W. RITCHIE.

Locking-Up Device for Printing-Presses.

No. 211,258. Patented Jan. 7, 1879.

Fig. 1.

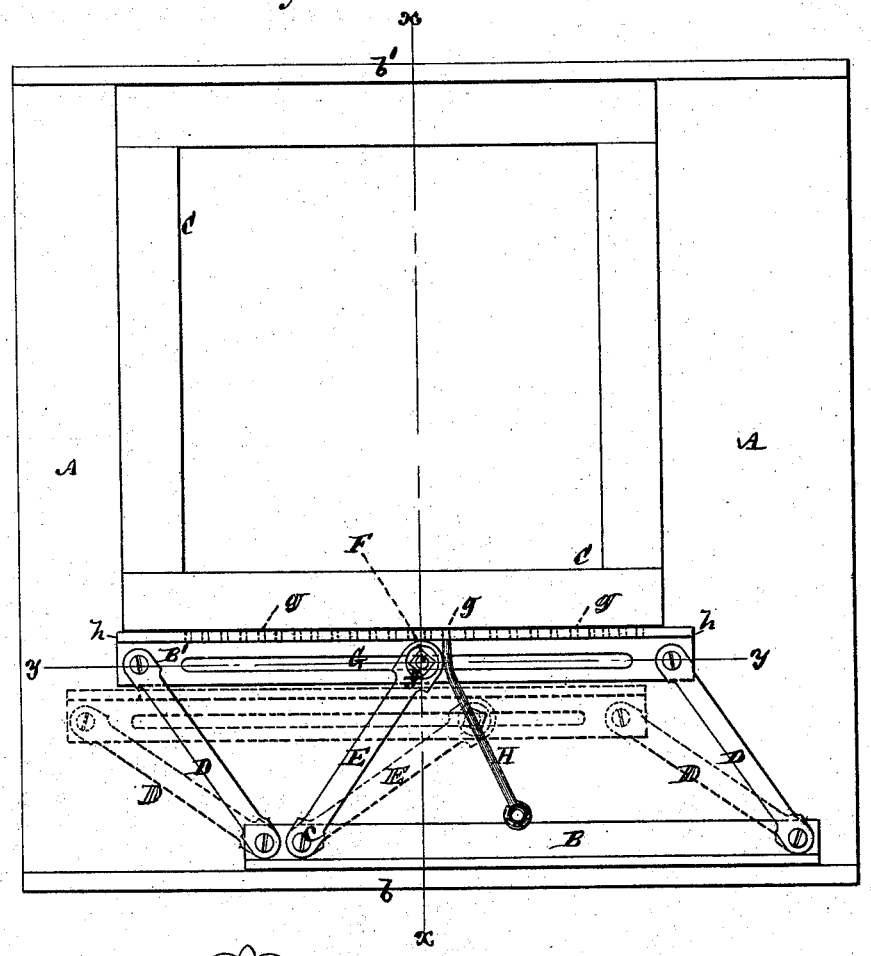


Fig. 2.

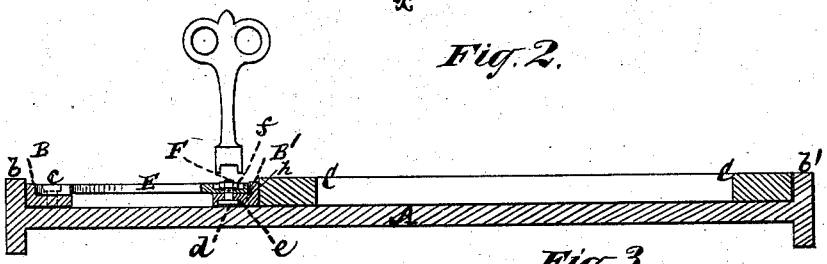
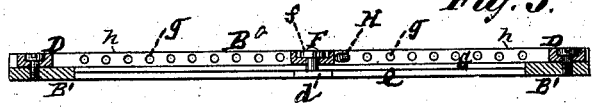


Fig. 3.



Witnesses

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WILLIAM RITCHIE, OF BROOKLYN, NEW YORK.

IMPROVEMENT IN LOCKING-UP DEVICES FOR PRINTING-PRESSES.

Specification forming part of Letters Patent No. **211,258**, dated January 7, 1879; application filed October 23, 1878.

To all whom it may concern:

Be it known that I, WILLIAM RITCHIE, of the city of Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Locking-Up Devices for Galleys, Forms in Chases, and Chases and Blocks on Printing-Presses, of which the following is a description, reference being had to the accompanying drawings, forming part of this specification.

