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No. 118,835. Patented Sep. 12, 1871.

F. L. BAILEY'S

Printing Press.

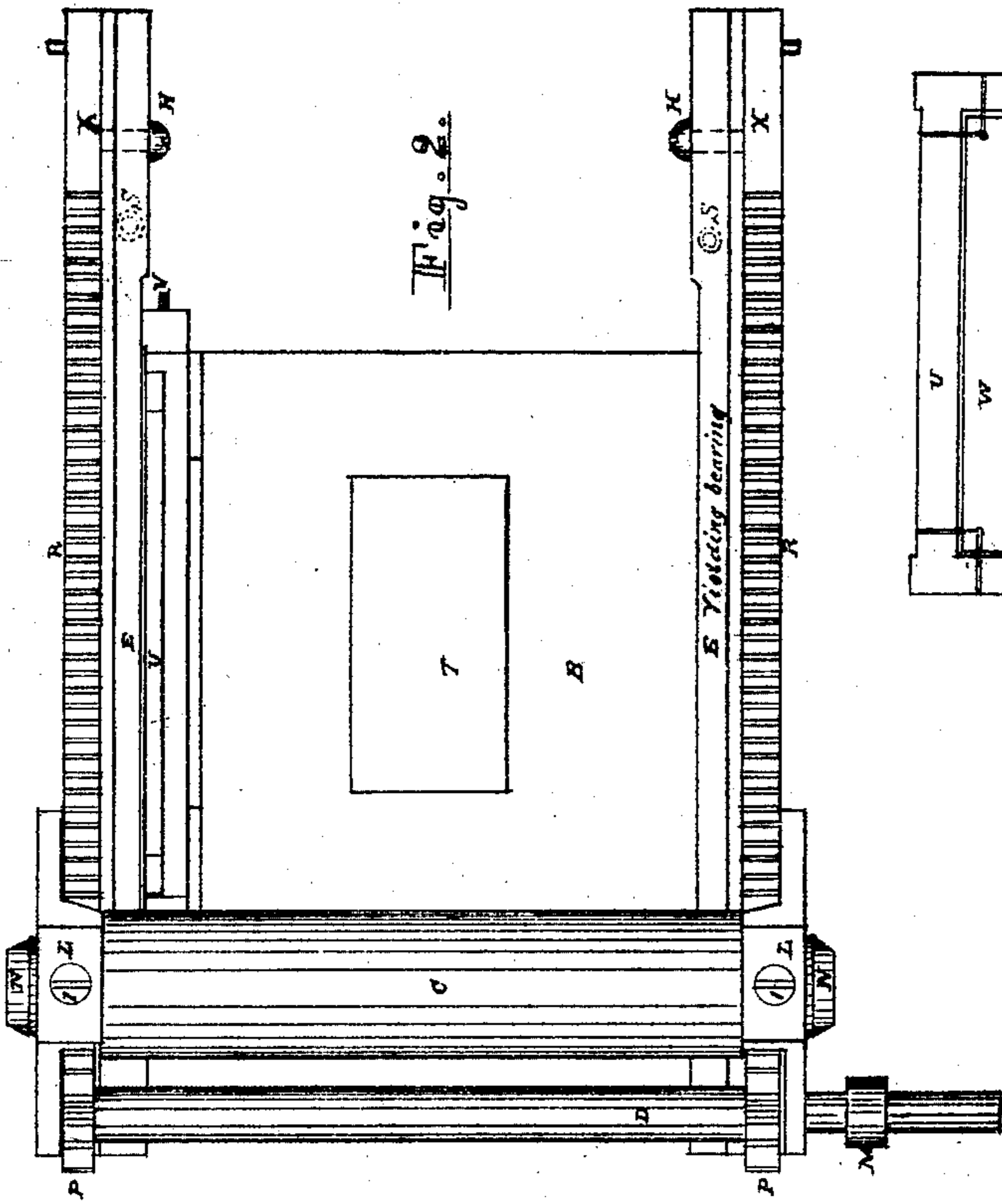


Fig. 2.

