

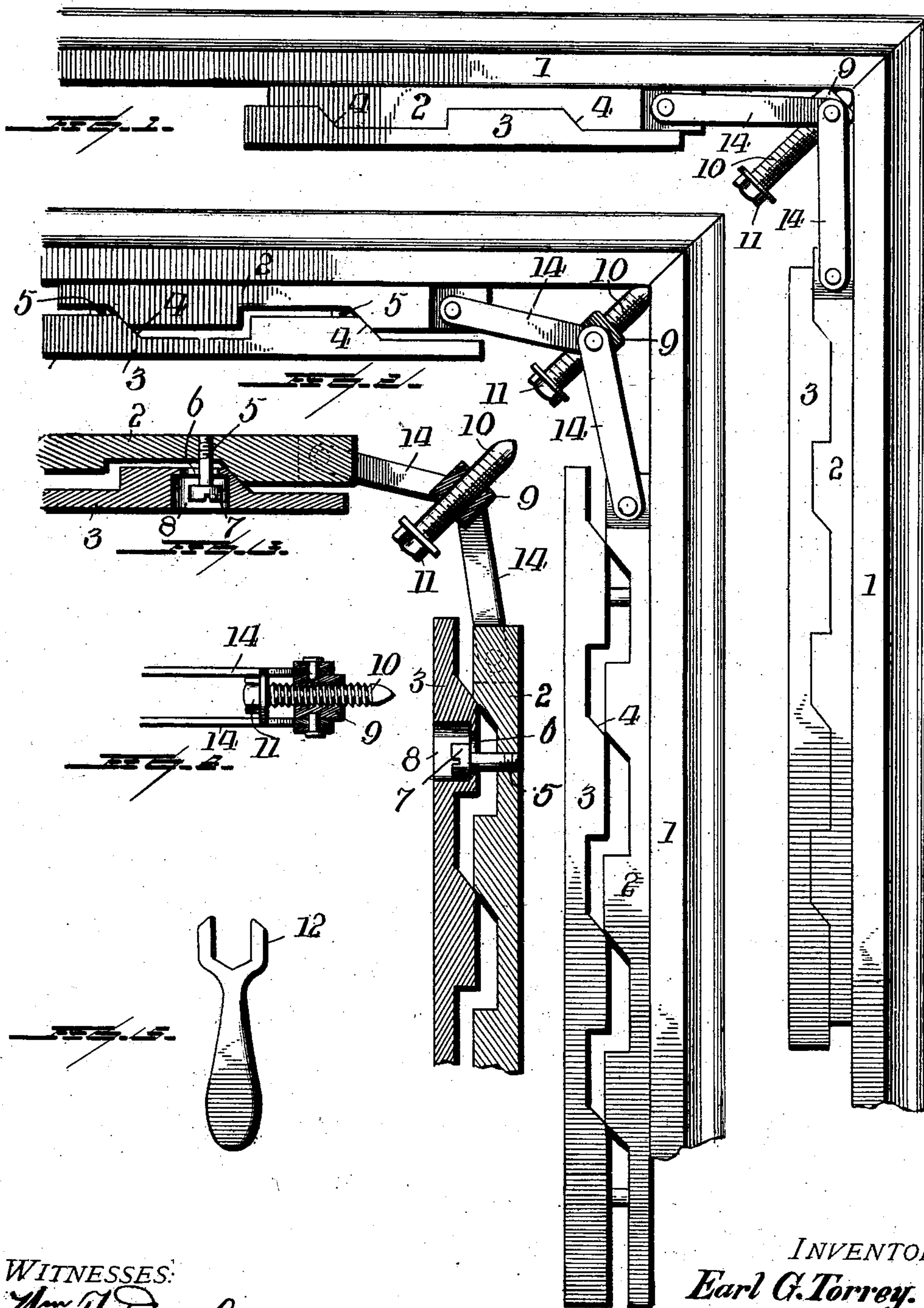
No. 707,987.

Patented Aug. 26, 1902.

E. G. TORREY.  
LOCK-UP FOR PRINTERS' FORMS.

(Application filed July 26, 1901.)

(No Model.)



WITNESSES:  
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# UNITED STATES PATENT OFFICE.

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## LOCK-UP FOR PRINTERS' FORMS.

SPECIFICATION forming part of Letters Patent No. 707,987, dated August 26, 1902.

Application filed July 26, 1901. Serial No. 69,810. (No model.)