The object of this invention is to construct a simple locking-up device for galleys, forms in chases, and chases and blocks on printing-presses, which shall not only dispense with the furniture ordinarily employed for such purpose, but which shall be superior in several respects to said furniture—as, for instance, by doing away with that damage to the galleys and the bed of the press which results from hammering up the quoins commonly used; also, by expediting the work and affording greater convenience for locking up chases, forms, or blocks of different sizes, and by insuring a parallel locking-up action, which shall cause both ends of a chase to be locked up equally tight; and, further, by obviating the liability to lift and form a convex surface on the bed, to which ordinary furniture is liable.

The invention consists in a parallel-motion locking-up device, in which a brace pivoted to one of the parallel bars has its other end adjustable along the other bar by means of a longitudinal slot in said bar, and a bolt passing therethrough and through a hole in the end of the brace, and provided with a nut by which the bolt may be tightened to hold the brace and bar firmly together at any desired point, or loosened to permit the end of the brace to be moved. By this arrangement the parallel bars may be adjusted to great nicety.

Parallel-motion locking-up devices have heretofore been used in which one of the bars is provided with a rack on its inner edge, and one or more arms are pivoted to the other bar, and have their swinging ends adapted to take into the rack and support or brace the bars as they are spread; but it will be seen that this locking-up device has an arbitrary adjustment regulated by the distance apart of the rack-teeth, and it will sometimes occur that when the brace is against a certain tooth the form will not be locked up tightly enough, while moving the brace another tooth would lock it too tightly, and "bow" it or disarrange curved lines, if such are in a form, or overstrain the galley-frame when used for locking up galleys.

The invention also consists in a special means for prizing or setting up the brace which holds the parallel bar hard up against the chase or block on the bed of the press.

Figure 1 represents a plan of the bed of a printing-press with a chase thereon and having my invention applied; Fig. 2, a transverse section of the same on the line *x x*, Fig. 1; and Fig. 3, a longitudinal section thereof, in part, on the line *y y*, Fig. 1, illustrating the means for prizing or setting up the brace which holds one of the parallel bars up against the chase.

A is the bed of the press, having the usual raised side strips or corners *b b'*, and C a chase, or it might be a block seated thereon and resting at its one end against the corner *b'*.

To lock up this chase I substitute for the furniture usually employed a parallel-motion locking-up device consisting of two bars, B B', connected by radial levers or links D D. One of these bars (preferably the outer one, B, which rests against the corner *b* of the bed) has pivoted to it, at *c*, a brace or bracing-bar, E, the opposite end of which is connected by a bolt, F, through a longitudinal slot, G, with the other parallel bar, B'. The head *d* of this bolt is of square or angular construction, and fits a groove, *e*, in the under side of the parallel bar B', to prevent the bolt from turning when securing the brace by the bolt through a nut, *f*, on the latter. This parallel-motion locking-up device having been inserted between the corner *b* of the bed and the lock or chase C, with its inner bar, B', bearing against the end of the chase, the brace E, which may either occupy an acute or obtuse angle relatively to the radial lever or rod D next adjacent to it, is forced or set up at its end, which works by the bolt F within the slot G, to hold or force the bar B' against the chase, after which the nut *f* is turned to secure the adjusted brace. This prevents the parallel-motion locking-up device from moving, and insures both ends of the chase being equally tight. Prior to securing the brace, however, by the nut *f*, after it has been set up to hold the parallel-motion

locking-up device in position for securing the chase, said brace is prized or has the finishing portion of its setting-up action communicated to it to give a firm gripe of the chase or block by inserting one end of a lever, H, into one or other of a series of holes, *g*, in an upward-projecting flange, *h*, on the parallel bar B′, which holes form a series of fulcrum holes or apertures for the lever H, whereby the latter is caused to act with considerable force or pressure on the brace E to make it throw or press out the bar B′ against the chase, after which the brace is locked by the nut *f*.

The application of my locking-up device to galleys and to forms within chases will be readily understood from the foregoing explanation of the manner of locking a chase on the bed of a press.

I claim—

1. The combination of the parallel bars B B′, connected by the links D, one of said bars having a longitudinal slot, G, with the link E, adjustably attached to the slotted bar by bolt F and nut *f*, and pivoted to the other bar, substantially as set forth.

2. The combination of the bar B, links D, bar B′, having longitudinal slot G and the perforated flange, the adjustable brace E, secured to the slotted bar by bolt F and nut *f*, and pivoted to the other bar, and the lever H, adapted to fit into the perforations *g*, substantially as and for the purpose set forth.

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Witnesses:

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