

No. 896,745.

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T. F. MURRAY.  
FOOT BAR FOR PRINTERS' CHASES.  
APPLICATION FILED MAR. 4, 1907.

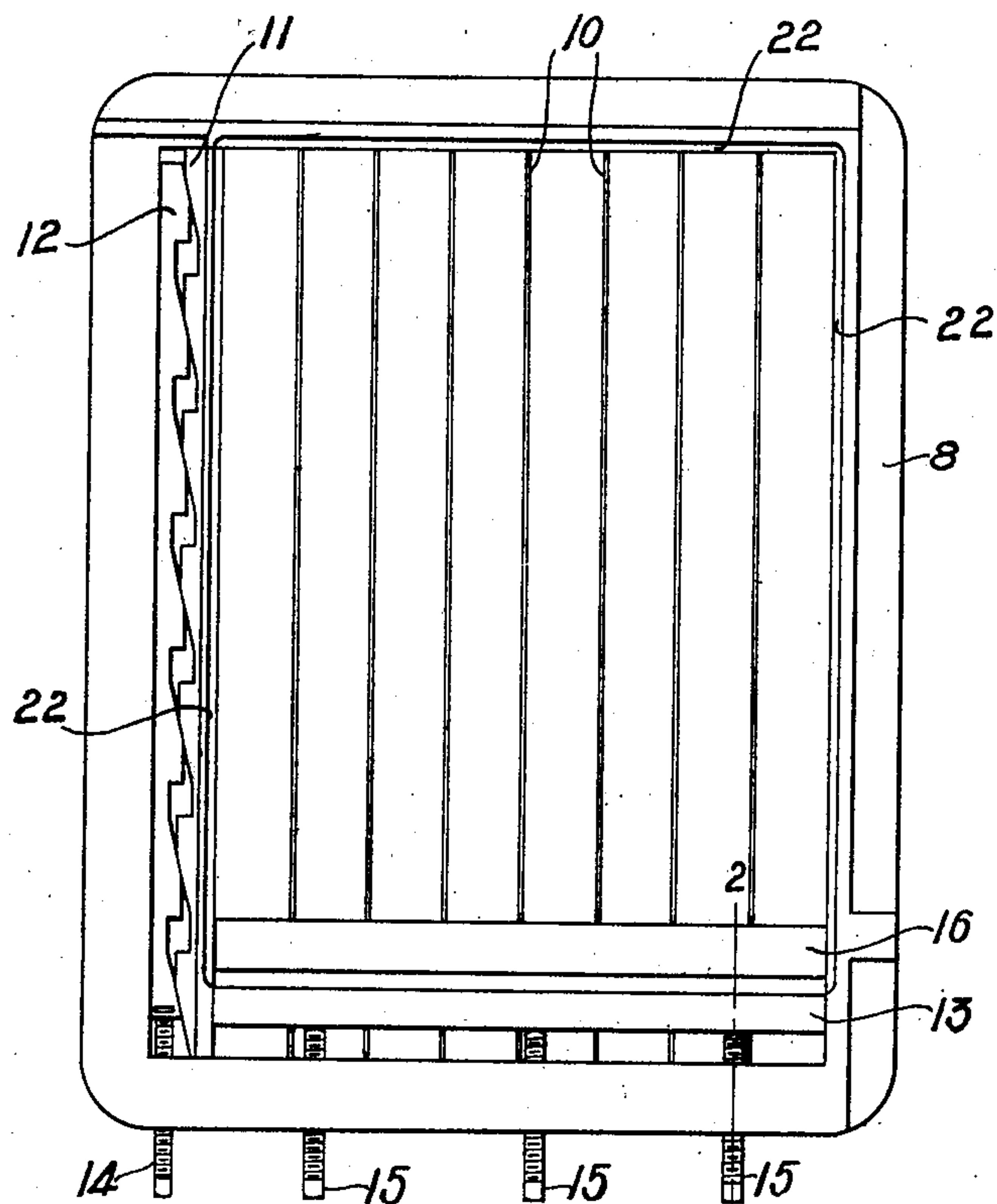


Fig. 1.

