

(No Model.)

D. J. DEEGAN.
PRINTER'S CHASE.

No. 602,679.

Patented Apr. 19, 1898.

Fig. 1.

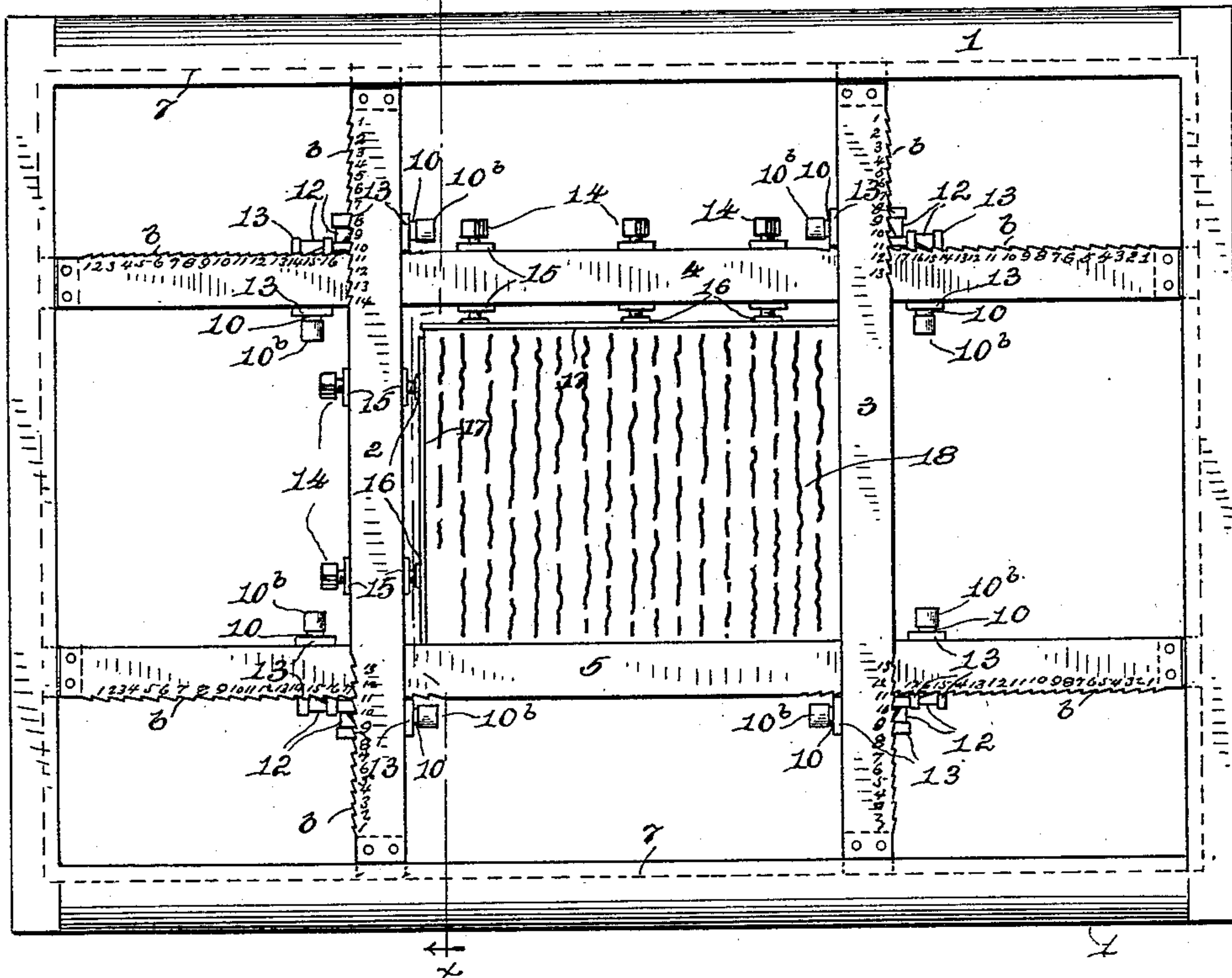


Fig. 2.

