D. Nelleton,

Clamp.

No. 107,527. Patented Sept. 20. 1870.

Fig. 1.

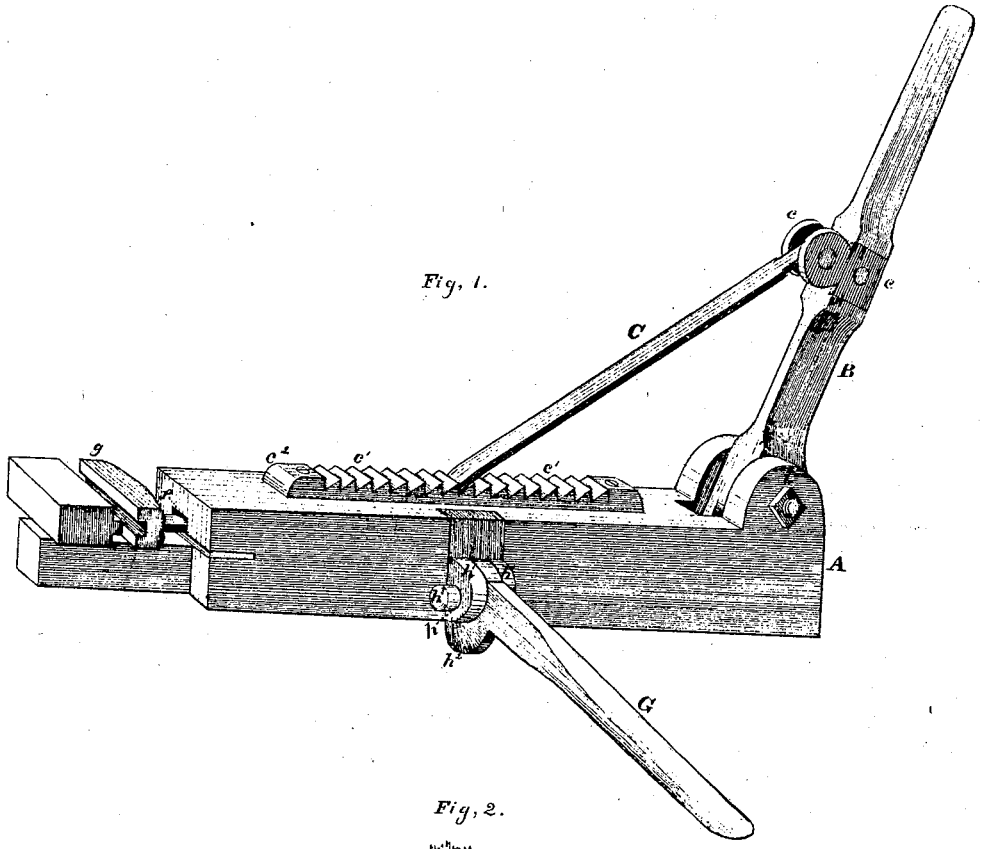
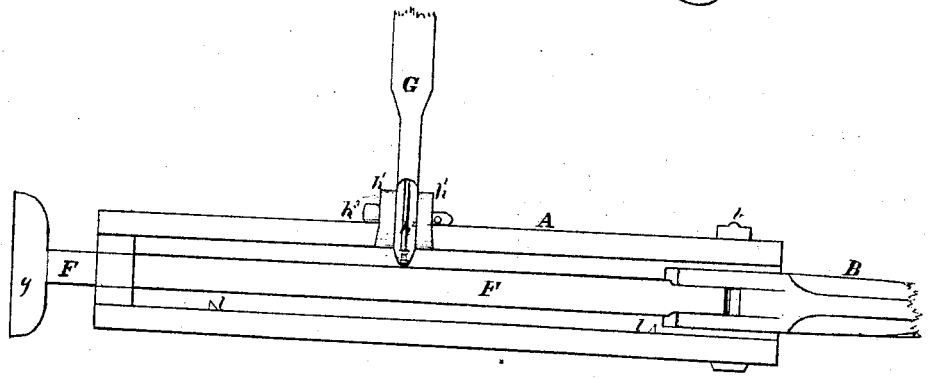


Fig. 2.



Witnesses,

M. A. Daniels.

L. W. Hester

David Nelleton, Inventor, by

Chas. S. Whitman, Attorney,

United States Patent Office.

DAVID NETTLETON, OF HUMBIRD, WISCONSIN.

Letters Patent No. 107,527, *dated September* 20, 1870.

IMPROVEMENT IN FLOOR-CLAMPS.

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, DAVID NETTLETON, of Humbird, in the county of Clark and in the State of Wisconsin, have invented a new and useful Improvement in Apparatus for Tightening Floors of Buildings, &c.; and do hereby declare that the following specification, taken in connection with the accompanying drawing, hereinafter referred to, forms a full and exact description of the same, wherein I have set forth the nature and principles of my said improvement, by which my invention may be distinguished from others of a similar class, together with such parts as I claim and desire to secure by Letters Patent.

