

No. 896,736.

PATENTED AUG. 25, 1908.

R. MASON.
WEB GUIDE FOR PRINTING PRESSES.

APPLICATION FILED OCT. 20, 1905.

2 SHEETS—SHEET 1.

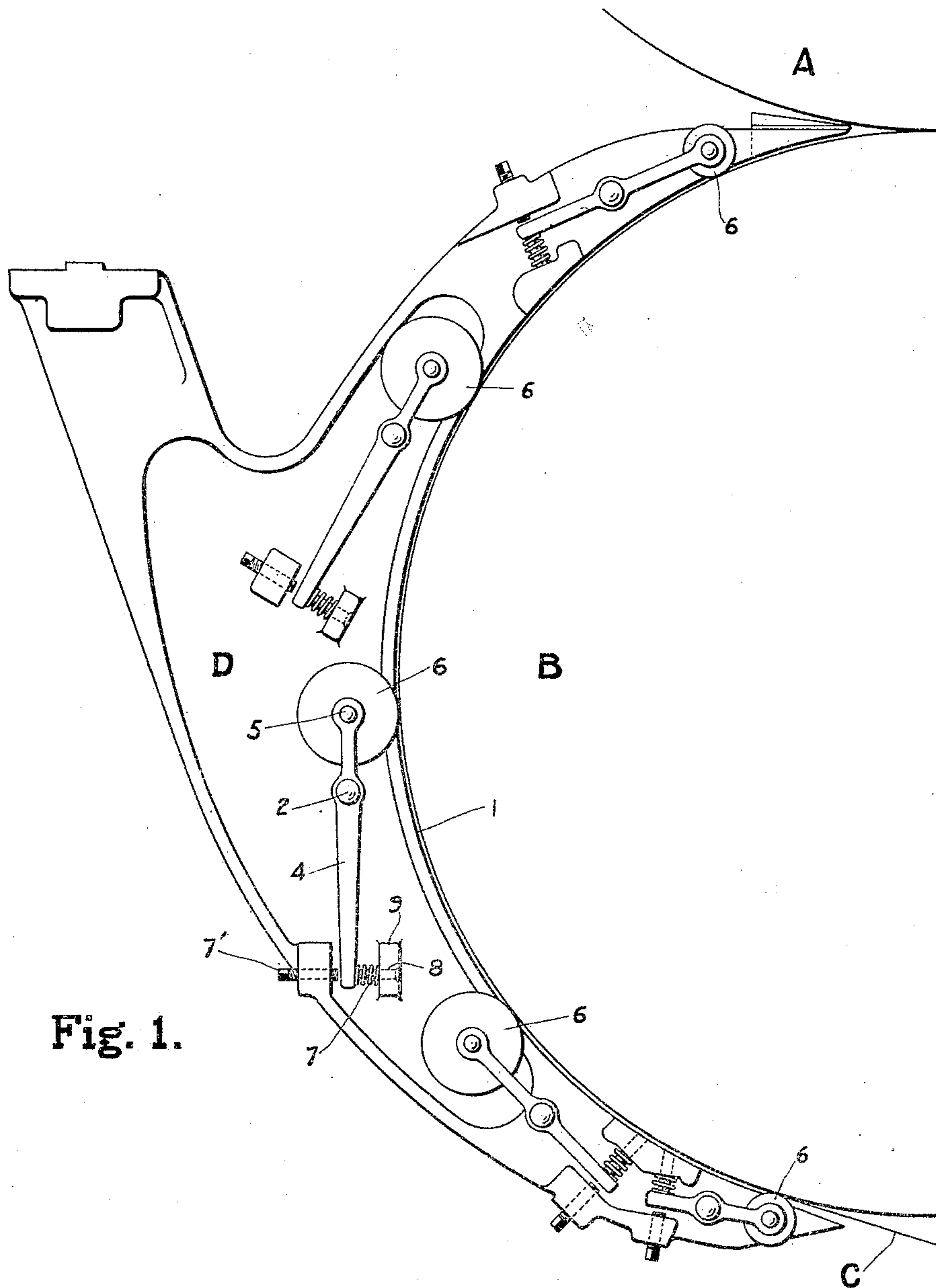


Fig. 1.