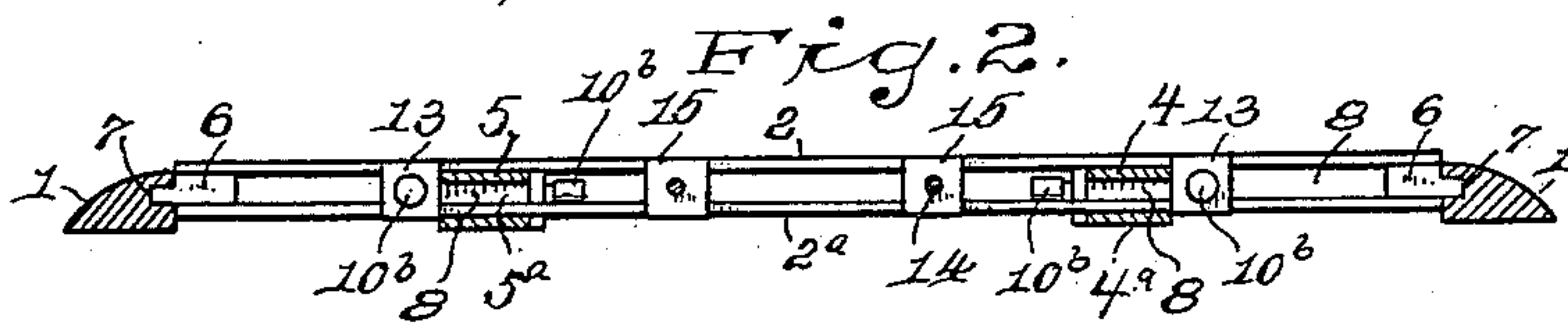
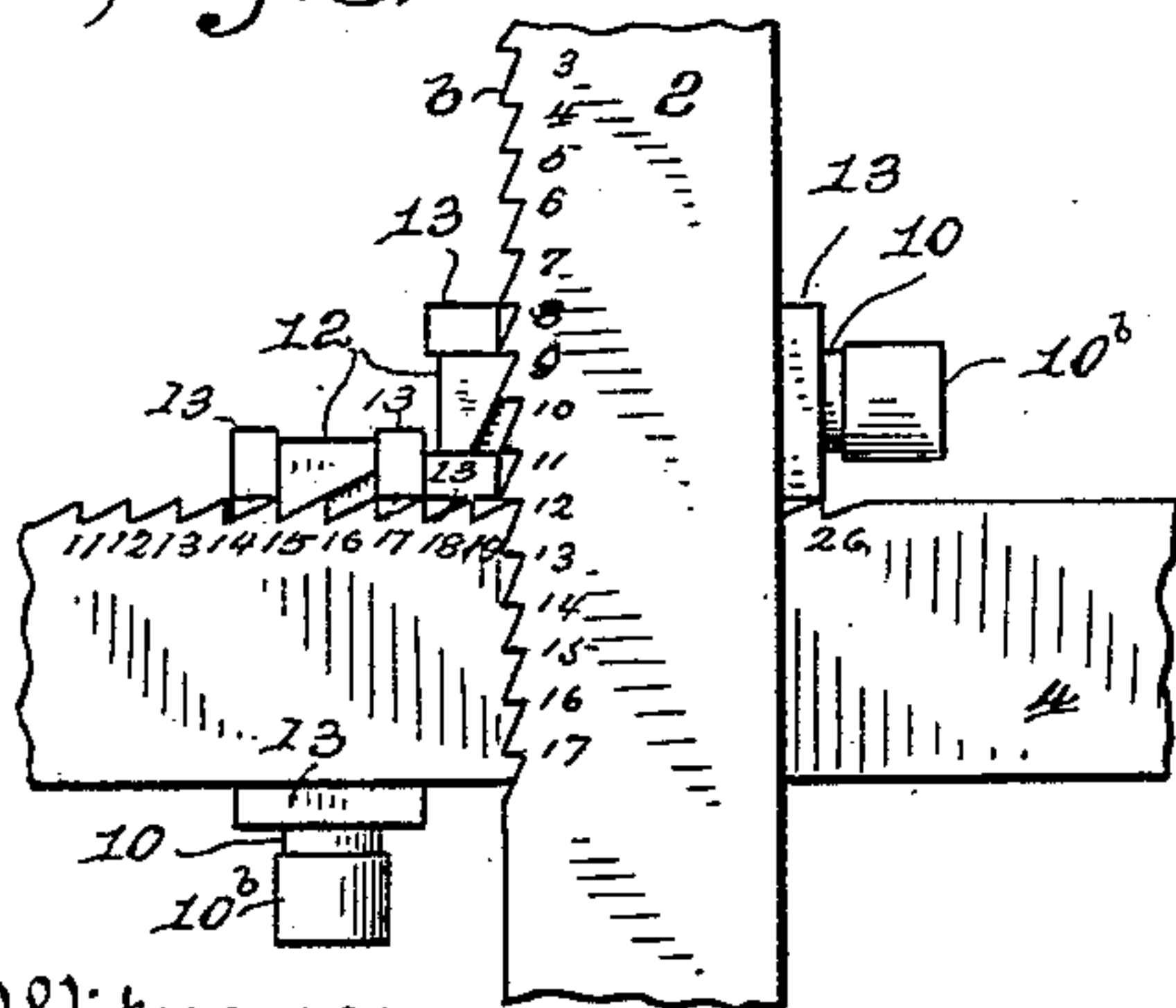


