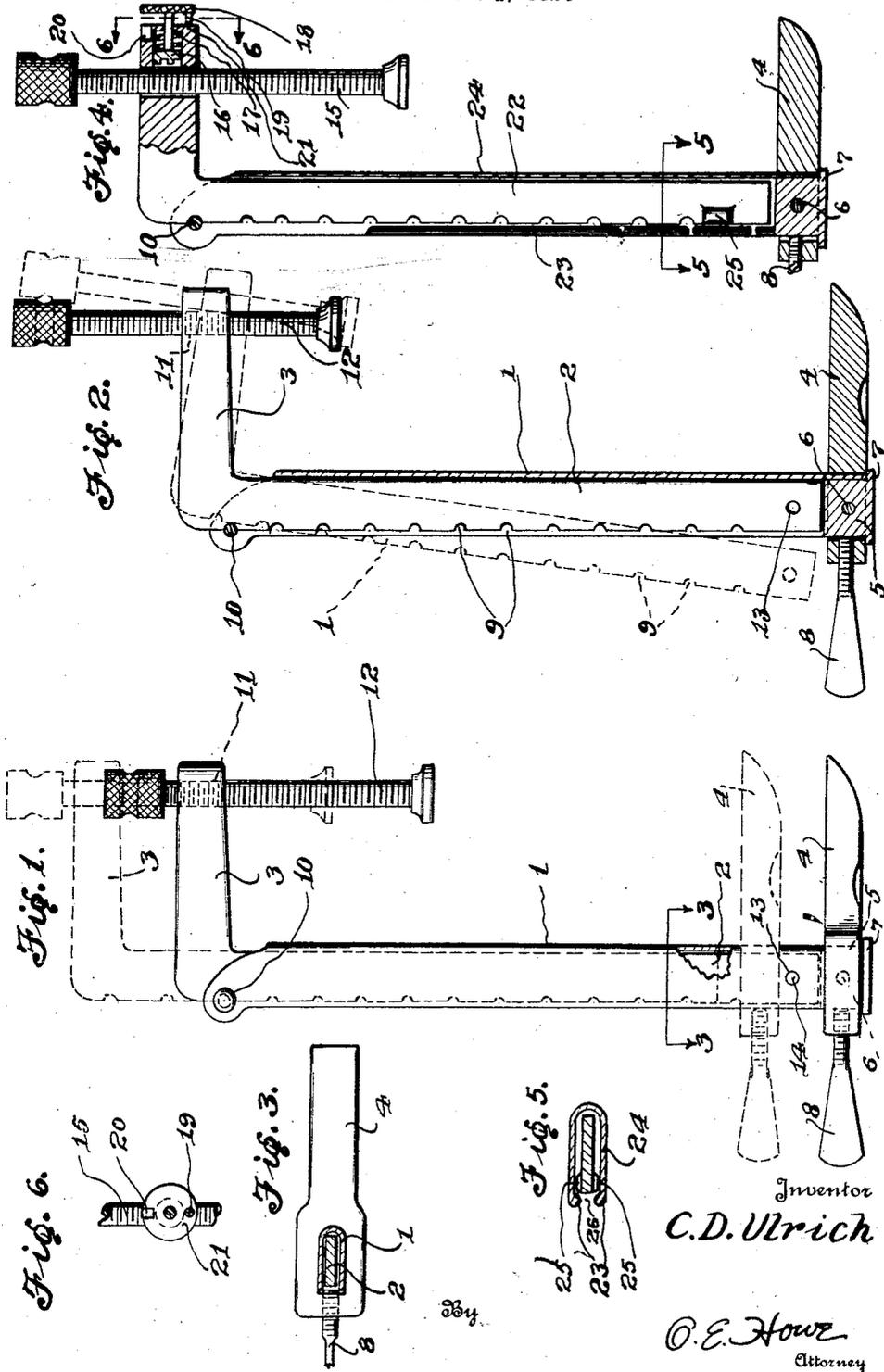


June 23, 1925.

1,543,197

C. D. ULRICH
EXPANSIBLE CLAMP

Filed Dec. 1, 1924



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EXPANSIBLE CLAMP.

Application filed December 1, 1924. Serial No. 753,400.

To all whom it may concern:

Be it known that I, CHRISTIAN D. ULRICH, a citizen of the United States, residing at North Little Rock, in the county of Pulaski and State of Arkansas, have invented new and useful Improvements in Expansible Clamps, of which the following is a specification.

This invention relates to expansible clamps and the main object of the invention is to provide a clamp which is rigid in construction, easy to adjust and which has relatively few parts.

