

E. P. BROWN.
STEREOTYPE LOCKING DEVICE.

No. 250,052.

Patented Nov. 29, 1881.

Fig. 1.

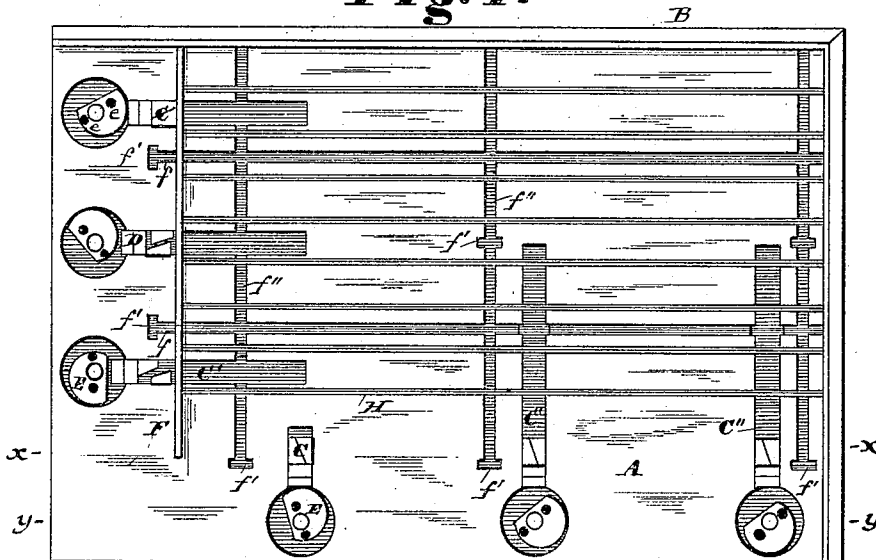


Fig. 2



Fig. 3



Fig. 4

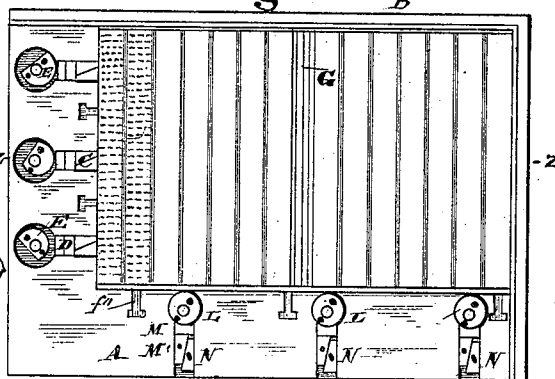
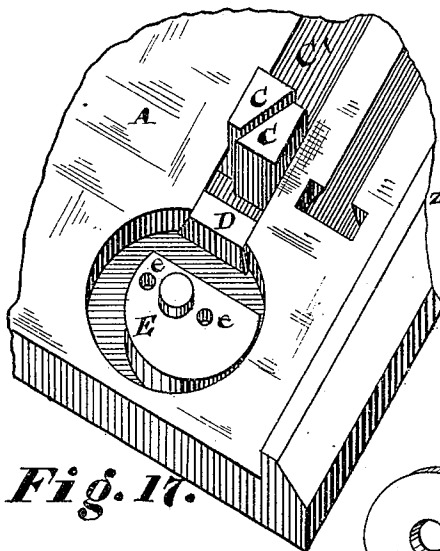


Fig. 5.

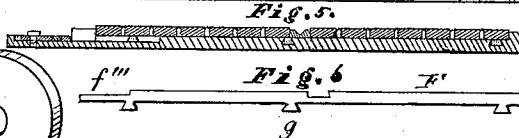
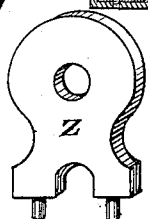


Fig. 7.

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Fig. 9.

