W. PIPPERT.

PRINTING PLATE CLAMP.

APPLICATION FILED JULY 5, 1916.

1,214,216.

Patented Jan. 30, 1917.

Fig. 1.

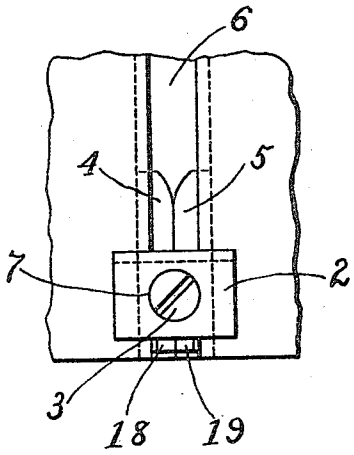


Fig. 4.

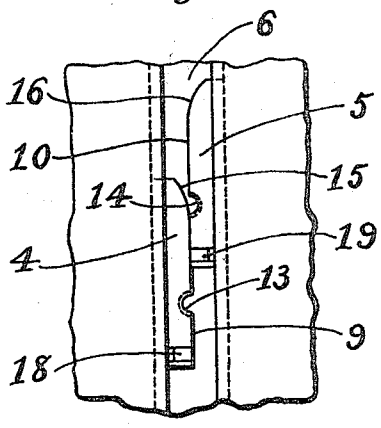
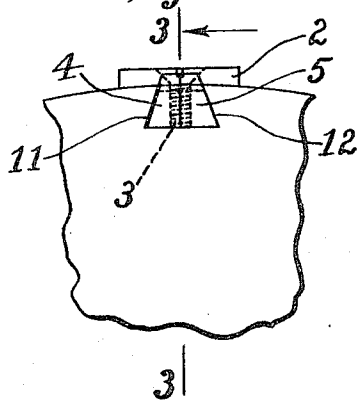
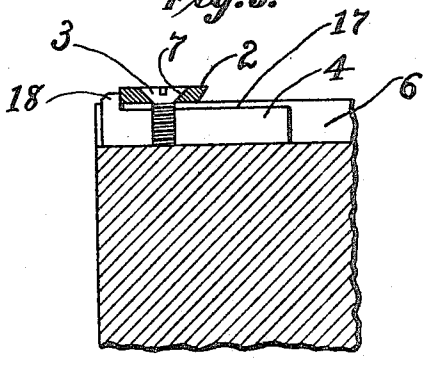


Fig. 2.



3

Fig. 3.



Witness:

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UNITED STATES PATENT OFFICE.

WILLIS PIPPERT, OF RUMFORD, MAINE.

PRINTING-PLATE CLAMP.

1,214,216. Specification of Letters Patent. Patented Jan. 30, 1917.

Application filed July 5, 1916. Serial No. 107,513.

To all whom it may concern:

Be it known that I, WILLIS PIPPERT, a subject of the Emperor of Germany, and a resident of Rumford, in the county of Oxford and State of Maine, have invented certain new and useful Improvements in Printing-Plate Clamps, of which the following is a specification.

This invention relates to printing plate clamps, such for instance as are employed for securing stereotype or other plates to the beds or carriers provided therefor. Such beds or carriers, which may be cylindrical or flat, are usually provided with undercut slots for the reception and retention of the clamp base and the object of my improvements is particularly directed to the provision of a printing plate clamp in which the base may be inserted into and removed from the slot with ease and facility and when locked in holding position will be highly secure.

With these ends in view my improved plate clamp is illustrated in its preferred embodiment in the accompanying drawing wherein—

Figure 1 is an assembled plan view of my improved clamp; Fig. 2 is an end view corresponding with Fig. 1; Fig. 3 is a vertical cross-section on line 3, 3 of Fig. 2; and Fig. 4 is a plan view similar to that of Fig. 1, illustrating the assembling of two of the several parts of the clamp.

The general art of printing plate clamps is one to which inventive ability has been directed for many years and many clamps containing features of merit have been devised and largely used.

One object to which inventive skill has been directed is the production of devices which may be inserted into the mouth or top of the holding slot at any point lengthwise of that slot.

Many clamps are of such character that they must be inserted at the end of the slot and then slid into place, which is often highly inconvenient. Some clamps are arranged to engage slots having opposite parallel sides but the generally preferred and accepted slot in plate beds or carriers is an undercut slot of dovetail conformation such as is illustrated in the drawing herewith, and I have designed my improvements particularly for use in connection with such undercut slots.

Multiplicity of parts in a plate clamp is objectionable and I have confined myself to the employment of not more than four parts in my improved clamp. Those parts consist in the usual clamp dog 2, a clamp screw 3, and base pieces 4 and 5.