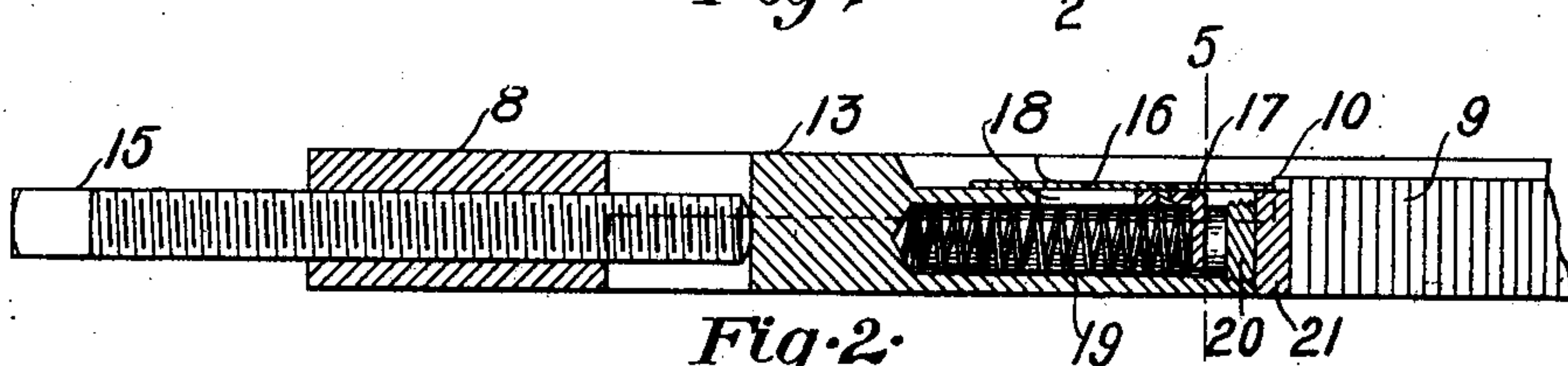


Fig. 2.

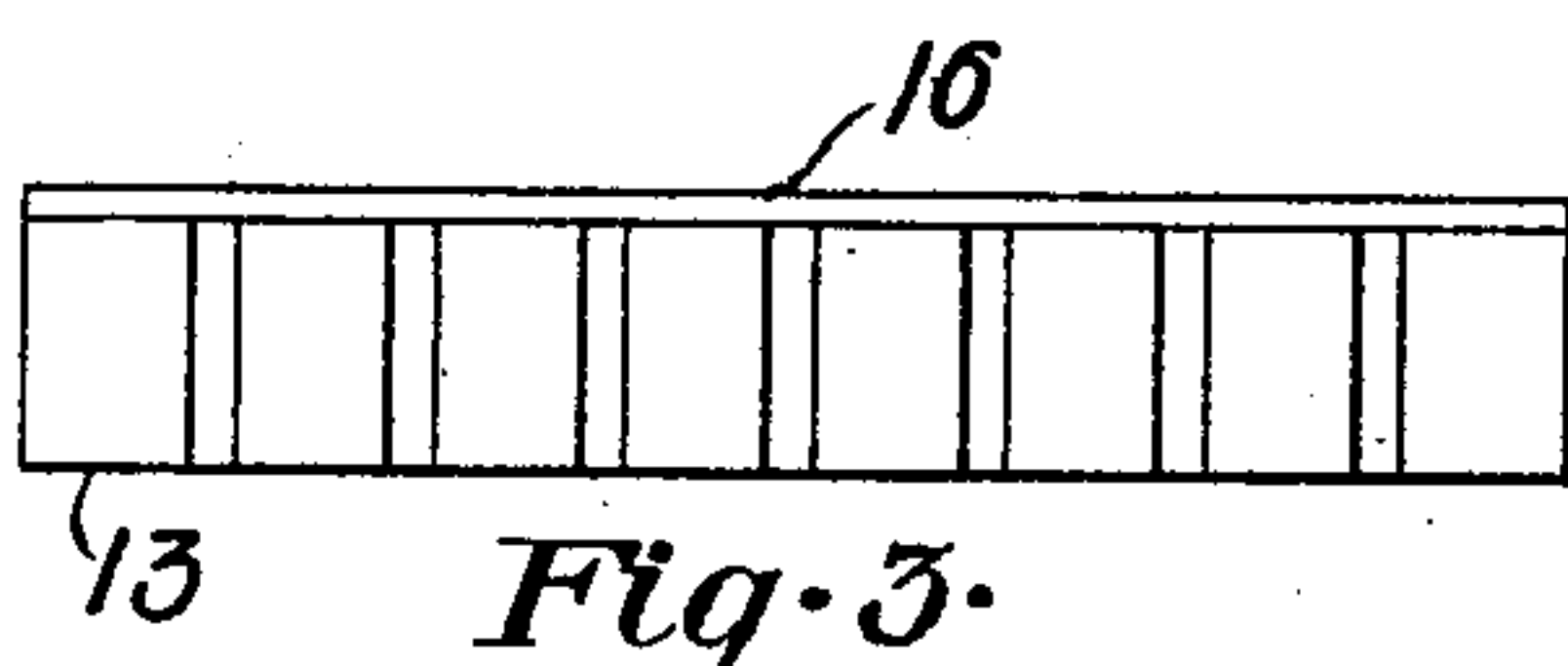


Fig. 3.

