

Jan. 9, 1968

U. A. LAURÉN

3,362,707

AUXILIARY STACK HOLDER

Filed Nov. 27, 1964

2 Sheets-Sheet 1

Fig. 1

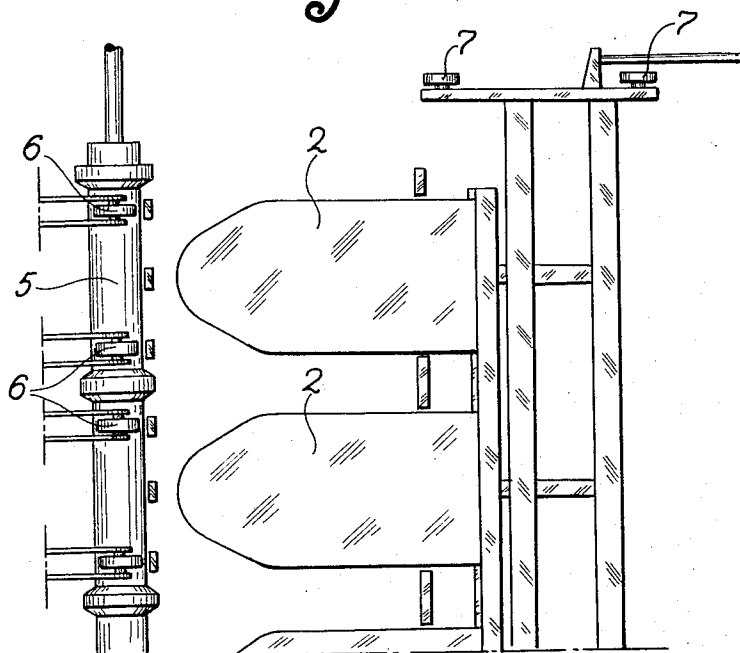
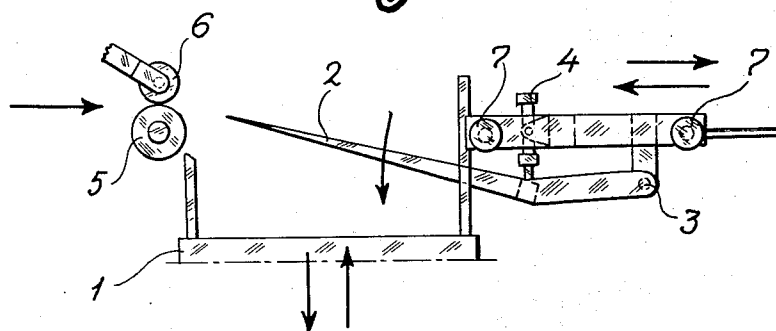


Fig. 2



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2 Sheets-Sheet 2

Fig. 3

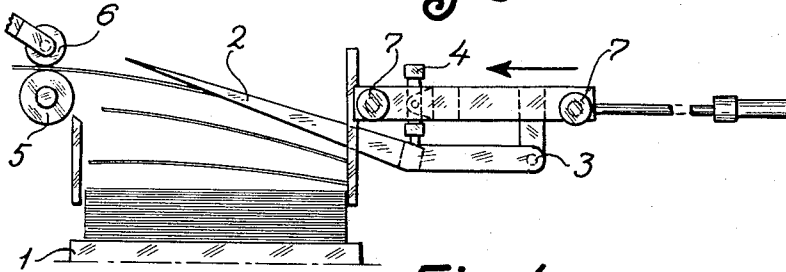


Fig. 4

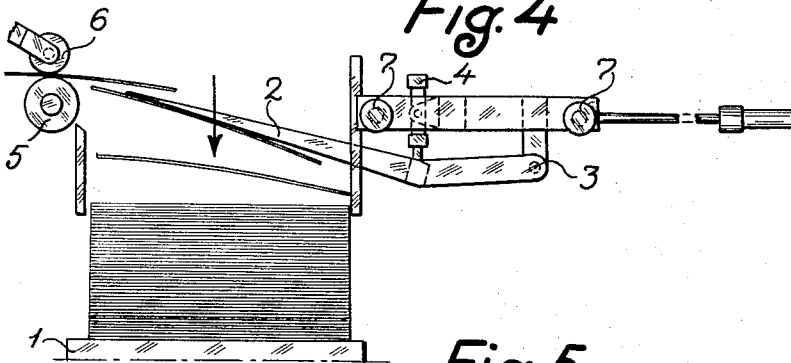


Fig. 5

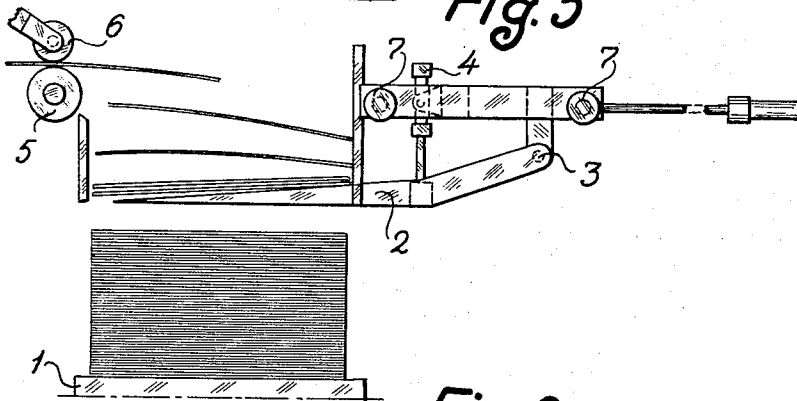
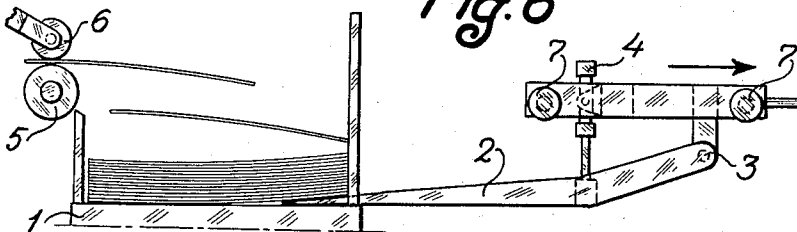


