## A. T. THAYER. PRINTER'S FURNITURE.

No. 455,070.

Patented June 30, 1891.

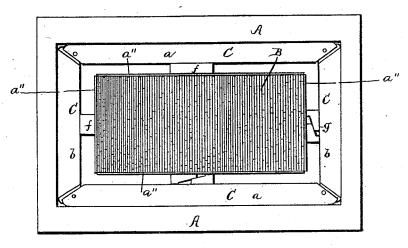
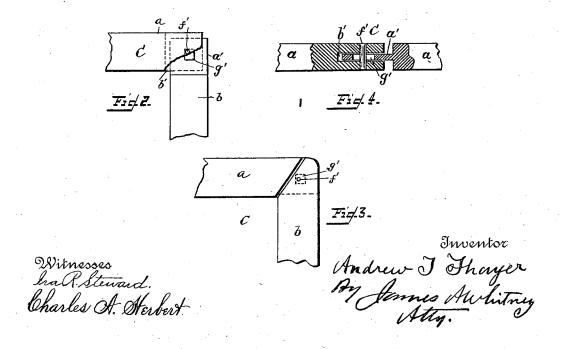


Fig. I.



## UNITED STATES PATENT OFFICE.

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## PRINTER'S FURNITURE.

SPECIFICATION forming part of Letters Patent No. 455,070, dated June 30, 1891.

Application filed January 12, 1889. Serial No. 296,146. (No model.)

To all whom it may concern:

Be it known that I, ANDREW T. THAYER, of the city, county, and State of New York, have invented certain new and useful Improvements in Printers' Furniture; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

This invention comprises an improvement in that part of the printer's art which relates to securing the form in the chase, and its object is to provide for a more secure support and retention of the form in place than is af-15 forded by the "furniture," so called, heretofore in use, and also to provide for a material saving of time and labor in the operation of securing the form in the chase.

My invention comprises the combination, 20 with the chase, of the hereinafter-described expansible piece of furniture, whereby the chase itself may be used with a wider range as regards size of forms than is feasible with the ordinary chase used with the ordinary 25 furniture; and whereby said object is secured with less expense and greater convenience of manipulation than has heretofore been accomplished by devices intended to effect similar results.

Figure 1 is a plan view of an apparatus embracing my said invention. Figs. 2 and 3 are plan views; and Fig. 4 a vertical sectional view further illustrating my said invention.

A is the chase, which may be of the usual

35 or any ordinary construction.

B is the form, which may also be of any appropriate or ordinary kind, and which, of course, has at its ends or sides, in other words, its circumference, the usual reglets  $a^{\prime\prime}$ .

C is a piece of expansible furniture interposed between the form and the chase, as represented in Fig. 1, it being, of course, understood that the form is placed within the chase and in substantially the ordinary relation 45 thereto.

The expansible furniture C is composed of side pieces a and end pieces b, arranged in such relation to each other that the transverse and longitudinal diameters of the device 50 may be increased or diminished by moving the said side pieces and end pieces farther from or nearer toward the center of the device. I ordinary furniture is greatly diminished, the

The construction may be that represented in Fig. 2, in which tenons a' on one of the parts passes into sockets b' in the adjacent part, so 55 that the parts may be moved with reference to each other. In order to keep the parts together pins f' are passed from one side to the other of the socket through slots g' in the tenon of the contiguous end of the adjacent 60 part, thereby permitting the parts to be moved with reference to each other and expanded or contracted to increase or diminish the circumference of the furniture.

As the equivalent of the construction just 65 described, the corners of the furniture may be made slotted or non-expansible, but with the side pieces a and end pieces b expansibly jointed at some part along their respective lengths. Such a joint is illustrated in Fig. 4, 70 in which a tenon a' on one section of the side or end piece, as the case may be, fits into a corresponding socket b' in the contiguous end of the other section on the same side piece or end piece, as the case may be, with a pin f', 75 passing through the socketed end and through a suitable slot in the tenon of the tenoned By this construction the available length of the side piece, and also the end pieces, may be increased or diminished, there- 80 by increasing or diminishing the circumferential size of the furniture C. This piece of furniture C is placed within the chase A and around the form B, and being expansible, as described, its outer or circumferential sur- 85 faces are brought firm and snug against the inner surface or circumference of the chase. Pieces f of ordinary furniture and ordinary quoins g are then placed between the form and the expansible piece of furniture C, as rep- 90 resented in Fig. 1, and the form is then keyed up firmly against the inner surface or circumference of the expansible furniture C in substantially the same manner as with the ordinary apparatus.

By the use of the expansible piece of furniture C a much more firm and secure bearing, support, and retention of the form in place is obtained than if the ordinary quoins and furniture f were alone employed to press the 1co form through the entire space between the form and the chase. Furthermore, inasmuch as the number of small pieces f, &c., of the

handling of the single device, the expansible furniture C being substituted for the handling of a considerable number of small pieces, there is a great deal of time saved in the adjustment of the furniture, and also a corresponding reduction in the degree of continuous care involved in securing the form in place and position within the chase.

I am aware that a printer's chase has been heretofore proposed, in which two series of bars at right angles to each other are provided upon screws working in fixed bearings provided to the chase, with the object of providing a variable central space in which the form may be placed and embraced. Such apparatus, however, is expensive, liable to get out of order, and the screws being in practice almost necessarily of metal, are liable to become rusted or corroded, and the apparatus is unfitted for use by parties not familiar with machinery nor habituated to the care thereof. My invention is totally distinct from this and

avoids the defects thereof and provides a simple and cheap apparatus for service in the ordinary composing-room, and secures in 25 practice great economy of time and labor and diminishes for any given quantity of work the number of chases required in a printing establishment.

What I claim as my invention is—
The printer's furniture herein specified, the same consisting of a frame adapted to set within the chase, the pieces of the frame being united at the corners by loose jaws and tenons primed together, the holes in the tenons for the pins being sufficiently large for the furniture to be contracted when placed in the chase and expanded in blocking up the form, substantially as specified.

ANDREW T. THAYER.

Witnesses: Charles A. Herbert, Albert C. Aubery.