the "lower" level stacker is of approximately half that width, with shafts, gate, number of belts, etc., half that of the former.

15 The full nature of the invention will be understood from the accompanying drawings and the following description and claims:

In the drawings,

20 Fig. 1 is a top plan view of the invention.

Fig. 2 is an elevational view of the discharge end thereof.

Fig. 3 is a side elevational view of the same and included therein is the diagrammatic indication of the dual discharge means of a duplex corrugating machine with which this invention is peculiarly applicable as aforementioned.

25 Since the details of the specific construction of the multiple adaptable stacking of this invention are most fully illustrated and described in the aforementioned patent, same are intentionally omitted herefrom as unnecessary and said patent disclosure is specifically made a part hereof.

30 The same numerals employed in said patent, insofar as possible, accordingly are herein employed to designate like or similar parts. Since in said patented machine certain parts depend from overhead supports carried by overhead portions of the frame and cooperate with, or are juxtapositioned to other portions of the machine, such as the endless belts, etc., the simplest method of effecting the objective of this invention is to sectionalize the frame end of the machine at

45 the sheet intake end thereof.

This sectionalized end, accordingly, cannot only be adjusted for the purpose described, but can be adjusted, when desired, to other corrugating machines having a sheet discharge level, or levels, different from that herein indicated at X and Y in Fig. 3. These diagrammatic representations indicate the discharge ends of the upper and lower knife delivery conveyors of a duplex machine.

55 Herein A generally indicates the frame, 2 and

2' the aligned shafts mounted therein and driven by motors M and M', respectively, also carried by the frame through a belt sprocket and chain drive. These shafts carry pulleys supporting belts 4 and 4' carried by shafts I and I', respectively, at the intake end of the machine. The upper runs are suitably supported by plates, as illustrated in Fig. 4 of said patent.

Longitudinal portions of machine dependingly and adjustably support the gates 55 and 55' and the pressure fingers 61 and 61', the adjustments and operation being exactly as described in said patent.

By sectionalizing the intake end of the machine frame and near the lower corner, the entire machine can be tilted at a slight angle to the horizontal so that the pulleys on shaft I supporting belts 4 can occupy the position level of the pulleys on shaft I' supporting belts 4'.

Accordingly, when it is understood that the machine is about fourteen feet long and this intake end difference is about fourteen inches, the tilt is not very great in the slope of the entire machine, except for the intake lower end. Hence all relative positions are maintained as before, and no other adjustments are required by reason of intake level adjustment. Naturally, the maximum limit of lowering is that which just permits pulleys on the shaft I' to just clear the right hand track, Fig. 3.

Herein one additional modification is desirable, to-wit: the lower, longitudinal frame members D at opposite sides are inclined upwardly from the discharge end to such an elevation at the intake end so that these members at their front ends, when the adjustment is made for maximum lowering, will just clear the track supporting surface.

Referring more particularly to Fig. 3 herein, E indicates the major portion of the intake end of the frame A. Shafts I and I' are supported thereby as shown in said patent. The tracks T, as before, support rollers or flanged wheels a.

The intake end wheels a are carried by stub shafts b, in turn carried by the lower portions

of the end frame portions. In Fig. 3, the right hand lower portion is indicated by letter c. As shown in Fig. 3 these preferably are straddled and lapped by portions E.

The means for adjustably connecting the adjacent lapping ends may be of any convenient form. Likewise, the connections may be simultaneously adjustable or independently adjustable, as illustrated. Herein such connection is indicated at F.

From the foregoing, therefore, disconnection or loosening at F and lowering of frame end E, relative to footing portion C thereof, will effect lowering of the under belt structure intake or receiving end to the original level of the intake end of the narrower belt structure for the purpose described.

While the invention has been illustrated and described in great detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character.

The several modifications described herein, as well as others which will readily suggest themselves to persons skilled in this art, all are considered to be within the broad scope of the invention, reference being had to the appended claims.

The invention claimed is:

1. A stacking machine for handling both discharges from a duplex corrugator, comprising in combination a full width stacking mechanism having an intake at one level for one of the corrugator discharges, a lesser width stacking mechanism having an intake at another level for the other of the corrugator discharges, a single frame for both mechanisms, and adjustable means for tilting the intake end of the frame to position the intake end of the full width mechanism at the normal level of the intake of lesser width stacking mechanism.

2. A stacking machine as defined by claim 1 wherein the lesser width stacking mechanism intake end normally is below the level of the full width stacking mechanism intake.

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