Fig. 3.



Witnesses.

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Fig. 4.

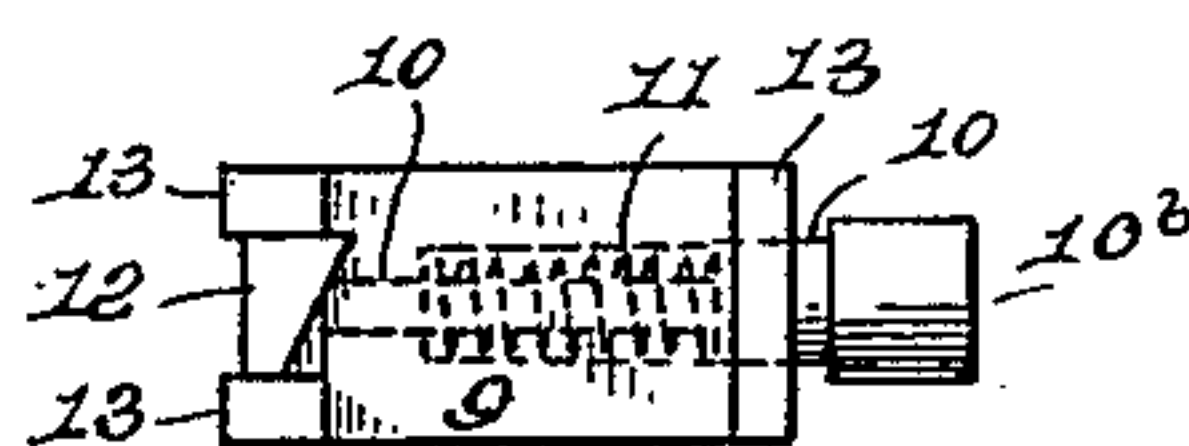
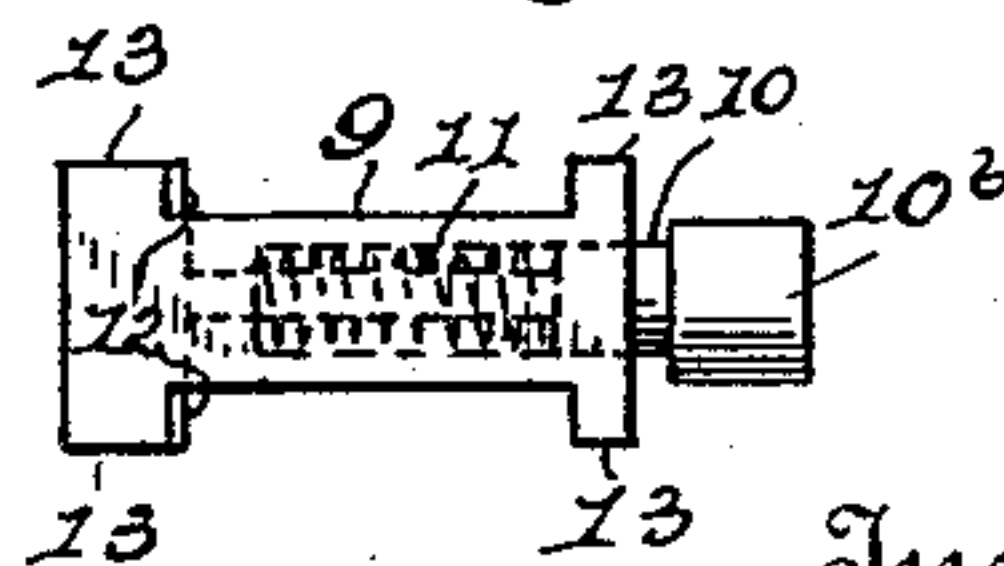


Fig. 5.



