Nov. 3, 1925. 1,560,091

L. NYGREN

CABINET CLAMP

Filed June 22, 1925

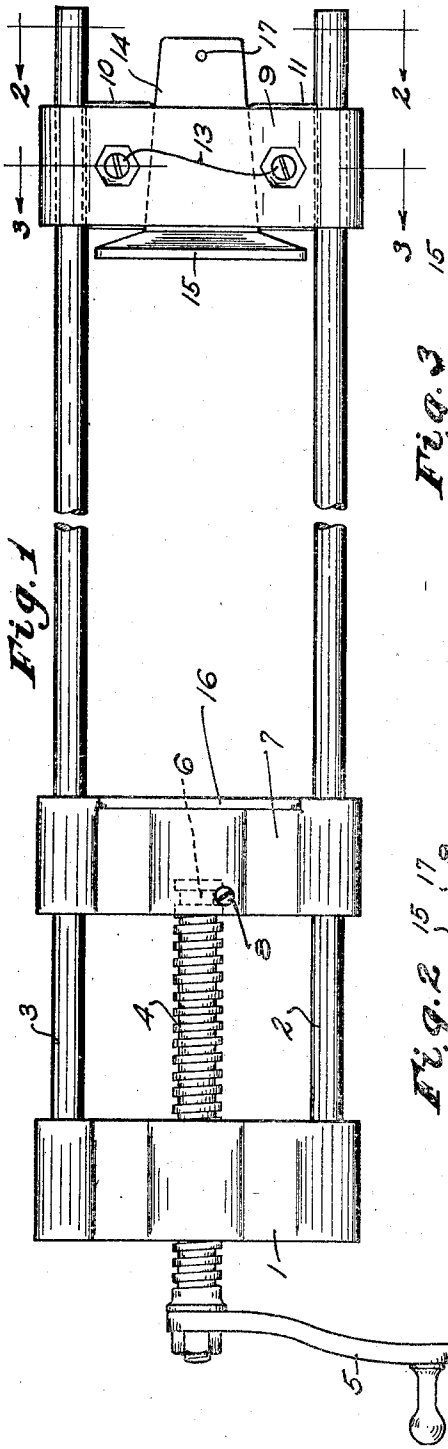


Fig. 1

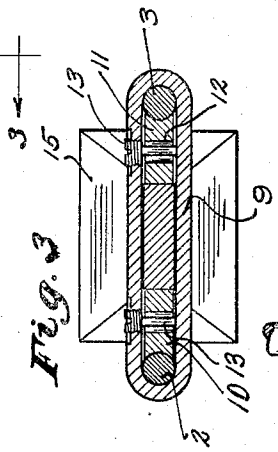


Fig. 3

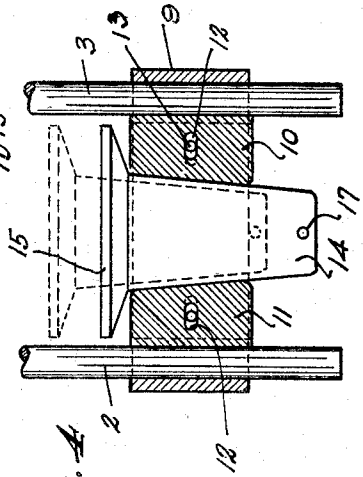


Fig. 4

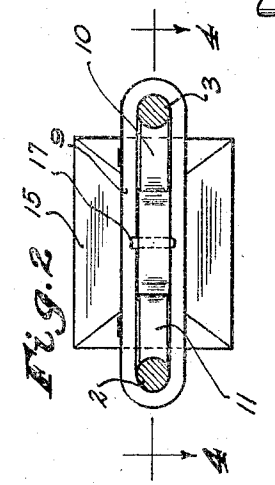


Fig. 2

Inventor
L. NYGREN.

By

Attorney

Patented Nov. 3, 1925. 1,560,091

UNITED STATES PATENT OFFICE.

LEANDER NYGREN, OF BIRMINGHAM, ALABAMA.

CABINET CLAMP.

Application filed June 22, 1925. Serial No. 38,931.

To all whom it may concern:

Be it known that I, LEANDER NYGREN, a citizen of the United States of America, residing at Birmingham, in the county of Jefferson and State of Alabama, have invented certain new and useful Improvements in Cabinet Clamps, of which the following is a specification.

My invention relates to cabinet clamps, and has for its object more particularly to simplify and improve the lower or demountable clamp member which works in opposition to the screw adjusted or upper clamp member.

