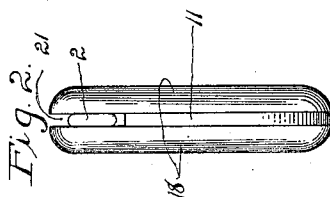
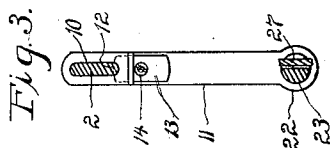
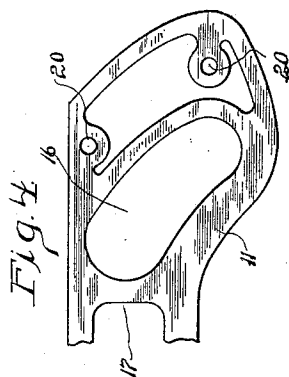
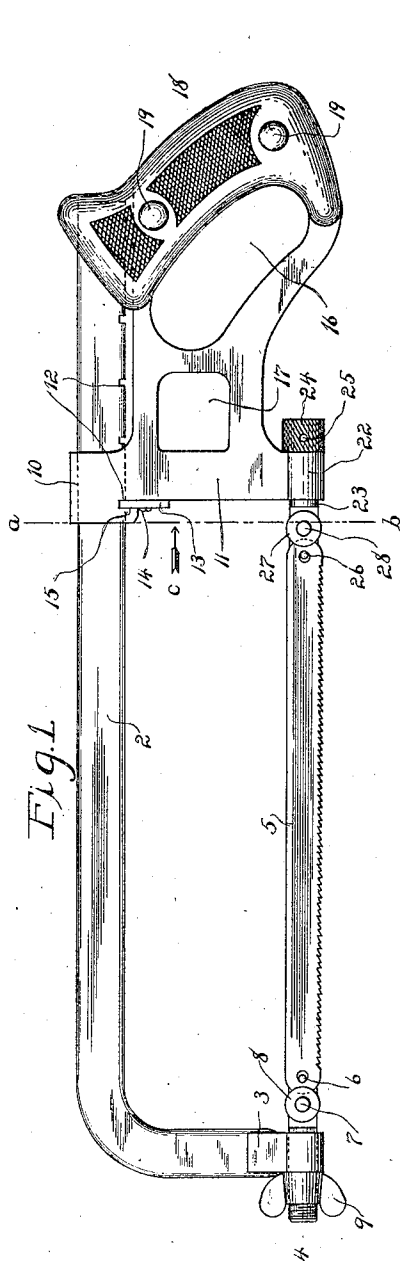


F. S. BRADLEY.
EXTENSION FRAME HACKSAW.
APPLICATION FILED SEPT. 9, 1912.

1,060,312.

Patented Apr. 29, 1913.



Witnesses
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UNITED STATES PATENT OFFICE.

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EXTENSION-FRAME HACKSAW.

1,060,312.

Specification of Letters Patent.

Patented Apr. 29, 1913.

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To all whom it may concern:

Be it known that I, FRANK S. BRADLEY, a citizen of the United States, residing at West Haven, in the county of New Haven and State of Connecticut, have invented a new and useful Improvement in Extension-Frame Hacksaws; and I do hereby declare the following, when taken in connection with the accompanying drawings and the characters of reference marked thereon, to be a full, clear, and exact description of the same, and which said drawings constitute part of this application, and represent, in—

Figure 1 a view in side elevation of a hack-saw constructed in accordance with my invention. Fig. 2 a view thereof in rear elevation. Fig. 3 a view thereof in vertical section on the line *a—b* of Fig. 1, looking in the direction of the arrow *c*, and showing only the adjacent parts. Fig. 4 a broken detached view of the grip-plate from which the grip-scales have been removed.

My invention relates to an improvement in extension-frame hack saws, the object being to replace the longitudinally arranged round grip with which such saws are generally provided, with the so called "easy grip" which better conforms in contour to the hand, and which is located in an inclined position.

A further object of my invention is to utilize an easy grip to protect the hand from any contact with the free end of the extension-frame.

A further object is to produce a compact, convenient and safe extension-frame hacksaw at a low price.

With these ends in view, my invention consists in an extension-frame hack-saw having certain details of construction and combination of parts as will be hereinafter described and pointed out in the claims.