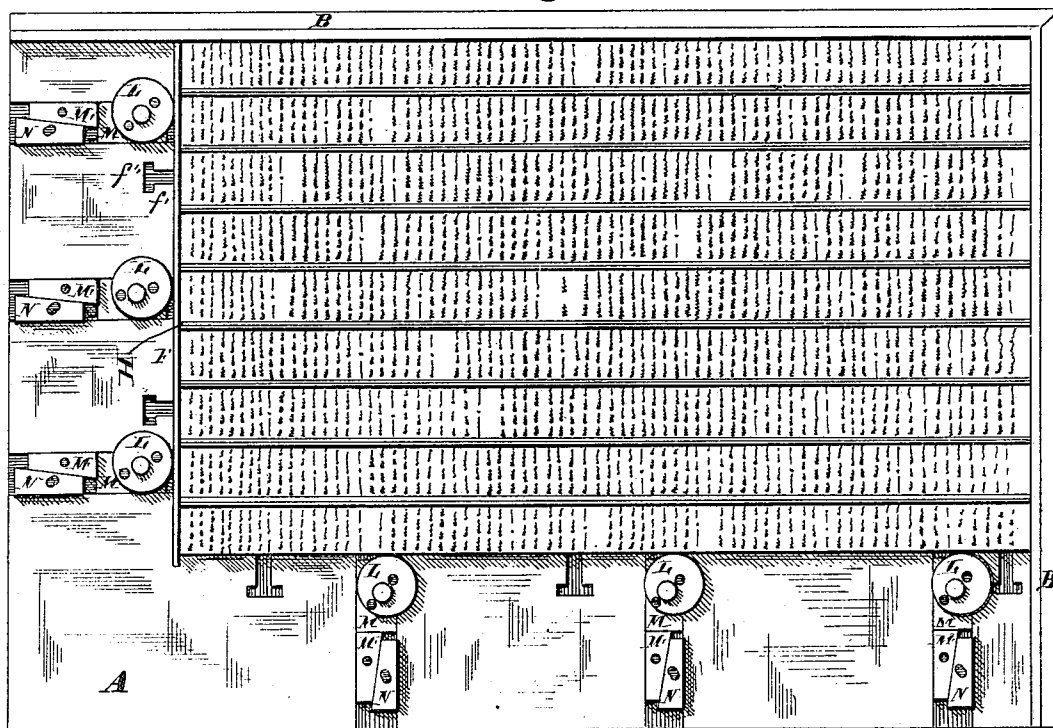


Fig. 16.

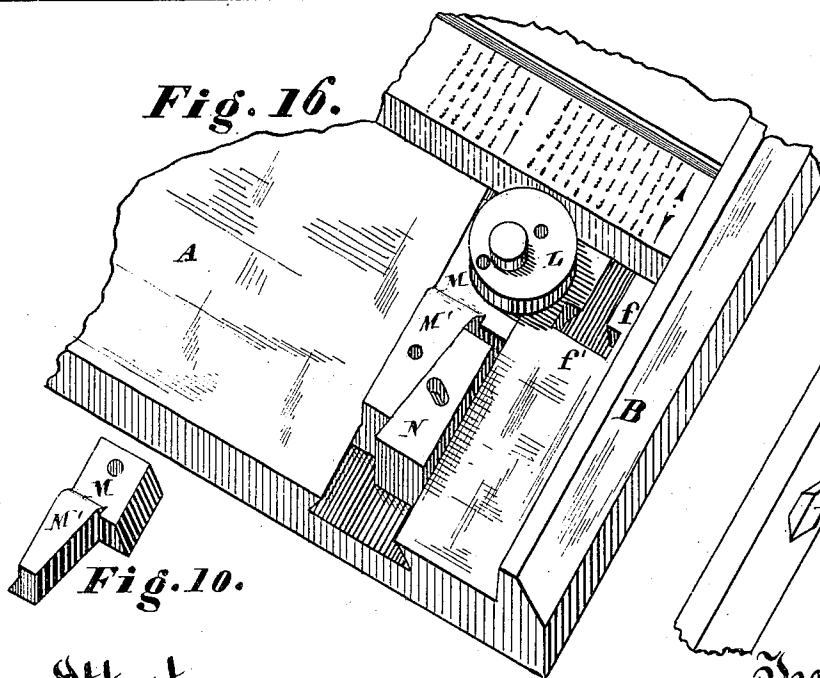
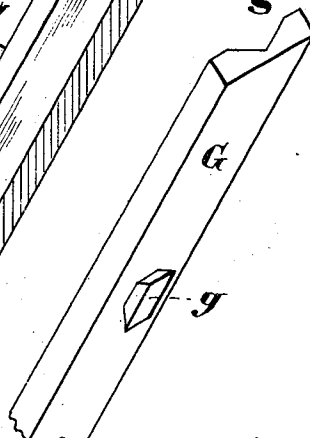


Fig. 10.

