

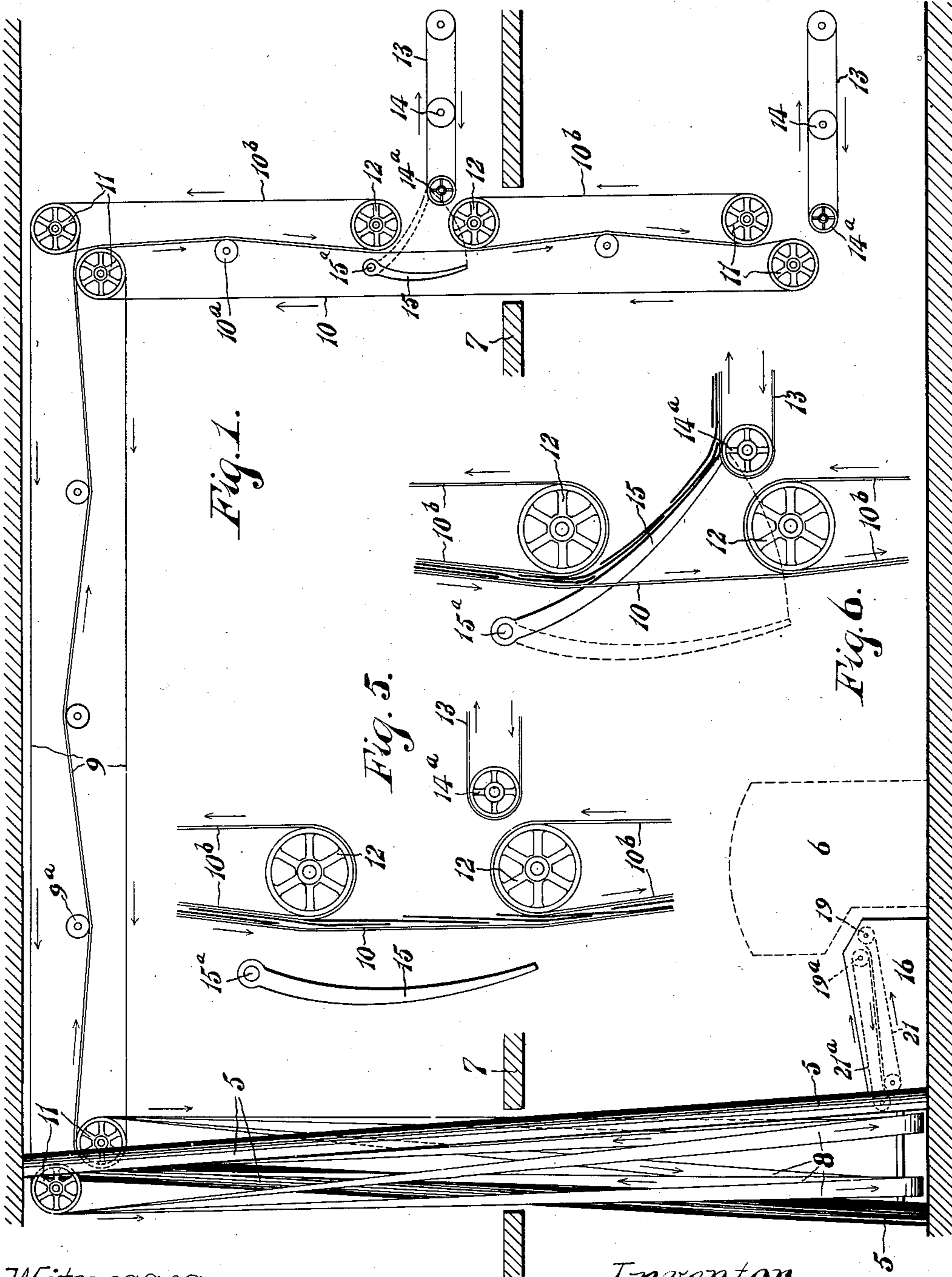
No. 862,148.

PATENTED AUG. 6, 1907.

V. FILTEAU.
CARRIER.

APPLICATION FILED JUNE 13, 1906.