WITNESSES:

J. Clyde Ripley.
C. H. Wilson.

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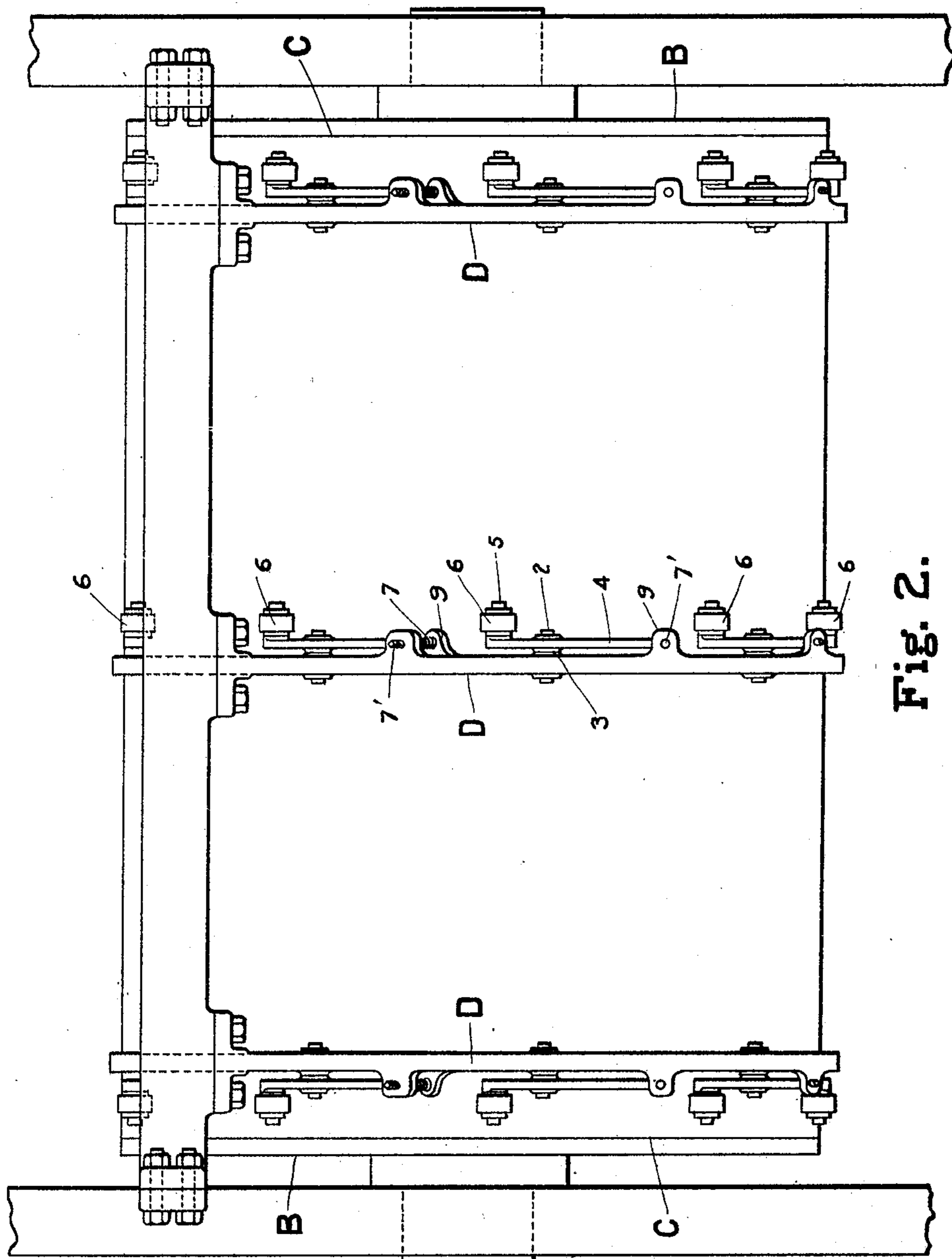


Fig. 2.