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Fig. 8.



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(No Model.)

3 Sheets—Sheet 3.

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Fig. 11.

Fig. 12.

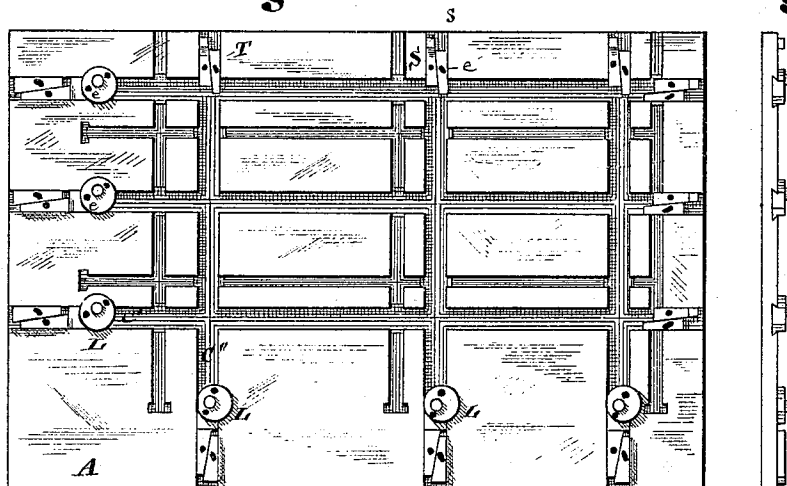


Fig. 13.

Fig. 14.

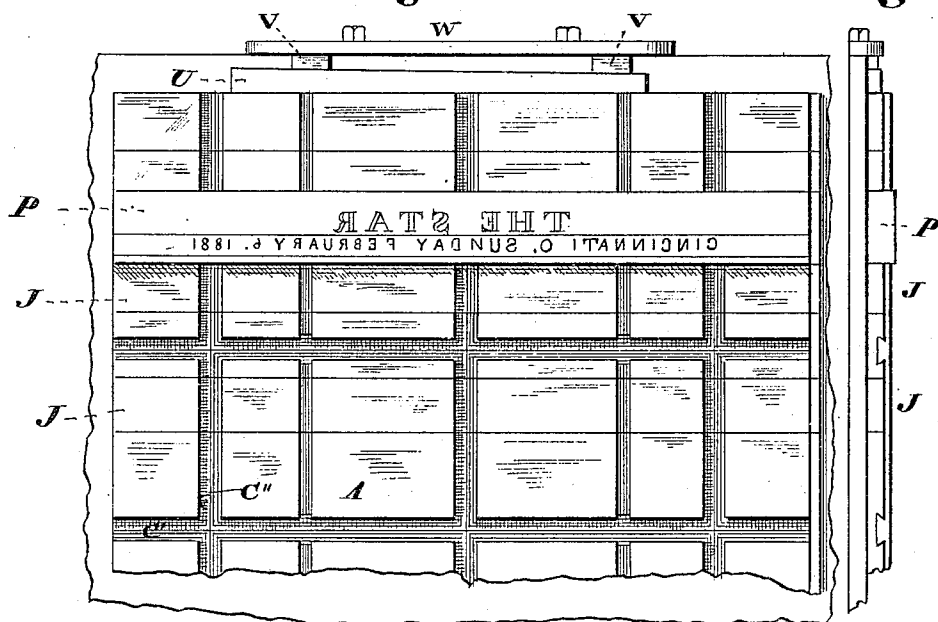
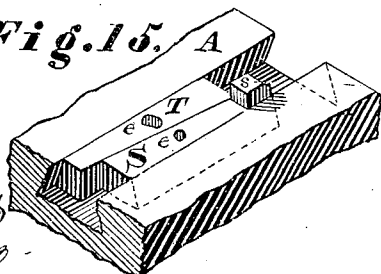


Fig. 15.



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UNITED STATES PATENT OFFICE.

ELIJAH P. BROWN, OF CINCINNATI, OHIO.

STEREOTYPE-LOCKING DEVICE.

