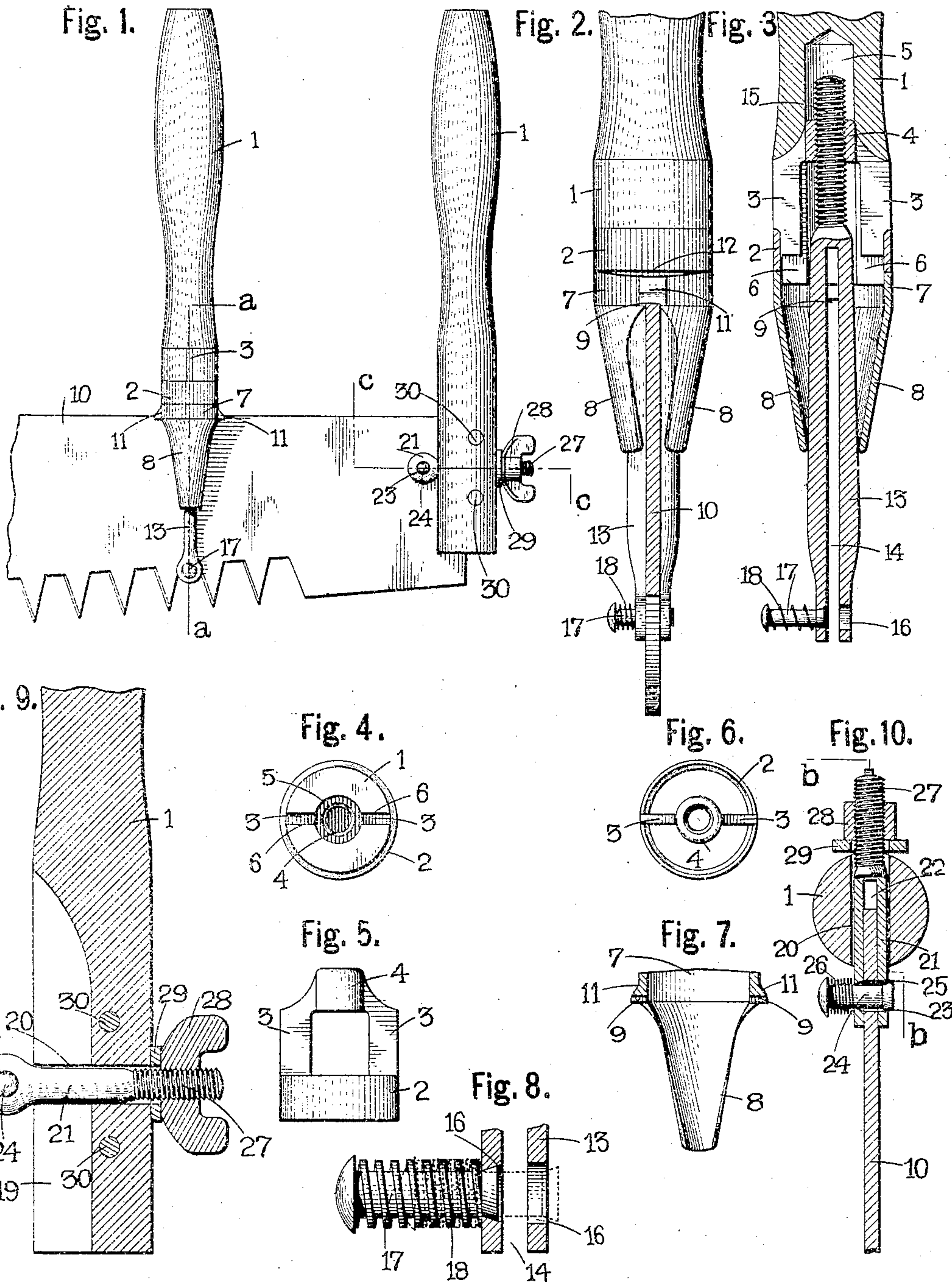


M. E. TRUE.
CROSSCUT SAW HANDLE.
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Witnesses.

L. M. Sangster.
Geo. A. Neubauer.

Moses E. True.

