

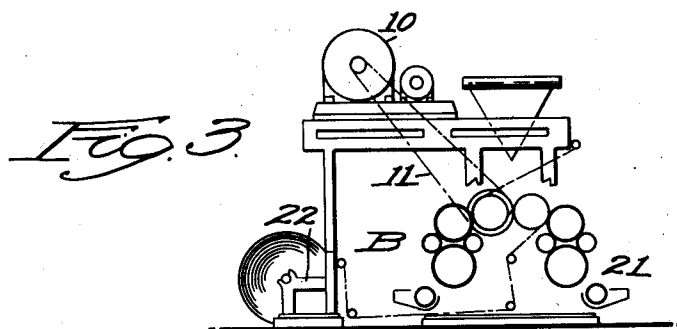
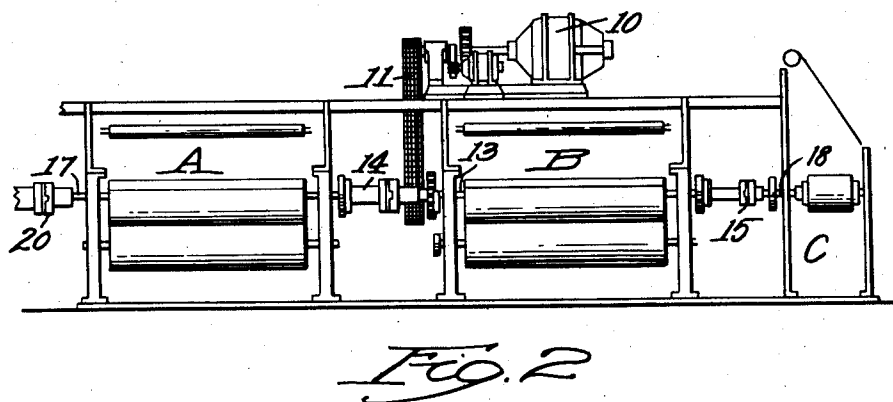
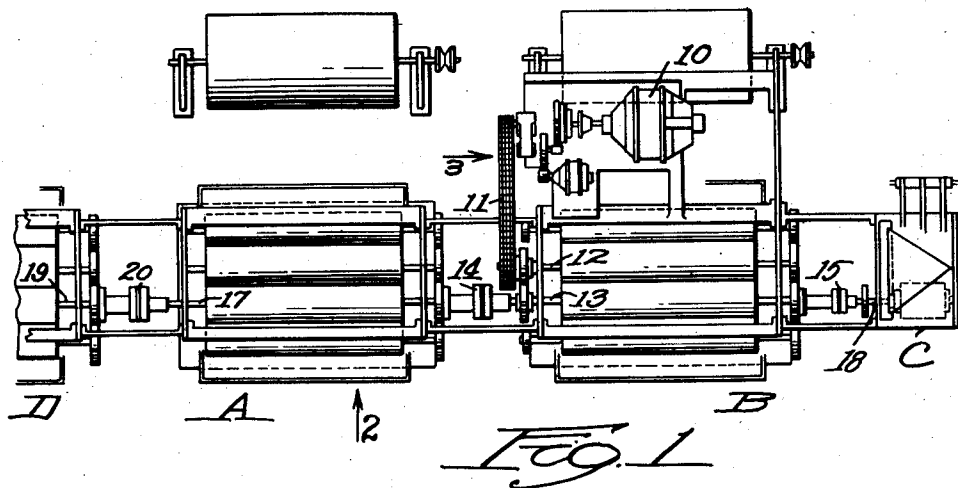
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H. A. W. WOOD

1,924,584

PRESS UNIT DRIVE

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UNITED STATES PATENT OFFICE

1,924,584

PRESS UNIT DRIVE

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Original application February 18, 1926, Serial No.
89,070, now Patent No. 1,883,256, dated October
18, 1932. Divided and this application April
10, 1930. Serial No. 443,082.

4 Claims. (Cl. 270—5)

This is a division of my application for patent, Serial No. 89,070, filed February 18, 1926, patented Oct. 18, 1932, No. 1,883,256.