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UNITED STATES PATENT OFFICE.

ROBERT MASON, OF DOVER, NEW HAMPSHIRE, ASSIGNOR TO KIDDER PRESS COMPANY, OF DOVER, NEW HAMPSHIRE. A CORPORATION OF WEST VIRGINIA.

WEB-GUIDE FOR PRINTING-PRESSES.

No. 896,736.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed October 20, 1905. Serial No. 283,573.

To all whom it may concern:

Be it known that I, ROBERT MASON, residing at Dover, in the county of Strafford and State of New Hampshire, have invented certain new and useful Improvements in Web-Guides for Printing-Presses, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to printing presses and has for one of its objects to provide mechanism characterized by simplicity and efficiency.

Another object is to provide means adapted to guide a sheet over the impression cylinder of a printing couple and deliver the same between the members thereof.

Another object is to provide means in a perfecting printing couple adapted to guide a sheet over the impression cylinder and between the members of the printing couple, said means also operating to maintain the sheet in contact with the offset web traveling over the impression cylinder of said printing couple.

Other objects will be in part obvious and in part pointed out hereinafter.

The invention accordingly consists in the features of construction, combinations of elements and arrangement of parts which will be exemplified in the mechanism hereinafter described and the scope of the application of which will be indicated in the following claims.

In the accompanying drawings, wherein is shown diagrammatically one of the various possible embodiments of my invention: Figure 1 is a side elevation of the same. Fig. 2 is a front elevation of the same.

Similar reference characters refer to similar parts throughout both views of the drawings.

Prior to entering into a description of the specific features of my invention and in order to render certain of the objects thereof clearer of understanding, it may here be noted that, in printing presses wherein the offset web is carried upon the impression cylinder of a printing couple, grippers cannot be employed to transfer the sheet over the impression cylinder on account of the interference of the offset web. In prior constructions, endless tapes or bands have been employed in this relation, but the use of such

tapes or bands has proven impracticable for many reasons, among which are their liability to slip and the frequency with which it has been found necessary to renew or replace them.

To accomplish the above results with the avoidance of the disadvantages inherent in other mechanisms employed for this purpose, I have found it desirable to provide a plurality of independent rolls suitably mounted for rotation and so arranged with respect to the impression cylinder as to guide the sheet thereover and deliver the same between the members of the printing couple. I have also provided means whereby the sheet is held yieldingly in contact with the offset web traveling over the impression cylinder. The above and other advantages are secured in constructions of the nature of that hereinafter described.

Referring now to the drawings, there is shown at A in the present instance a perfecting form cylinder, which coöperates with a perfecting impression cylinder B. Impression cylinder B has traveling thereover an offset web C unwinding and rewinding upon suitable rolls, not herein shown, as they of themselves comprise no essential part of my present invention.

D indicates housings suitably carried by the frame of the printing press, said housings having curved peripheries, as at 1, arranged in proximity to impression cylinder B. The housings D are designed in the present instance to support rotatably the means adapted to guide the sheet over the impression cylinder and maintain the same in contact with the offset web. It may here be noted that, while in this illustrative embodiment, as shown in Fig. 2, I have shown impression cylinder B as provided with three independent housings, it is obvious that a greater or less number may be employed, although the number shown is particularly well adapted to accomplish the purposes of my invention. Housings D and the means carried thereby are similar in all respects and a description of one will, therefore, suffice.

As shown in Fig. 1, the lower end of housing D is carried away from impression cylinder B to receive the sheet from the preceding printing couple and lead the same to the transfer rolls presently to be described. The upper end of housing D is arranged in

proximity to impression cylinder B and extends within a substantially V-shaped space formed by the surfaces of form cylinder A and impression cylinder B in such position
5 as to insure the delivery of the sheet between the members of the printing couple comprised by said form and impression cylinders.

