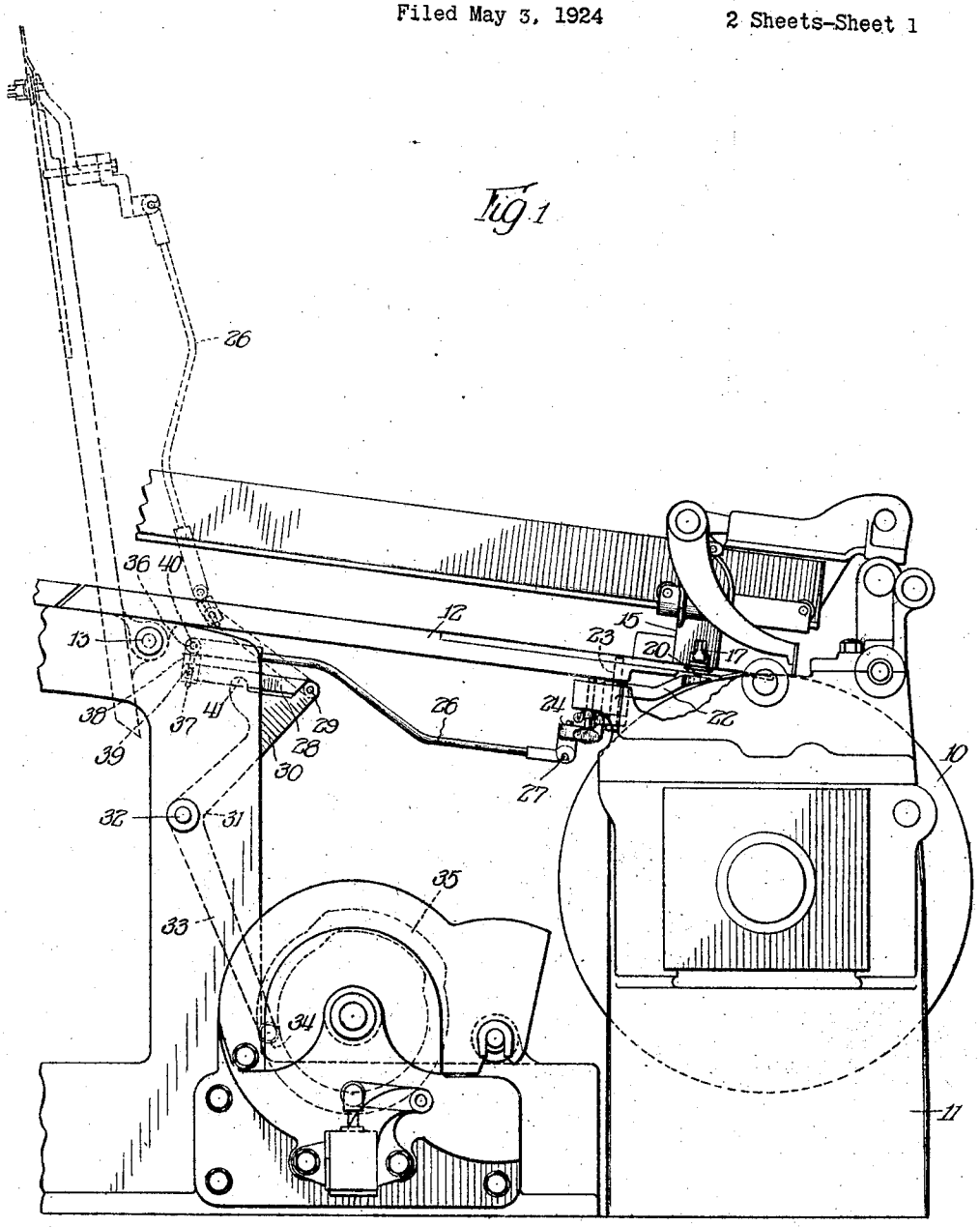
May 18, 1926. 1,585,369

J. R. BLAINE

SIDE REGISTER MECHANISM

Filed May 3, 1924 2 Sheets-Sheet 1

Fig. 1



Witness:
R. Burkhardt

Inventor:
Joseph R. Blaine,
By Wilkinson, Huxley, Byron & Knight
Attys.