SPECIFICATION forming part of Letters Patent No. 250,052, dated November 29, 1881.

Application filed February 25, 1881. (No model.)

To all whom it may concern:

Be it known that I, ELIJAH P. BROWN, of Cincinnati, in the county of Hamilton and State of Ohio, have invented new and useful Improvements in Stereotype-Locking Devices for Printing-Presses, of which the following is a specification.

The invention consists of a base or abutment block and its appurtenances for holding stereotype-plates of different sizes.

Although adapted for holding plates from a very small size up to the largest size, and the bed will contain and be applicable to various classes of work, my devices are more particularly designed for newspaper work, and can be so arranged that plates of many different shapes and dimensions for either folio or quarto newspapers may at different times be imposed upon the same base, either as entire pages in one piece or in fragmentary parts—as, for example, in one, two, three, or more columns or parts of columns combined together into one or more full pages. By this means changes can be made in the plate-forms on the press with great facility, one or more columns being removed and others substituted with but slight delay to the machine. Changes in the size of the form—as from a six-column to an eight-column one—can also be made with dispatch without removing the bases from the press.

In ordinary use for newspapers of large size two of my bases would be used side by side, one for each page; but in smaller sizes two pages may be imposed upon one base, as will be hereinafter shown.

In the accompanying drawings, Figure 1 is a top view of a bed adapted for a single folio page, the head-rules and the column-rules being shown in position. Figs. 2 and 3 are sections on the lines *xx* and *yy*, respectively. Fig. 4 is a top view of a bed adapted for use with two quarto pages, all the parts, including the column-plate, being in position, and two kinds of locks, one for the foot and the other for the side of the form or matter, being shown. Fig. 5 is a section of the same on the line *zz*. Fig. 6 is a side view of my head-rule. Fig. 7 represents my cam-wrench. Fig. 8 is a perspective view of a portion of my page-separating bar. Fig. 9 is a top view of my bed for folio page with column-plates locked in position. Fig. 10 shows my

quoin or block for said lock detached. Fig. 11 is a plan of my bed, showing, in association with my said locking device, my adjustable shouldered quoin substitute for the ordinary bed flange or curb. Fig. 12 is an end view of the bed. Figs. 13 and 14 are, respectively, a plan and end view of upper portion of a bed adapted for use with a type-high head-line. Fig. 15 is an enlarged view of my adjustable flange. Figs. 16 and 17 are enlarged views of form-locks.

A is a base, bed, or abutment block, composed of cast-iron or brass or other suitable material.

B is a raised abutment flange or curb, constituting a part of the base on two sides, against which the stereotype-plates are locked.

C is a block in two halves, fitted together in wedge shape for ready insertion in or removal from a dovetail groove, *C'*, within which it freely slides. The block C rises somewhat above the bed-face. The remainder or intervening portion of the groove outside of the plates is occupied with dovetailed blocks or quoins D, that are flush with the bed-face.

E is an eccentric or cam which occupies a sunk area at the extremity of the dovetail groove, which eccentric, being turned by means of a forked wrench, Z, fitted to holes *e*, applies pressure to the series of quoins D, and thence to the duplex block C and to the form or stereotype-plate. When the eccentric E is turned back one or more of the quoins D may be slipped out, giving room for the opening and separation of block C, after which it can be taken out of the groove and placed between certain others of the quoins D, in whatever position may be most applicable for locking up the form in hand.

Associated or not with the locking device C D E, I sometimes employ a form-lock of the following construction: In this form-lock the eccentric L (see Figs. 4, 11, 12, and 16) is located contiguous to the matter and rises above the bed-face, being pivoted on top of a movable quoin, M, which is flush with the bed-face, and which has a wedge-shaped prolongation, M', which, in association with another dovetailed wedge, N, is capable of being firmly fixed or jammed within any part of the groove by the use of the forked wrench Z within the ori-

fices *e*. Crossing the grooves *C'* at right angles are similar grooves, *C''*, and the respective vertical and horizontal grooves may be occupied by different kinds of locks, as shown in the drawings, as the nature of the job may render desirable. The member *M'* may constitute an integral part of quoins *M*, as in Figs. 10 and 16, or be a separate wedge, as in Fig. 9.

