Sept. 29, 1925.

1,555,069

A. F. OSTERLIND

PRINTER'S PLATE HOOK

Filed Nov. 12, 1924

Fig. 1

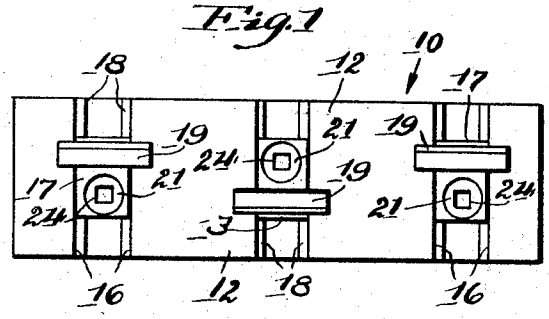


Fig. 2

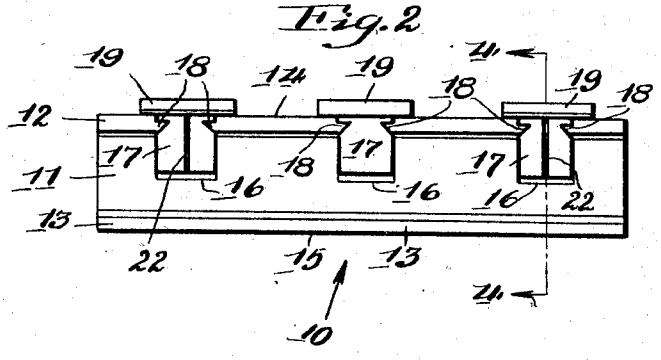


Fig. 3

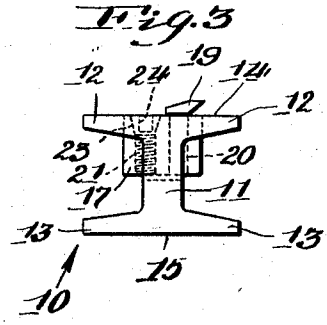
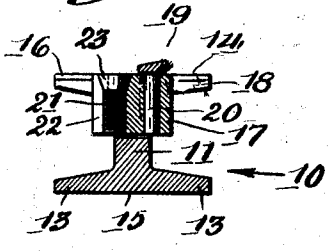


Fig. 4



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UNITED STATES PATENT OFFICE.

AUGUST F. OSTERLIND, OF ST. PAUL, MINNESOTA.

PRINTER'S PLATE HOOK.

Application filed November 12, 1924. Serial No. 749,400.

To all whom it may concern:

Be it known that I, AUGUST F. OSTERLIND, a subject of the King of Sweden, residing at St. Paul, in the county of Ramsey and State of Minnesota, U. S. A., have invented new and useful Improvements in Printers' Plate Hooks, of which the following is a specification.

It is the object of this invention to provide a printer's hook, adapted to be used for mounting plates of various kinds and sizes in the diverse classes of work required of modern printers.

A further object of this invention is to provide highly efficient means of this kind, which can be manufactured at a much lower cost than has been possible heretofore.

Another object is to produce hooks adapted to be used in series in a bar of great strength and light weight. This invention also includes other novel features of construction hereinafter pointed out.

Heretofore, it has been the general practice to provide individual hooks of more or less complicated and expensive construction, each of which must be separately fitted in the chase, together with the bases and other furniture. Handling the separate hooks is tedious and renders the mounting of plates expensive because of the large amount of time consumed. It will thus be evident that decided advantages are to be obtained by placing a series of hooks in a relatively long bar adapted to be clamped in a printer's form. My bar form of hook body effects a further economy by reason of the fact that it replaces a substantial amount of the furniture and bases usually employed, the plates being supported at their edges, especially where narrow margins are to be produced, upon the hook body. However, bars constructed like the metal blocks forming the body of the common types of hooks would be too heavy, and consequently too expensive and difficult to handle for practical use. I have therefore devised a hook which is peculiarly adapted for use in a bar of unusually light and at the same time strong construction, such as that of my Patent No. 1,438,717 of December 12th, 1922.

The accompanying drawings illustrate the best form of my device at present known to me. Referring to the drawings, Figure 1 is a plan view of my device, Fig. 2 is a side elevation of the same, Fig. 3 is an end view thereof and Fig. 4 is a section taken on the line 4—4 of Fig. 2. In the drawings I have used the numeral 10 to indicate the body or bar in which the hooks proper are mounted in series. This bar is substantially I shaped in cross section, being provided with a central web 11 and pairs of flanges 12 and 13 projecting transversely from the web 11.

The flanges 12, which are those normally uppermost during the operation of mounting a plate, are formed with plane upper surfaces 14 adapted to receive the plates, while the normally lower flanges 13 have plane surfaces 15 parallel to the surfaces 14 on the flange 12. The outer extremities of the flanges 12 and 13 are perpendicular to the surfaces 14 and 15 so as to present a suitable abutment for the adjacent furniture and bases.