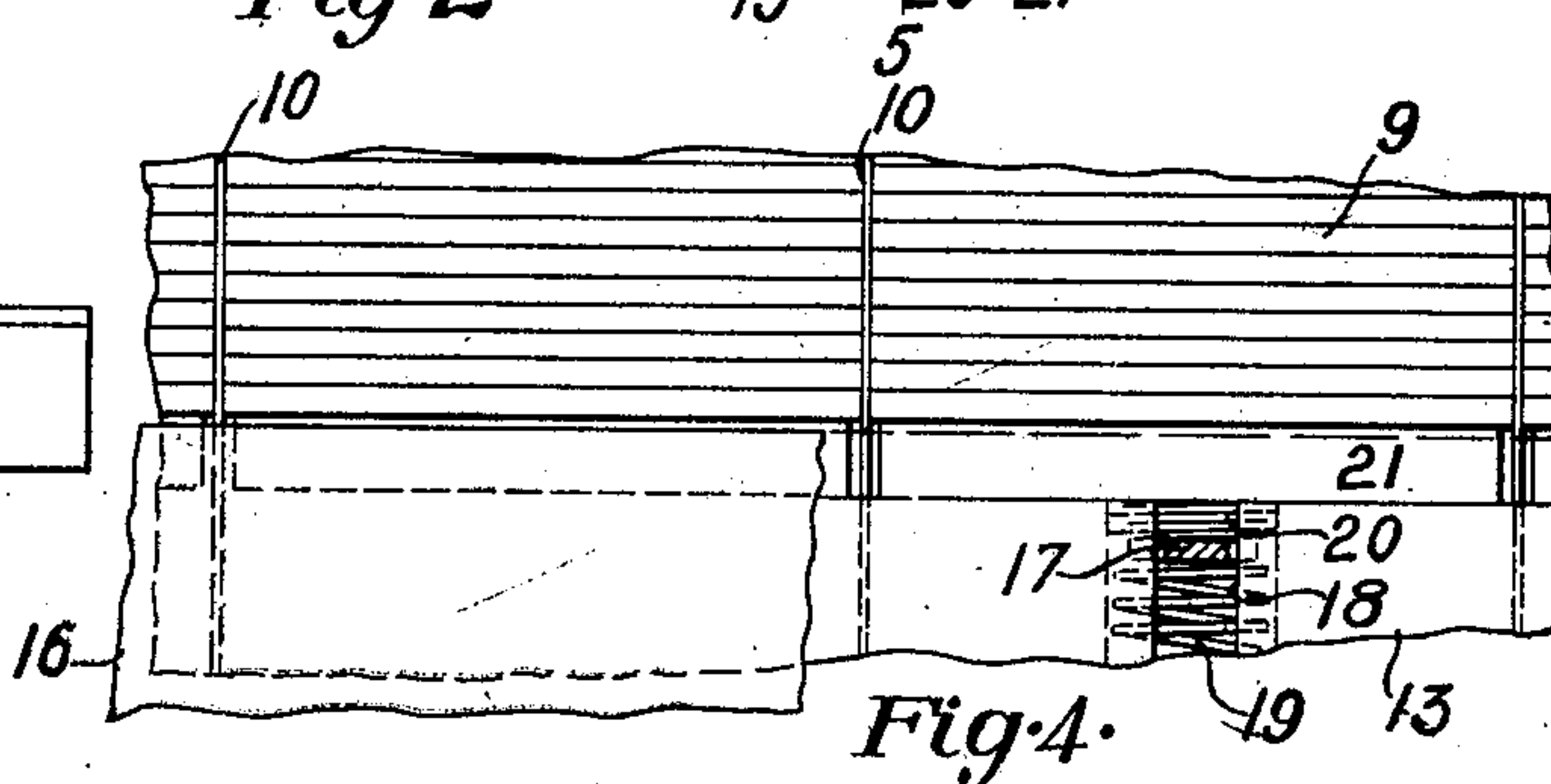


Fig. 4.