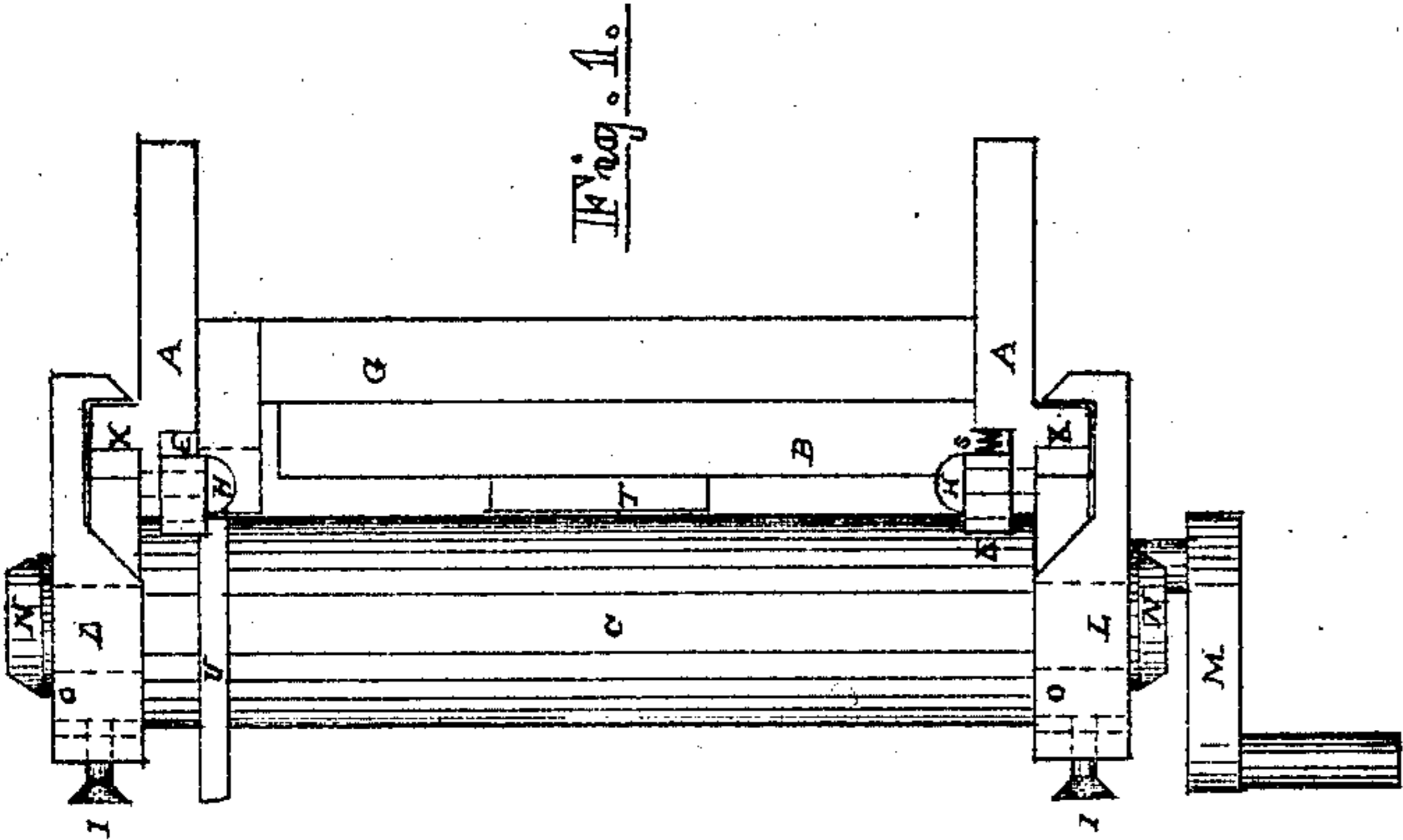


Fig. 1.

