

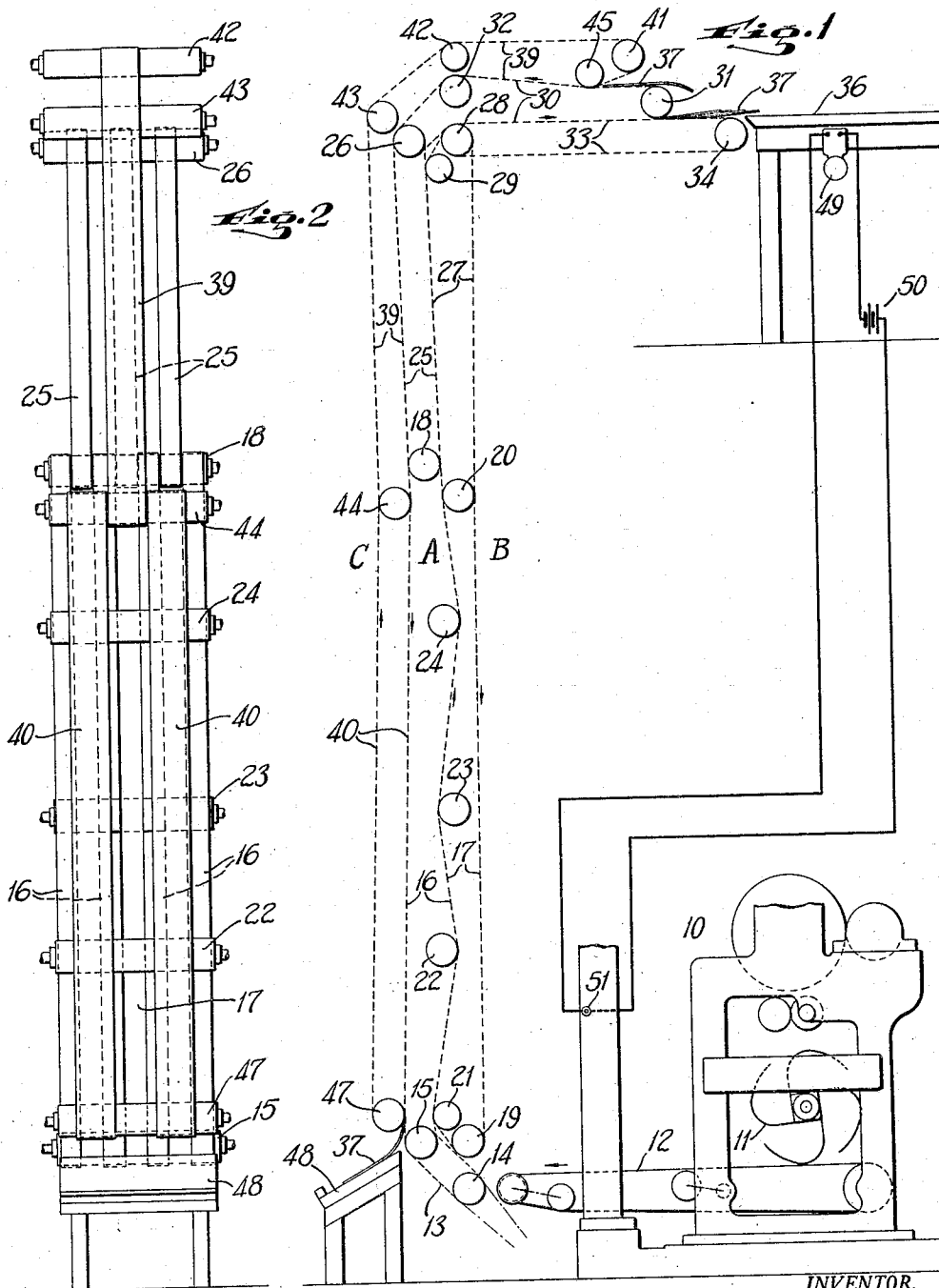
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INSPECTION SHEET CONVEYER FOR PRINTING PRESSES

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INSPECTION SHEET CONVEYER FOR PRINTING PRESSES

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My invention relates to printing presses and has for an object to provide means for facilitating inspection of the product of the press whenever desired.

5 In the operation of high speed printing presses such as those used in the manufacture of a newspaper it is necessary for the pressmen at frequent intervals to inspect the finished product so as to determine what, if any, 10 adjustments of this press may be necessary, such as, setting up rollers, adjusting the ink fountain, correcting register, etc. The present tendency in newspaper production is toward higher speeds but as the speed is increased it becomes increasingly difficult for 15 a pressman to extract a sheet from the delivery without disturbing the delivery and running the danger of choking the delivery conveyer. Also when a sheet is lifted off the 20 delivery in a press room it destroys the count in the mailing room and causes an error.