Witnesses:

Walter L. Pierce  
Ernest A. Gelfer

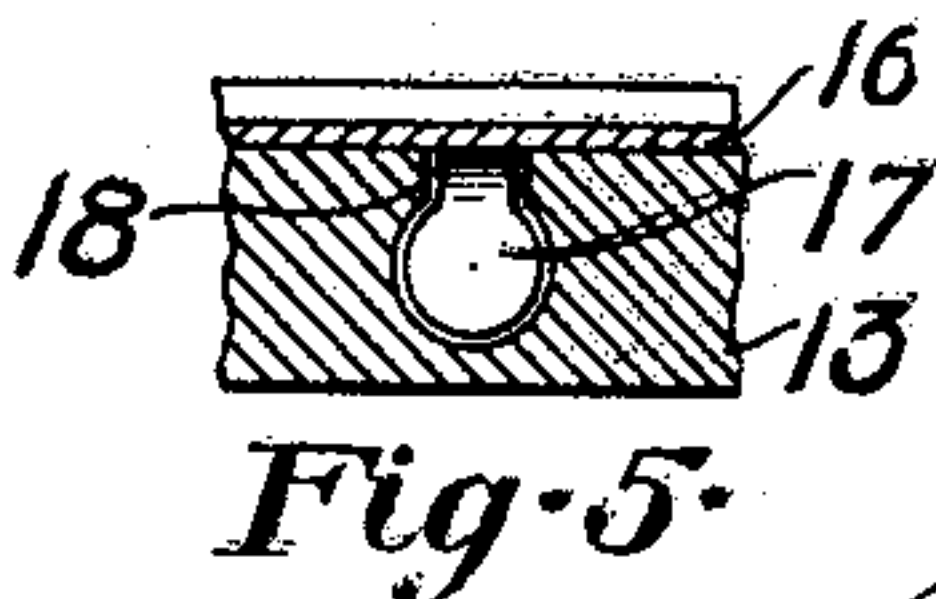


Fig. 5.

Inventor:

Thomas F. Murray  
by his attorney  
Charles J. Gooding.



# UNITED STATES PATENT OFFICE.

THOMAS F. MURRAY, OF JAMAICA PLAIN, MASSACHUSETTS.

## FOOT-BAR FOR PRINTERS' CHASES.

No. 896,745.

Specification of Letters Patent.

Patented Aug. 25, 1908.

Application filed March 4, 1907. Serial No. 360,339.

*To all whom it may concern:*

Be it known that I, THOMAS F. MURRAY, a citizen of the United States, residing at Jamaica Plain, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Foot-Bars for Printers' Chases, of which the following is a specification.

This invention relates to an improvement in foot-bars such as are used in locking up a form in a printer's chase.

The object of the invention is to provide a foot-bar which is adapted to be adjusted longitudinally of the chase in the usual manner by means of adjusting screws so that slugs at the foot of each column of type are forced by said foot-bar against the foot of the column of type, thus locking the type in position in the chase, said foot-bar having slidably mounted thereon a plate which is adapted to be yieldingly pressed against the lower ends of the rules separating the different columns of type and covering the spaces between the adjacent ends of said slugs, so that when a matrix is taken from said chase and the form locked therein a continuous depressed portion extending around the entire form will be provided, so that a continuous raised portion will extend around and inclose the impression of the type formed in said matrix, the object of this raised portion then being to obtain in the finished plate a continuous depressed portion extending around the entire form with a smooth edge without the expense and loss of time necessitated by routing or trimming said plate. To this end, my improved foot-bar is preferably formed in two parts, one adapted to be forced against the slugs which are placed between the upper edge of the foot-bar and the lower end or foot of the type and the other slidably mounted upon said foot-bar and adapted to press against the lower ends of the rules which separate the different columns of type, or against the type or cuts or against both rules and type and cuts. By thus mounting said plate so as to slide laterally upon the foot-bar, said foot-bar can be forced against the slugs and thus clamp the type firmly in the chase without bringing any excessive pressure to bear against the lower ends of the rules, so that said rules are free to expand longitudinally thereof when subjected to heat in the process of obtaining the matrix, without causing said rules to buckle or to be forced against any matter,

such as cross-rules or cuts, at the upper ends of said longitudinal rules, as is often the case when a continuous rule extending longitudinally of the chase from top to bottom thereof abuts at its lower end against an unyielding foot-bar.