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SIDE REGISTER MECHANISM

Filed May 3, 1924 2 Sheets-Sheet 2

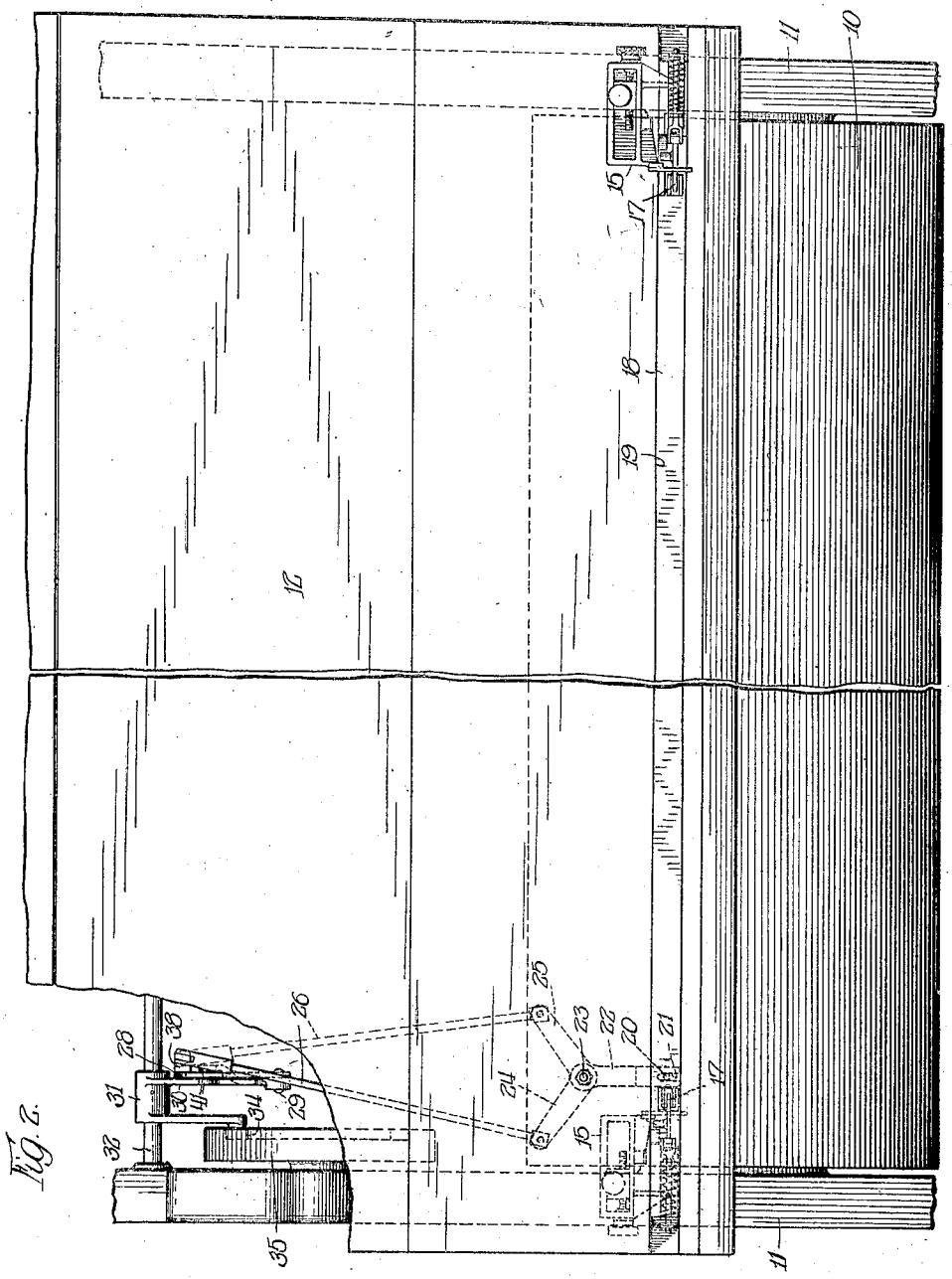


Fig. 2.

Witness:
R. Burkhardt

Inventor:
Joseph R. Blaine,
By Wilkinson, Huxley, Byron & Knight
Attys.

Patented May 18, 1926. 1,585,369

UNITED STATES PATENT OFFICE.

JOSEPH R. BLAINE, OF OAK PARK, ILLINOIS, ASSIGNOR TO MIEHLE PRINTING PRESS & MANUFACTURING COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

SIDE REGISTER MECHANISM.

Application filed May 3, 1924. Serial No. 710,758.

This invention relates to printing presses and more particularly to side register mechanism therefor.

One object of the invention is to provide simple, durable, and efficient means whereby a side guide mounted on a feed board which is to be moved or swung away to facilitate "make ready" on the cylinder may be operatively connected to its actuating mechanism in a manner whereby the side guide need not be disconnected, adjusted or timed when, or preparatory to the moving or swinging of the feed board.

Another object is to provide a simple and efficient arrangement whereby side guides at either side of the press may be properly operated from the same cam.

These and other objects are accomplished by means of the arrangement disclosed on the accompanying sheets of drawings in which—

Figure 1 is a fragmentary side elevation of a printing press embodying my invention; and

Figure 2 is a fragmentary top plan view of the same.

The various novel features of the invention will be apparent from the following description and drawings, and will be particularly pointed out in the appended claims.

