(No Model.)

A. T. TIETZ.

CLAMP.

No. 434,487. Patented Aug. 19, 1890.

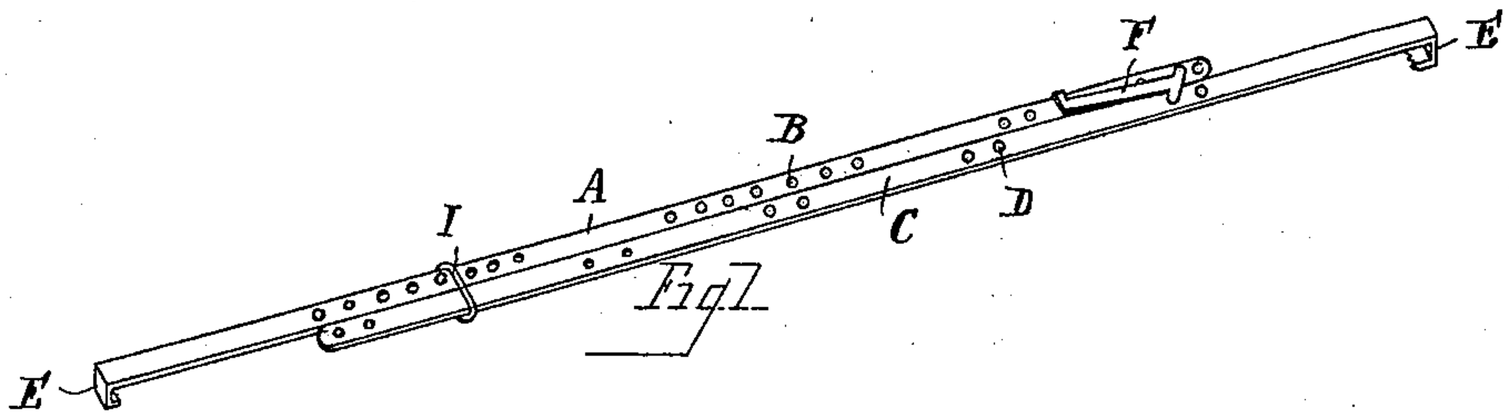

Fig. 1.