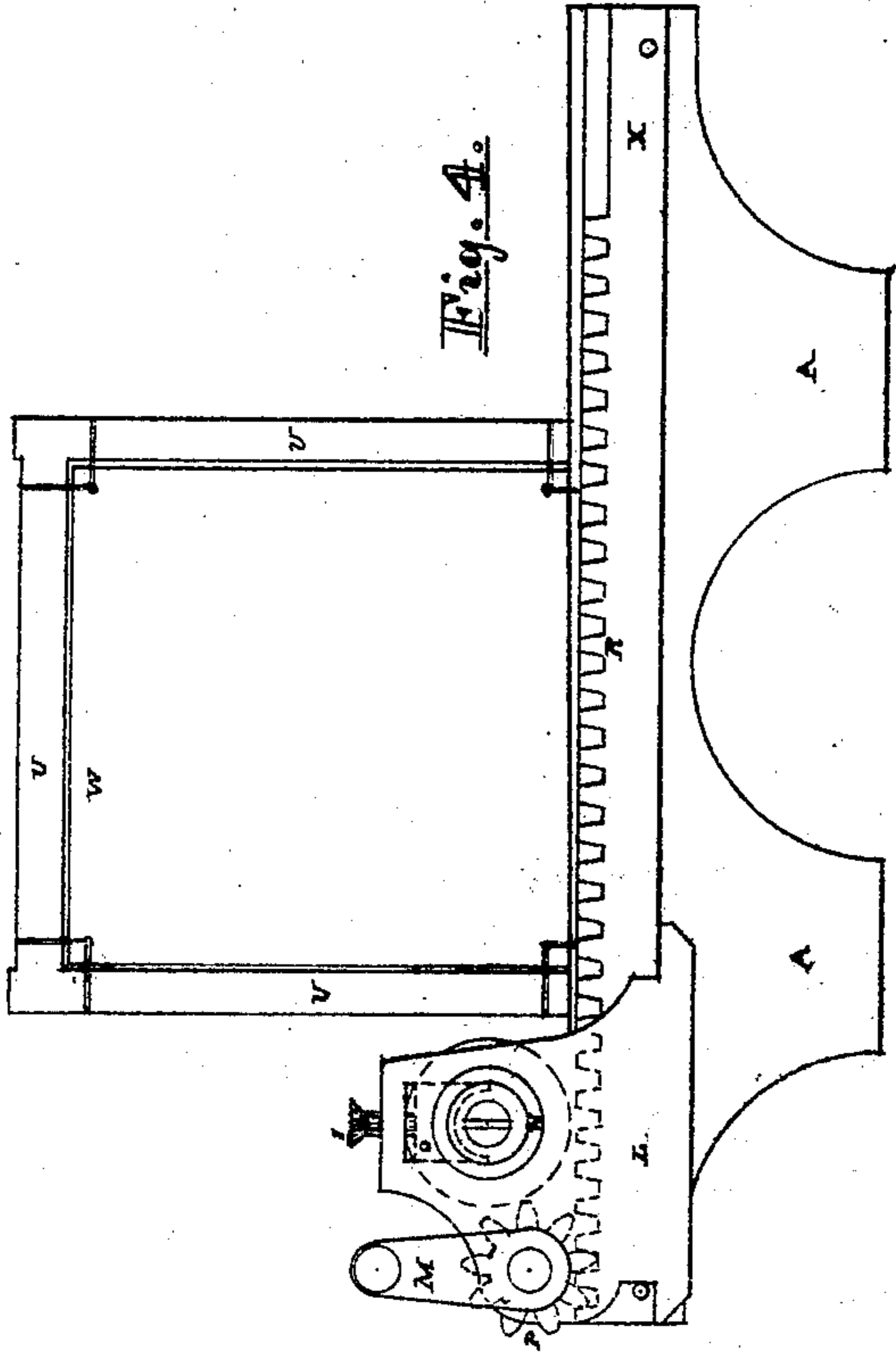


Fig. 4.

