

No. 781,958.

PATENTED FEB. 7, 1905.

H. A. KNOKE.

CLAMP.

APPLICATION FILED MAY 6, 1904.

Fig. 1.

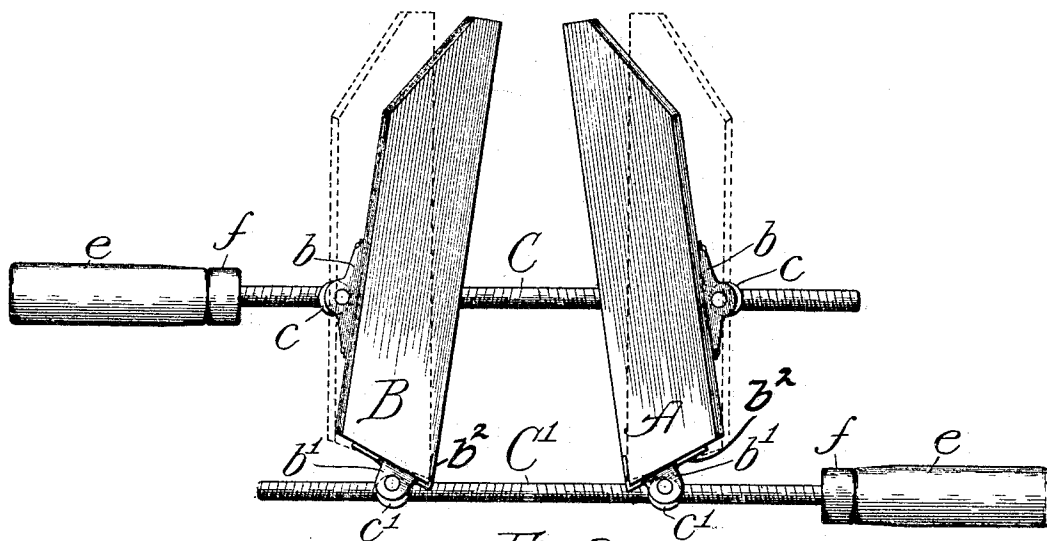


Fig. 2.

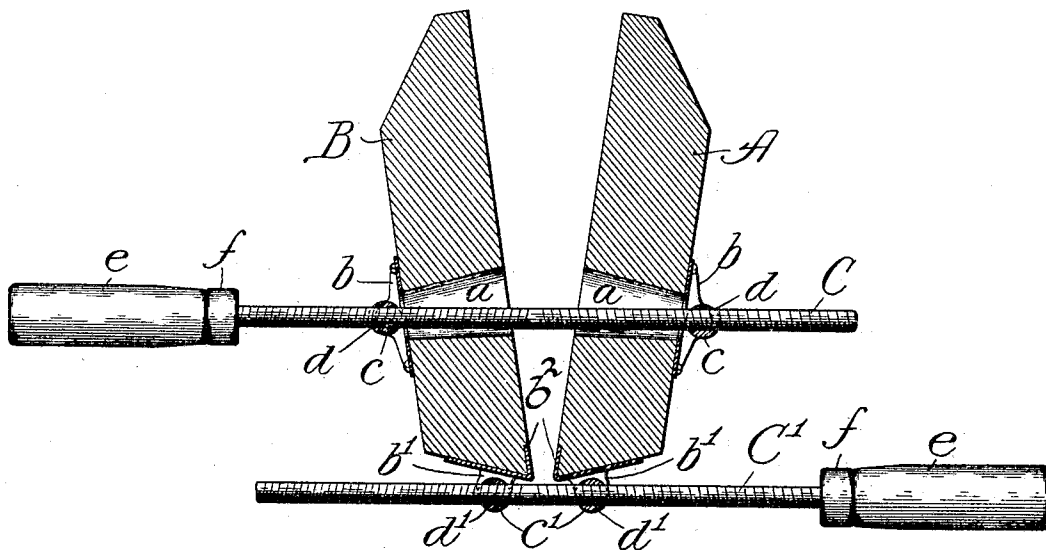
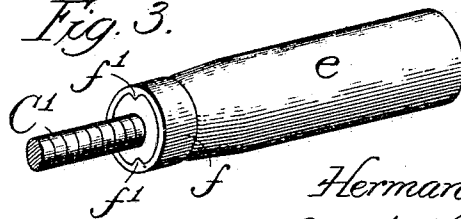


Fig. 3.



