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DRIVE FOR UNIT PRESSES AND FOLDERS

Original Filed March 16, 1926

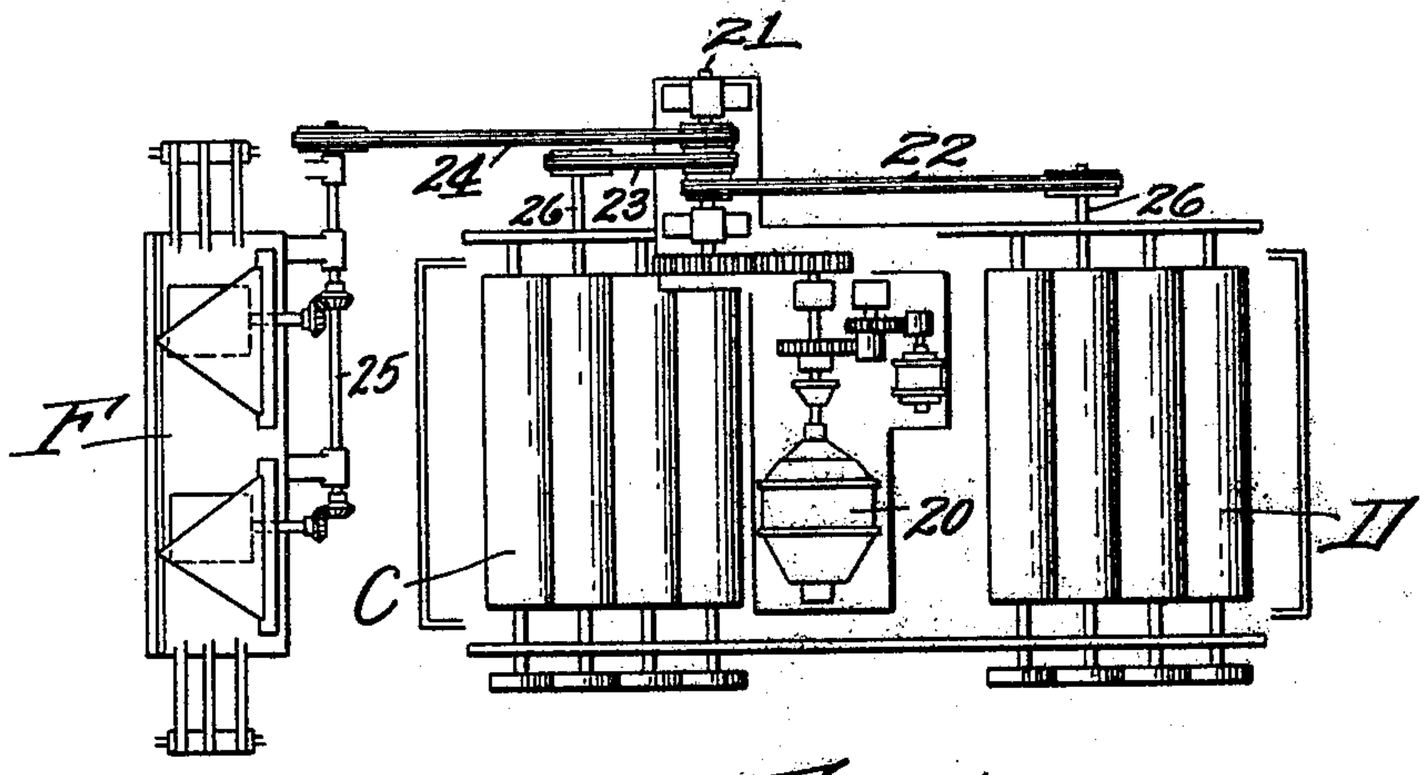

FIG. 1

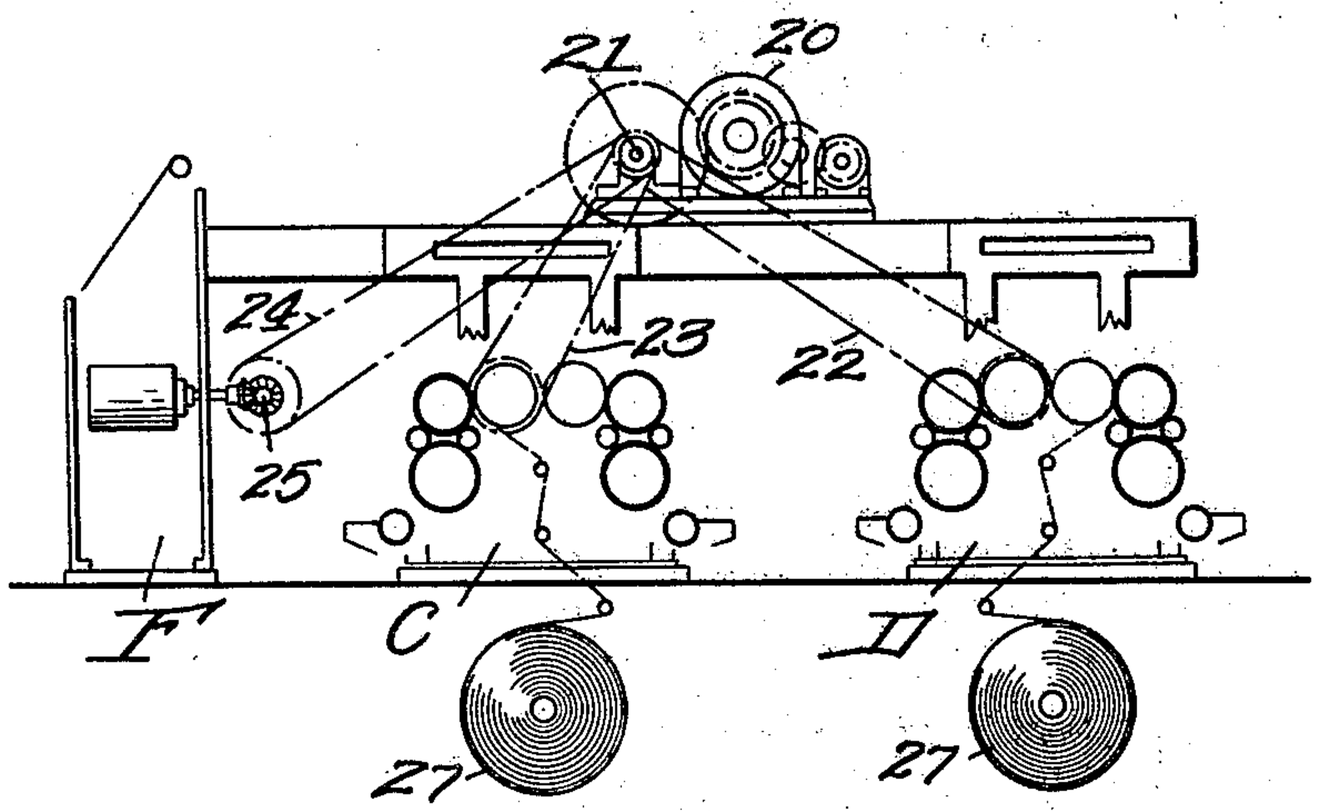

FIG. 2.

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UNITED STATES PATENT OFFICE

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DRIVE FOR UNIT PRESSES AND FOLDERS

Original application filed March 16, 1926, Serial No. 95,036. Divided and this application filed November 21, 1929, Serial No. 408,711. Renewed March 31, 1932.

This invention is a division of my application Serial No. 95,036, filed March 16, 1926, on a drive for unit press and folder.

The principal object of this invention is to provide a compact drive for connecting the several units of a press with the main driving means in such a way that the several units can be disconnected from the drive individually so as not to interfere with the driving of the other units and in which this can be done in a convenient manner.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawing in which

Fig. 1 is a plan of a certain type of multiple press showing the drive for the several units arranged in accordance with this invention, and

Fig. 2 is a side view thereof.

Heretofore one method employed for connecting up several units consisted of a direct connection between the ends of the shafts of the cylinders in each unit, generally constructed with projections on the shafts which engaged each other to drive the several units together. In that case the disability of one of the intermediate units breaks the power transmissions to any unit, which may be driven from it on either side thereof, and throws out the whole mechanism until the necessary repairs are made.

This invention is designed for the purpose of obviating this difficulty.

In the form shown, the two press units C and D are set up side by side, that is, with the corresponding cylinders parallel with each other longitudinally. Of course, the invention is not limited to the employment of two units only. Furthermore the folder F is located at the end of the series.

A motor 20 drives a main driving shaft 21 through the usual gearing. Three separate chain drives 22, 23 and 24 are employed to deliver power from this single shaft adjacent to the motor to the printing units C and D and the molding mechanism F. The main shaft 21 and the driving shafts 26 of the press units and the driving shaft 25 of the folder are parallel.

In this way the driving shafts of the units C, D and F are driven from the driving shaft 21 at whatever speed may be desired. Ordinarily, of course, these driving shafts are all driven at the same speed. By this means any intermediate unit may be silenced by disconnecting the corresponding sprocket chain from the sprocket wheels, without in any way interfering with the operation of the driving or folding units on either side of it.