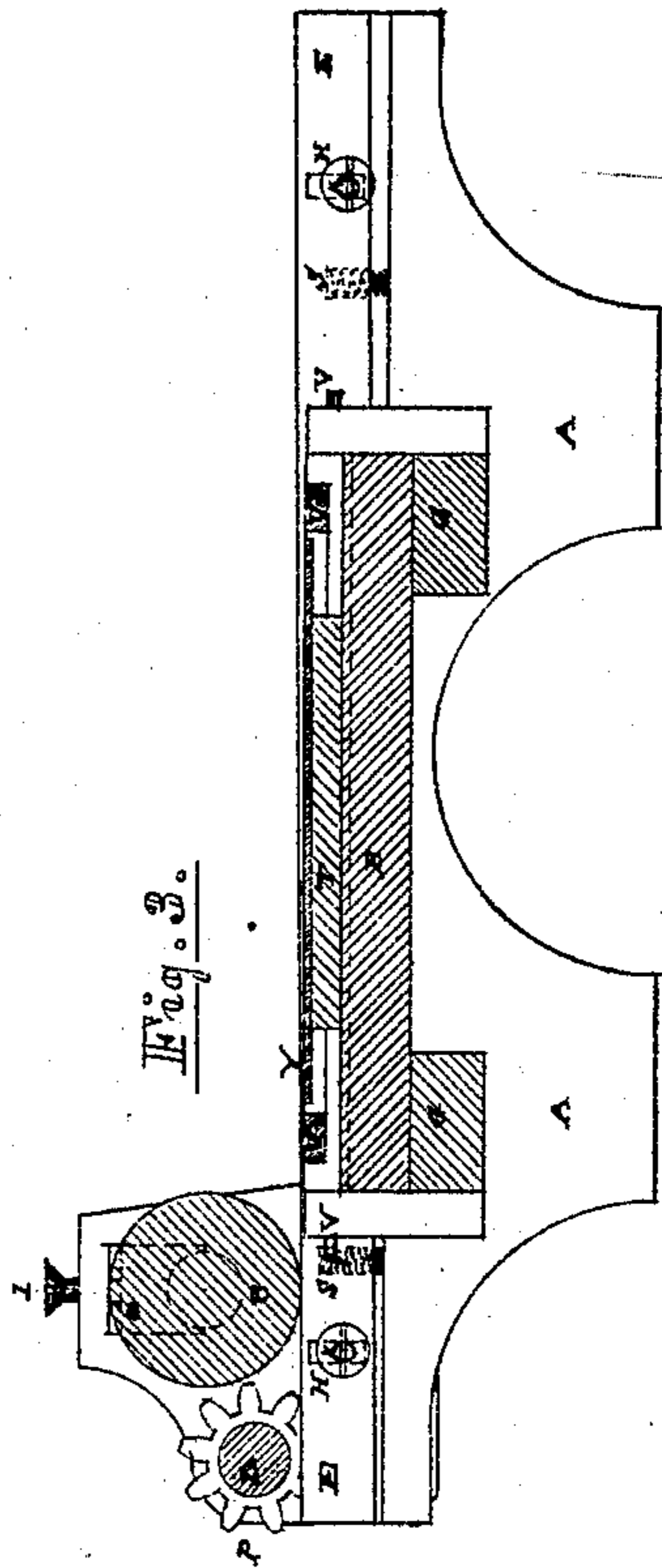


Fig. 3.

Witness
Sumner Allen
Mrs. R. F. Fowler.

Franklin L. Bailey

UNITED STATES PATENT OFFICE.

FRANKLIN L. BAILEY, OF BOSTON, MASSACHUSETTS.

IMPROVEMENT IN PRINTING-PRESSES.

Specification forming part of Letters Patent No. 118,835, dated September 12, 1871.

To all whom it may concern:

Be it known that I, FRANKLIN L. BAILEY, of Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Printing Presses; and I do declare the following to be a clear and exact description of the same, reference being had to the accompanying drawing and the figures of reference marked thereon.