Pivotaly mounted at 2 upon lugs 3 cast upon housing D are levers 4, each adapted
10 rotatably to support at 5 transfer rolls 6. Springs 7 carried by pins 8 extending from lugs 9, cast upon housing D exert pressure upon the free ends of levers 4 to maintain transfer rolls 6 yieldingly against offset web
15 C traveling over impression cylinder B. Set screws 7' extend through threaded openings in housing D and normally have their inner ends arranged in proximity but out of contact with the free ends of levers 4.

20 The operation of my invention, which should be largely obvious from the above description, is substantially as follows: The sheet upon its delivery from the preceding printing couple enters the opening provided
25 between the lower ends of housings D and impression cylinder B, and is guided between the lowermost of transfer rolls 6 and offset web C traveling over impression cylinder B, with its freshly printed surface in contact
30 with the offset web C. As will be understood, offset web C carries the sheet over impression cylinder B, delivering the same between the members of the perfecting printing couple. During the passage of the sheet
35 over the impression cylinder B, transfer rolls 6 yieldingly maintain the same in contact with the offset web C. Set screws 7' may be manipulated to force transfer rolls 6 out of contact with offset web C, when it be-
40 comes necessary to thread a new offset web between housings D and impression cylinder B. Set screws 7' also operate to limit the pivotal movement of levers 4 and maintain the transfer rolls 6 in substantially the same
45 relative position when, for any reason, the impression cylinder B is removed from the press.

It will accordingly be seen that I have provided mechanism well adapted to achieve
50 the objects of my invention, which is characterized by simplicity of structure coupled with efficiency of action, the several parts cooperating to perform their functions with a minimum of wear.

55 It will, of course, be obvious that, while I have shown my invention in the relation above described, I do not intend to so limit its employment, as the same is well adapted for use in many other analogous relations in
60 other machines of this type.

As many changes could be made in the above construction and many apparently

widely different embodiments of my invention could be made without departing from the scope thereof, I intend that all matter
65 contained in the above description or shown in the accompanying drawings shall be interpreted as illustrative and not in a limiting sense. I desire it also to be understood that the language used in the following claims is
70 intended to cover all of the generic and specific features of the invention herein-described and all statements of the scope of the invention which, as a matter of language, might be said to fall therebetween.

75 Having described my invention, what I claim as new and desire to secure by Letters Patent, is:—

1. In mechanism of the class described, the combination with a printing couple comprising a form cylinder and an impression cylinder, of means for guiding a sheet about the impression cylinder and for delivering the sheet between said cylinders comprising a rigid member which extends partly about
80 the impression cylinder and conforms substantially to the contour thereof, said member having a plurality of journal studs disposed at different points in the length thereof, a lever journaled upon each of said studs,
85 a pressure roller journaled upon one end of each of said levers, and springs engaging opposite ends of said levers whereby the pressure rollers are forced into engagement with the impression cylinder.

90 2. In mechanism of the class described, the combination with a printing couple comprising mating form and impression cylinders and an offset web which travels over the impression cylinder, of means for guiding a
100 sheet over said impression cylinder and maintaining the same in contact with the offset web comprising a plurality of rigid members which extend partly about the impression cylinder and conform substantially
105 to the contour thereof, each of said members being provided with a plurality of integral journal studs disposed along the length thereof, a lever mounted upon each of said journal studs, a pressure roller mounted upon
110 one end of each of said levers, a spring engaging the opposite end of each of said levers for urging the pressure rollers into engagement with the sheet, and adjustable abutments threaded through portions of said
115 rigid members to limit the swinging movement of said levers.

In testimony whereof I affix my signature, in the presence of two witnesses.

ROBERT MASON.

Witnesses:

E. G. WHITNEY,
G. R. WILLIAMS.