

No. 682,840.

Patented Sept. 17, 1901.

C. F. BURROUGHS.
PRINTER'S CHASE.

(Application filed Nov. 12, 1900.)

(No Model.)

Fig. 1.

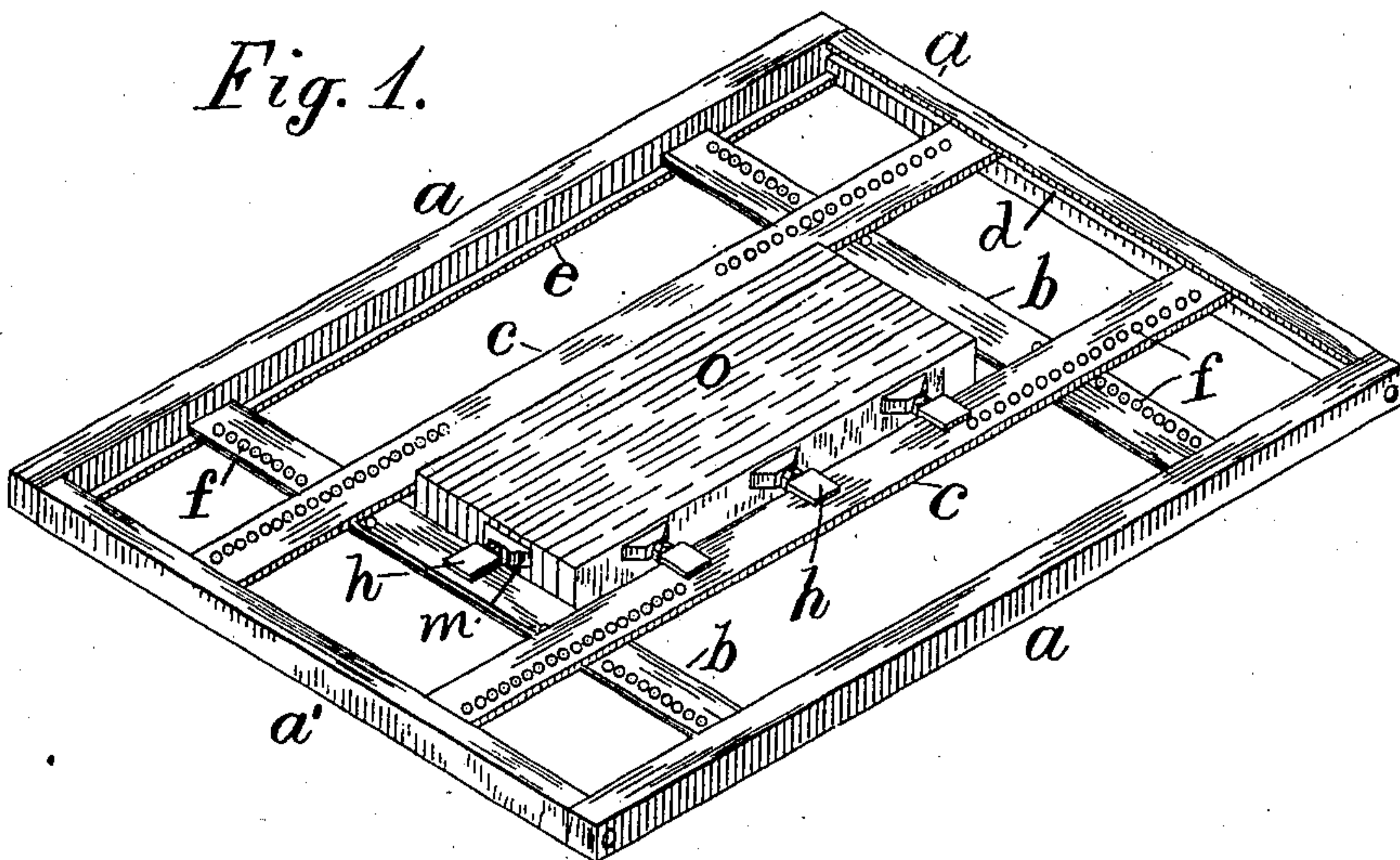


Fig. 2.