This invention relates to the connection of several units of a printing press with the necessary folder or folders. The principal objects of the invention are to connect the units and folders by a series of shafts in alignment throughout the system as to reduce the expense of manufacture and maintenance; to avoid back lash in stopping and starting the presses by the elimination of the numerous gears now employed, and to do away with vertical shafts.

Reference is to be had to the accompanying drawing in which

Fig. 1 is a plan of an embodiment of this invention which accomplishes the above named objects in the highest degree;

Fig. 2 is a side view of the same; and

Fig. 3 is an end view thereof;

When a number of newspaper printing press units are connected together it is customary to form the connection by means of a horizontal driving shaft which receives and delivers the power through a number of gears mounted on other horizontal and vertical shafts connected with the units. The horizontal driving shaft usually is located directly above or below the floor of the press and is driven by a motor placed adjacent thereto. When the motor is stopped or started, the several press units and folders are subjected to a certain amount of back lash or lost motion on account of these gears. This is multiplied by each set of gears used. Thus this effect is multiplied, which causes several difficulties, sometimes even the tearing of the paper.

I have illustrated two press units A and B, placed end to end, that is, with corresponding shafts in alignment. These are also shown as provided with a folder C located at the end of one of the printing units. In this case, the drive is from a motor 10 through a chain 11 and its sprockets to a main shaft 12 on one of these units. This shaft, by gears in the usual way, drives a shaft 13 in the press, that is, the unit B. This shaft I call the driving shaft and it is provided with extensions rigidly mounted on each end, coupled directly by couplings 14 and 15 to two other driving shafts. One of these shafts is the shaft 17 for driving another printing unit A and the other is the shaft 18 which drives the folder C. Both the shafts 17 and 18 are driving shafts. It will be obvious that in addition to the units A and B I can connect these up with other units as for example, the unit D having a driving shaft 19

connected with the shaft 17 by a coupling 20 like the coupling 14. Thus this system can be extended as far as practical considerations will allow.

I have not described the details of the press units any more than enough to show the application of this invention to one type thereof. It will be understood, of course, that the press units can be provided with inking mechanism 21, fresh roll supports 22, etc.

This type of press, as shown in Figs. 1, 2 and 3, is simplified, as far as the drive is concerned, to as high a degree as is possible in a multiple unit press. This will be seen to be true, when it is pointed out that all the press units and folders are driven, from a single main shaft on one of them, through an unbroken line of driving shafts arranged end to end and in alignment and without any gears of any sort or other relatively movable parts for transmitting the power from one to another. These driving shafts, as well as the main shaft, are all located at the same level, or substantially so, namely the level of all the printing couples, so vertical shafts are eliminated with their gears.

Intermediate vertical shafts and gears are done away with, except that one pair of gears is used, but there is an important saving in the number of gears required for each machine. This reduces the expense and the amount of back lash.

Although I have illustrated and described only one form of the invention I am aware of the fact that modifications can be made therein by any person skilled in the art without departing from the scope of the invention as expressed in the claims. Therefore I do not wish to be limited to all the details of construction herein shown and described, but what I do claim is:—

1. The combination with a plurality of press units, each having a horizontal shaft parallel with the axes of the printing couple thereof, of a direct rigid connection between said shafts of two units which are in alignment with each other, and a main shaft directly connected with one of the driving shafts for driving it.

2. The combination with a plurality of press units, of a folder, a series of shafts belonging to said press units and folder all located in longitudinal alignment, and direct means for connecting the opposite ends of one of said shafts in one of the press units to a corresponding shaft in another press unit and a corresponding shaft in the folder respectively.

3. The combination with a press unit and a main shaft parallel with the axes of the printing couple thereof, said press unit having a driving

shaft connected with the main shaft, of another press unit and a folder, each having a driving shaft, the two latter driving shafts being directly connected to the first named driving shaft.

5 4. In a printing system, the combination with a plurality of press units arranged end to end, and a folder arranged at the end of one of said

press units, of an unbroken line of shafts extending through the press units and folder, the different parts thereof being rigidly connected together for driving all of said machines directly from one of them.

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