

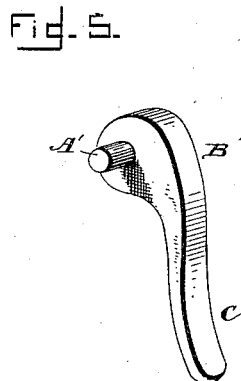
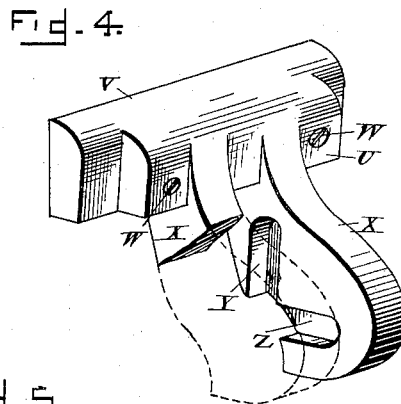
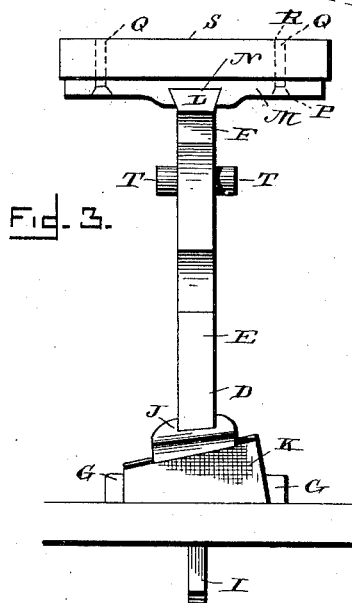
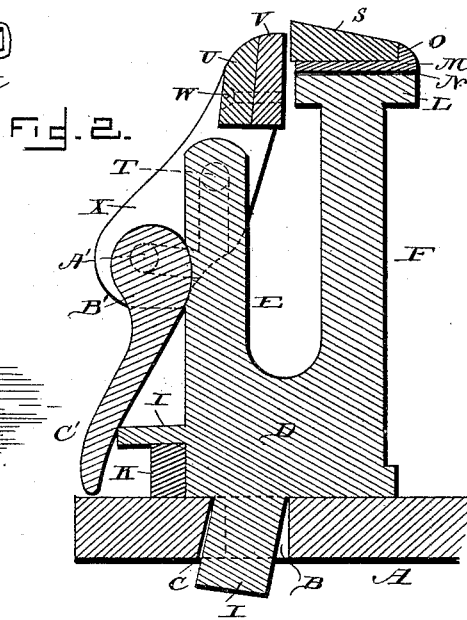
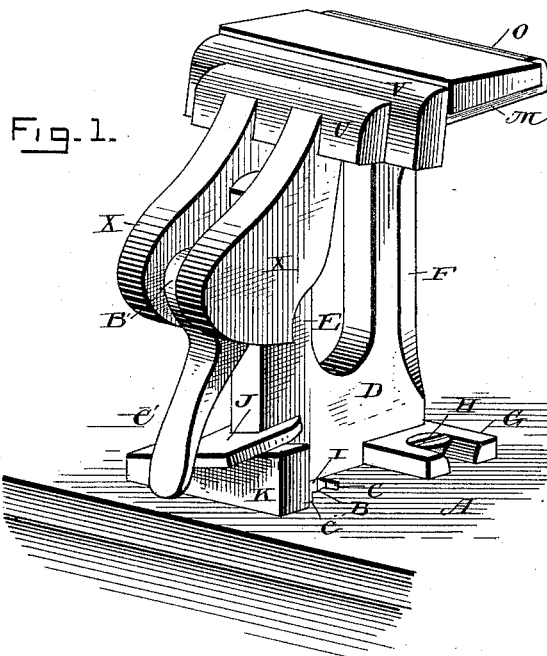
(No Model.)

G. BLYTHE.

CLAMP.

No. 344,713.

Patented June 29, 1886.



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UNITED STATES PATENT OFFICE.

GEORGE BLYTHE, OF CHILLICOTHE, MISSOURI.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 344,713, dated June 29, 1886.

Application filed March 15, 1885. Serial No. 195,231. (No model.)

To all whom it may concern:

Be it known that I, GEORGE BLYTHE, a citizen of the United States, and a resident of Chillicothe, in the county of Livingston and State of Missouri, have invented certain new and useful Improvements in Clamps; 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, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a perspective view of my improved clamp. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a front view of the clamp, showing the forward jaw removed. Fig. 4 is a perspective detail view of the front jaw with portions broken away, and Fig. 5 is a similar view of the clamping-lever.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to clamps having flat facing-jaws, suitable for holding saw-blades while being filed, or for harness-makers' use, or for similar purposes; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the table, bench, block, or similar object, upon which the clamp is secured, and this table or block is formed with a perforation, B, having a series of notches, C, in its edge. The frame of the clamp consists of a U-shaped upright, D, having its forward leg, E, shorter than its rear leg, F, and the lower end of the upright is formed at the rear edge with two laterally-projecting slotted lips, G G, into which fastening-screws H H may be inserted into the table, while a flat tongue, I, projects from the lower end, near the forward edge, having its lower end tilted somewhat forward, fitting into the perforation, and with its forward inclined edge into one of the notches in the edge of the perforation in the table. A lip, J, projects from the front edge of the upright near the lower end, and has its under side slightly inclined to one side, and a wedge, K, may be inserted between this lip and the top of the table, forcing the forward side of the upright upward and causing the inclined front edge of the tongue to bear against the notch