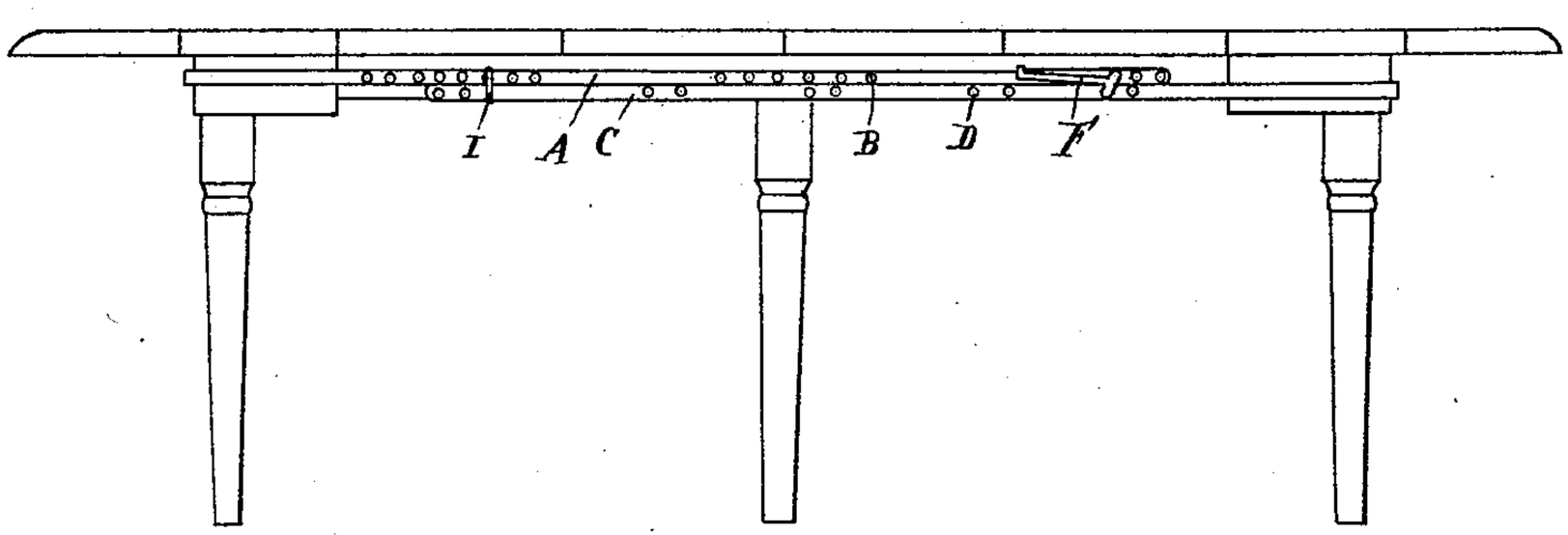

Fig. 2.

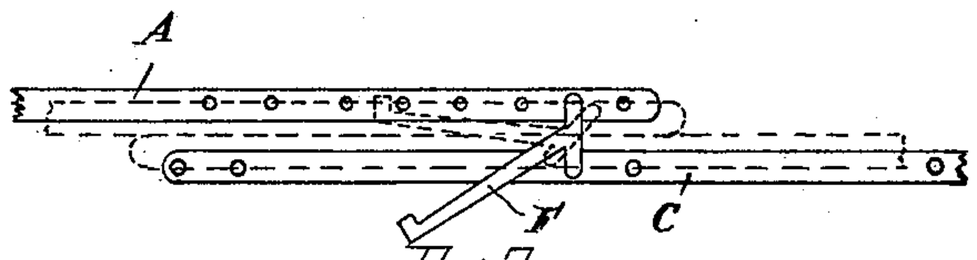

Fig. 3.

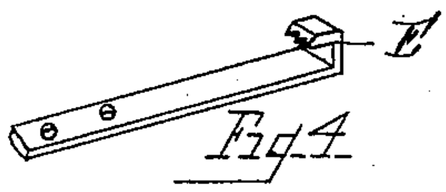

Fig. 4.

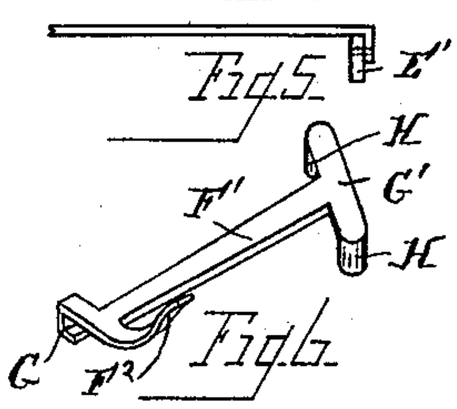

Fig. 5.

Fig. 6.

WITNESSES

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AUGUST T. TIETZ, OF TOLEDO, OHIO.

CLAMP.

SPECIFICATION forming part of Letters Patent No. 434,487, dated August 19, 1890.

Application filed March 14, 1890. Serial No. 343,874. (No model.)

To all whom it may concern:

Be it known that I, AUGUST T. TIETZ, of Toledo, in the county of Lucas and State of Ohio, have invented certain new and useful Improvements in a Clamp; and I do hereby declare that the following is a full, clear, and exact description of the invention, 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 the letters of reference marked thereon, which form part of this specification.

My invention relates to a clamp; and it has for its object to construct a clamp with an adjustability to any desired length, and with a leverage to afford any desired tension.

I have illustrated my improved clamp in use upon an extension-table to draw the supporting-legs from an inclined to a vertical position, so as to cause the top of the table to be horizontal instead of sagging from the end supports toward the center, an inevitable result with tables of this character when long in use, this illustration being given merely to show one use to which the clamp may be put, it being useful for a variety of purposes—such as holding a number of boards in position when being glued together, and in bending fellies, carriage-bows, &c.

