

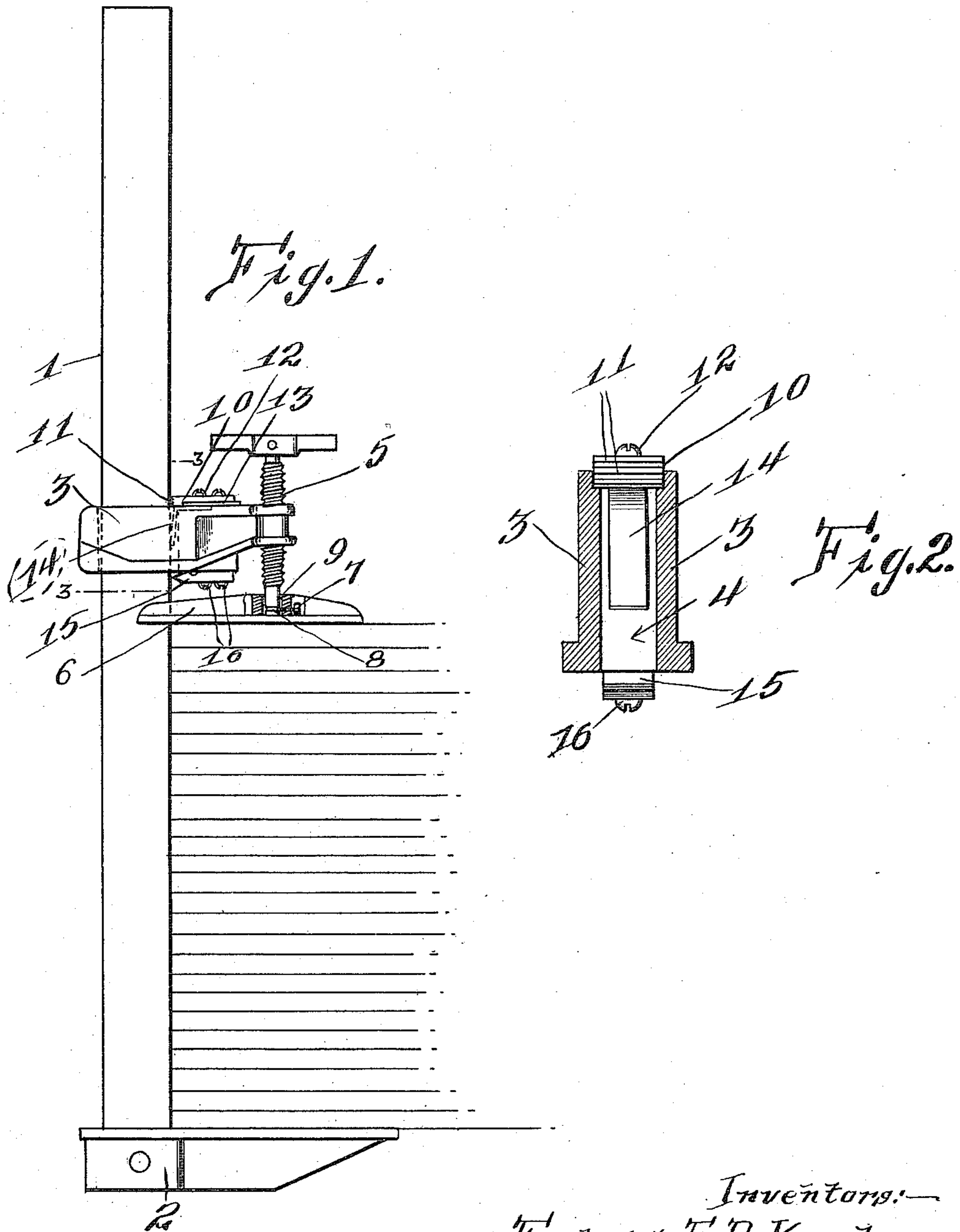
F. E. R. KRUMHAAR & S. J. MALBOEUF.

CLAMP.

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983,148.

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UNITED STATES PATENT OFFICE.

FREDERICK E. R. KRUMHAAR AND SYLVA J. MALBOEUF, OF CHICAGO, ILLINOIS.

CLAMP.

983,148.

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To all whom it may concern:

Be it known that we, FREDERICK E. R. KRUMHAAR and SYLVA J. MALBOEUF, citizens of the United States, residing at Chicago, in the county of Cook and State of Illinois, have invented certain new and useful Improvements in Clamps, of which the following is a specification.

This invention relates to a clamp, but more particularly to that type of clamps which when used in a sufficient number is adapted principally for pressing layers of veneer on superposed series of doors and the like, and comprises, essentially, a bar provided at one end with a rigid jaw, an arm slidably mounted on the bar, and provided with a clamping screw which, in turn, is provided with a pressing jaw, between which latter and the rigid jaw the work is clamped.

Still more particularly, however, the present invention relates to means, carried by the sliding arm, which will permit said arm to be slid along the bar until the pressing jaw comes into contact with the work, when a half turn or so of the clamping screw will cause the means to bite into the edge of the bar and securely hold the arm against further movement.