F represents the head-rule for a folio page, agreeing in height with the thickness of the stereotype-plate employed. Said head-rule is held firmly in position by its dovetail projections, (see *g*, Fig. 6,) which projections occupy dovetail grooves *f*, having end enlargements, *f'*, that enable the insertion of said dovetail projections.

In like correspondence in height with the stereotype-plates are column-rules *H*. They are secured to the base by similar means to the head-rule—namely, by dovetail projections, (see *g*, Fig. 2,) that occupy dovetail grooves *f''*. Similarly the foot-rule is secured by projections that occupy the same or similar grooves as are occupied by the projections of the head-rule.

When full-page plates are used the column and head rules are cast in them; but when one or more columns are cut out of the page for the purpose of substituting other matter occupying the same space to make a new edition one or more separable columns and head-rules are used in the manner shown in Fig. 13.

Stereotype-plates no thicker than one-fourth of an inch may be employed, and such plates, when composed of a number of separable columns, are preserved from bowing or arching upward by means of similar dovetail projections from their under surfaces to the projections *g*. (Shown and described of the head, foot, and column rules.)

In order that two or three parallel dovetail grooves, *f*, may suffice, the bottoms of the head and foot rules may be the same length for all sizes, with a suitable part of the surface cut away, as at *f'''* in Fig. 6.

In quarto forms, or where two pages are imposed upon a single base, the columns are placed as shown in Fig. 4—that is to say, at right angles to the position occupied by folio columns—and the head and foot rules anchor in the grooves *f''*.

To secure the proper separation or blank spaces between the pages, a bar, *G*, Fig. 8, of suitable width and thickness, is used, and is anchored by projections (see *g* in said figure) similarly to the other rules already spoken of.

In Figs. 11, 12, and 15 is shown a device which enables the pressman to locate the abutment-flange at any part of the bed. This device consists of two wedges, *S T*, of such dimensions as to be capable of being jammed firmly within the appropriate groove, each wedge being, for this purpose, on its side remote from the other, of dovetail form, and on its upper surface provided with orifices *e*, for the application of the same forked wrench that

is employed for operating the eccentrics. One wedge of each such pair has a head or stirrup, *s*, nearly the height of the type above the bed-face, and which, in association with others like it in grooves of the same parallel, constitutes an effectual abutment or curb applicable to any desired part of the bed-face.

The first or title page heading is provided for in my Patent No. 229,862, issued July 13, 1880. For page 2 and subsequent pages a transplaceable type-high heading may be employed by having the top end of the base or bed divisible in sections *J*, corresponding to the different spaces that may be required to be occupied by such a type-high heading as represented at *P* in said figure. The remainder or undivided portion of the base and these separate removable sections are locked upon the press either in the usual manner employed for fastening chases or forms—as, for example, by bevel-stick *U* and quoins *V* against customary detachable flange *W*, such as used in cylinder-presses—or against a stationary flange, such as used in reciprocating presses. When using such a type-high heading the lock-up on the press is loosened, the section which occupies the desired location of the heading is removed, and the heading set in its place. This arrangement provides for emergencies when time is insufficient to prepare a plate-heading in advance.

By means of these devices and the anchorage of rules, as shown, plates made to fit a rotary bed or cylinder may be fastened upon it with the same security as upon a flat base.

Having thus described my invention, the following is what I claim as new therein and desire to secure by Letters Patent:

1. In combination with the bed *A*, having transverse grooves *f'' C''* and longitudinal grooves *f C'*, the head, column, and foot rules having anchoring dovetail projections *g*, substantially as set forth.

2. The form-lock consisting of a pair of wedge-formed dovetail blocks, *M N*, and an elevated eccentric upon one of them, substantially as set forth.

3. An adjustable curb or abutment consisting of the pair of dovetail wedges *S T*, flush with the bed-face, and of which one wedge has a head, *s*, projecting above it, substantially as and for the purpose designated.

4. In combination with the grooved bed and head, column, and foot rules, substantially as described, the wedges or quoins acting to hold the said rules against the form by lateral pressure of the said wedges on the walls of the grooves.

In testimony of which invention I hereunto set my hand.

ELIJAH P. BROWN.

Attest:

GEO. H. KNIGHT,
S. S. CARPENTER.