Cut through the flanges 12 and web 11 is a series of guide-ways 16 for hook blocks 17. Pairs of wedge-shaped projections 18, formed on the flanges 12 at the lateral edges of the guide-ways 16, slidably support the blocks 17 in the bars 10. The blocks 17, which are substantially rectangular, are so mounted in the guide-ways 16 that their upper faces are in the same plane with the surfaces 14 of the flanges 12. Swiveled near one end of each of the blocks 17 is a cross bar 19 forming an under cut jaw for engagement with the plates. These bars 19 are secured to pins 20 which extend perpendicularly downward from the normally upper surfaces of the blocks 17. The cross bars or jaws 19 (when not locked) are thus freely revoluble upon the upper surfaces of the blocks 17 and flanges 12.

Means for quickly and securely fastening the blocks 17 in any desired position in the guide ways 16 are provided. These means consist of a screw 21 threaded centrally in each of the blocks 17, said blocks being made expansible in a direction transverse the wedge projections 18 by a kerf 22. The normally upper ends of the screws 21 are formed with conical heads 23 arranged, when the screws are turned downward, to forcibly expand the blocks 17 into frictional engagement with the wedge projections 18. A central squared aperture 24, in each of the screws 21, is adapted to receive a wrench or key for turning said screws.

To set up a plate or several plates in a chase, the bases are laid out on an imposing surface and the required number of the bars 10, each carrying a series of the

hook blocks 17 are mounted so as to support the edges of the plates. With the screws 21 loosened, the blocks 17 are now moved in the guide ways 16 to bring the jaws 19 into engagement with the edges of the plates. The screws 21 are finally turned downward with a suitable wrench to expand the blocks 17 against the wedge projections 18. The arrangement of these wedge projections is such that when the block is expanded there is a tendency to draw the block downward and to bring its upper surface into coincidence with the plane of the surfaces 14. Thus, the top of the blocks 17 are sure to be maintained at a level where they will afford a uniform support for the edge of the plate.

It will be evident that two plates may be mounted with their edges in close proximity, each over-lapping the screws 21 holding the jaws 19 in engagement with the adjacent plate. The blocks 17 may be removed from the guide ways 16 and replaced with the screws 21 on one side or the other of the jaws 19 as required to make said screws always accessible. By making the jaws 19 revoluble in the blocks 17, firm uniform engagement with the edges of the plates is insured. Thus, if the edge of a plate is so placed that it is not parallel with the edge of the greatest dimension of the bar 10, the jaw 19 will merely turn in the block 17 to properly engage the plate. It is to be noted that the hook of the present invention is carried in a bar containing a minimum of metal and that at the same time, the bar on account of its peculiar cross-sectional shape, has ample strength. Further, as the bar can be produced at a comparatively low cost, I effect a much needed economy in the cost of manufacturing the hook.

Having described my invention what I claim as new and desire to protect by Letters Patent is:

1. In a device of the class described, a bar having a normally upright web and a flange projecting laterally from said web, said flange being formed with a plane upper surface and having a plurality of guide slots extending transversely therethrough, hook blocks severally slidable in said slots, said blocks being adapted to expand to frictionally engage said flange, means for forcibly expanding said blocks against the flange, and jaws arranged on said blocks to engage the edges of plates.

2. In a device of the class described, a bar formed with a web and upper and lower flanges projecting laterally from said web, said upper flange having a plurality of guide slots extending transversely therethrough, hook blocks severally slidable in said slots, manually operable means for adjustably securing said blocks in the bar, and jaws arranged on said blocks to engage the edges of plates.

3. In a device of the class described, a bar formed with a web and a flange projecting laterally from said web, said flange being formed with a plane upper surface and having a plurality of guide slots extending transversely therethrough, wedge-shaped projections along the edges of said slots, hook blocks slidably mounted in said slots, said blocks being adapted to expand to frictionally engage said projections, means for forcibly expanding said blocks against the projections, and jaws arranged on said blocks to engage the edges of plates.

4. A hook comprising, a body having a plane upper bearing surface and a slot extending across said surface, an expansible block slidably carried in said slot, means for forcibly expanding said block to frictionally engage said body in said slot, and a jaw adapted to engage a plate on the upper surface of said block.

5. A hook comprising a body having plane, upper, lower and lateral bearing surfaces and a slot extending across said upper surface, wedge-shaped projections along the lateral edges of said slot, an expansible block slidably carried in said slot, means for forcibly expanding said block to frictionally engage said projections, and a jaw carried on the upper surface of the block.

6. A hook comprising, a body having a plane upper bearing surface and a slot extending across said surface, an expansible block slidably carried in said slot, a screw formed to forcibly expand said block to frictionally engage said body in said slot, and a jaw pivotally carried on the upper surface of the block.

In testimony whereof, I have hereunto signed my name to this specification.

AUGUST F. OSTERLIND.