It is an object of the present invention to avoid the possibility of choking the conveyer by providing for extraction of a sheet or 25 paper for inspection in the delivery room instead of the press-room. Since, however, the inspection should take place in the press-room, my invention provides means for returning the paper to the press-room.

30 It is common practice to convey papers from the press-room to the delivery room between adjacent runs of endless belts. A specific object of the present invention is to employ a return conveyer which will cooperate with return runs of the delivery belts 35 to convey a paper from the delivery room back to the press room.

Another object of the invention is to provide for a signalling device in the delivery- 40 room, operable from the press-room, so that when the press-man desires an inspection sheet he may signal the delivery room, whereupon an operator in the latter room will extract a paper from the stream coming up to 45 the delivery room and place the paper on the return conveyer to be carried to a convenient place near the press. By this arrangement no disturbance is caused in the conveyer and 50 the delivery-room being cognizant of the fact

that the paper has been removed may make the necessary correction in the count.

With the above-named objects in view and others which will appear hereinafter, I shall now describe a preferred embodiment of my invention and thereafter shall point out the novelty and scope of the invention in the 55 claims.

In the accompanying drawing;

Figure 1 is a partly diagrammatic side elevation showing part of a printing press and my conveyer associated therewith; and 60

Fig. 2 is an end elevation of the same as viewed from the left hand side of Fig. 1.

In Fig. 1 the delivery end of a printing 65 press is shown at 10. The product of the press is delivered by a fan 11 to a horizontal belt conveyer 12 leading out of the press. The papers carried by the conveyer 12 are delivered to an inclined conveyer 13 which is 70 of the endless belt type running about rollers 14 and 15. The roller 14 may be driven from a source of power not shown. From the inclined conveyer the papers are picked up between a pair of substantially vertical conveyers A and B, which are also of the belt 75 type each being composed preferably of a number of sections. The section 16 of the conveyer A runs about the lower roller 15 and an upper roller 18, while the lower section 16 of the conveyer B runs about a lower roller 19 adjacent the inclined conveyer and an upper roller 20 close to the roller 18. The 80 papers are gripped between the adjacent runs of the conveyers A and B, and, in order to give the conveyer sections 16 and 17 the necessary grip on the papers, their adjacent runs are passed about rollers 21, 22, 23 and 24, which bear alternately on opposite sides 85 of the same.

Since the conveyer section 16 is passed about and driven by the roller 15, it is preferably formed of an even number of separate belts arranged side by side, while the inclined conveyer 13 is comprised of an odd number 95 of belts located respectively between the belts of the conveyer section 16. Thus, as shown in Fig. 2, the conveyer section 16 comprises four endless belts and the conveyer 13 would then consist of three intermediate belts. 100

However, the conveyer section 17 preferably consists of a pair of wide belts. An upper vertical extension 25 of the conveyer A consists preferably of three endless belts which pass about the roller 18 between the belts of conveyer 16 and thence at about a roller 26. Similarly there is a vertical extension 27 of the conveyer B consisting of a single wide belt which passes about the roller 20 between the two belts of the conveyer 17 and thence about a roller 28. An idler 29 serves to press the inner run of the belt 27 against the adjacent run of the central belt of conveyer section 25.

The conveyer A terminates at its upper end in a substantially horizontal section 30 composed of four belts which pass about the roller 26 between and on either side of the belts 25 and thence pass about a roller 31. The lower runs of the belts 30 pass over the roller 28 while the upper runs are guided over a roller 32. Similarly the conveyer B has horizontal section 33 composed of two belts which pass about the roller 28 and thence about a roller 34. The latter is located in such position with respect to a delivery table 36 that papers 37 coming up from the press will be delivered to the table 36.

A return belt conveyer C is disposed upon the outer side of the conveyer A, i. e. on the side opposite that occupied by conveyer B. The arrangement is such that the inner runs of the belts of conveyer C will bear against outer belt runs of the conveyer A. The conveyer C is preferably composed of two sections 39 and 40. The section 39 may be composed of a single wide belt, as shown in Fig. 2. This belt at its upper forward end passes about a roller 41 and thence the upper run of the belt is guided by rollers 42 and 43 to a lower roller 44. The inner run of the belt passes over rollers 26 and 32 and is pressed against the conveyer 30 by a roller 45. The lower section 39 is composed of a pair of belts which pass about the roller 44 and a roller 47 at the lower end of the conveyer. Immediately below the roller 47 there is a desk 48, in such position that papers carried down between conveyers A and C will be delivered to said desk.

In order to notify the delivery room that a paper is required for inspection, I provide a suitable signal such as an electric bell 49 in the delivery room. This electric bell is placed in circuit with a battery 50 and a switch 51. The latter may be located at a convenient point in the press room. Thus, whenever the pressman desires to inspect a sheet he depresses a push button 51 sounding the bell 49 and then an operator in the delivery room extracts a sheet from the stream carried in by the delivery conveyer and sends this sheet by way of the return conveyer to the inspection point or desk 48.