The invention further relates to means for holding the sliding arm at any point on the bar it may be moved to when the clamp is not in use.

The principal object of the invention is to provide a clamp of the above character, in which the means above referred to are rigidly fastened to the sliding arm, thereby preventing any possibility of the same becoming lost, and which will be strong and durable, positive in operation, and at the same time extremely simple and inexpensive in construction.

In the accompanying drawing which forms a part of this specification and in which like reference numerals indicate corresponding parts throughout the several views, Figure 1 is a side elevation of the clamp complete, but partly in section, and Fig. 2 is a vertical sectional view taken on the line 3—3 of Fig. 1, with the bar removed.

Referring specifically to the drawings, 1 indicates the main bar of the clamp, which may be of any desired length, and which has a rigid jaw 2 at its lower end.

The sliding arm is indicated at 3, and has a rectangular opening 4, formed centrally and vertically through one end, through

which the bar 1 passes. The length of the opening 4 is slightly greater than the width of the bar, so as to permit the arm to tilt slightly on the bar. The other end of the arm is provided with the clamping screw 5, to the lower end of which is fastened the pressing jaw 6.

As shown in Fig. 1, the lower end of the screw 5 is fastened to the jaw 6 by means of a set screw 7, which enters a groove 8 formed around the lower end of the screw, and as the diameter of the opening 9, which receives the screw, is slightly greater than that of the screw, said screw, and consequently the arm 3, will be permitted to tilt a slight distance when pressure is applied to and removed from the pressing jaw 6. Mounted to the upper edge of the arm 3, adjacent the inner wall of the opening 4, is a dog 10, the outer end of which projects a short distance beyond the said inner wall of the opening and is provided with a series of longitudinal parallel serrations 11, which are adapted to bite into the edge of the bar 1 in a manner to be hereinafter referred to. The dog 10 is held in position by means of screws 12, and for the purpose of rigidity it is mounted in a pocket formed on the arm by ridges 13.

Clamped under the outer end of the dog 10 is one end of a flat spring 14, which extends outwardly and downwardly into the opening 4, and has its free end bearing against the edge of the bar 1, for the purpose of normally holding the serrated end 11 of the dog 10 out of engagement with the adjacent edge of the bar 1.

Mounted to the under side of the arm 3, directly below the dog 10, is a tooth 15 which is rigidly held in position by means of screws 16. The free sharp end of the tooth is adapted to engage the adjacent edge of the bar 1 to hold the arm 3 on the bar when the clamp is not in use.

In use, the work to be pressed is placed on the rigid jaw 2. The sliding arm 3 is tilted sufficiently, by pulling upwardly on the clamping screw, to disengage the tooth 15 from the edge of the bar. The arm will then be allowed to slide down the bar until the pressing jaw 6 comes in contact with the work, when a half turn or so of the clamping screw will cause the screw to tilt toward the bar, and the serrated end 11 of the dog 10 to bite into the edge of said bar, and securely hold the arm from slipping upwardly

on the bar. The desired pressure may then be exerted on the work by turning the clamping screw. When it is desired to remove the work from the clamp, the clamping screw is turned in a reverse direction until the pressure is relieved sufficiently to allow the screw to be tilted away from the bar, to disengage the end 11 of the dog 10 from the edge thereof, when the arm may be moved higher up on the bar, to remove the work. The weight of the pressing jaw, etc., will cause the screw to tilt away from the bar 1, and the tooth 15 to engage the edge of the bar, thereby holding the arm at any point it may be moved to on the bar, when the clamp is not in use.

From the foregoing, it will be seen that a clamp constructed in accordance with this invention will be extremely simple, with no loose parts to get out of order, and which will admirably serve the purpose for which it is intended.

We claim:

1. A clamp comprising a main bar, a jaw thereon, an arm slidably mounted on said bar, a clamping screw working in the outer end of said arm, and a pressing jaw, carried by said clamping screw, a dog rigidly mounted on the upper edge of said arm, and having its outer end provided with a series of serrations which are adapted to engage the adjacent edge of the main bar, when

pressure is applied to the aforesaid clamping screw, a tooth rigidly mounted on the lower end of the arm, below said dog, and adapted to engage the adjacent edge of the main bar, when the clamp is not in use, and a spring fastened at one end under the aforesaid dog and bearing against the main bar, to keep the serrated end of said dog normally out of engagement with the edge of said main bar.

2. A clamp comprising a main bar, a jaw thereon, an arm slidably mounted on said bar, a clamping screw working in the outer end of said arm, and a pressing jaw, carried by said clamping screw, a dog rigidly mounted on the upper edge of said arm, and having its outer end provided with a series of serrations which are adapted to engage the adjacent edge of the main bar, when pressure is applied to the aforesaid clamping screw, and a tooth rigidly mounted on the lower end of the arm, below said dog, and adapted to engage the adjacent edge of the main bar, when the clamp is not in use.

In testimony whereof we affix our signatures in presence of two witnesses.

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