*To all whom it may concern:*

Be it known that I, EARL G. TORREY, a citizen of the United States of America, residing at Washington, in the District of Columbia, have invented certain new and useful Improvements in Lock-Ups for Printers' Forms, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates generally to certain new and useful improvements in printers' furniture, and relates more particularly to a lock-up for printers' forms.

15 The invention has for its object to construct a lock-up device having quoin members operative laterally, so as to engage and lock the form within the chase. The quoin members are connected by an adjusting device carrying an operating-screw adapted to engage in 20 one corner of the chase to actuate the quoin members.

In locking up a form within a chase by means of the quoins as now generally employed it is practically impossible to so operate 25 said quoins that their pressure will be exerted upon the type in a manner to secure the proper justifying thereof, as these quoins, exerting pressure first against one side of the form and then against another side thereof, 30 distort the form by reason of the pressure being unequally applied. The present invention aims to overcome this difficulty by operating both quoin members at the same time or simultaneously, imparting where necessary a greater lateral movement to the one 35 quoin member than to the other, and adjusting the bars in such a manner as to prevent any distortion of the form and securely locking the latter within the chase.

40 The various novel features of construction entering into my invention will be hereinafter specifically described and then particularly pointed out in the claims, and in describing the invention in detail reference will be had to the accompanying drawings, forming a part of this specification, and wherein 45 like numerals of reference will be employed for designating like parts throughout the several views, in which—

Figure 1 is a detail plan view of my improved lock-up for printers' forms, showing the same within a chase, the latter being partly broken away. Fig. 2 is a similar view of the same, partly broken away, showing the quoin members after having been operated 55 to engage with the form. Fig. 3 is a horizontal sectional view of a part of the lock-up. Fig. 4 is a transverse vertical sectional view of the adjusting device. Fig. 5 is a detail plan view of the spanner or wrench employed 60 for operating the screw of the adjusting device.

Referring now to the drawings by reference-numerals, 1 indicates the chase, which may be of the regular form, usually comprising a substantially rectangular metal frame, 65 which is cast integral and is adapted to receive the form, which latter is clamped tightly against displacement by means of the two quoin members disposed against two mutually-adjacent sides of the frame. These quoin 70 members are made of unequal length to accommodate the rectangular frame—that is, the quoin member lying against the longer side of the chase is of greater length than the 75 quoin member lying against the mutually-adjacent shorter side or end of the chase. The two quoin members each comprise two sections 2 and 3, and while the one quoin member is of greater length than the other quoin member 80 the sections comprising each quoin member are identical in construction, and the same reference-numerals have therefore been applied to both the quoin members. The members or sections of each of the quoin members 85 have their adjacent faces provided with cams 4, which are oppositely disposed, as shown, so that as one member or section is slid longitudinally over the opposing member or section these cams will ride one on another and 90 the sections or members 3 be forced outwardly to broaden the quoin. When the quoin members are operated so as to move the sections toward each other, the cams of one member or section will take into the inter- 95 spaces between the cams of the opposing member or section and the width of the quoin thus diminished. The sections 2 of the quoin mem-



bers in the present instance are disposed with their outer faces against the mutually-adjacent sides of the chase, and are slidable against these sides of the frame or chase, being actuated by means of the equalizer, as will be hereinafter described. The sections 2 3 of each quoin member are connected the one to the other by stud-bolts or screws 5, rigidly secured in the members or sections 2.

These screws or stud-bolts pass through oblong apertures 6 in the members or sections 3, and the head 7 of the stud-bolts or screws lie within the recesses 8 provided therefor in the sections 3 of the quoin members. Two of the stud-bolts or screws are provided for each quoin member, one near each end of the sections. The sections 2 of the quoin members are actuated so as to move the members 3 3 outwardly by means of the adjusting device, which will now be described. This adjusting device comprises a substantially square block 9, having a threaded aperture therethrough in which is arranged to operate a screw 10, the pointed or tapered end of which is adapted to engage in the corner of the frame or chase 1. This screw 10 carries a nut-shaped head 11 to receive a spanner or wrench 12 for actuating the screw. This head 11 may of course be of any approved or desired form, and it will readily be observed that the screw 10 may be operated by any equivalent means to the wrench without deviating from the principle and spirit of the invention. The block 9 of the adjusting device is pivotally connected to each of the quoin members by two pairs of links 14. One pair of these links is pivotally connected at their one end to the upper and lower faces of the section 2 of the shorter quoin member, and the other pair of links is pivotally connected to the section 2 of the longer quoin member. The same pivots are employed for fastening the two pairs of links at their ends to the block, the one pair of links lying on and overlapping the other pair. The block preferably has its edges rounded, so as to permit of the same fitting neatly in the corner of the frame or chase.