The supply rolls 27, it will be noted, can be located out of the way directly under the press units.

It is to be understood that although I have shown only two printing units the invention is not limited to any particular number. This arrangement secures all the objects mentioned above, without in any way decreasing the output of the press or limiting the operation of its several units.

Although I have illustrated and described only one form of the invention I am aware of the fact that modifications can be made in the way of connecting the parts which have been described with the units of the press and with the motor. Therefore, I do not wish to be limited in this respect but what I do claim is:—

1. In a printing machine, the combination with a plurality of printing units arranged adjacent to each other, side by side and a folding unit arranged at the end of the series, of a main shaft, means for driving the main shaft, a series of sprocket wheels on the main shaft, a series of sprocket wheels, one on each of the driving shafts of the several units, and sprocket chains connecting the sprocket wheels with each other in pairs side by side.

2. In a printing machine, the combination with a plurality of printing units arranged adjacent to each other, side by side, and a folding unit arranged at the end of the series, of a main shaft, and driving shafts for the printing and folding units, all parallel with each other, means for driving the main shaft, a series of sprocket wheels on the main shaft, a series of sprocket wheels, one on each of the driving shafts of the several

units, and sprocket chains connecting the sprocket wheels with each other.

3. In a printing machine, the combination with a plurality of printing units arranged adjacent to each other, side by side, and a folding unit arranged at the end of the series, of a main shaft, means for driving the main shaft, a series of sprocket wheels on the main shaft, a series of sprocket wheels, one on each of the driving shafts of the several units, and sprocket chains connecting the sprocket wheels with each other in pairs side by side and supply rolls for the press units located below them.

4. In a printing press, the combination with printing units and folders arranged side by side, of a drive shaft parallel to the printing cylinders of said units, and individual chain connections from the drive shaft to each unit and the folders.

In testimony whereof I have hereunto affixed my signature.

JOHN A. ISBELL.