Referring to the figures of the drawings, it will be noted that my invention is illustrated in connection with a printing press having an impression cylinder 10 rotatably mounted in a frame 11, sheet material being fed to the cylinder down over a feed board 12 which preferably is pivotally mounted as at 13 to the frame 11. The feed board 12 is pivotally mounted so that it may be swung upwardly away from the cylinder to facilitate "make ready" thereon.

In connection with registering a fed sheet of material, said sheet is first fed against suitable front guides whereupon the sheet is side registered against a side guide 15. For giving the sheet its sidewise movement the sheet is gripped between a movable jaw 17 and a portion of a bar 18 slidably mounted sidewise of the press within a groove 19 in the feed board 12. Extending downwardly through a slot in the feed board from the slide bar 18 is a pin 20 which is received within a slot 21 formed within one end of a lever arm 22 secured to a pin 23 to which also are secured two lever arms 24 and 25. The mechanism for actuating the slide bar 18 is connected to either one or the other of the lever arms 24 or 25, depending upon at what side of the press it is wished to side register. As shown in full lines in the figures of the drawings, the actuating mechanism is connected to the lever arm 24 for registering a sheet at the right hand side of the press, as viewed in Figure 2. If it is desired to side register at the left hand side, the side register mechanism shown at the right hand side of the figure will be disconnected and moved beyond the path of the sheet and the left register moved into the path of the sheet as shown in dotted lines, and the operative connection then changed from lever 24 to lever 25.

The operative connection referred to includes a link 26 which has a universal connection at a point 27 with the lever arm 24, the opposite end of said link 26 also having a universal connection with respect to a second link 28 which has a folding or collapsible action with respect to the link 26. The link 28 is pivotally connected at a point 29 to one arm 30 of a bell crank lever 31 mounted upon a rock shaft 32 and having another arm 33 carrying a roller 34 which receives the proper motion from a cam 35 which may be rotated in any suitable manner from any suitable source. It will be appreciated that if the link 26 were connected directly to the lever arm 30 by a simple pivotal connection it would be impossible to swing the feed board upwardly away from the cylinder 10. However, by providing the extra link 28 having a folding or collapsible relationship with respect to the link 26 the feed board 12 may be freely swung away from the cylinder to facilitate "make ready" and swung back into position without cramping or straining any of the parts or making necessary the altering of any of the connections.

The universal connection between the link 26 and the link 28 includes an eye-bolt 36 having a stem 37 pivotally connected to a block 38 which in turn is pivotally connected at 39 to the link 28. The pivotal connection at the point 40 between the link 26 and eye-bolt 36 is horizontal, the pivotal connection between the stem 37 and the block 38 is substantially a vertical pivotal connection when the feed board is in its normal operative position, and the

connection at 39 is a horizontal pivotal connection.

In order to support the link 28 from a further downward movement, as shown in Figure 1, and also to support it against lateral movement the link is interposed between lips 41 carried by the lever arm 30. Care is to be exercised in the location of the pivotal points 27, 40 and 29 so that normally they are substantially in the same straight line to properly balance actions and reactions transmitted through the links 26 and 28.

By means of the arrangement herein disclosed and described, the side guide being mounted on the feed board may be swung up with the feed board away from the cylinder, and the side guide and its actuating connections are arranged so that they need not be disconnected, adjusted or timed when or preparatory to raising the feed board for "make ready" on the cylinder.

It is my intention to cover all modifications of the invention falling within the spirit and scope of the following claims.

I claim:

1. In a printing press, the combination of a movable mounted feed board, side register means carried thereby, and actuating mechanism for said register means including parts having a folding relationship to permit movement of said feed board without cramping any parts or altering any connections.

2. In a printing press, the combination of a movably mounted feed board, side register mechanism carried thereby and including a slidably mounted member carried by said board, and relatively collapsible actuating members operatively connected to said slide member for permitting movement of said feed board without altering any connections.

3. In a printing press, the combination of a movably mounted feed board, side register mechanism carried thereby, and means for actuating said side register mechanism including relatively collapsible members for permitting movement of said feed board without altering any connections.

4. In a printing press, the combination of a movably mounted feed board, side register mechanism carried thereby, means for actuating said side register mechanism including relatively collapsible members for permitting movement of said feed board without altering any connections, and means for supporting said relatively collapsible members in operative position.

5. In a printing press, the combination of a movably mounted feed board, side register mechanism carried thereby, actuating means for said side register mechanism including a plurality of relatively collapsible members and an actuating lever, one of said members being connected to said lever and supported thereby against movement in a plurality of directions.

6. In a printing press, the combination of a movably mounted feed board, side register mechanism carried thereby, actuating means for said side register mechanism including a plurality of relatively collapsible members and a lever connected to one of said members, said lever having lip portions for embracing opposite sides of one of said relatively collapsible members for supporting same in position.

Signed at Chicago, Illinois, this 8th day of April, 1924.

JOSEPH R. BLAINE.