The invention consists in providing two parallel oppositely-movable bars provided with a series of perforations along their lengths, with a lever mechanism to engage in the desired perforations to move the bars to give the desired tension thereon.

In the drawings, Figure 1 is a perspective view of a complete clamp. Fig. 2 is a side elevation of an extension-table, showing the clamp put in tension upon the legs thereof to draw the legs to a vertical position to hold the top of the table flat. Fig. 3 is a plan view of a section of the clamp-bars, showing in full lines their position when the lever is adjusted prior to putting tension thereon, and in dotted lines the position of the lever and bars when tension is put upon the bars and the lever secured in position. Fig. 4 is a detail view of one end of one of the clamping-bars. Fig. 5 is a like view showing a rubber secured thereon to prevent marring the article upon which the clamp is placed. Fig. 6 is a perspective view of the lever.

A designates a bar, preferably formed with a series of perforations B along its length and intermediate imperforate spaces, although the perforations may be formed the entire length, or when a determinate movement is desired the number of perforations may be limited to effect the desired movement.

C designates a bar, preferably formed with a less number of perforations D than are formed in bar A, although the number of perforations are not material, so that all the perforations in the two bars do not coincide when arranged upon an article to be clamped. Each bar is formed with a right-angled end E, adapted to engage with the article, and to insure against slipping may be turned again at right angles and serrated, as plainly shown in Fig. 4, or the angled end may be provided with a cushion E′, of rubber or analogous material, to prevent marring the article against which it bears, as shown in Fig. 5.

F designates the lever formed with a body portion F′, having a catch G at one end adapted to fit over and engage with the outer edge of bar A, and at the other end with an acute-angled head G′, formed with a lateral projection H, upon each end adapted to fit into the perforations in bars A and C, as will be more fully explained.

In operation the outer end of each bar is engaged with the sides of the article to be operated upon, and the bars are placed in parallel relation, but slightly apart, as shown in Fig. 3, to allow the projections H each to enter a perforation in the bars A and C, respectively, with the body portion at an angle to the bars, when upon swinging the body portion of the lever the bar A is forced in one direction and the bar C in an opposite direction, thereby drawing the ends closer together and putting tension upon the bars.

In forming the perforations in the bars they are so arranged that when the bars lie parallel there is no coincidence of the perforations of one bar with those of the other, the variation varying in degree, so that the amount of tension can be readily determined by putting the projections H into the perforations more or less out of coincidence, as when the lever is thrown to cause catch G to engage with the outer side of bar A the head is inclined in an opposite direction, as shown in Fig. 3,

thereby moving the bars in opposite directions to an extent determined by the amount of movement of the catch end of the lever.

For convenience in moving the lever, especially in the smaller constructions, there is formed a thumb-rest F^2, against which the thumb may bear.

From the above description the operation will be readily understood. The ends E are engaged with the sides of the article and the bars are laid parallel. If a great amount of tension is desired, the projections H are placed into those perforations of each bar the farthest out of coincidence, and if a less amount of tension is desired in those having the nearest coincidence, or in any of the perforations intermediate the nearest and farthest from coincidence. In order to hold the bars together at the end opposite to that in which the head G′ is attached, I slip a link I over both bars, as shown in Figs. 1 and 2, thereby holding the same closely assembled.

The device is inexpensive of construction, easily operated, and can be formed with sufficient strength to give any amount of tension desired.

What I claim is—

1. In a clamp, two bars each formed with an outer angled end, and perforations along their lengths, in combination with a lever having a head formed with lateral projections to enter the perforations, and a catch to engage with one of the bars, as and for the purpose set forth.

2. In a clamp, two bars, each formed with an outer angled end and having perforations along its length, in combination with a lever having a head on which is formed lateral projections to enter the perforations in the bars, the said head being at an acute angle to the body portion of the lever, which portion is provided with a catch to engage with the edge of one of the bars, as and for the purposes set forth.

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

AUGUST T. TIETZ.

Witnesses:
WILLIAM WEBSTER,
ANNA J. LEHANEY.