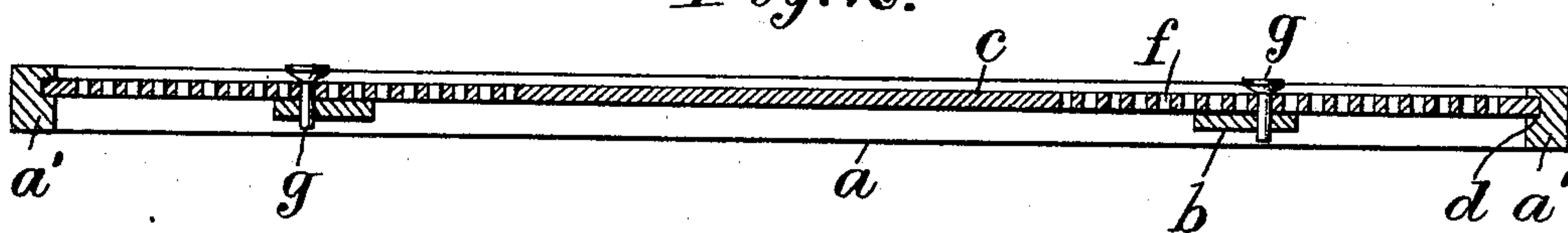


Fig. 3.

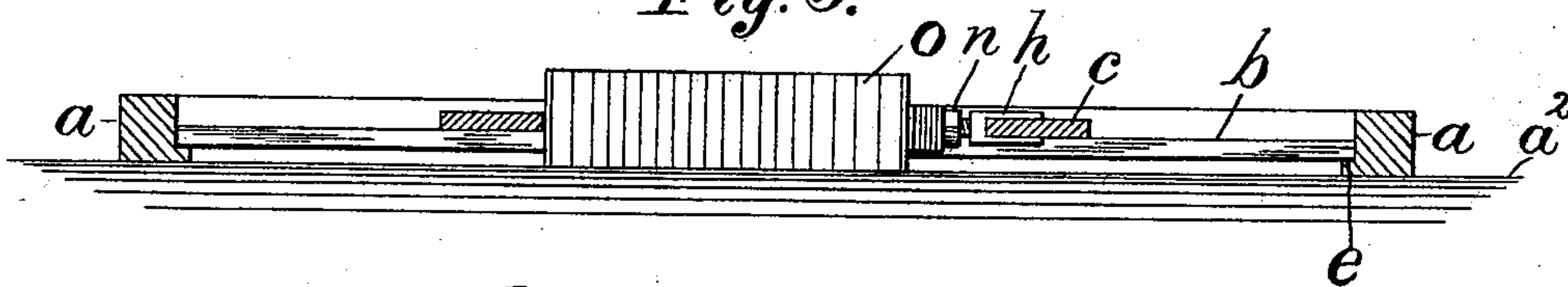


Fig. 4.



Fig. 5.



Fig. 6.

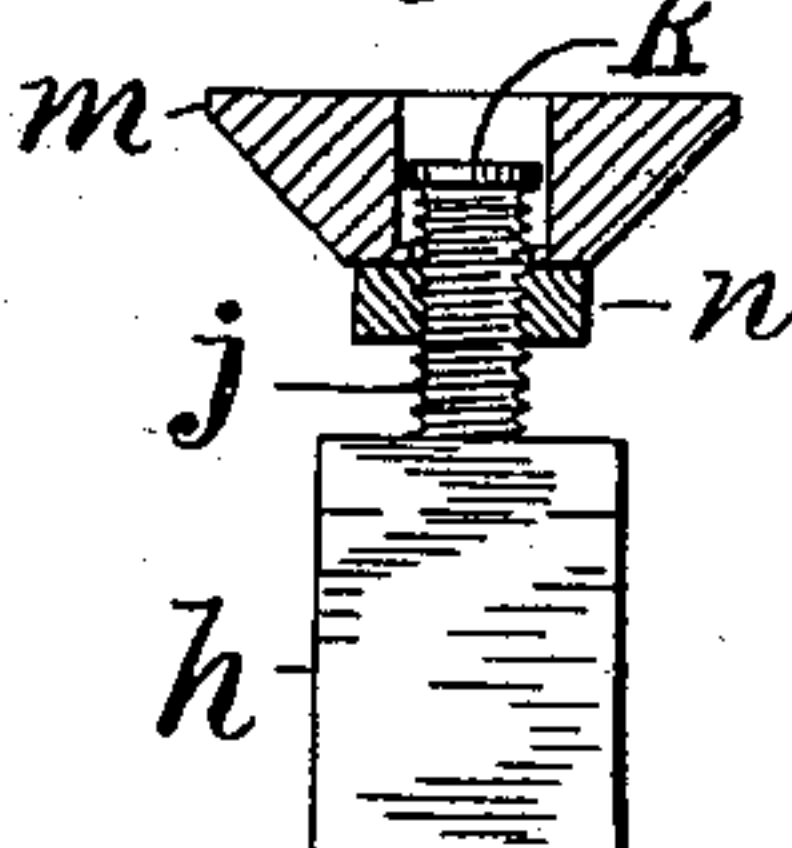
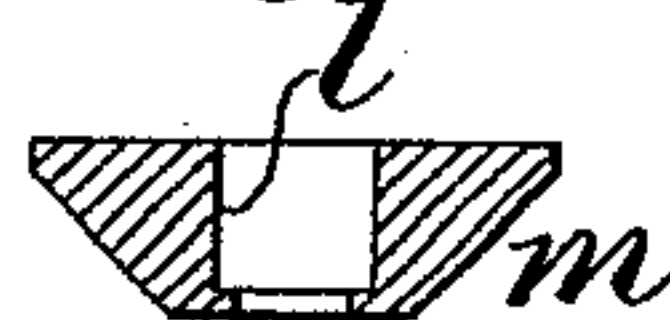