My object is to devise a lower clamp member which will take positive hold upon the parallel rods without tending to burr or indent same, and in which the rod clamping members are applied by co-acting wedge elements which cause their smooth elongated bearing faces to bind on the rods with a pressure proportionate to the pressure exerted on the work by the screw clamp member.

My invention further comprises the novel details of construction and arrangements of parts, which in their preferred embodiments only are illustrated in the accompanying drawings which form a part of this specification, and in which:—

Fig. 1 is a plan view of the complete clamp with the clamp rods broken away.

Figs. 2 and 3 are sectional views taken respectively on the lines 2—2 and 3—3 of Fig. 1.

Fig. 4 is a sectional view taken on the line 4—4 of Fig. 2.

Similar reference numerals refer to similar parts throughout the drawings.

In the embodiment of my invention illustrated, I show the same adapted for use as a cabinet clamp though obviously it can be applied to various analogous devices.

As illustrated, the clamp comprises a head block 1 having threaded apertures in its ends into which the parallel rods 2 and 3 are adapted to be screwed. Through the center of the head 1 I provide a threaded aperture which receives the screw 4 which has fast on its outer end an operating crank handle 5, and at its inner end is provided with a circumferential groove or channel 6 which is adapted to turn in a socket provided with the upper sliding clamp block 7. A screw pin 8 inserted through the block 7 so as to engage in the groove 6 serves to connect the clamp block to the screw. This block 7 at each side is provided with parallel holes through which the rods 2 and 3 pass leaving the upper clamp block 7 free to slide thereon responsive to the action of the screw 4. My invention as thus far described corresponds to the conventional type of cabinet clamp and it is to be understood that the details may be widely varied without departure from my present invention, which concerns itself solely with the lower or removable clamp member.

The lower clamp member is formed by a flattened steel sleeve 9 corresponding in width with the upper clamp block 7 and adapted to receive the rods 2 and 3 in the bite at each end of the loop with a snug sliding fit. In the loop at each side I mount a tapering wedge block 10 or 11 which are similar except that one is right hand and the other left hand, and each block is provided along its outer edge with an elongated grooved face adapted to engage the adjacent rod 2 or 3. The blocks are co-extensive in width with the sleeve 9 and are provided near their centers with transversely elongated slots 12 through each of which I insert a screw pin 13, the pin having an enlarged head threaded and screwed into one side of the sleeve 9. The pin is small enough to allow ample play of the blocks 10 and 11 towards and from each other required for setting them in operating position or releasing them. The inner opposed faces of the blocks are oppositely tapered and adapted to be engaged throughout their length by the wedge shank 14 of the lower clamp head 15 which is disposed between the rods and corresponds substantially in size to the opposed head 16 on the upper clamp member 7. The shank 14 extends substantially beyond the clamp sleeve 9 and receives a pin 17 which prevents its complete disengagement from the sleeve.

It is important to note that the wedge shank 14 engages the wedge blocks throughout the length of their inner taper faces and that the outer grooved faces of these wedge blocks engage almost the inner half circle of each rod throughout the full width of the lower clamp sleeve 9. This gives the blocks a very strong clamping hold on the smooth rods and enables me to provide a clamp in which the lower clamp member can be almost instantly applied with an automatic action and with a positive grip that

will not slip, and at the same time I avoid any burring or roughening of the rods which interferes with the free sliding of the lower clamp member.

Though I have described with great particularity the details of the embodiment of the invention herein shown, it is not to be construed that I am limited thereto, as changes in arrangement and substitution of equivalents may be made by those skilled in the art without departing from the invention as defined in the appended claims.

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

1. In a cabinet clamp of the character described, comprising a clamp frame having side rods and an upper screw actuated clamp member, a lower clamp member comprising a sleeve-like element embracing the clamp rods, a pair of wedge blocks loosely mounted in each end of the sleeve with their outer faces grooved and substantially co-extensive in width with the sleeve and with their inner faces reversely tapered, and a work engaging element having a wedge shank loosely mounted in the sleeve and adapted to engage the taper faces of said blocks.

2. The combination with a cabinet clamp comprising an upper head carrying parallel rods and a screw actuated upper clamp member slidably engaging said rods, of a clamp member comprising a flattened sleeve adapted to receive the rods in the bite at each end, a pair of wedge blocks mounted in each side of the sleeve and having elongated smooth grooved end walls adapted to engage said rods and having inner spaced taper walls, a transverse elongated slot in each block, a pin through the sleeve and each slot to mount the blocks free for lateral play, a work support having an elongated wedge shank adapted to pass through the sleeve between the blocks and in engagement with the taper faces thereof, and a stop on the lower end of said shank to hold the support assembled with the sleeve.

In testimony whereof I affix my signature.

LEANDER NYGREN.