The nature of my invention is seen in the arrangement of an impression-cylinder that travels from end to end of the press over a stationary bed, with its ends resting and rolling on rails or bearers placed outside of the bed, and extending as far as the cylinder is made to move, these rails being pressed upward by springs, and thus supporting the weight of the cylinder and its carriage-plates, crank-shaft, and pinions; these plates, having cleats on their inner surfaces, are in this manner lifted so as to press up against corresponding cleats on the sides of the frame of the press; these plates of the carriage always maintaining the same height and plane of movement, the cylinder being adjustable up and down in these plates to change its impression on the type; these bearers or rails accommodating themselves to the varying heights. Thus the bearers have the double purpose of supporting the cylinder and causing it to roll as it approaches the type, avoiding friction against it, at the same time adapting themselves to the differing heights of the impression-cylinder.

It will be seen that, by this arrangement of parts, the only nice points in construction to be attended to are those of making the under surfaces of the cleats on the frame straight and parallel with the bed on which the type rests, all the movable parts being restrained or held in place by the springs of the bearers up and down, and laterally by the natural friction of the cylinder on the bearers, making the construction of the press a very simple matter, at the same time gaining advantages in its effects on the quality of the printing.

To enable those skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

In the drawing, Figure 1 is an end view of this press. Fig. 2 is a plan. Fig. 3 is a longitudinal vertical section taken through the center, with the frisket turned down onto the type. Fig. 4 is a longitudinal elevation, with the frisket turned up off from the form.

A A are the two sides of the machine. B is the bed, which, with the girts G G, Fig. 3, being firmly fixed to the sides A A, constitutes the frame or the stationary parts of the press. X X are cleats extending out from the frame on opposite sides of the press, and extend the whole length of the press, with straight under surfaces, upon which the carriage-plates L L, with corresponding cleats turned inward, press upward and slide against. The upper sides of the cleats of the frame are made into racks, which the pinions P P, on the crank-shaft in the carriage, join and cause the carriage and its cylinder C to move from end to end of the press, the shaft D carrying the pinions P P and the crank M. The cylinder C, passing through the plates L L of the carriage, with proper bearings, has flanges N N on its ends, and next to the plates, keeping the plates in place laterally, thus holding the plates against the frame with their cleats underneath those of the frame. The cylinder is held up with these plates by the impression-bearers E E, Figs. 1, 2, and 3, they pressing upward against the opposite ends of the cylinder C, these bearers being held in place by the screws H H passing through slots K K in the bearers. The springs S S serve to press the said bearers upward and lift the cylinder upward, so that its carriage-cleats take hold underneath those of the frame. The carriage-plates L L being stationary, vertically, with reference to the type T placed on the bed B, the impression-cylinder is made adjustable up and down in these plates by means of the cap-boxes O O and the screws I I, these screws being unscrewed and the impression-bearers or rails lifting the impression-cylinder upward from the face of the type when the impression is required to be lighter or the paper is thicker, and the reverse when the impression is required to be greater. U U U U is the frisket-frame, hinged on one side of the press and edge of the bed B, in standards V V, at points on a level, or nearly so, with the face of type. This frame has a rubber or parchment blanket, W, Fig. 4, which blanket or frisket is made to rest or lie between the impression-cylinder and the sheet of paper previously laid on the form to be printed, as the cylinder is rolled over the form to give the impression, being a soft yielding surface for the face of the type to bear against, a necessary condition of all type-printing.

Having described all parts of the press, at the same time their purpose, I will describe its operation by saying that when the impression-cylinder,

is run to either end of the press the frisket-frame is lifted, the form is exposed to view, when it is inked, a new sheet is then laid on the type, the frisket is again turned down upon it, the cylinder is then run to the opposite end of the press, giving the impression as it rolls over the tympan-blanket, when the latter is again lifted, exposing the printed sheet to view.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The yielding or supporting-rails or bearers

E E, in combination with the adjustable traveling cylinder C, substantially as described and for the purpose set forth.

2. The yielding and supporting-rails or bearers and the traveling-cylinder C, in combination with the plates LL and cleats XX, substantially as described, and for the purpose set forth.

FRANKLIN L. BAILEY.

Witnesses:

SUMNER ALBEE,
GEO. R. FOWLER.