The invention consists in a foot-bar for a printer's chase and a plate preferably mounted thereon adapted to slide laterally thereof relatively to said foot-bar.

The invention further consists in the combination and arrangement of parts set forth in the following specification and particularly pointed out in the claims thereof.

Referring to the drawings: Figure 1 is a plan view of a printer's chase showing my improved foot-bar and yielding plate in connection therewith, and with the type removed. Fig. 2 is an enlarged section taken on line 2—2 of Fig. 1, with type shown in connection therewith. Fig. 3 is an underneath plan on the same scale as in Fig. 1 of my improved foot-bar and yielding plate. Fig. 4 is a plan view partly broken away and shown in section of a portion of two columns of type with my improved foot-bar shown in connection therewith. Fig. 5 is a detail section, broken away to save space, taken on line 5—5 of Fig. 2.

Like numerals refer to like parts throughout the several views of the drawings.

In the drawings, 8 is the chase, 9 the type, 10, 10 the rules, 11 the side-bar, 12 the quoin, and 13 the foot-bar.

14 is an adjusting screw for adjusting the quoin 12 and 15 15 are adjusting screws for adjusting the foot-bar longitudinally of the chase.

16 is a plate which is adapted to slide laterally thereof upon the foot-bar 13. Said plate is preferably mounted upon said foot-bar and is suitably guided thereon, preferably by a plurality of guide-fingers 17, 17, each of said guide-fingers being fast to the under side of the plate 16 and projecting downwardly therefrom into slots 18, 18 formed in the foot-bar 13, extending partly thereacross and opening out of the upper edge of said foot-bar or upon the edge adjacent to the type. In each of the slots 18 is located a spring 19 which presses at one end against the bottom of said slot and at the opposite end against one of the guide-fingers 17. Screws 20, 20 have screw-threaded engagement with the foot-bar 13 at the open ends of the slots 18 and form stops against



which the guide-fingers 17 are adapted to abut. Slugs 21, 21 are placed beneath the upper edges of the plate 16 and against the type at the foot of the different columns of

5 type.  
A groove 22 extends along the inner side of the chase, at the right hand side thereof and at the head thereof said groove 22 further continues along the inner side of the  
10 side-bar 11, the grooves 22, 22 upon opposite sides of the type being joined together at the foot of the type by a depression of equal depth therewith, extending over the entire face of the foot-bar 13 and plate 16, *i. e.*, the  
15 upper face of the plate 16 is flush with the bottom of the groove 22 where said groove adjoins said plate upon opposite sides of the chase.

After the type 9 has been set up in the  
20 chase it is clamped therein in the usual manner by means of the adjusting screws 14 and 15, 15, the foot-bar 13 forcing the slugs or foot plates against the different columns of type and between the rules 10, 10. It will  
25 be seen that the foot-bar 13 may be forced upwardly to any extent desired in the chase until the type is locked in said chase, and that while adjusting the foot-bar upwardly in the chase the plate 16, which normally  
30 projects beyond the upper edge of the foot-bar, as shown in Fig. 2, will abut against the lower ends of the rules 10, 10, and thereafter any further adjustment of the foot-bar upwardly will leave the plate 16 stationary and  
35 bearing against the lower ends of said foot-bars with a yielding pressure, said yielding pressure being rendered possible by the springs 19, 19 which are interposed between said foot-bar and the guide-fingers 17, 17  
40 fast to the plate 16.

It will be seen that after the type has been set up in the chase, as hereinbefore described, and firmly clamped therein, any heat applied to the type and to the chase in the subsequent process of obtaining the matrix from  
45 the form will not cause the rules 10, 10 to buckle by reason of expansion, as when said rules expand longitudinally thereof, it is evident that the plate 16 will yield or be forced  
50 downwardly, the springs 19, 19 being compressed to allow of such movement of said plate.

By reference to Fig. 4 it will be seen that there is a space between the adjacent ends of  
55 each pair of slugs 21, 21 and when the ordinary foot-bar is used this space remains open, so that when the matrix is obtained from the form it will be crowded down into said space and thus inequalities will be  
60 formed upon the surface of the matrix at points corresponding to these different spaces, which are objectionable for the reason that it is desirable to have an unbroken raised surface or border extending around  
65 the outside of the matrix and corresponding

to the grooves 22, 22. When my improved yielding plate 16, however, is used, it will be seen that the depressed portion which extends across the upper face of said plate and forms a continuation of the grooves 22, 22 in  
70 the side bar 11 and in the side of the chase will present a smooth and unbroken surface from side to side of the chase, so that the corresponding raised portion forming a portion of said border upon the matrix which is ob-  
75 tained from said form will have no depressions or inequalities therein throughout its entire extent, thus saving trimming or routing the plates.