By

A. J. Sangster.

Inventor.

Attorney.

UNITED STATES PATENT OFFICE.

MOSES E. TRUE, OF EAST PEMBROKE, NEW YORK.

CROSSCUT-SAW HANDLE.

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To all whom it may concern:

Be it known that I, MOSES E. TRUE, a citizen of the United States, residing at East Pembroke, in the county of Genesee and State of New York, have invented certain new and useful Improvements in Crosscut-Saw Handles, of which the following is a specification.

This invention relates to an improved handle for crosscut-saws of that class which is detachably clamped to the saw by screw-pressure or the like.

One of the features of the invention has reference to a spring-tensioned pin which is normally retained in an inoperative position and instantly and automatically retracted by the spring from an operative to an inoperative position to free the handle from the saw.

Another feature has reference to novel means for clamping the jaw members upon the saw.

The main object of the invention aside from certain novel improvements in the clamping head, jaws, and handle construction is to provide for the instant detachment of the handle from the saw the moment the clamping-jaws are loosened. This is accomplished by a locking-pin which is movably mounted in openings in clamping members and is instantly retracted sufficiently to entirely free the slot between the clamping members of any projection whatever by a spring means when a friction fastening is released.

The invention also relates to certain details of construction, all of which will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which an adaptation of the invention is shown.

Figure 1 is a side elevation of the end portion of a crosscut-saw, showing two forms of my improved saw-handle attached thereto, one form of the handle being secured to the saw at some distance from the end thereof and the other form being secured to the extreme end thereof. Fig. 2 is an enlarged fragmentary view of the first form of saw-handle shown in Fig. 1 looking lengthwise of the saw-blade, which is shown in position between the jaws of the clamping-bar. Fig. 3 is an enlarged central vertical section through

the saw-handle on line *a a*, Fig. 1, the saw-blade being omitted. Fig. 4 is a detached bottom view of the handle shown in Figs. 2 and 3 with the clamping-head and clamping-bar removed. Fig. 5 is a detached side elevation of the combined ferrule and screw-nut which is used in the form of handle shown in Figs. 2 and 3. Fig. 6 is a detached top plan view of the combined ferrule and screw-nut. Fig. 7 is a central vertical section through the clamping-head. Fig. 8 is an enlarged fragmentary section through the lower end of the clamping-bar, showing the method of securing the pin thereto. Fig. 9 is an enlarged central vertical section through the second form of saw-handle, which is secured to the extreme end of the saw-blade in Fig. 1, the section being cut on or about line *b b*, Fig. 10, with the saw-blade removed. Fig. 10 is an enlarged horizontal section through the form of saw-handle shown in Fig. 9, the section being cut on or about line *c c*, Fig. 1.

In referring to the drawings for the details of construction like numerals designate like parts.

I will first describe the form of handle shown in Figs. 1 to 8, inclusive, and then describe the form of handle shown in Figs. 1, 9, and 10, the latter being used principally as an auxiliary handle.

1 represents the handle proper, which is preferably made of wood, that being considered the lightest and most suitable material. The lower end of this handle 1 is slightly reduced, and a ferrule 2 is fitted upon this reduced portion of the handle, so that a short piece of the handle is exposed below the ferrule 2. The ferrule is provided with two upwardly and radially extending arms 3, which are connected at their upper ends to a screw-nut 4. The ferrule 2, radial arms 3, and screw-nut 4 are preferably formed in one integral piece, as shown in Figs. 3, 5, and 6, which is then fitted upon the lower end of the handle 1 by boring a hole 5 longitudinally into the handle and cutting vertical slots 6 therein to admit the radial arms 3. The ferrule 2 is secured to the handle by being driven tightly upon the reduced lower end thereof, so that the outer surface of the ferrule is flush with

the outer surface of the handle. The hollow clamping-head is formed as shown in Figs. 1, 2, 3, and 7, and consists of a circular rim or ring 7 and two tapering holding or clamping jaws 8, which project downwardly from the rim 7 and are formed integral therewith. This clamping-head is adapted to fit upon the exposed lower end of the handle 1, with its top edge against the bottom edge of the ferrule 2.