2 SHEETS—SHEET 1.



Witnesses

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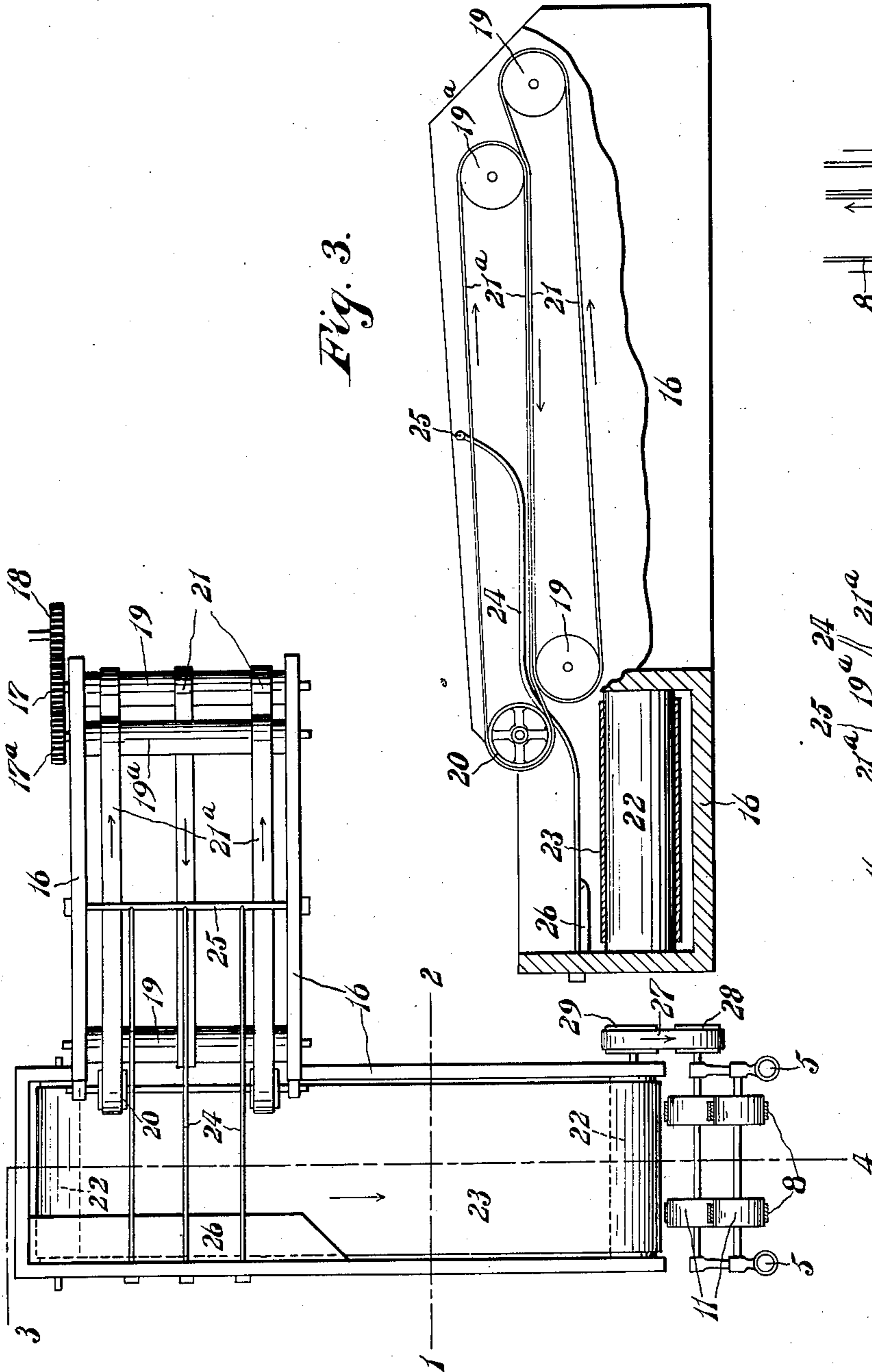


Fig. 3.