Fig. 7.



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UNITED STATES PATENT OFFICE.

CHARLES F. BURROUGHS, OF NEWARK, NEW JERSEY.

PRINTER'S CHASE.

SPECIFICATION forming part of Letters Patent No. 682,840, dated September 17, 1901.

Application filed November 12, 1900. Serial No. 36,162. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. BURROUGHS, a citizen of the United States, residing at 141 Commerce street, Newark, Essex county, New Jersey, have invented certain new and useful Improvements in Printers' Chases, fully described and represented in the following specification and the accompanying drawings, forming a part of the same.

- 10 The present invention relates to that class of printers' chases in which adjustable bars and screw-clamps are used in place of the quoins and furniture required with a plain rectangular frame.
- 15 The object of the invention is to furnish an improved construction whereby the chase may be manufactured more cheaply and used with more facility than those heretofore employed. This object is attained by using
- 20 only a single pair of longitudinal bars in the frame and a single pair of transverse bars in contact therewith and clamps fitted detachably to the inner edges of the bars, so that any number of clamps may be readily applied to the bars that are found necessary to
- 25 lock up a given body of "matter." To hold the contiguous sides of the bar in contact without any locking projections upon them and without using duplex bars, which in-
- 30 crease the weight, I form two of the frame sides with a ledge near one edge to receive two of the adjustable bars and I form the other two frame sides with an opposed ledge near its opposite edge to receive the other two bars
- 35 and hold them adjustably in contact with the first-mentioned bars. The clamps are made detachable from the bars by forming each with a slot or forked foot, which can be instantly applied to or removed from the in-
- 40 ner edge of the bar. The bars are locked together at each of their crossings by a locking-pin inserted through one of the holes in each of two series of holes formed in the two bars, and the headpiece of the clamp is provided with a screw adjustment equal to the
- 45 variation effected by using adjacent holes.

In the annexed drawings, Figure 1 is a perspective view of the chase with some matter locked up therein. Fig. 2 is a longitudinal section through the holes in one of the longitudinal bars. Fig. 3 is a transverse section of the chase with the chase and the mat-

ter set upon a flat surface. Fig. 4 is an elevation of the locking-pin. Fig. 5 is an edge view of one of the clamps. Fig. 6 is a side view of the same with the head and nut in section; and Fig. 7 is a section of the head, drawn separate from the clamp.

The frame sides *a* are provided each upon the inner side near the bottom with the ledge *e*, and the transverse bars *b* are movable upon such ledge. The longitudinal bars *c* are fitted to grooves *d* in the frame sides *a*'. The upper side of the groove forms a ledge *e'*, which is opposed to the ledge *e*, and the two ledges are so situated as to hold the bars in contact with one another at their intersection. Each bar is formed with a series of holes *f*, and the bars are locked at their intersection by a locking-pin *g* inserted through the coincident holes.