While the drawings illustrate the slugs as  
80 projecting slightly along their upper edges between the rules so that the plate 16 bears against the lower ends of said rules, it is evident that the lower face of the lowermost type or cut in the chase might project down-  
85 wardly below the lower ends of the rules, and in that case the yielding plate 16 would bear against said type or cuts and not against the rules. Again, it is evident that the lower ends of the rules and the type might both be  
90 in alinement with each other and, therefore, both bear against the upper edge of the plate 16, but in any case it will be understood that said plate 16 covers the space between the  
95 adjacent ends of the slugs.

Another advantage obtained by the use of my improved yielding plate in combination with the foot-bar is that a rule can be used in one piece without injuring the matter at the  
100 head of the rule. It is the custom in making up the form to use a rule in two pieces with a space between their adjacent ends in order to overcome the difficulty hereinbefore stated where a solid foot-bar is used and this  
105 takes time and also requires the very careful exercise of skilled judgment in order to know just how much space to leave between the adjacent ends of the two pieces of the rule. All of this trouble and uncertainty is over-  
110 come by the use of the yielding plate of my invention.

It will be evident to those skilled in this art that the use of the slugs is of greater advantage in making up the form, as it prevents the type from falling down and be-  
115 coming displaced prior to the locking up of the form. By the use of my improved foot-bar with the yielding plate the slugs can be used by the compositor in making up the page and then, without removing the slugs,  
120 the foot-bar can be forced by the adjusting screws, in the manner hereinbefore described, to lock up the form. Without the use of the slugs and with the solid foot-bar with no yielding plate, it is evident that the  
125 foot-bar could bear against the lower end of the rules even when the type and cuts might not be firmly locked in the form, and in such a case as this, where the type or cuts are not firmly locked in the form the same are liable  
130



to fall-out when the chase is being removed from the table and thus destroy the form and lead to a large amount of trouble loss of time and expense, but where the slugs are  
 5 used with the foot-bar there is no danger of this occurring and by the combination of the foot-bar with my improved yielding plate, all of the disadvantages hereinbefore enumerated resulting from the use of the foot-bar  
 10 and slugs without the yielding plate are overcome.

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

15 1. A foot-bar for a printer's chase and a plate mounted thereon adapted to bear against the ends of rules in said chase and also adapted to slide laterally upon said foot-bar.

20 2. A foot-bar for a printer's chase, a plate mounted thereon adapted to bear against the ends of rules in said chase, and a spring interposed between said plate and foot-bar adapted to move said plate laterally of said foot-  
 25 bar and toward said rules.

3. A foot-bar for a printer's chase, a plate slidable thereon, a plurality of guide-fingers fast to said plate and projecting into slots extending laterally of said foot-bar a spring  
 30 in each of said slots bearing at one end thereof against one of said fingers, respectively, and stop-screws at the front end of each of said slots against which said fingers are adapted to abut.

35 4. In combination, a printer's chase, a foot-bar therefor, a plate yieldingly mounted

to slide laterally upon said foot-bar, and means to adjust said foot-bar longitudinally of said chase.

5. In combination, a printer's chase, type, 40 rules extending longitudinally of said chase, a foot-bar, means to adjust said foot-bar longitudinally of said chase, whereby said type are clamped in said chase, and a plate movable laterally relatively to said foot-bar and  
 45 adapted to bear against the ends of said rules.

6. In combination, a printer's chase, type, rules extending longitudinally of said chase, a foot-bar, means to adjust said foot-bar lon- 50 gitudinally of said chase, whereby said type are clamped in said chase, and a plate movable laterally relatively to said foot-bar and adapted to bear against the ends of said rules with a yielding pressure. 55

7. In combination, a printer's chase, type, rules extending longitudinally of said chase, a foot - bar, slugs interposed between said type and foot-bar, means to adjust said foot-  
 60 bar longitudinally of said chase, whereby said type is locked in said chase, and a plate movable laterally relatively to said foot-bar and adapted to bear against the ends of said rules with a yielding pressure.

In testimony whereof I have hereunto set 65 my hand in presence of two subscribing witnesses.

THOMAS F. MURRAY.

Witnesses:

CHARLES S. GOODING,  
 LOUIS A. JONES.