K. M. SCHLUETER & F. SCHLUETER, JR.

PLATE HOLDER FOR PRINTING PRESSES.

APPLICATION FILED JAN. 23, 1911.

992,267. Patented May 16, 1911.

Fig. 1.

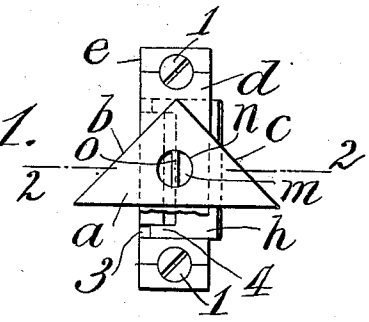

Fig. 3.

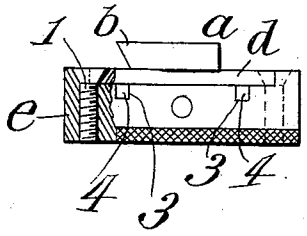

Fig. 2.

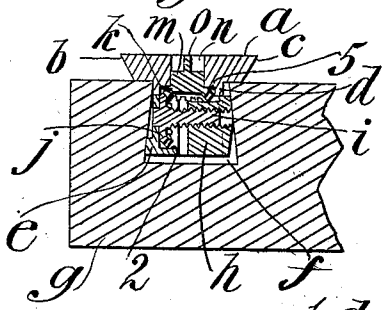

Fig. 4.

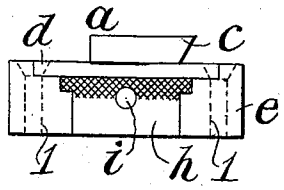

Fig. 5.

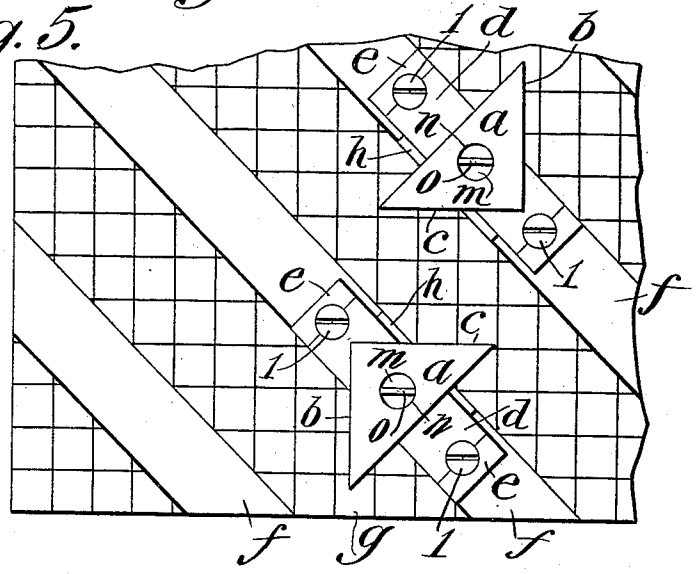

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PLATE-HOLDER FOR PRINTING-PRESSES.

992,267. Specification of Letters Patent. Patented May 16, 1911.

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To all whom it may concern:

Be it known that we, KARL M. SCHLUETER and FERDINAND SCHLUETER, Jr., citizens of the United States, and residents of New York, county of New York, and State of New York, have invented certain new and useful Improvements in Plate-Holders for Printing-Presses, of which the following is a specification, reference being had to the accompanying drawing, forming a part thereof, in which similar letters of reference indicate corresponding parts.

This invention relates to plate holders for printing presses of the character having a grooved base for supporting bevel-edged printing plates.

The object of the invention is to provide a device of this character which obviates liability of accidental loosening and detachment after it is placed, and which may be rapidly operated and securely fixed to the base, whereby time is conserved; the device comprising laterally expansible clamping members, and means for operating them comprising beveled gear wheels and a horizontal screw, all of said parts being located and inclosed within the structure and below the surface of the base. Thus providing a device which, when fixed to the base, remains rigidly in place, and which may be rapidly removed, as well as placed, by employment of a simple tool.

The invention will be hereinafter fully described and specifically set forth in the annexed claims.

In the accompanying drawings forming part of this specification, Figure 1, is a plan view of one of our improved plate holders; Fig. 2, a cross sectional elevation taken on the line 2—2, of Fig. 1, and showing the device connected to a printing press base; Fig. 3, a side view of the device; Fig. 4, a similar view showing the opposite side; and Fig. 5, is a plan view of part of a printing press base having two of our improved plate holders attached thereto.