In carrying out my invention as herein shown, the longitudinally movable flattened bar forming the extension frame of the saw is arranged with its straight free end extending rearward toward the hand, while its forward end is turned downward at a right angle and furnished with a strap 3 in which is mounted the threaded plunger 4 to the inner end of which the forward end of the saw 5 is secured in the ordinary manner by means of a pin 6 mounted in the rear

end of the plunger which is also provided with a threaded stud 7 carrying a knurled binding-nut 8. The projecting outer end of the plunger 4 is threaded for the reception of a thumb-nut 9 by means of which the saw is placed under the required tension in the usual manner. The rear end of the extension member 2 is extended through a vertical slot 10 formed in the upper portion of the flat grip-plate 11 the inner edge of the said rear end of the extension frame 2 being formed with notches 12 receiving the upper edge of a locking-dog 13 secured by a screw 14 to the upper portion of the forward edge of the grip-plate 11 which is constructed with a notch 15 intersecting the slot 10 aforesaid near the forward end thereof, and made deep enough to permit the upper edge of the locking-dog 13 to enter the notches 12. The rear portion of the said grip-plate 11 is formed with a forwardly inclined finger-opening 16, and as shown, with a rectangular opening 17 which serves to lighten the whole structure. To the rear of the finger-opening 16 the grip-plate 11 is provided with two inclined grip-scales 18 exactly corresponding to each other, having rounded edges and secured in place by screws 19 passing through screw-holes 20 in the rear edge of the plate 11 upon which the grip-scales 18 are placed so as to follow along the rear edge and lower end of the finger-opening 16 with the rear and lower wall of which the forward edges of the grip-scales 18, as thus arranged, coincide. The two scales 18 are extended above the upper edge of the grip-plate 11 and being separated by the thickness of the same, form a space or housing 21 for the reception of the extreme rear end of the extension saw-frame 2 as shown in Fig. 1 when the said member is adjusted to the limit of its rearward adjustment. Under these circumstances, the rear end of the saw-frame 2 is entirely housed, so that no possible use of the saw can result in any injury to the hand of the user, although the hand of the user is in direct proximity to the rear end of the saw-frame. Now if the saw-frame 2 is moved into any of its intermediate positions, or to the limit of its forward movement, it is still apparent that although the upper ends of the grip-scales 18 will not actually house the rear end of the saw-frame, yet the upper ends of the grip-scales

will be interposed, as it were, between the hand of the user and the rear end of the saw-frame, and prevent the hand from being injured thereby. The lower end of the grip-plate 11 is formed in the usual manner with a sleeve 22 for the reception of a plunger 23 provided at its rear end with a knurled button 24 secured to it by a pin 25. The forward end of the plunger 23 is furnished with a coupling pin 26 for the attachment of the rear end of the hack saw 5, which is held in place by means of a binding-nut 27 screwed upon a threaded stud 28 mounted in the plunger 23 at a right angle thereto, the construction just described being old and well known.

It will be apparent that under my invention, I have provided an extension-frame hack saw with an "easy grip" in such a way as to facilitate the use of the saw, and have utilized the grip in such a way as to make it effectively protect the hand of the user of the saw from the extension-member of the device.

I claim:—

1. In an extension-frame hack-saw, the combination with a grip-plate formed with a slot and located in the plane of the saw, of an extension saw-frame mounted in the said plate with its free end extending rearwardly through the said slot, and grip-scales mounted in the plane of the saw upon the said plate and having their upper ends interposed between the hand of the user and the free rear end of the extension saw-frame for the protection of the hand therefrom.

2. In a hack-saw, the combination with a grip-plate formed with a slot and located in the plane of the saw, of a saw-frame having its free end extended rearward through the said slot, and two corresponding grip-scales applied in the plane of the saw to the rear of the said grip-plate so as to extend above the same and be interposed between the hand and the rear end of the saw-frame, the space between the upper portions of the grip-scales forming a space for the reception of the rear end of the extension saw-frame.

3. In a hack-saw, the combination with a flat grip-plate formed in its rear portion with an inclined finger-opening, and in its upper portion with a slot and located in the plane of the saw, of an extension saw-frame having its free end extended rearwardly through the slot, means for locking the saw-frame with respect to the grip-plate, and two grip-scales applied in the plane of the saw to the opposite faces of the grip-plate at a point to the rear of the said finger-opening therein and extending upward above the upper edge of the said plate to form a barrier between the hand of the user and the free rear end of the saw-frame.

In testimony whereof, I have signed this specification in the presence of two subscribing witnesses.

FRANK S. BRADLEY.

Witnesses:

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GEORGE D. SEYMOUR.