In Fig. 1 the lock-up is shown in the form in which it is placed in the frame or chase, and it will be observed that the two quoin members and their connecting-links when in this position are at direct right angles to each other. When, however, the screw 10 is actuated, the thrust of this screw in the corner of the frame or chase forces the block 9 outwardly away from the corner of the frame or chase, causing the links 14 to assume an obtuse angle with respect to the frame or chase, moving the sections 2 2 of the quoin members longitudinally and causing the cam-faces on the sections to act against each other, so as to separate the sections of the quoin members and increase the width of the latter, the sections 3 3 of the quoin members engaging either with the type or with furniture placed between the type in the form and the sections 3 3 to securely lock up the form.

I desire to call particular attention to the fact that in cases where in order to effect the lock-up of the form it is necessary that one of the sections 3 move a greater distance than the other of these sections as soon as the section 3 having the less distance to move comes in engagement with the type-form (or furniture placed between the form and the section 3) the adjusting device will act so as to continue the movement of the other quoin member until its section 3 comes into engagement with the type-form or furniture, and any further pressure exerted by reason of further inward thrust of the screw will be distributed against mutually-adjacent sides of the type-form, and any distortion whatever of the latter is prevented, and an absolutely true and perfect lock-up of the form is secured. For these reasons a lock-up of this form while applicable for general use will be found particularly useful where it is absolutely necessary that the form be locked in the frame or chase absolutely true. The simultaneous operating of the quoin members against the form assures this perfect lock-up, as described.

While the construction as herein shown and described in detail embodies a practical form of my invention as demonstrated by actual practice, yet I do not wish to unduly limit myself to the exact construction shown and described, as it will of course be observed that equivalents may be substituted for certain parts without changing the spirit of the invention and as would come clearly within the scope thereof.

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

1. In a lock-up for printers' forms, the combination with two parallel movable quoin members disposed at right angles to each other and each comprising two sections one of which is movable longitudinally and the other of which is movable laterally, said sections of each member having coacting cam-faces, of a pressure-adjusting device including a block interposed between the mutually-adjacent ends of the members and pivotally connected to the adjacent ends of the longitudinally-movable sections of the members, and means operating through said block for actuating the members substantially as described.

2. In a lock-up for printers' forms, the combination with the quoin members each comprising two sections, the one section of each member being movable longitudinally and the other section of each member movable laterally, of a pressure-adjusting device including a block pivotally connected to adjacent ends of the members, and a screw operating through said block, substantially as described.

3. In a lock-up for printers' forms, the combination with the quoin members adapted to be placed within the chase substantially at right angles to one another, of a pressure-ad-



justing device including a block and screw, the block pivotally connected to the adjacent ends of the quoin members, substantially as described.

5 4. In a lock-up for printers' forms, the combination with the quoin members disposed at right angles to each other and each comprising two sections having coacting cam-faces, one section of each member movable longitudinally and the other movable laterally, of a  
10 pivotal connection between the adjacent ends of the longitudinally-movable members and means connected to the said pivotal connections for adjusting the pressure of the members on the type-form, substantially as described.

5 5. The combination with the quoin members each comprising two sections one section movable longitudinally and the other laterally, with means carried by the longitudinally-movable section to limit the movement of the laterally-moving section, and a pressure-adjusting device including a block, and a screw operating therethrough, the block being pivoted to the adjacent ends of the longitudinally-movable sections, substantially as described.

30 6. In a printer's lock-up, two quoin members adapted to be placed within a chase substantially at right angles to each other, a block placed between the adjacent ends of said members, a screw operating through said

block for engagement in the corner of the chase, and links pivoted at their ends to the block and quoin members, substantially as described. 35

7. A lock-up for printers' forms, comprising in connection with a type-chase, quoin members which are adapted to be placed in the chase substantially at right angles, a block located between the adjacent ends of the quoin members, a screw operating through the block and engaging the type-chase, and links pivoted to the block and to the adjacent ends of the quoin members, as and for the purpose described. 40 45

8. In a printer's lock-up two quoin members adapted to be placed within a chase at substantially right angles to each other, each member comprising two sections, one section movable longitudinally and the other section of each member movable laterally, a pivotal connection between the adjacent edges of the said longitudinally-movable members, and a pressure-adjusting device pivotally secured to the said pivotal connection, substantially as and for the purpose described. 50 55

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

EARL G. TORREY.

Witnesses:

A. M. WILSON,  
E. F. CAVERLY.