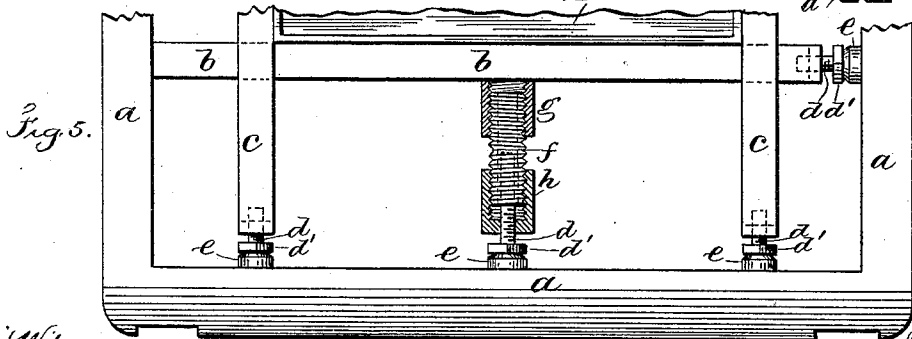
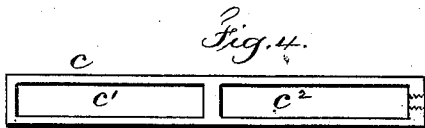
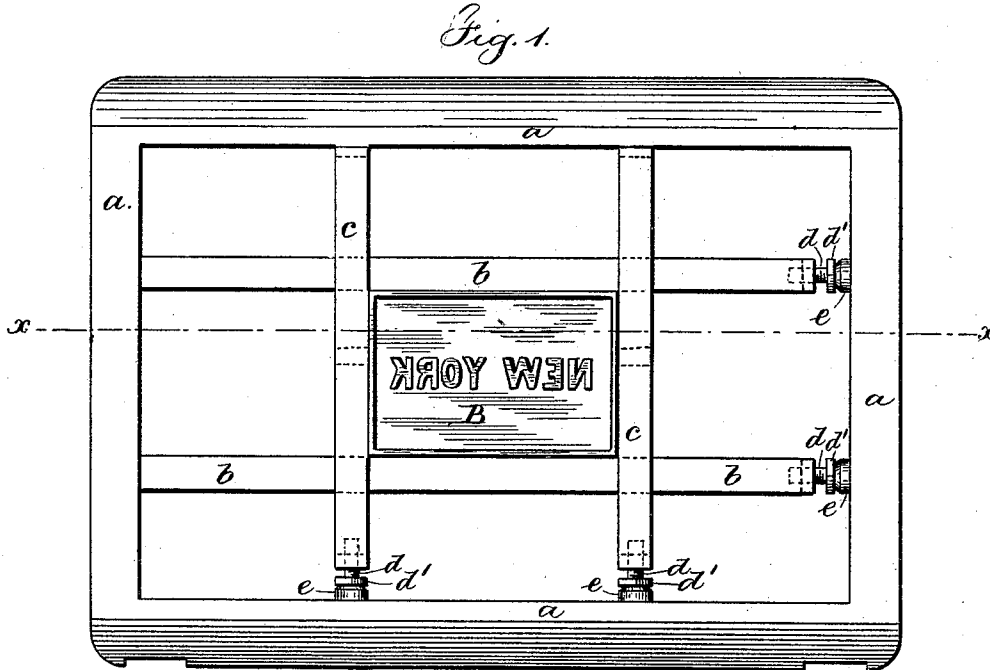


(No Model.)

N. E. SMITH.
TYPE FRAME FOR CHASES.

No. 451,625.

Patented May 5, 1891.



Witnesses
Chas. H. Smith
J. Stait.

Inventor
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UNITED STATES PATENT OFFICE.

NATHANIEL E. SMITH, OF JERSEY CITY, NEW JERSEY, ASSIGNOR TO HIMSELF AND PHILIP E. MARTIN, OF SAME PLACE.

TYPE-FRAME FOR CHASES.

SPECIFICATION forming part of Letters Patent No. 451,625, dated May 5, 1891.

Application filed August 8, 1890. Serial No. 361,431. (No model.)

To all whom it may concern:

Be it known that I, NATHANIEL E. SMITH, a citizen of the United States, residing at Jersey City, in the county of Hudson and State of New Jersey, have invented an Improvement in Type-Frames for Chases, of which the following is a specification.