Another object of this invention is to provide means for keeping the expansible bar within the housing when the clamp is out of use.

Another object of the invention is to provide means for threadedly engaging and disengaging the adjusting screw.

Other objects will appear as the disclosure progresses. The drawings are intended merely to indicate a possible embodiment of the invention. It is obvious that the actual needs of manufacture may necessitate certain mechanical changes. It is, therefore, not intended to limit the invention to the embodiment illustrated, but rather, to define such limits in the appended claims.

For a more detailed understanding of the invention, attention is now called to the drawings in which a preferred embodiment is shown illustrated. In these drawings, like parts are designated by like reference characters in all the views.

Figure 1 is a side elevation of the clamp.

Figure 2 is a side elevation of the clamp partly in section.

Figure 3 is a section on line 3—3 of Figure 1.

Figure 4 is a side elevation partly in section of a modified form of the clamp.

Figure 5 is a section on line 5—5 of Figure 4.

Figure 6 is a section on line 6—6 of Figure 4.

Referring now to the drawings in detail, numeral 1 designates the U-shaped housing, 2 the movable bar, 3 an arm at right angles to the movable bar, and 4 the lower jaw. The lower jaw is prevented from leaving the U-shaped housing 2 by a block 5 kept in place by a pin 6 and having a flange 7 at the lower end. Numeral 8 represents a set

screw for adjusting the lower jaw in any desired position.

The outside edge of the bar 2 is provided with a series of notches 9 which are adapted to engage a pin 10 at the upper end of the U-shaped housing, for the purpose of vertical adjustment of the movable bar 2. Numeral 11 represents a threaded hole and 12 the adjusting screw. To prevent the lower end of the bar 2 from swinging outward when the bar 2 is in the lowest position, holes 13 are provided in the bottom of the U-shaped housing and the bar, which register with each other for the insertion of a pin 14.

In Figure 4 is shown a modification of the device with means to threadedly engage and disengage the adjusting screw 15 for the purpose of quick adjustment of same. Numeral 16 designates a threaded element which is normally urged against the threaded screw 15 by a spring 17. To disengage the threaded elements from the adjusting screw, the knob 18 is pulled and revolved through an arc of 180°. This will bring the pin 19 out of engagement with the slot 20 and bear against the flat surface 21 as noted in the drawing.

Means are provided to prevent the lower end of the bar 22 from swinging outward when the clamp is not in use, and which consist of bent-over portions 23 in the U-shaped housing 24 and lugs 25 at the lower end of the bar 22. As noticed in Figure 5, the slot 26 is somewhat narrower than the distance from the face to face of the lugs 25. This arrangement is for the purpose of snapping the bar 22 in place. To swing the bar in or out of the housing 24, the side walls will be spread apart somewhat to clear the lugs 25, the material of the housing being somewhat resilient.

It is thought from the foregoing description that the advantageous and novel features of my invention will be readily apparent.

What I desire to secure by Letters Patent is:

1. In a device of the class described in combination, a U-shaped housing, a movable bar adapted to fit in the said U-shaped housing, an arm at right angles to the said movable bar, notches at the outer end of the said movable bar, a pin for engaging the said notches, a lower jaw, means for adjust-

ing the position of the said lower jaw, a block having a flange at the bottom of the U-shaped housing, and an adjusting screw in the said arm.

5 2. In a device of the class described in combination, a U-shaped housing, a movable bar adapted to fit in the said U-shaped housing, an arm at right angles to the said movable bar, notches at the outer end of the said movable bar, a pin for engaging the said notches, lugs at the bottom of the said U-shaped housing, the said lugs adapted to spread apart the said bent inward portions when contacting with same, a lower jaw, means for adjusting the position of the said lower jaw, an adjusting screw and means to threadedly engage and disengage the said adjusting screw.

10 20 3. In a device of the class described in combination, a U-shaped housing, a movable

bar adapted to fit in the said U-shaped housing, an arm at right angles to the said movable bar, notches at the outer end of the said movable bar, a pin for engaging the said notches, lugs at the bottom of the said movable bar, bent inward portions of the said U-shaped housing, the said lugs adapted to spread apart the said bent inward portions when contacting with same, a lower jaw, means for adjusting the position of the said lower jaw, an adjusting screw, means to threadedly engage and disengage the said adjusting screw, the said means, including a movable element having a threaded face, a spring for normally urging the said threaded face against the said adjusting screw, a stem, a slot, a disengaging pin adapted to fit in said slot and a knob for pulling and revolving the said engaging and disengaging means.

CHRISTIAN D. ULRICH.