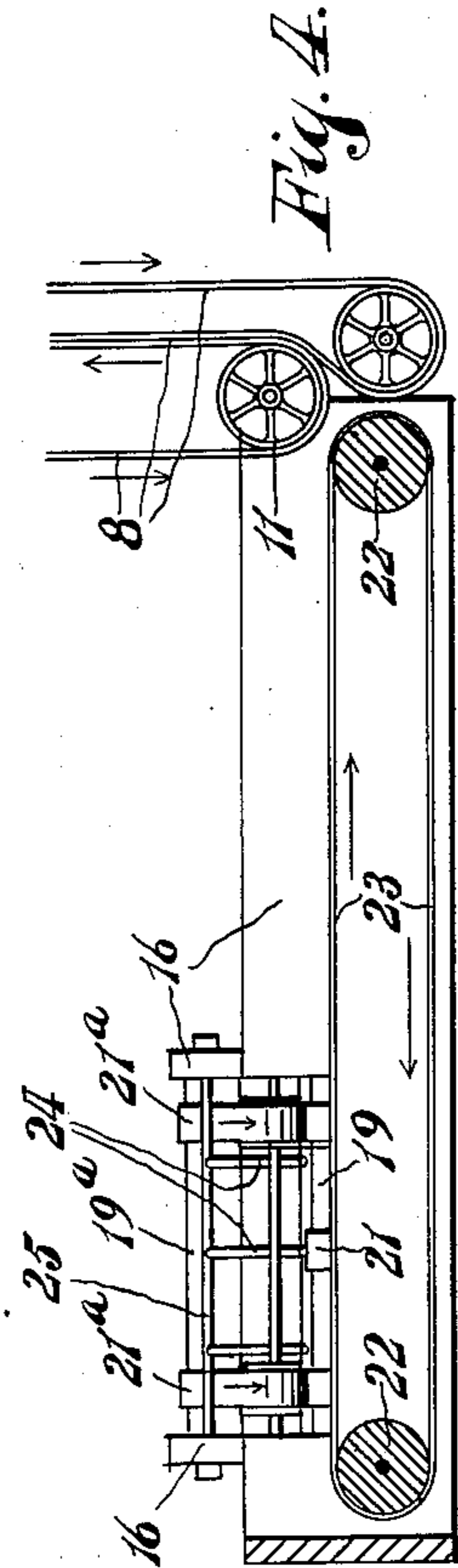


Fig. 4.

Fig. 2.

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VICTOR FILTEAU, OF MONTREAL, QUEBEC, CANADA.

CARRIER.

No. 862,148.

Specification of Letters Patent.

Patented Aug. 6, 1907.

Application filed June 13, 1906. Serial No. 321,461.

To all whom it may concern:

Be it known that I, VICTOR FILTEAU, of the city of Montreal, in the Province of Quebec and Dominion of Canada, have invented certain new and useful Improvements in Carriers, of which the following is a full, clear, and exact description.

My invention relates to carriers particularly adapted to be used in connection with printing presses and is designed as an improvement upon my U. S. Patent No. 817,842, dated April 17th, 1906.

In the press rooms of many newspapers, and especially in those located in the congested districts of large cities, adequate floor space is often unavailable, and it has heretofore been found impossible to install automatic newspaper carriers owing to the limited space between the delivery mechanism of the press and the adjacent walls of the room. Moreover, many presses deliver one edition of a newspaper in quarter fold and another edition in half fold, thus necessitating the attachment of a subsidiary folding mechanism. Papers delivered in quarter fold are usually ejected from the press at right angles to those delivered in half fold, and a carrier that would operate with the former delivery would not operate with the latter. It has been found practicable to install carriers to convey papers in a direct line or at 180 degrees to the ejecting mechanism; but, to my knowledge, it has never been possible to install a carrier to operate successfully at right angles to the delivery mechanism.

One of the main objects of this invention is to provide means for transferring the folded papers in overlapping relation from the press ejecting mechanism onto a carrier traveling at right angles to said ejecting mechanism, in order that a single conveyer may be used for carrying papers either in quarter or half fold.

This invention further provides for a carrier being installed in conjunction with a press so situated that no space would be available for a carrier operating in a direct line with the ejecting mechanism.

Another object of this invention is to provide means for delivering papers upon different floors, in order that various deliveries may be kept in operation simultaneously.

A further object is to provide means for so directing the course of the horizontal carrier that papers may be conveyed in an angular direction to the line of delivery from the vertical carrier.

To accomplish these objects, I provide a double belt carrier which may be positioned in the most convenient relation to the press, but preferably in line with the ejecting mechanism of either the quarter or half fold delivery. To cooperate with this carrier, I provide a subsidiary conveyer traveling at right angles to said carrier and operating to receive the folded papers from the press and deliver them onto said carrier in over-

lapping relation. The speed of the subsidiary conveyer corresponds to the speed of the press, while that of the carrier proper is considerably slower in order that the papers may be carried in overlapping relation. The regulation of the various speeds, however, is well known in the art. The vertical standards of the carrier proper may, if desired, be given part of a turn in order to carry the papers at an angle varying from zero to 90 degrees to the angle of delivery. I further provide the carrier with adjustable fingers or other suitable device adapted to direct the papers onto a suitable delivery mechanism on various floors for further distribution.

In the drawings which illustrate my invention:— Figure 1 is a general elevation of the device and shows the quarter turn imparted to the vertical carrier and a double floor delivery device. Fig. 2 is a plan view of the device for transferring the papers to a carrier at right angles to the line of delivery from the press. Fig. 3 is a vertical section on the line 1—2 of Fig. 2, and shows the arrangement of belts for transferring the papers from the folder to the carrier. Fig. 4 is a vertical section on the line 3—4 of Fig. 2, showing the further arrangement of the belts. Fig. 5 is a side elevation of a floor delivery device in inoperative position to allow the papers to be carried past the floors. Fig. 6 is a side elevation similar to Fig. 5 showing the device in operative position for delivering the papers from the belt to the floor conveyer.