The rim 7 of the clamping-head is provided with two notches or depressions 9 in its bottom surface, in which the top edge of the saw-blade 10 seats. These notches or depressions are placed opposite to each other, and the rim 7 is strengthened at these two points by lips or lugs 11. The top of the clamping-head is made slightly concaved on each side, the deepest points being directly above the notches 9, so that a slight opening 12 is left between these parts and the bottom edge of the ferrule 2. (See Fig. 2.) The two tapering clamping-jaws 8 are made hollow or concave on the inside, so as to fit snugly around the longitudinally-slotted bar 13 and hold the same rigidly in place. This longitudinally-slotted bar 13 is preferably formed as shown in Fig. 3, and has a slot 14 extending longitudinally through it, in which the saw-blade 10 is held. The outer surface of the longitudinally-slotted bar 13 is tapered upwardly at the sides where the two tapering clamping-jaws 8 touch. (See Figs. 2 and 3.) The upper end 15 of the longitudinally-slotted bar 13 is screw-threaded and is adapted to screw into the screw-nut 4, as shown in Fig. 3. The lower ends of the clamping-bar 13 are enlarged and provided with openings 16, one of which is larger than the other, through which a pin 17 passes. The pin 17 has a head formed on one end and has its other end slightly upset or expanded, so that the upset end of the pin can easily pass through the larger opening 16, but cannot pass through the smaller opening 16. A spiral spring 18 encircles the pin 17 between the head and the slotted clamping-bar 13 and serves to keep the pin 17 normally withdrawn from the larger opening 16. (See Fig. 8.) The operation of this form of handle is as follows: A saw-blade is fitted into the slot 14 in the longitudinally-slotted clamping-bar 13, and the pin 17 fitted between two of the saw-teeth, as shown in Fig. 1. The pin 17 is pushed through the larger of the openings 16 by pressing upon the pin-head with the finger, and the handle 1 is turned a sufficient number of times (carrying the screw-nut 4 with it) to draw the clamping-bar 13 upwardly until the pin 17 rests against the bottom surface of the saw-blade, between two of the teeth. The force of the screw 15 tends to contract the lower ends of the clamping-jaws 8 upon the tapered sides of the slotted clamping-bar 13 as the bottom edge of the ferrule 2 presses against the two highest points of the concaved upper surface of the rim 7, and

thus clamps the saw rigidly between the lips 11, pin 17, and the members of the slotted clamping-bar 13. To remove the handle from the saw-blade, the handle 1 is turned in the opposite direction, which loosens the slotted clamping-bar 13 and permits the spring 18 to withdraw the pin 17 from the larger of the top openings 16, which instantly frees the handle from the saw.

The form of handle shown secured to the extreme end of the saw in Fig. 1 and in Figs. 9 and 10 is adapted to be secured to the end of the saw-blade and acts as an auxiliary handle when a greater leverage is desired. A vertically and inwardly extending slot or depression 19, in which the end of the saw-blade 10 is adapted to fit, is formed in one side of the lower end of the handle 1. An opening 20 is bored transversely through the handle 1 and lengthwise of the saw-blade. A clamping-bar 21 is passed through this opening and has a longitudinally-extending slot 22 formed therein, into which the saw-blade 10 enters. The ends of the slotted portion of the bar 21 are enlarged and provided with openings 23, through which a pin 24 passes. The saw-blade 10 is also provided with an opening 25, through which the pin 24 passes to secure the handle to the same. The openings 23 in the slotted bar 21 and the pin 24 are made substantially similar to the openings 16 and pin 17, heretofore described. A spiral spring 26 encircles the pin 24 for the same purpose as the spring 18, above described. The outer end 27 of the slotted clamping-bar 21 is screw-threaded and a butterfly or thumb nut 28 is screwed thereon, a washer 29 being preferably interposed between the handle 1 and the thumb-nut 28. In order to prevent the handle 1 from splitting, two or more rivets 30 may be driven therethrough, as shown in Figs. 1 and 9. In attaching the handle to a saw the saw-blade is fitted into the slot 19 and the pin 23 pushed through the opening 25 in the saw-blade. The thumb-nut 28 is now turned upon the screw-threaded end of the clamping-bar 21 until the end of the saw-blade is drawn tightly against the inner wall of the slot 19, thus securing the handle to the saw. This form of handle is instantly detached from the saw by unscrewing the thumb-nut 28, so that the tension of the spring 26 will entirely withdraw the pin from the opening 25 in the saw-blade and within the opening in the clamping member, thereby removing the only obstruction in the slot 19.