While I have described my invention in

considerable detail in connection with the accompanying drawing, it will be evident that various changes could be made in form and construction of the apparatus. For instance, instead of using flat belts, such as shown in Fig. 2, I may use cords or wires. Also the conveyers may be continuous instead of in sections.

It will be understood, therefore, that the drawing is to be taken as illustrative and not limitative of the invention and that I am entitled to make such changes in form and construction and arrangements of parts as fall within the spirit and scope of the following claims.

I claim:

1. The combination with a printing press of means for delivering the product of the press to a delivery point, and means for returning a sample of the product from said point to the vicinity of the press.
2. The combination with a printing press of a conveyer, means for feeding the product of the press to the conveyer to be conveyed thereby to a delivery point, and means for returning a sample of the product from said point to the vicinity of the press.
3. The combination with a printing press of a conveyer, means for feeding the product of the press to the conveyer to be conveyed thereby to a delivery point, and another conveyer cooperating with the first named conveyer to return a sample of the product from said point to the vicinity of the press.
4. The combination with a printing press of a pair of belt conveyers cooperating to convey the product of the press to a delivery point, and another belt conveyer cooperating with one of the above-named conveyers to return a sample of the product from the delivery point to the vicinity of the press.
5. In combination with a printing press, a central belt conveyer, a pair of outer belt conveyers disposed respectively in gripping relation with opposite runs of the central conveyer, and means for feeding papers from the press between the central conveyer and one of the outer conveyers to be carried to a delivery station, the central conveyer and the other outer conveyer serving to return papers from the delivery point.
6. In combination with a printing press, a central belt conveyer, a pair of outer belt conveyers disposed respectively in gripping relation with opposite runs of the central conveyer, means for feeding papers from the press between the central conveyer and one of the outer conveyers to be carried thereby to a delivery point, the central conveyer and the other outer conveyer serving to return papers from the delivery point to an inspection point, and means at the latter point for receiving the return papers.
7. In combination with a printing press, a central belt conveyer, a pair of outer belt

conveyers disposed respectively in gripping relation with opposite runs of the central conveyer, means for feeding papers from the press between the central conveyer and one of the outer conveyers to be carried thereby to a delivery point, the central conveyer and the other outer conveyer serving to return papers from the delivery point to an inspection point, a signal near the delivery point, and means near the inspection point for operating the signal.

8. In combination with a printing press, a central belt conveyer, a pair of outer belt conveyers disposed respectively in gripping relation with opposite runs of the central conveyer, means for feeding papers from the press between the central conveyer and one of the outer conveyers to be carried thereby to a delivery point, the central conveyer and the other outer conveyer serving to return papers from the delivery point to an inspection point, and means for signalling between said points.

9. A conveyer for the product of a printing press, comprising a central endless belt, and a pair of opposed outer endless belts disposed respectively in gripping relation with opposite runs of the central conveyer, whereby the product of the press placed between one run of the central belt and the adjacent outer belt will be carried off to a delivery station and samples of said product may be returned from the delivery station by introducing them between the opposite run of the central belt and the other outer belt.

10. A conveyer for the product of a printing press, comprising a central endless belt, a pair of oppositely disposed outer endless belts, and means for pressing adjacent runs of the several belts into gripping relation, whereby said product of the press placed between one run of the central belt and the adjacent outer belt will be carried off to a delivery station and samples of said product may be returned from the delivery station by introducing them between the opposite run of the central belt and the other outer belt.

11. A conveyer for the product of a printing press, comprising a central endless belt, a pair of oppositely disposed outer endless belts, means for pressing adjacent runs of the several belts into gripping relation, whereby said product of the press placed between one run of the central belt and the adjacent outer belt will be carried off to a delivery station and samples of said product may be returned from the delivery station by introducing them between the opposite run of the central belt and the outer belt, and means for signalling to the delivery station to return a sample of said product.

12. A conveyer belt for the product of a printing press, comprising a plurality of cen-

tral endless belts placed side by side in spaced relation, two sets of opposed endless belts disposed respectively in gripping relation with opposite runs of the central belts, and means for feeding the product of the press between the central belts and one set of outer belts whereby said product will be carried off to a delivery point, the other set of outer belts cooperating with the central belts to return samples of said product.

13. A conveyer belt for the product of a printing press, comprising a plurality of central endless belts placed side by side, two sets of opposed endless belts disposed respectively in gripping relation with opposite runs of the central belts, means for feeding the product of the press between the central belts and one set of outer belts whereby said product will be carried off to a delivery point, the other set of outer belts cooperating with the central belts to return samples of said product, and a receiver for said samples.

In testimony whereof, I have signed this specification.

HENRY A. WISE WOOD.

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