Referring to the drawings, 5 designates the tubular framework for supporting the carrier, and is similar to that shown in my former patent above referred to. Under certain conditions it may be desirable to carry the papers diagonally across the press room to a distributing point, and under such circumstances, instead of arranging the vertical supports 5 in parallel relation, they are given an angular turn, as shown in the left hand side of Fig. 1. The framework is of such a character that this may be accomplished with facility, and the carrier is thus given an angular turn which may vary from zero to 90 degrees.

The newspaper folder 6, located on the floor of the press room, is shown in dotted outline, and the floor of the first story above is represented at 7. The carrier consists of double belts of the usual type, which travel upwardly to the ceiling of any floor, and are then carried horizontally along the ceiling and downwardly to the points of distribution. The ascending carrier belts are represented by the numerals 8, the horizontal carriers by 9, and the descending carriers by 10. The carriers 9 and 10 are adapted to be tightened and held taut by the rollers 9^a and 10^a, respectively, while the belts 8 may be similarly tightened by means fully explained in my former Patent No. 817,842. The belts 8, 9, and 10, pass over the pulleys 11 as shown in Fig. 1. One of the descending carrier belts is divided into sections 10^b, which sections pass

over the pulleys 12 located adjacent to the floor upon which it is desired to deliver the papers for distribution.

At the floors of each distributing point, are located the horizontal delivery belts 13 which are stretched over the pulleys 14^a and rolls 14. Curved discharge fingers 15, pivoted at 15^a, are located immediately behind the pulleys 12 and are adapted to swing into the space between the pulleys 12 so that, when desired, papers may be deflected onto the carrier belts 13, as shown in Fig. 6. When it is desired to carry the papers to the floor below, the fingers 15 may be swung back in inoperative position, as shown in Fig. 5.

The device shown in Figs. 2, 3, and 4, for transferring the papers from the folder at right angles to the carrier belts, consists of an L-shaped framework 16, one arm of which projects under the paper folder 6. This arm is provided with a pair of rolls 19 having thereon a gear wheel 17 in mesh with the gear 18 on the folder. Three belts 21 are stretched over the rolls 19. A third roll 19^a is positioned above the roll 19 and carries two belts 21^a, which are in running contact with the belts 21 and pass over the pulleys 20. The roll 19^a is provided with a gear 17^a in mesh with the gear 17. The other arm of the framework 16 is provided at each end with a roller 22, over which an apron 23 is stretched, running at right angles to the belts 21 and 21^a and at a slightly lower level. A plurality of guard fingers 24 are fixed to the framework 16 and extend across the belt 23 and are then bent upwardly to lie in the same plane and parallel with the contacting portions of the belts 21 and 21^a. The ends of the fingers 24 are bent upwardly and are attached to the cross rod 25, fixed to the framework about the middle of the belts 21^a. A guard 26 is attached to the framework 16 opposite the carrier belts 21. One of the rolls 22 carries at its outer end a pulley 29 which is connected to the driving pulley 28 of the vertical carrier belts by means of the driving belt 27.

The operation of my device is as follows:—The papers are received from the folder 6 between the rolls 19 and 19^a and are carried between the belts 21 and 21^a to be transferred onto the belt 23. The belts 21 and 21^a travel at the same speed as the folder, carrying the papers in spaced relation. The belt 23, however, is arranged to travel more slowly than the belts 21 and 21^a so that the papers are laid upon the belt 23 in overlapped relation and are thus transferred to the ascending carrier. The papers are guided on to the apron 23 by means of the fingers 24 and are maintained in position by means of said fingers and the guard 26. The papers are carried upwardly between the vertical ascending belts 8, which may if desired be given an angular turn, and are conveyed along the horizontal carriers 9 to the descending belts 10. If it is desired to deliver part of the issue on the first, or any other floor, for distribution, the fingers 15 are swung into operative position, as shown in Fig. 6, and the papers will be carried on to the delivery belts 13, there to be stacked or piled, as fully described in my U. S. Patent No. 817,892. If it is desired to carry the whole or part of the issue to a distributing floor below, the fingers 15 are swung backwardly out of operation and the papers will be carried in overlapped position past the gap between the pulleys 12—12, and down to the floor below.

