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J. E. HILLEBRANDT.
WOODWORKER'S CLAMP.
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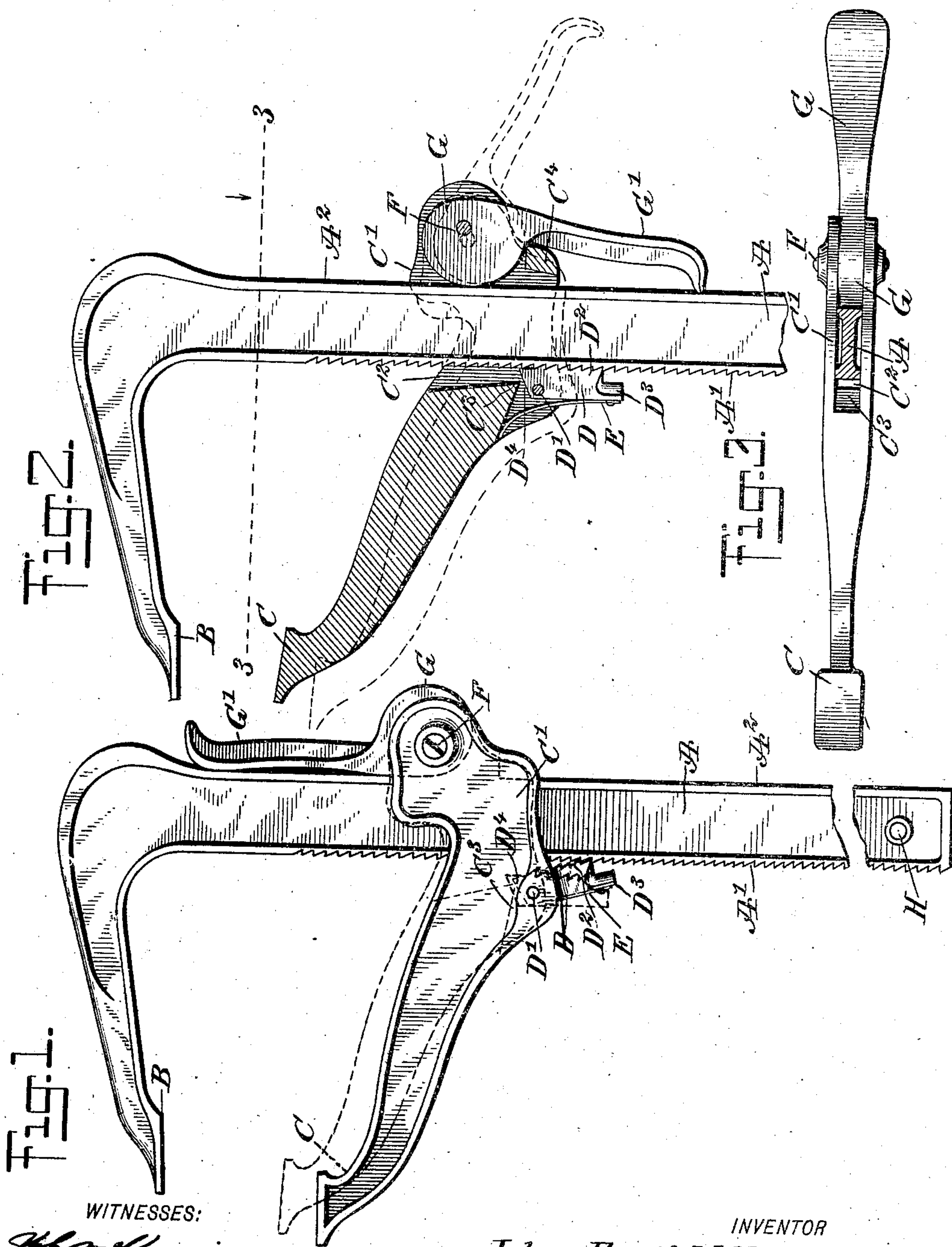


FIG. 1.

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WOODWORKER'S CLAMP.

No. 828,113.

Specification of Letters Patent.

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To all whom it may concern:

Be it known that I, JOHAN EMIL HILLEBRANDT, a subject of the King of Denmark, and a resident of Buffalo, in the county of Erie, and State of New York, have invented a new and Improved Woodworker's Clamp of which the following is a full, clear, and exact description.

The object of the invention is to provide a new and improved clamp more especially designed for the use of carpenters, cabinet-makers, piano-makers, and other woodworkers and arranged to permit quick and convenient adjustment of a movable jaw relative to a fixed jaw and to securely clamp pieces of wood to be glued together or other objects between the jaws.

The invention consists of novel features and parts and combinations of the same, which will be more fully described hereinafter and then pointed out in the claims.