Three clamps are shown upon each of the longitudinal bars *c* and one upon each of the transverse bars *b*, fitted to the inner edges of the bars with their headpieces pressed against the matter *o*. Each clamp, as shown in Figs. 5 and 6, is formed with the forked foot *h*, having the slot *i*, adapted to fit upon the inner edge of the bars *b* or *c*. The foot has the screw *j* projected therefrom and provided with a collar *k* upon its head, which fits within a counterbored recess *l* in the headpiece *m*. A nut *n* upon the screw operates, when turned, to press the headpiece outward until the bottom of the counterbored recess touches the collar *k*. The play afforded by such recess is a little greater than the variation which is effected in the position of the bars by using the adjacent holes *f*, and the clamps thus compensate for the whole range of such variation. The bars *b* and *c* are made relatively thin and broad, and thus offer great resistance to the lateral pressure exerted by the clamps. The desired resistance is thus afforded by using a single pair of transverse bars, and a single pair of longitudinal bars, thus cheapening the construction and facilitating the use and adjustment of the bars. The bars *b* and *c* are both made of the same thickness, so as to be used with the same clamps, and the forked foot of each clamp fits movably upon the edge of the bar, so that it may be set at any point in its length and may be instantly removed or ad-

justed thereon. The longitudinal bars serve to hold the transverse bars down upon the ledge *e*, and the transverse bars would hold the longitudinal bars against the ledge *e'* at the upper side of the groove if the lower side of the groove were cut away. The opposed ledges are therefore the operative elements in holding the bars adjustably in the frame. The sides *a a'* of the frame are joined at the corners by any suitable means after the bars are inserted. As the locking-pins resist all the outward thrust of the clamps, it is obvious that the frame sides *a a'* are not subjected to any lateral strain and may be made quite light.

The bars *b* and *c* are straight flat bars, and the whole structure is thus simple and cheap in construction, and all the parts are very accessible and convenient to manipulate in use.

In chases having adjustable bars it has been common heretofore to apply locking devices to the outer edges of the bar, and such locking devices necessarily prevent the bars from being pushed into contact with the frame sides *a* and *a'*. The use of such locking devices therefore diminishes the capacity of the chase, while the employment of the pins *g* in the holes through the bars at their crossings avoids all projections upon the exterior of the bars, and thus enables them to be moved apart as far as the frame sides will permit.

The detachability of the screw-clamps from the bars greatly facilitates the use of the chase, as only the desired number may be used to lock up the matter, which is not the case where the clamps embrace both edges of the bars and are thus secured permanently thereon.

I am fully aware that it is common to make the transverse bars in a chase of duplex construction and to hold one set of the bars in place by inserting them between the members of the duplex bars. Such a construction employs six bars instead of four and increases the weight of material in the bars about fifty

per cent. In a chase of large dimensions such additional weight is very undesirable, and my invention produces a much lighter construction by using only a single pair of longitudinal bars and a single pair of transverse bars and holding the contiguous sides of such bars in contact by means of opposed ledges upon the longitudinal and transverse sides of the frame.

I do not claim the use of transverse and longitudinal bars, as such a construction is old, but have pointed out the advantage of using the single pair of bars in each set and avoiding the weight of the duplex construction.

Having thus set forth the nature of the invention, what is claimed herein is—

1. In a printer's chase having a rectangular frame with longitudinal and transverse bars adjustable therein, the combination, with such frame and bars, of the clamps having each the forked foot *h* with screws *j* projected therefrom, the headpiece *m* secured movably upon the screw, and the nut *n* for adjusting the headpiece, and the feet being fitted detachably to the inner edges of the bars, substantially as herein set forth.

2. In a printer's chase, the combination, with the frame sides *a* having each the ledge *e* and the frame sides *a'* having each the ledge *e'* opposed to the ledges *e*, of the bars *b* and *c* fitted respectively to such ledges, and adjustable in contact with one another, and their contiguous faces held together by the operation of the opposed ledges, the bars *b* and *c* both having series of holes *r* with locking-pins *g* fitted thereto at the crossings of the bars, and clamps being fitted detachably to the inner edges of the bars, as and for the purpose set forth.

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

CHARLES F. BURROUGHS.

Witnesses:

THOMAS S. CRANE,
BENJ. E. JARVIS.