

C. B. CANFIELD.
CLAMP.

No. 102,487.

Patented May 3, 1870

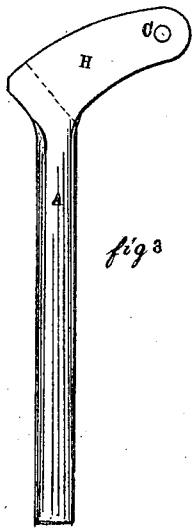
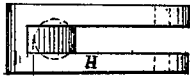


fig 3

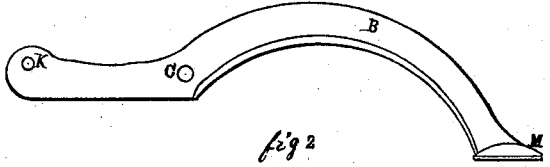


fig 2

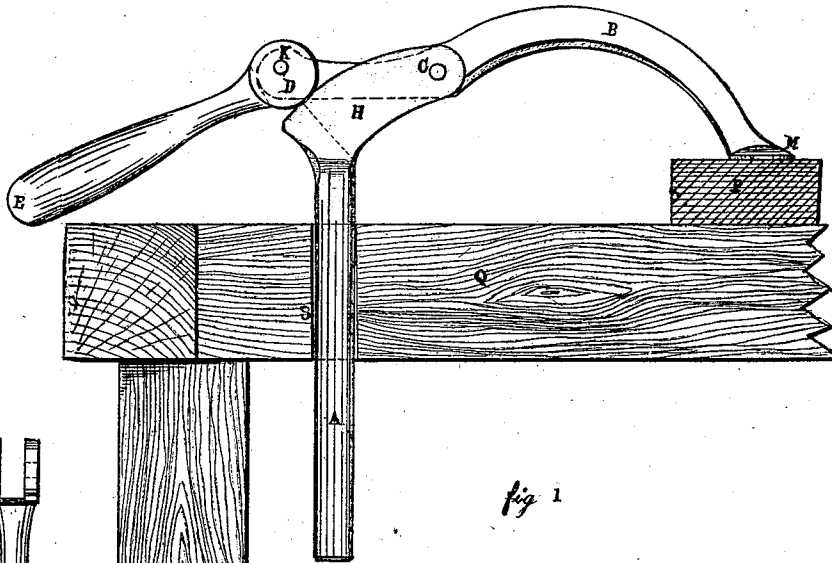


fig 1

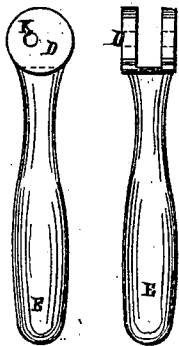


fig 4

Witnesses,

Robt. R. Mendenhall.
Perepont Bastow.

Inventor,

Charles B. Canfield,
by William H. Fisher,
his attorney in fact.

United States Patent Office.

CHARLES B. CANFIELD, OF ORISKANY, NEW YORK.

Letters Patent No. 102,487, dated May 3, 1870.

IMPROVEMENT IN CLAMP.

The Schedule referred to in these Letters Patent and making part of the same

To all whom it may concern:

Be it known that I, CHARLES B. CANFIELD, of the village of Oriskany, in the county of Oneida and State of New York, have invented certain new and useful Improvements in Bench-Clamps; of which the following is a specification.

Nature and Objects of my Invention.

My invention relates to the arrangement of an eccentric when attached to the lever of a bench-clamp, and an inclined arm upon the shaft of the same, in such a manner that said lever can be easily and quickly raised or depressed upon the object to be held by the said clamp, the objects of my invention being to obtain a cheap, very serviceable and very simple bench clamp, which while capable of being used upon either the top or side of a work-bench, and of performing the offices of a vise, and also hand-screws, in gluing together small articles, shall at the same time be easily and quickly operated.

Description of the Accompanying Drawing.

The accompanying drawing shows a side view of a bench-clamp embodying my invention.

The full view shows the positions of the eccentric and levers of the clamp, when said clamp is grasping a piece of work.

The dotted lines show the position of the eccentric and levers of the said clamp, when said clamp is not in use.

Figure 2 is a side and top view of the main lever of the bench-clamp.

Figure 3 is a side and top view of the shaft and arm of the bench-clamp.

Figure 4 is a side and top view of the eccentric and hand-lever of bench-clamp

General Description.

A is a shaft to be inserted in the work-bench or table.

H is an arm of the shaft A, inclined upward.

B is the lever which is raised or depressed upon the object to be held. This lever B, turns upon an axis or fulcrum C.

M is the foot of the lever, and rests directly upon the object to be clamped.

D is an eccentric.

K is an axis on which this eccentric turns, and by which said eccentric is attached to the lever D.

E is a hand-lever connected with the eccentric D, and turns the same.

Q is the top of an ordinary work-bench.

P is an article to be held by the clamp.

Mode of Operation.

The manner in which my improvement operates in connection with a clamp such as described, is as follows.

The lower part of the shaft A is slipped into any desired hole, as S, in the top or side of a bench, and the article to be clamped being placed under the foot M of the lever B, the shaft is allowed to settle down in the said hole until stopped by the foot M, resting upon the article P.

In order to clamp an article as P, securely, the operator takes hold of the lever E, and turns it backward away from the axis C.

As the lever E moves, it turns the widest part of the eccentric D upon the plane H, and thus raises the short end of lever B and depresses the long end and foot of the said lever. But this is not all, the eccentric D, in turning thus is forced up along the inclined plane H, and by this means the short end of the said lever B is raised higher than it could be raised by an eccentric working upon a horizontal plane, and, as a consequence of the aforesaid combination of an eccentric and the inclined plane, the short end of the lever B being raised considerably, the foot M on the long end of said lever will be at the same time considerably depressed, and in practice it is found that when so depressed it will hold the article to be clamped with great firmness, and this foot can be made to cause an indentation in the soft wood of an article placed under this foot of the clamp.

Claim.

I claim the arrangement of the eccentric D, lever B, and an inclined arm of the shaft A, when constructed to operate in the manner and for the purpose specified.

CHARLES B. CANFIELD.

Witnesses:

HENRY C. BUELL.

J. H. BUELL.