Inventor.
Daniel J. Deegan.
By Geo. Phillips.
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UNITED STATES PATENT OFFICE.

DANIEL J. DEEGAN, OF BRIDGEPORT, CONNECTICUT, ASSIGNOR OF ONE-HALF TO CHARLES E. SANFORD, OF SAME PLACE.

PRINTER'S CHASE.

SPECIFICATION forming part of Letters Patent No. 602,679, dated April 19, 1898.

Application filed June 30, 1897. Serial No. 642,915. (No model.)

To all whom it may concern:

Be it known that I, DANIEL J. DEEGAN, a citizen of the United States, and a resident of Bridgeport, in the county of Fairfield and State of Connecticut, have invented certain new and useful Improvements in Printers' Chases, of which the following is a specification.

My invention relates to printers' chases.

The chase ordinarily used by printers consists of a strong iron rectangular frame in which the pages of type or form are fixed or confined by means of strips of wood or metal called "furniture" and "locked up" or rigidly fastened in place by devices known as "quoins."

The object of my invention is to provide the ordinary chase with means for readily locking up the form and dispensing entirely with the use of furniture or quoins.

To this end my invention consists in combining with adjustable parallel bars having ratchet-teeth on their edges a spring-catch locking device adjustably mounted on said bars and permanently connected therewith, whereby the bars are readily locked around the form, combined with clamping-screws or other like holding devices permanently connected with two or more of the said bars, whereby the necessary pressure is applied to the form to lock it firmly in the chase.

To enable others to understand my invention, reference is had to the accompanying drawings, in which—

Figure 1 represents an upper plan view of a chase with the parallel bars locked around a form. Fig. 2 is a cross-section through line *x* of Fig. 1. Fig. 3 is a broken section of two of the parallel bars and their locking devices. Fig. 4 is a detail side view of one of the bar-locking devices. Fig. 5 is a detail edge view of one of the locking devices looking in the direction of arrow *a*, Fig. 4.

Its construction and operation are as follows:

1 represents the ordinary printer's chase.

2, 3, 4, and 5 are parallel bars. Each bar, as a matter of economy and strength, is composed (see Fig. 2) of two parallel strips 2^a, 3^a, 4^a, &c., and such strips are separated at their ends by the blocks 6. The outer pro-

jecting portions of these blocks are reduced to form tongues to enter the groove 7 on the inner face of the chase-frame 1, wherein said bars are permitted to move freely when not locked. Forming each of the four parallel bars of two strips of metal will leave the opening or free passage-way 8 between such strips for the adjustment of the locking and clamping devices presently to be explained.

One edge of the upper and lower strips composing each bar is provided with ratchet-teeth, which teeth extend along such edges a distance conformable to the requirements of the chase. To bring the outer surface of all the cross-bars nearly in the same plane, the upper strips of the short bars 2 and 3 pass between the two longer bars. This feature enables the bars to be made of lighter material without detracting from the necessary strength required.

9 are eight spring-locks, two of which are placed at the intersection of the parallel bars. These locks are narrowed down at their central portion, Figs. 4 and 5, which narrow portion is adapted to move freely in the spaces 8 between the upper and lower strips composing each bar.

10 is a spring-bolt adapted to operate in a hole extending longitudinally through the spring-lock. A portion of this hole is enlarged to admit the spring 11 and to form a seat or kicking-post for the said spring, while the larger portion of the bolt forms a shoulder against which the other end of the spring engages. The reduced portion 10 extends through a hole in the body to correspond thereto. On one end of this bolt is the head 10^b, while on the opposite end is mounted the T-shaped dog 12, which dog is adapted to engage with the teeth of both the upper and lower strips of the several parallel bars. Cutting away the central portion of the locks leaves the projections 13, which are adapted to rest on the top of these teeth and thereby give increased support or bracing effect.

14, Figs. 1 and 2, are the form-clamping bolts, which extend through the openings of the parallel bars 2 and 4. Washers 15, having holes therethrough to admit the body of such bolts, rest on the two strips or sections of said bars to keep the said bolts in an up-

right position when loosened. The ends of these bolts carry the washers or plates 16 to rest against the slugs 17 of the form 18.