Forms of type are commonly held in a printer's chase by blocks of various shapes and wedges; but much time is often lost in finding and adjusting blocks to fit the various spaces unoccupied in the chase. Printers' chases have also been employed of peculiar construction, in which there were longitudinal and transverse bars operated through and at right angles to each other by means of screw-rods with right and left hand threads, all of which were permanent fixtures in the chase, and which, if employed, required that the usual form of chase be thrown away.

My invention relates to a device for blocking type which is adapted for use with the ordinary chase; and the same consists of longitudinal bars and transverse bars, which together form a frame within the chase, the one set of bars moving in slots in the other set and both sets of bars being clamped within the chase by screw-stems having heads and operating upon disks which bear against the inner face of the chase, and in some cases I employ a brace where there is a long line of type unsupported, and this brace bears against the chase and one of the longitudinal and transverse bars and acts to support said bar and assist in securely blocking the type.

In the drawings, Figure 1 represents a plan view of my improvement. Fig. 2 is a longitudinal section of the same at the line xx of Fig. 1. Fig. 3 is a section in larger size of one of the tightening-screws. Fig. 4 is an elevation of one of the transverse bars, and Fig. 5 is an elevation of a portion of the chase with my improved brace in the position it occupies in use.

a represents the printer's chase, which is of cast metal in the usual form employed.

b represents the longitudinal bars, and c the transverse bars, which together form a frame within the chase for receiving and holding the form of type. The longitudinal bars b are preferably solid and the transverse

bars c slotted at c' , Fig. 4, the longitudinal bars b passing through the slots of the transverse bars, the transverse bars being movable along the longitudinal bars b , and the longitudinal bars b movable through the slots of the transverse bars c .

d represents screw-stems formed with polygonal heads d' , and e represents bearing-disks upon the ends of the screw-stems, the ends of which stems pass through the disks e and are upset, so that the stems and disk are inseparable, but the stems are free to rotate within the disks. One end of each of the longitudinal bars b and transverse bars c is perforated and threaded to receive one of the screw-stems d , which, together with the heads and bearing-disks, form a device for clamping said bars b and c within the chase a at any point desired by simply turning the polygonal heads d' with a wrench to rotate and extend the stems and cause the disks e at one end and the opposite ends of the bars b c to wedge more tightly within the chase a .

The form of type as set up for printing is to be surrounded by the longitudinal bars b and transverse bars c either centrally of the chase or nearer to any portion thereof, and the parts, after being brought up to the type, are clamped, as herein described, and should they not be tight enough a slight tap of a hammer will bring the same snugly to place. In the drawings I have shown an electrotype-block B as clamped by the bars b c .

The brace shown in Fig. 5 is composed of a central tubular stem f , with right and left hand threads running in opposite directions from a central point, and g h represent tubular portions or sleeves internally threaded and adjustable longitudinally upon the stem f . The outer end of the tubular portion h is made solid, and I employ a screw-stem, polygonal head, and bearing-disk similar to those heretofore described, the stem screwing into the end of the tubular portion h and passing partially through the tubular stem f . This brace is to be employed between the central portion of one of the bars b and the chase to support and clamp the type, the same being operated and clamped by means of the tubular portions and the screw-stem set forth.

My improved device is very simple in con-

struction, is very efficient in its operation, and possesses the advantage of being adapted for use with the common printer's chase, so that it is not necessary for the printer to buy
 5 new chases in order to have an adjustable frame, the frames being of sizes adapted to fit the chases.

I claim as my invention—

1. The combination, with the printer's chase,
 10 of the bars *b*, the slotted bars *c*, through which the bars *b* pass, and a clamping-screw passing into one end of each bar and in line with the same and bearing against the chase for securing such bars in place, substantially as
 15 specified.

2. The combination, with the chase *a*, the longitudinal bars *b*, transverse bars *c*, and means for clamping the said bars within said chase, of a brace composed of a stem *f*, with

right and left hand threads, tubular portions
g and *h*, adjustable longitudinally upon the same, and the screw-stem, polygonal head, and bearing-disk connected to one end of one tubular portion, substantially as and for the
 20 purposes set forth.

3. The combination, with the chase *a* and type-clamping bars, of the brace composed of a tubular stem *f*, with external right and left
 25 hand threads, nuts or tubular end portions *g* and *h* around the tubular stem, the screw *d*,
 30 and head *d'*, screwing into the end of the nut *d* and passing freely into the tubular stem *f*, substantially as specified.

Signed by me this 1st day of August, 1890.

NATHANIEL E. SMITH.

Witnesses:

GEO. T. PINCKNEY,
 HAROLD SERRELL.