My invention relates to that class of apparatus made use of for tightening the flooring of buildings, the decks or bottoms of boats, &c., while undergoing formation, and the nature thereof consists in certain modifications in the details and improvements in the construction of the same, whereby lateral, as well as longitudinal pressure may be obtained for the purpose of holding that part of the said apparatus designed to be stationary rigidly in place while in use, so as to cause the operative parts thereof to perform, with dispatch and accuracy, the operation of tightening the boards or planks comprising the aforesaid flooring, and a novel construction and arrangement of the component parts of said apparatus secured, involving convenience of operation and susceptibility of adjustment of the various parts thereof.

In the accompanying drawing, which illustrates my invention and forms a part of the specification thereof—

Figure 1 represents a view of my invention in perspective, showing its application to the joist upon which the flooring is designed to be fastened, the pressure-rod or bar and block being thrown out in the act of tightening the said flooring; and

Figure 2 is an inverted view thereof, exhibiting its internal construction and arrangement.

The construction and operation of my invention are as follows:

A designates a hollow rectangular block, the lower side of which being left open, so as to admit of the reception of the joist, over which it is intended to be placed.

Directly above the said chamber or receptacle of block A, and forming an extension thereof, but contracted, so as to suit the size of the pressure-bar F, is the groove *f*, cut lengthwise of said block.

B represents a hand-lever, pivoted, at its lower end, to one end of block A, by means of a screw-bolt, *b*, passing through aperture cut in said lever and apertures cut in cheek-pieces or semicircular projections formed on the upper side of said block, as seen in fig. 1.

To one end of screw-bolt *b* is attached a nut, by means of which it may be withdrawn, releasing lever B from block A. At that end of the block A where the lever B is pivoted, the chamber or receptacle of said block is left open, as is, also, its opposite end, and provided with an opening, of such a size as to permit of the reception of the lower end of the lever B, and to allow of the operation of the same, in such a manner that the said lever may be placed at any desired angle.

Secured within mortises cut in the sides of the lever at or near its center, by means of a rivet, are the metallic plates or cheek-pieces, *c c*, which are connected together, at their outer ends, by means of a cylindrical pin or rivet, firmly fastened in apertures or holes cut therein, and furnishing a pivot for the upper end of pawl or support C, said upper end of pawl C being so bent as to form an eye or receptacle for the reception of said pivot or rivet.

The outer ends of said plates *c c* are made semicircular, in order to allow the pawl C to be set at any desired inclination, while their inner ends are quadrangular in form, so as to afford a ready means of securing them in position in their respective mortises or recesses cut in the lever B.

C designates the pawl, pivoted, as aforesaid, and entering serrations or teeth, c^1 c^1, cut in the required way, on a bar or strip, c^2, inserted and screwed down into mortise or recess constructed in the upper side of block A.

F designates the pressure-bar, located in the groove *f* of block A, and pivoted within a recess cut in the lower end of lever B, directly beneath the pivot of lever B, by means of a cylindrical pin, fastened within apertures cut in the sides of the said lever, and passing through an eye or receptacle formed on the inner end of said bar.

The outer or opposite end of the said pressure-bar is made to extend a sufficient distance beyond the outer end of block A as to allow the block or presser *g*, placed thereon, to have the necessary lateral movement in operating the same. The pressure-block *g* is provided, on its lower side, with a dovetailed groove, in order to receive the correspondingly-beveled outer end of the pressure-bar, said groove also being contracted at its outer end, adapting itself to the shape of the said bar F, upon which the block *g* is placed, and holding the latter firmly in place.

The pressure-block *g* is located at right angles to the said bar F, provided with a longitudinal groove, to receive the tongue of the board against which it is brought to bear while tightening the same, and secured in place by a screw, passing through an aperture cut in the pressure-bar, and entering its lower side.

G represents an arm or bar, pivoted, at the point h, between the semicircular projections or lugs h^1, connected together, at the upper end, by being constructed in one and of the same piece, and secured transversely within a recess cut in one side, and at the center of the block A.

The inner end of the pivoted arm G is supplied with an eccentric, h^2, having serrations or teeth cut on its periphery, so as to cause said eccentric to grasp the joist when downward pressure is applied to arm G, the hollow block A having been first placed over one of the joists upon which the flooring is to be fastened, to permit of the grasping of the said joist, as above described

The pin h^3, by means of which the arm G is pivoted to block A, may be easily removed, so as to allow of the said arm, with its eccentric h^2, being detached from the said block A, when it is desired to open the teeth of said eccentric, enabling it to adhere to or more firmly grasp the joist aforesaid.

The eccentric h^2 of arm G is assisted in holding the block A in position on its joist by means of the pointed or sharpened projections l l, secured to the opposite side of said block, and extending inwardly, as shown in fig. 2.

It is clearly obvious, from the foregoing description of the construction of my invention, that the operation thereof may be seen without further elucidation of the same.

Having thus described my invention, I will indicate what I claim and desire to secure by Letters Patent, in the following clause:

I claim—

The arrangement of the block A, provided with the projections l l and the ratchet-bar c^2, lever B, pressure-bar F, brace-bar C, and clamp-arm G, all constructed and operating substantially as described.

In testimony that I claim the foregoing, I have hereunto set my hand this 22d day of March, 1870.

DAVID NETTLETON.

Witnesses:

C. R. JOHNSON,

EDWIN HOUGHTON.