A practical embodiment of the invention is represented in the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a side elevation of the improvement, showing the parts in position for adjusting the movable jaw. Fig. 2 is a like view of the same, showing the movable jaw in section and in clamping position; and Fig. 3 is a sectional plan view of the improvement on the line 3-3 of Fig. 2.

The shank A of the clamp is provided at one end with an integral jaw B, operating, in conjunction with a movable jaw C, for clamping pieces of wood to be glued together or other objects securely in place. The movable jaw C is provided with a box-like structure C', through the opening C² of which extends loosely the shank A to permit of sliding the jaw C, up or down on the shank A to bring the movable jaw C in close proximity to one side of the object to be clamped between the jaws B and C.

In the box-like structure C' is pivoted at D' a pawl D, pressed on by a spring E and provided at its inner face with ratchet-teeth D², adapted to mesh with ratchet-teeth A', formed on the inner edge of the shank A. The free end of the pawl D is provided with a suitable handle D³ to enable the operator to conveniently disengage the teeth D² from the teeth A' whenever it is desired to move the movable jaw C up or down on the shank A.

The heel D⁴ of the pawl D is beveled and is adapted to abut against a projection C³, forming part of the jaw C, so as to hold the pawl D in an angular position relative to the shank A, as plainly indicated in Fig. 1, to bring the outermost tooth of the teeth D² into engagement with one of the teeth A' to allow the pawl D to swing on this outermost tooth as a fulcrum and at the time the jaw C is moved sidewise and swings on the fulcrum D' of the pawl D.

On the box-like structure C' is arranged a transverse pivot F, on which is mounted to turn a cam-lever G, adapted to engage the back A² of the shank A, and the said cam-lever G is provided with a handle G', adapted to be taken hold of by the operator to turn the cam-lever G with a view to swing the jaw C sidewise, and with it the pawl D, as above explained, to cause the jaw C to move toward the jaw B, and thus securely clamp the object between the two jaws B and C. The box-like structure C' is provided on its outer side with a stop C⁴, spaced a distance from the projection C³ to exceed the width of the shank A, so that when the several parts are in the position as illustrated in dotted lines in Fig. 1 then the stop C⁴ rests against the back A² and the pawl D is completely free of the teeth A' to allow convenient up and down sliding of the movable jaw C on the shank A. Now when the several parts are in this dotted position and an object is abutted with one end against the jaw B then the other jaw C is moved up on the shank A by the operator until the jaw C engages or is in close proximity to the other side of the object. The operator now swings the handle G' of the cam-lever G downward, so that the pawl D engages with its outermost tooth one of the teeth A', and then the pawl swings inward to mesh all its teeth D² with the corresponding teeth A' of the shank A. At the same time that this takes place a swinging movement is given to the jaw C, which also moves bodily sidewise to firmly clamp the object between the jaws B and C. When it is desired to release the object, the operator swings the handle G' back to normal position, as indicated in Fig. 1, to cause the jaw C to swing back to its original position, thus releasing the object. By the operator now pressing the handle D³ outward the pawl D can be completely disengaged from the teeth A' of the shank A.

The woodworker's clamp shown and described permits an easy and quick adjust-

ment of the movable jaw C on the shank A, as the box-like structure C' of the jaw permits a free and easy sliding of the jaw on the shank A and without interference by the cam-lever G or the pawl D. It will also be noticed that by the arrangement described a double movement is given to the jaw C by the action of the cam-lever G by swinging the said cam-lever and by moving the same bodily sidewise, as above mentioned.

The woodworker's clamp is very simple and durable in construction, is composed of comparatively few parts, and is not liable to get easily out of order.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

1. A clamp comprising a shank having teeth at its inner edge, a jaw forming part of the shank, a jaw movable on the shank, a spring-pressed pawl pivoted on the said movable jaw and adapted to engage the teeth on the said shank, the pawl having a limited swinging motion on the said movable jaw to normally hold the pawl at an angle relative to the shank, and a cam-lever fulcrumed on the movable jaw and bearing on the back of

the said shank to impart a swinging motion to the movable jaw, the latter swinging from the pawl as the fulcrum.

2. A clamp comprising a shank provided at one end with a fixed jaw and having its inner edge formed with ratchet-teeth, a movable jaw slidable on the said shank in the direction of the length thereof and movable sidewise of the shank, a pawl fulcrumed on the said movable jaw and having ratchet-teeth for engagement with the ratchet-teeth on the said shank, the heel of the said pawl being adapted to rest on a projection on the said movable jaw to hold the pawl at an angle relative to the said shank, a spring pressing the said pawl to engage the outermost tooth with a tooth on the shank, and a cam-lever fulcrumed on the said movable jaw and bearing on the back of the said shank.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHAN EMIL HILLEBRANDT.

Witnesses:

FRANK NOWAK,
JOHN LORD O'BRIAN.