Witnesses:
Edw. C. Gaylord,
John Enders.

Inventor:
Herman A. Knoke,
By Dymforth, Dymforth & Lee,
Att'ys.

UNITED STATES PATENT OFFICE.

HERMAN A. KNOKE, OF CHICAGO, ILLINOIS.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 781,958, dated February 7, 1905.

Application filed May 6, 1904. Serial No. 206,670.

To all whom it may concern:

Be it known that I, HERMAN A. KNOKE, a citizen of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Clamps, of which the following is a specification.

My invention relates to an improvement in the class of clamps used in carpenter and cabinet work in which the jaws are adjustably connected by a right-and-left screw passing through them near the rear end of the clamp and a similar screw passing through them near their transverse centers, each screw having its bearings in a pair of shafts journaled within the jaws to extend across the screws at right angles to the latter for adapting the jaws to be set at varying relative angles without binding on the screws through the medium of which the setting is effected.

The object of my improvement is to simplify the construction of the variety of clamp referred to and to greatly increase its strength.

Referring to the accompanying drawings, Figure 1 illustrates my improved clamp by a view in elevation showing the jaws in one position by a full-line representation and in another position by a dotted representation. Fig. 2 is a vertical section through the clamp, showing the jaws adjusted to still another position; and Fig. 3 is a broken perspective view of the adjusting-screw handle, showing a desirable manner of securing against rotation the ferrule surrounding the wooden handle near its junction with the screw.

A and B are the wooden jaws, each provided near its transverse center with an opening *a*, shown in its preferred form of flaring toward the inner face of the jaw, though the opening may be throughout of the same diameter as that of its inner end. Each jaw is provided with an oblique or substantially oblique rear end, and on the outer face of each jaw is fastened a bifurcated metal bearing *b*, covering the respective end of the opening *a* and having journaled in its arms to extend across said opening a roller *c*, provided with a cen-

tral transverse threaded opening *d*. A right-and-left screw *C* extends through the jaw-openings *aa* and works in the rollers *c*, passing through openings *d* therein. On the oblique rear end of each jaw is fastened a bifurcated metal bearing *b'*, like the bearing *b*, and having journaled in its arms a roller *c'*, like the roller *c*, and similarly provided with a transverse threaded opening *d'*. Each bearing *b'* is carried by a corner-piece *b''*, reinforcing the face of the jaw near its oblique end. A right-and-left screw *C'* passes through and works in the openings *d'* of both rollers *c'*, extending reversely to the screw *C* and being provided, like the latter, with a wooden handle *e*, surrounded at its junction with the screw with an antisplitting metal ferrule *f*, having V-shaped lugs *f'* projecting from opposite sides of the inner surface of the ferrule to penetrate the wood of the handle encircled by the ferrule and prevent the latter from becoming loose and from turning on the handle. By thus providing the yielding bearings for the adjusting-screws on the surfaces of the wooden jaws weakening them by mutilation is avoided, and by beveling the rear ends of the jaws on which the bearings *b'* are secured the strain of clamping at those ends is distributed transversely through the entire bodies of the jaws, with consequent antisplitting tendency. To open or close the jaws with their rear ends together, the screw *C* is turned accordingly, the pivotal nature of their connection *d' C'* preventing any binding of the parts in producing the adjustment, and such binding is similarly prevented by the rotatory nature of the bearings *d* for the screw *C* in turning the screw *C'* to open and close the jaws at their rear ends.

What I claim as new, and desire to secure by Letters Patent, is—

A clamp comprising, in combination, two jaws each having an oblique lower end and an opening through it between its ends, bearings secured on the outer surfaces of said jaws at the openings therein and having journaled on them rollers provided with transverse thread-

ed openings, a right and left threaded hand-
screw passing through said jaw-openings and
working in said roller-openings, corner-pieces
secured to the lower ends of said jaws to ex-
5 tend along the inner surfaces and the oblique
lower ends of said jaws, said corner-pieces
carrying bearings having journaled on them
rollers provided with transverse threaded

openings, and a right and left threaded hand-
screw working in the last-named roller-open- 10
ings.

HERMAN A. KNOKE.

In presence of—

L. HEISLAR,

WALTER N. WINBERG.