B. F. HARDESTY.

Ship-Carpenter's Clamp.

No. 197,970. Patented Dec. 11, 1877

Fig. 1.

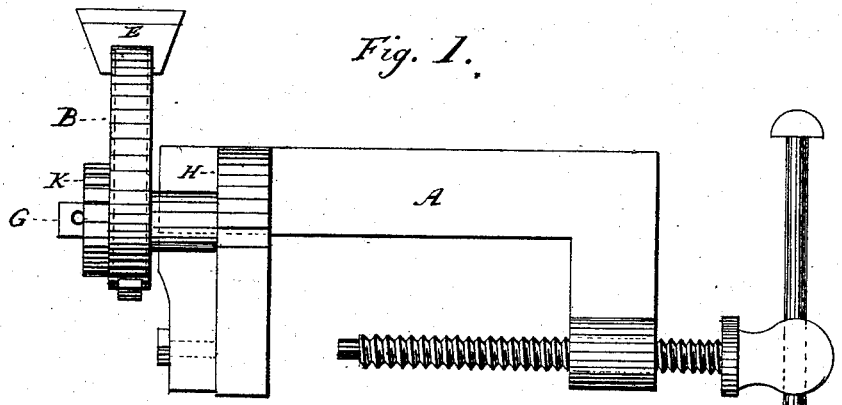
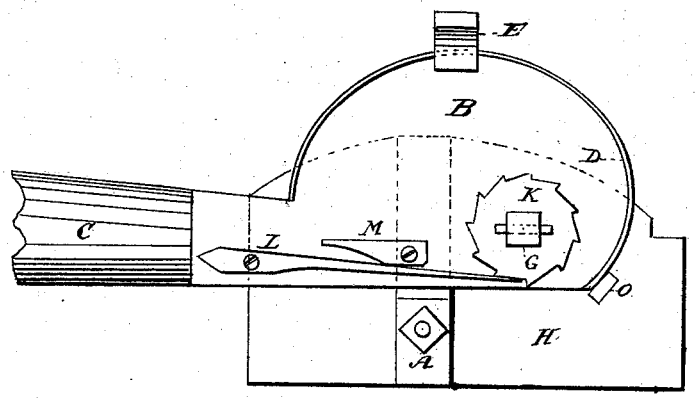


Fig. 2



Attest

Colborne Brookes

E. E. Court

Inventor

Benjamin F Hardesty

by John W. Fraze & Co.

Attorney

UNITED STATES PATENT OFFICE.

BENJAMIN F. HARDESTY, OF WASHINGTON, LOUISIANA.

IMPROVEMENT IN SHIP-CARPENTERS' CLAMPS.

Specification forming part of Letters Patent No. **197,970**, dated December 11, 1877; application filed March 8, 1877.

To all whom it may concern:

Be it known that I, BENJAMIN F. HARDESTY, of Washington, in the parish of St. Landry and State of Louisiana, have invented certain new and useful Improvements in Ship-Carpenters' Clamps; and I do hereby declare that the following is a full, clear, and exact description thereof, 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, and to letters of reference marked thereon, which form a part of this specification.

My object is to produce a convenient, portable, and powerful clamp, combining strength with simplicity, facility of application wherever planks are to be forced into unnatural positions, and hence an almost unlimited range of work.

My invention consists in a cam, B, that is made of cast or wrought iron, brass or steel, having a handle, C, provided with a socket for a wooden extension-handle. The cam moves in the same plane with the circle described by the applied power. The cam revolves on a pin, G, that is screwed and riveted into the jaw A. The cam has a flange, D, either cast on it or made separate and riveted on.

A movable head, E, that presses the plank or timber to its place, is fitted to slide easily on the flange D. The set-screw O prevents the movable head from sliding off the flange. By removing this screw the operator is enabled to change one movable head for another.

The pin G, on which the cam revolves, is made square from the side of the cam outward, and holds the ratchet K. On the lever or handle of the cam is a spring-pawl to engage the teeth of the ratchet. Above the pawl, on the side of the cam, is a button, M, square on one end, which, being turned on its axis, throws the pawl out of gear, enabling the operator to reverse the motion of the cam. The ratchet is held to its place by means of a small pin passing through the pin G.

The jaw H is grooved on the side next the cam, into which groove is fastened an ordinary ship-carpenter's clamp by means of a bolt passing through the jaw from its inner surface, and through the clamp. The nut of the bolt is on the outside, next the cam. This arrangement enables the mechanic to detach the clamp from the jaw, and use it as such, obviating the necessity of an extra tool in his kit.

The operation is as follows: The clamp being fastened to a rib or other portion of the ship, a plank or other timber is pressed into place by means of the cam, and held until securely fastened.

Having thus fully described my invention, I claim—

1. The clamp A, jaw H, cam B, having socket C and flange D, movable head E, ratchet K, and button M, combined and arranged as described and shown, and for the purpose specified.

2. The cam B, having socket-arm C, flange D, and set-screw O, in combination with the movable head E, pin G, and jaw H, as and for the purpose shown and described.

3. The cam B, movable head E, pin G, jaw H, ratchet K, and pawl L, in combination with the clamp A, as and for the purpose described and shown.

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

BENJAMIN F. HARDESTY.

Witnesses:

I. KOSSUTH SANDOZ,

C. P. RICHARD.