Fig. 6



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3,362,707

AUXILIARY STACK HOLDER

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1 Claim. (Cl. 271-88)

This invention relates to a sheet delivering apparatus for piling sheets of wood pulp, paper and the like, whereby the sheets are piled up to a table, which is evacuated as soon as the sheet piles have attained full weight or height, and which are provided with receiving devices such as forks or the like, for preventing the sheets from falling to the table during the time the evacuating is taking place. The object of the invention is to provide a sufficiently fast device of this type to permit the use of high speeds for the pulp web.

According to conventional construction the device preventing the sheets from falling to the table during the time the sheets are removed is shaped as a fork consisting of a number of parallel rods, which are movable in the direction of the pulp web. The fork moves forward a distance equal to or longer than the length of the sheet with a velocity sufficiently high to permit the fork to be pushed between two falling sheets without touching them. With fast machines the available time is only a fraction of a second. In conventional sheet delivering devices used with high speed machines great difficulties have been encountered as regards the synchronization of the movement of the fork to that of the sheet, as well as the braking of the said movement.

The object of the present invention is to eliminate the above-mentioned defects, the essential characteristics of the invention being that the receiving device is arranged to pivot fastly in a vertical direction from a neutral position down to a receiving device as soon as the pile of sheets on the table has attained full weight or height, and in that the receiving device, after the table has been evacuated and returned to its receiving position, is pulled away and returned to its neutral position above the falling track of the sheets.

The device according to the invention is described in more detail in the following with reference to the attached drawings, which illustrate an embodiment of the device according to the invention as an example, and in which

FIG. 1 is an elevational view of the device,

FIG. 2 is a plan view of the device, and

FIGS. 3 to 6 illustrate the operation of the device.

The fork on which the sheets are piled during the time the sheet table is evacuated consists of spadelike plates 2 pivoted around the axle 3. The pivoting movement is brought about by means of the pneumatic cylinders schematically shown at 4. The downward movement of such plates takes place so that the fork 2 moves with a great velocity from its upper position (FIG. 3), in which position the sheet after its passage of the ejector roll 5 and the pressure rolls 6 proceeds under the plates 2 to fall onto the table 1, to a position (FIG. 4), in which the sheets fall down to a position above and upon the sheet plates 2. After this the fork descends slowly to a horizontal position (FIG. 5). The fork is arranged to be movable horizontally to the right for a distance corresponding to the length of the sheet. It is provided with a wheel 7 and is driven by means of a pneumatic cylinder or a motor not described in detail.

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Instead of the plates it is possible to utilize parallel rods.

Since the pivoting movement, which is necessary for preventing the sheets from falling to the sheet table, is short, being only a fraction of the movement necessary with heretofore known devices, the device according to the present invention can be used in connection with high speed machines, where the time difference of the delivery of successive falling sheets is very short.

I claim:

1. A device adapted for use in sheet delivering apparatus for piling sheets of wood pulp, paper, and the like, said device comprising means for delivering said sheets in spaced sequence along a generally horizontal path, stop means interposed in the path of the thus delivered sheets to intercept the forward edges of said sheets, said stop means comprising upstanding members spaced horizontally, a vertically movable generally horizontally disposed table selectively located in a first position to receive the thus delivered and intercepted sheets so as to form a stack of sheets thereon, means to move the table with the stack of sheets supported thereon from said first position thereof to a second position wherein the stacked sheets are discharged from the table, and means selectively receiving the delivered sheets from the sheet delivering means when the table is removed from its said first position, said last named means comprising blade-like means providing a substantially flat upper sheet supporting surface selectively interposable above the first position of the table to receive sheets from the sheet delivering means, said blade-like means being receivable through the openings between successive upstanding members forming the stop means, means for pivotally supporting the blade-like means at the end thereof adjacent the said stop means for movement of the blade-like means pivotally about a horizontal axis from a first position, wherein it receives delivered sheets, to a second position above said first position, said stop means also intercepting the forward ends of the sheets when thus deposited on said blade-like means, and means to withdraw the blade-like means, upon the relocating of the table into its said first position, whereby to discharge the sheets from the blade-like means and cause them to be transferred to the table, said last named means comprising means for moving said pivotal support for the blade-like means horizontally toward the stop means and away from the stop means in the direction of travel of the sheets from the sheet delivery means, said blade-like means having a generally flat lower surface, the blade-like means when raised into its second position, above the table disposed in the first position of the latter, being positioned so that its lower surface intercepts the leading edges of the delivered sheets thereby to deflect them downwardly upon the upper surface of the table and of the stack of sheets disposed on the table.

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