My improvements pertain particularly to the base pieces, which are of such character that they may be inserted one at a time or both at one time, end to end, into the usual dovetailed slot 6, through the mouth of that slot, at any point in its length and slid endwise therein into operative position a distance equal only to the length of one of said base pieces. Said base pieces 4 and 5 are right and left independent duplicate members forming a complementary coacting pair and constituting when in coacting position a clamp base of rigidity and high efficiency. Said base pieces 4 and 5 are provided with vertical coacting faces 9 and 10 in which are formed respectively corresponding halves 13 and 14 of a screw thread for engagement with screw 3. Said faces 9 and 10 preferably have their noses chamfered or curved outwardly at 15 and 16 respectively to facilitate their assembling side by side in slot 6. The outside faces 11 and 12 of the base pieces, opposite vertical faces 9 and 10 respectively, are angled complementarily to the angles of the side walls of slot 6, so that when those base pieces are in place side by side in said slot they will practically fill that slot with the exception of near its top. The upper faces of said base pieces are cut away, as at 17 in base piece 4, so that when screw 3 is tightened those base pieces may rise slightly without colliding with the under face of clamp dog 2. Said base pieces 4 and 5 may be provided with upstanding stops 18 and 19 respectively which when in line, as in Fig. 1 for instance, serve to hold clamp dog 2 against turning and at right angles to the slot. Said stops 18 and 19 also serve as handle portions, by which base pieces 4 and 5 respectively, may be slid endwise in slot 6 for assembling and disassembling and by which said base pieces may be conveniently lifted from said slot.

The operation of my improved plate clamp is as follows: One of the base pieces as 4, is dropped into the slot and its beveled face 11 crowded over against the complementary beveled face of said slot. The other base piece 5 is then droped into the slot just

forwardly (or rearwardly) of base piece 4 and with its beveled face 12 toward that beveled face of the slot opposite to that engaged by base piece 4; said base piece 5 is then slid endwise past the chamfered nose 15 of base piece 4 and into position directly opposite that base piece so that the two half screw holes 13 and 14 form a complete threaded screw hole. Clamp dog 2 is then placed in position over said base pieces and against stops 18 and 19 with its countersunk screw hole 7 in line with the threaded screw hole 13, 14, Fig. 2. Screw 3 is then entered and turned into engagement with said screw hole 13, 14 and until the base pieces are drawn upwardly into engagement with the beveled faces of slot 6. This seating action of screw 3 also causes said base pieces to separate slightly along the dividing plane therebetween, whereby said base pieces are further forced against the beveled side walls of slot 6 and seated securely in place.

The device may be removed by loosening screw 3 and withdrawing it from engagement with base pieces 4, 5 when those base pieces may be separated by sliding one lengthwise upon the other, when both may be lifted from the slot.

It will be observed that the several steps of placing my improved clamp into operation and of removing it from the slot are all very simple and may be performed with the assistance of a screw driver only.

It is understood that the disclosures herein are illustrative of the invention, and that changes may be made within the scope of the claims without departing from the spirit of the invention.

I claim:

1. A printing plate clamp adapted for use in connection with a bed having a slot therein, including in combination a clamp dog, a pair of right and left duplicate coacting complementary base pieces, means for locking the base pieces to said clamp dog, both of said base pieces having faces for engaging the opposite sides of said bed slot respectively and both having threaded portions for engaging the clamp screw and both adapted to be entered singly into said slot through its mouth, and means on said base pieces for preventing the clamp dog from turning.

2. A printing plate clamp adapted for use in connection with a bed having a slot therein, including in combination a clamp dog, a pair of right and left duplicate coacting complementary base pieces, means for locking the base pieces to said clamp dog, both of said base pieces having faces for engaging the opposite sides of said bed slot respectively and both having threaded portions for engaging the clamp screw and both adapted to be entered singly into said slot through its mouth, and clamp dog stops on said base pieces respectively.

3. A printing plate clamp adapted for use in connection with a bed having a slot therein, including in combination a clamp dog, a pair of independent coacting complementary base pieces, a clamp screw for engagement with said base pieces and said clamp dog, both of said base pieces having faces for engaging the opposite sides of the bed slot respectively and both having threaded portions for engaging the clamp screw and both adapted to be entered singly into said slot through its mouth, and clamp dog stops on said base pieces respectively.

4. A printing plate clamp adapted for use in connection with a bed having a slot with undercut side faces, including in combination a clamp dog, a pair of independent coacting complementary base pieces, a clamp screw for engagement with said base pieces and said clamp dog, both of said base pieces having faces for engaging the opposite undercut faces of the bed slot respectively and both having means for engaging the clamp locking means and both adapted to be dropped one at a time into said slot through its mouth and slid endwise into coacting relation with each other and with the undercut faces of the slot, and clamp dog stops on said base pieces respectively.

Signed at Rumford, in the county of Oxford and State of Maine, this 28th day of June, 1916, before two subscribing witnesses.

WILLIS PIPPERT.

Witnesses:
JOHN DAWSON,
SHEPARD ALVIN RAMSDELL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."