in the perforation, and to hold firmly against the same. The upper end of the longer rear leg of the upright is provided with a head, L, the side edges of which are beveled toward the under side, and a plate, M, having a similarly-shaped dovetailed groove, N, in its under side, fits upon this head. The rear edge of this plate is formed with an upwardly-projecting flange or lip, O, and the plate is provided with perforations P P, for the insertion of screws Q, the upper threaded ends of which fit into registering-perforations R in the under side of the rear and rigid jaw, S, of the clamp or vise. The beveled or dovetailed head upon the rear leg of the upright tapers toward the forward end, and the groove in the jaw-holding plate has a similar taper, so that the plate may be slipped upon the head from the front, and will be held when the forward end of the groove has reached the forward end of the head, being held more firmly, as the jaw and plate are subjected to pressure from the front edge. The upper end of the forward shorter leg of the upright is provided with two laterally-projecting studs, T T, and the plate U, which has the front jaw, V, secured to its inner face by means of fastening-screws W, passing through the said plate, is formed with two downwardly and forwardly projecting flat arms, X X, secured at their upper ends to the jaw-holding plate, and having in their inner faces vertical grooves Y Y, the upper ends of which are rounded so as to form bearings, and fitting with the rounded ends of the said vertical grooves upon the studs projecting from the forward leg of the upright. Two horizontal grooves, Z Z, extend in the inner faces of the arms from a point at the lower ends of the vertical grooves toward the outer edges of the arms, and two laterally-projecting studs, A' A', projecting from the cam-head B' of the clamping-lever C', slide in these grooves and turn in their outer rounded ends. The eccentric enlargement of the cam-head of the clamping-lever projects toward the inner edge of the same and bears against the outer edge of the front leg of the upright, so that by depressing the said lever the lower ends of the arms of the movable jaw will be tilted outward, causing the jaw at the upper ends of the said arms to be forced against the rear rigid jaw, clamping any object which may be caught between

the jaws. It will be seen that the upright may be held firmly to the table by means of the screws, and the inclined downwardly-projecting lip, bearing with its inclined edge against the notch in the perforation, being forced against it by the action of the wedge under the lip upon the forward edge of the upright, and on account of the perforation in the table having a number of radiating notches, the jaws of the clamp may be placed at any desired angle to the edge of the table or bench for the purpose of obtaining the light thrown upon the work at the desired angle, or for any other purpose.

The clamp may be taken apart and packed into a comparatively small space without the necessity of removing or unfastening any screws or nuts, with the exception of the screws securing the slotted lips to the table, while otherwise the movable jaw may be slid off from the forward arm or leg of the upright, whereupon the clamping-lever may be slid out from the jaw, and the rear jaw and its holding-plate may be slid off from the rear leg of the upright. After removing the jaws from the upright the screws securing it to the table may be unscrewed with greater ease, and the wedge knocked out from the lip, when the upright may be removed from the table.

Jaws of different widths may be used upon the same upright, and if the jaws become damaged or worn out they may be removed from their holding-plates and new jaws inserted, or the old jaws may be repaired and again inserted, the jaws being held in their holding-plates by means of the securing-screws.

The clamp is simple of construction and durable, as the movable jaw and the clamping-lever are not pivoted upon inserted bolts or pins, but are pivoted upon studs integral with the upright and with the clamping-lever, or securely fastened in them, which studs are not removable, but rock in the ends of grooves, by means of which the parts may be slid apart.

Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

1. An upright having at its upper end a pair of clamping-jaws and means for operating the same, provided near its lower end with an inclined lip and at its bottom with a tongue projecting obliquely toward the side on which said lip is formed, in combination with a bench provided with a hole having

notches radiating therefrom for the reception of said tongue, and a securing-wedge.

2. An upright having at its upper end a pair of clamping-jaws and means for operating the same, provided on one edge, near its lower end, with an inclined lip, on the sides with laterally-projecting slotted lips, and at its bottom with a tongue projecting obliquely toward the side on which said inclined lip is formed, in combination with a bench provided with a hole for said tongue, and a securing-wedge.

3. A clamp consisting of a U-shaped upright provided with means for securing it in position, the upper end of one leg provided with a tapering head having its sides beveled under, a plate having a dovetailed tapering groove on its under side to receive said head, and a ledge along one of its upper edges, a jaw-plate formed to fit upon and to be secured to said plate, a movable jaw pivoted at the upper end of the other leg, and means for operating the movable jaw.

4. A clamp consisting of a U-shaped upright provided with means for securing it in position, a stationary jaw attached to one leg, a movable jaw pivoted upon the upper end of the other leg; and consisting of a plate having a jaw-plate secured to one side and a pair of obliquely-projecting arms upon the other side, and a cam-headed lever pivoted between said arms.

5. A clamp consisting of a U-shaped upright provided with means for securing the same in position, one leg of the upright being longer than the other, a removable rigid jaw attached to the upper end of the longer leg, the shorter leg being provided near its upper end with laterally-projecting studs, a movable jaw provided with a pair of obliquely-projecting flat arms having on the inner face of each two round-ended grooves formed at an angle to each other, one pair of said grooves serving in pivoting said jaw upon the shorter leg, and a cam-headed lever provided with laterally-projecting studs for pivoting the same in the other pair of grooves in said arms.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

GEORGE BLYTHE.

Witnesses:

JNO. P. SAILOR,
JOHN C. PATTERSON.