The direction of travel of the belts is represented by the arrows, while the overlapped papers are represented in Figs. 5 and 6. It has not been considered necessary to illustrate the framework further than that shown in the left hand end of Fig. 1; nor has it been considered necessary to illustrate the driving mechanism or gearing of the various belts as this has been fully illustrated and explained in my former patent above referred to.

The advantages of this device will be obvious to those accustomed to handling newspapers or similar articles. The press delivers the papers at a very high rate of speed, and, while carriers have been installed to operate in direct line with the ejecting mechanism, it has not heretofore been practicable to install a carrier traveling at right angles thereto without danger of blocking the newspaper ejecting mechanism. With my device a single carrier may be adapted to carry newspapers away from either a quarter or half folding mechanism and, further, may be installed to operate within the most limited space between the ejecting mechanism and the walls of the press room. Furthermore, the mechanism for delivery on various floors will be found to be very useful.

While I have shown the preferred form of construction, several modifications may be made without departing from the spirit of my invention. The carrier belts, for instance, may consist of a single apron or of any number of belts. The floor delivery mechanism may be multiplied indefinitely.

Having thus described my invention so that the same may be readily understood by those skilled in the art to which it appertains, what I claim and desire to secure by Letters Patent, is:—

1. A device of the character described comprising a horizontally disposed L-shaped framework having belt conveyers mounted thereon and traveling at right angles to each other, means for transferring papers in over-lapping order from one of said conveyers to the other, a vertically disposed carrier mounted in line with one of said conveyers, and means for changing the angular direction of said carrier in its ascent.
2. A device of the character described comprising a horizontal L-shaped framework, belt conveyers mounted at right angles to each other upon said framework, means for transferring papers in over-lapping relation from one conveyor to the other, a vertically disposed carrier traveling in line with one of said conveyers, said vertical carrier being mounted on supports so disposed as to change the angular direction of travel of said carrier in its ascent.
3. In a device of the character described a horizontally disposed conveyor adapted to receive papers from a printing press, a second horizontally disposed conveyor traveling out of line with the first conveyor, means for transferring papers in over-lapping order from the first to the second conveyor, a vertical carrier adjacent the end of the second conveyor said carrier being mounted on a pair of supports so disposed as to change the angular direction of said carrier in its ascent, and floor delivery means cooperating with said carrier.
4. A device of the character described comprising a horizontally disposed L-shaped framework having belt conveyers mounted thereon and traveling at right angles to each other, a vertically disposed carrier mounted in line with one of said conveyers, means for changing the angular direction of said carrier in its ascent, and floor delivery means cooperating with said carrier.
5. In a device of the class described, a double belt conveyor adapted to receive papers from the ejecting mechanism of a printing press, a second conveyor traveling at right angles thereto, means for transferring papers from the first to the second conveyor in over-lapped relation, a

double belt carrier traveling in line with the second conveyer, and floor delivery means cooperating with said carrier.

5 6. A device of the class described comprising a pair of double belt conveyers traveling at right angles to each other, a carrier mounted in line with one of said conveyers, and a plurality of floor delivery mechanisms cooperating with said carrier.

10 7. A device of the class described comprising an L-shaped framework having double belt conveyers mounted thereon and traveling at right angles to each other, a carrier mounted in line with one of said conveyers, and adjustable floor delivery devices cooperating with said carrier.

15 8. A device of the class described comprising an L-shaped framework having belt conveyers mounted thereon and traveling at right angles to each other, means for transferring the papers in overlapped relation from one arm of the framework to the other, a carrier mounted in line with one of said conveyers, and adjustable floor delivery devices cooperating with said carrier.

20 9. A device of the class described comprising a horizontal L-shaped framework, belt conveyers mounted at right angles to each other upon said framework, means for transferring papers in overlapped relation from one conveyer to the other, a carrier traveling in line with one of

said conveyers, and adjustable delivery fingers cooperating with said carrier.

10. A device of the class described comprising a horizontal L-shaped framework, a double belt conveyer mounted on one arm of said conveyer, a second conveyer mounted on the other arm of said framework, means for transferring papers in overlapped relation from the first to the second conveyer, a carrier mounted in line with said second conveyer, and adjustable floor delivery fingers cooperating with said carrier.

11. A device of the class described comprising a conveyer mounted in line with the ejecting mechanism of a printing press, a second conveyer traveling at right angles thereto, means for transferring papers in overlapped relation from the first to the second conveyer, a carrier mounted in line with said second conveyer, and adjustable floor delivery fingers adapted to deliver papers from said carrier intermittently to a plurality of distributing stations.

In witness whereof I have hereunto set my hand in the presence of two witnesses.

VICTOR FILTEAU.

Witnesses:

STUART R. W. ALLEN,
W. G. ARMSTRONG.