The purpose in making one of the openings in the slotted clamping-bars smaller than the other and in upsetting or enlarging the ends of the pins is to prevent the pins from being entirely withdrawn, and so avoid the possibility of loosening the pin. The advantage of this construction is that the pin is moved by the spring sufficiently to bring those portions

of the pin which project across the slot and into the opening in one clamping member into the opening in the other clamping member, so that the slot is entirely free from any obstruction when the handle is released.

I claim as my invention—

1. A crosscut-saw handle having clamping members adapted to embrace a saw-handle, a pin loosely arranged in openings in said clamping members and adapted to be fitted through an opening in the saw-blade, means for moving said clamping members to frictionally lock said pin in position in the opening in said saw-blade and means for instantly retracting said pin to entirely free the slot or opening between the clamping members of obstructions when the friction locking means is released.

2. A crosscut-saw handle having clamping members adapted to embrace a saw-blade, a pin loosely arranged in openings in said clamping members and adapted to be fitted through an opening in the saw-blade, means for moving said clamping members to frictionally lock said pin in position in the opening in said saw-blade and a spring for instantly retracting said pin to entirely free the slot or opening between the clamping members from obstructions when the friction locking means is released.

3. The combination with a saw having an opening, of a handle therefor having clamping members adapted to engage upon opposite sides thereof, a pin loosely mounted in and movable independently of the clamping members and having a head at one end and a coil-spring encircling the pin and bearing respectively against the head of the pin and the outer surface of one of the clamping members, substantially as set forth.

4. The combination with a saw having an opening, of a handle therefor having clamping members adapted to engage upon opposite sides thereof, a pin loosely mounted in and movable independently of the clamping members and having a head at one end and

a spring arranged between the pin-head and one of the clamping members, substantially as set forth.

5. The combination with a saw having an opening, of a handle therefor having a slotted element in which the saw projects, a pin loosely mounted in said slotted element and arranged to be projected through the opening in the saw for locking said handle to said saw and means for retracting said pin entirely without the slot of the slotted element to instantly release the handle from the saw.

6. A crosscut-saw handle, consisting of a handle portion having a central circular opening and a cross-slot in its lower end, in which is fitted a screw-nut having arms extending to and connected with a ferrule so that a small portion of the handle extends below it, in combination with a clamping-bar having a screw portion adapted to screw into the nut within the handle and provided with a longitudinal slot through which the saw passes, a clamping-head consisting of a rim at the top adapted to fit the handle below the ferrule and having a slight concave or depression at the top and at its lower side two hollow clamping-jaws the lower ends of which are forced tightly against the longitudinal clamping-bar and the sides of the saw when the handle is secured to the saw, substantially as described.

7. A crosscut-saw handle, consisting of a handle portion proper, a screw-nut fitted in said handle portion and connecting to a ferrule, a clamping element having a screw portion adapted to screw into the nut and provided with a longitudinal slot adapted to pass over the saw, and a clamping-head consisting of a rim, and two clamping-jaws embracing the slotted clamping element, said rim being slightly concaved at the top, substantially as set forth.

MOSES E. TRUE.

Witnesses:

L. M. SANGSTER,
GEORGE A. NEUBAUER.