To operate the device, the form is placed
5 within the parallel bars and such bars are closed against the form, and the spring-locks on two of the bars that are parallel with each other—*e. g.*, 2 and 3—are brought close against the horizontal bars 4 and 5, while their dogs
10 engage with the teeth on their respective bars. The remaining spring-locks—*i. e.*, on bars 4 and 5—are then brought against the before-mentioned spring-locks, thus firmly bracing the corners or intersecting points of the four
15 parallel bars. The clamping-bolts 14 are then brought firmly against the slugs 17 to securely lock the form up. Without these clamping-bolts it would be absolutely impossible to securely lock up the form by means of the
20 spring-locks alone, as they could not be adjusted close enough for this purpose, and it would be impracticable to attempt to make the ratchet-teeth fine enough to do this and retain sufficient strength to resist the strain of
25 the clamping-bolts. The office of the spring-locks is to lock the four parallel bars firmly together in their quickly-adjusted position, while the clamping-bolts, as before mentioned, lock up the form. To unlock the form,
30 the clamping-bolts are loosened and the spring-locks released by simply pushing against the heads 10^b of the spring-bolts, so as to release their respective dogs from their engagement with the ratchet-teeth, when such
35 locks can be moved back.

To facilitate the quick adjustment of the bars, so as to keep each pair parallel with each other and thus prevent the form assuming an oblique position, the teeth on said bars are
40 graduated so that the dogs of the long and short bars will drop into the same ratchet-tooth, as shown in the drawings, where the dogs of the bars 2 and 3 are in the teeth 9, while the dogs of the bars 4 and 5 are in the
45 teeth 15.

Another great advantage of my improved arrangement is that the clamping-screws when tightened up do not exert the slightest pressure on the rectangular frame 1, as the
50 whole strain is on the spring-locks and parallel bars. Therefore such frame may be made very light. The peculiar construction of these bars enables all of such bars to be made of equal strength, so that one bar need
55 not be weakened by having a portion of its stock cut away in order to pass through another bar. For this reason the bars are made double, so as to leave a longitudinal slot from end to end of such bars for the free and un-
60 obstructed movement of the bars, spring-locks, and clamping-bolts.

From the foregoing description it will readily be seen that my construction is far superior to all devices heretofore used for this
65 purpose. It does away with all quoins and

furniture, is quickly and easily adjusted, and all the different parts—such, for instance, as the spring-locks and clamping-bolts—are inseparable from the bars, so that they are not liable to be misplaced or lost when most
70 needed.

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

1. In a printer's chase, the combination, 75 with a rectangular frame, of adjustable parallel bars composed of two strips of metal fastened together at their respective ends, so as to leave a free, unobstructed space between such ends, said bars yoked together, as shown, 80 adjustable spring-locks carrying spring-actuated dogs to engage ratchet-teeth on said bars, clamping-bolts adjustably mounted on one or more of said bars, for the purpose set forth.

2. In a printer's chase, the combination, 85 with a rectangular frame and adjustable parallel bars having ratchet-teeth, of spring-locks adjustably mounted on said bars, and carrying dogs to engage the teeth of said bars, for the purpose set forth. 90

3. In a printer's chase, the combination, with a rectangular frame and adjustable parallel bars having ratchet-teeth, of spring-locks adjustably mounted on said bars, and carrying dogs to engage the teeth of said bars, com- 95 bined with clamping-bolts adjustably mounted on one or more of said bars, whereby the form is securely locked up after the parallel bars are locked, for the purpose set forth.

4. In a printer's chase, the combination, 100 with a rectangular frame and adjustable parallel bars mounted therein, each of said bars composed of two strips of metal parallel with each other and fastened together at their respective ends, in the manner substantially as 105 shown, said bars adapted to be yoked together—as shown—locks carrying spring-actuated dogs to engage the teeth on said bars, said locks having a reduced central portion adapted to enter the space between the metal 110 strips of said bars, and projections adapted to rest on both of said strips and on both edges thereof, combined with adjustable clamping-bolts mounted on said bars, for the purpose set forth. 115

5. In a printer's chase, the combination, with a rectangular frame and adjustable parallel bars mounted therein and having ratchet-teeth formed on the edges thereof—as shown— 120 of locks carrying spring-actuated dogs to engage with such ratchet-teeth, said teeth graduated—as shown—for the purpose set forth.

Signed at Bridgeport, in the county of Fairfield and State of Connecticut, this 12th day of June, A. D. 1897.

DANIEL J. DEEGAN.

Witnesses:

M. J. KEANE,
C. H. WHITT.