As illustrated by the drawings, we employ for directly holding the printing plate a metallic clamping plate *a*, which is triangular in contour and has two beveled-edges *b* and *c*, extended at right angles from each other, these are for interchangeable engagement with the beveled-edges of printing plates. Said clamping-plate *a*, forms an integral part of an extended plate *d*, which is secured, by means of screws 1, to an extended and downwardly directed member *e*, having a side contour adapted for snugly registering with one of the side walls of a groove, as *f*, formed in the printing press base *g*. In the drawings we have shown a base having dove-tailed grooves, but our device is susceptible of successful operation in connection with bases having other shaped grooves, as grooves having vertical side walls and grooves having compound-curved side walls. In such cases it is simply necessary to provide the clamping-member *e* and the clamping-member *h*, hereinafter described, with outer surfaces of a contour adapted to register with the side walls of the groove employed.

Located within a recess of the member *e*, is a reciprocating slide comprising a clamping-member *h*, having a horizontal screw *i*, threaded therethrough; formed integral with this screw is a beveled gear wheel *j*, which is in pivotal engagement with the member *e;* said member *e* having a recess 2, for accommodating the beveled gear wheel *j*, whereby said gear wheel is protected and not susceptible of being accidentally turned. The said slide *h*, has a side surface formation adapted to register with the side wall of the groove employed, whereby the device may be securely clamped and held within said groove. The member *e*, is provided with grooves 3, which engage tongues 4, of the slide *h*, whereby said slide is maintained in alinement while the device is being operated.

As a means for turning the beveled gear wheel *j*, a similar beveled gear wheel *k*, is located within a recess 5, of the under part of the plate *d*, said gear wheel *k*, having a cylindrical extension *m*, which is journaled through an opening *n*, leading through the plate *a*. A head *o*, which is preferably of rectangular contour, is formed integral with the extension *m*, of the gear wheel *k*, and located below the upper surface of the plate *a;* this said head is adapted for engagement with a bifurcated screw driver whereby the gear wheel *k*, may be rotated.

In the operation and use of the invention, by turning the gear wheel *k*, in one direction the gear wheel *j* and its integrally formed screw *i*, rotates to move the slide *h*, laterally, rapidly and directly away from the member *e*, thus expanding the device and securely clamping the member *e*, and the clamping member embodying slide *h*, with-

in the groove *f*, of the base *g*, said clamping members *e* and *h*, engaging opposite walls of said groove. To remove the device a few turns of the wheel *k*, in an opposite direction is all that is necessary.

The direct, rapid and positive horizontal movement of the clamping parts admits of securely and quickly fastening the device within a groove of the base, and owing to the inclosed arrangement of the operating elements of the device it is not susceptible of accidental displacement, nor liable to injury by accumulation of dust.

While we have illustrated the device in connection with a flat base, it is also susceptible of use, in slightly modified form, in connection with a grooved cylindrical base.

Having thus described our invention, what we claim as new, and desire to secure by Letters Patent, is:

1. A printing plate holder comprising two normally contracted laterally expansible clamping members which are in horizontally slidable connection with each other, said clamping-members adapted for being expanded within and frictionally engaging opposite side walls of a groove of a printing press base, one of said members having extended across its upper surface a triangular clamping plate having two of its sides beveled for engaging printing plates, and means for operating said clamping members comprising bevel gearing and a horizontal screw, substantially as shown and described.

2. The combination, with a plate holder comprising a bevel-edged plate having an integrally formed, depending and extended part, and a depending clamping-member parallel therewith, and secured thereto, and adapted for engagement within a groove of a printing press base, and a clamping-member in slidable engagement with the first named member and having a horizontal screw threaded therethrough, said screw having a head embodying a bevel gear wheel pivotally engaging first named member and inclosed in a recess therein, and a bevel gear wheel for operating said first named gear wheel, substantially as shown and described.

3. A printing plate holder comprising a bevel-edged clamping plate for engaging the printing plate, said clamping plate having a depending clamping-member, and a parallel clamping-member in slidable engagement therewith and a horizontal screw threaded through the last named member and having a head embodying a bevel gear wheel inclosed within a recess of the first named member, and an inclosed bevel gear wheel engaging the first named gear wheel, the holder adapted to be expanded by turning said gear wheel, and clamped within a groove of a printing press base by direct horizontal movement of the clamping-member which engages the screw, substantially as shown and described.

4. The combination, with a printing plate holder comprising a clamping-plate having a depending and extended clamping-member, and an inclosed bevel gear wheel having an upwardly extended operating part, and a slidable clamping-member, and a horizontal screw threaded therethrough and having a head embodying a bevel gear wheel which engages the first named gear wheel, said gear wheels and screw being inclosed; of a base having parallel grooves, the holder clamped within one of said grooves, and the clamping-plate bearing on the surface of said base, substantially as shown and described.

In testimony that, we claim the foregoing as our invention, we have signed our names in the presence of two witnesses, this 13th day of January 1911.

KARL M. SCHLUETER.
FERDINAND SCHLUETER, JR.

Witnesses:
E. S. SUTHERLAND,
N. STERN.