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Patented Aug. 1, 1899.

J. O'CONNOR.

FASTENING HANDLES TO CROSSCUT SAWS.

(Application filed Apr. 7, 1898.)

(No Model.)

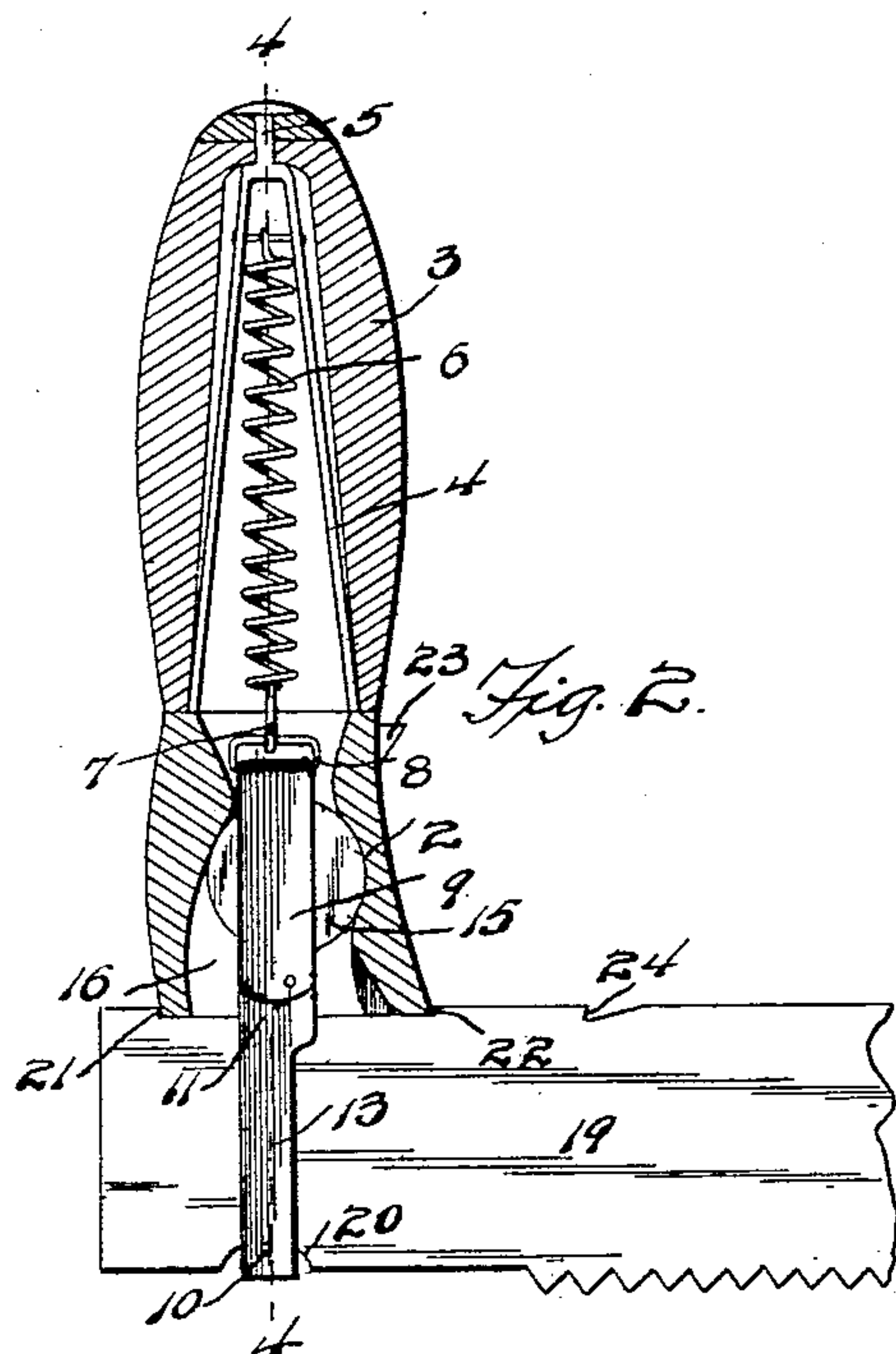
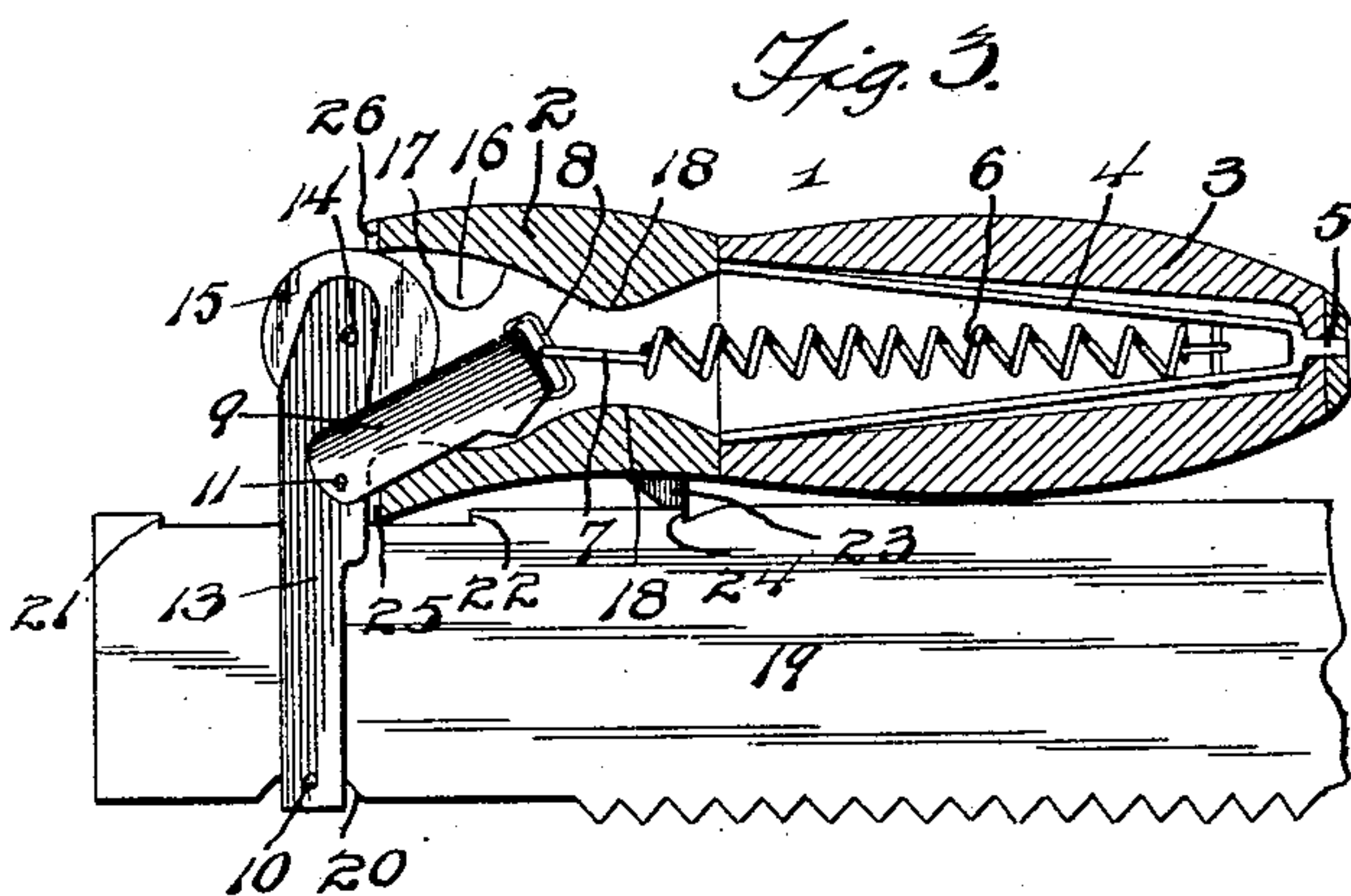
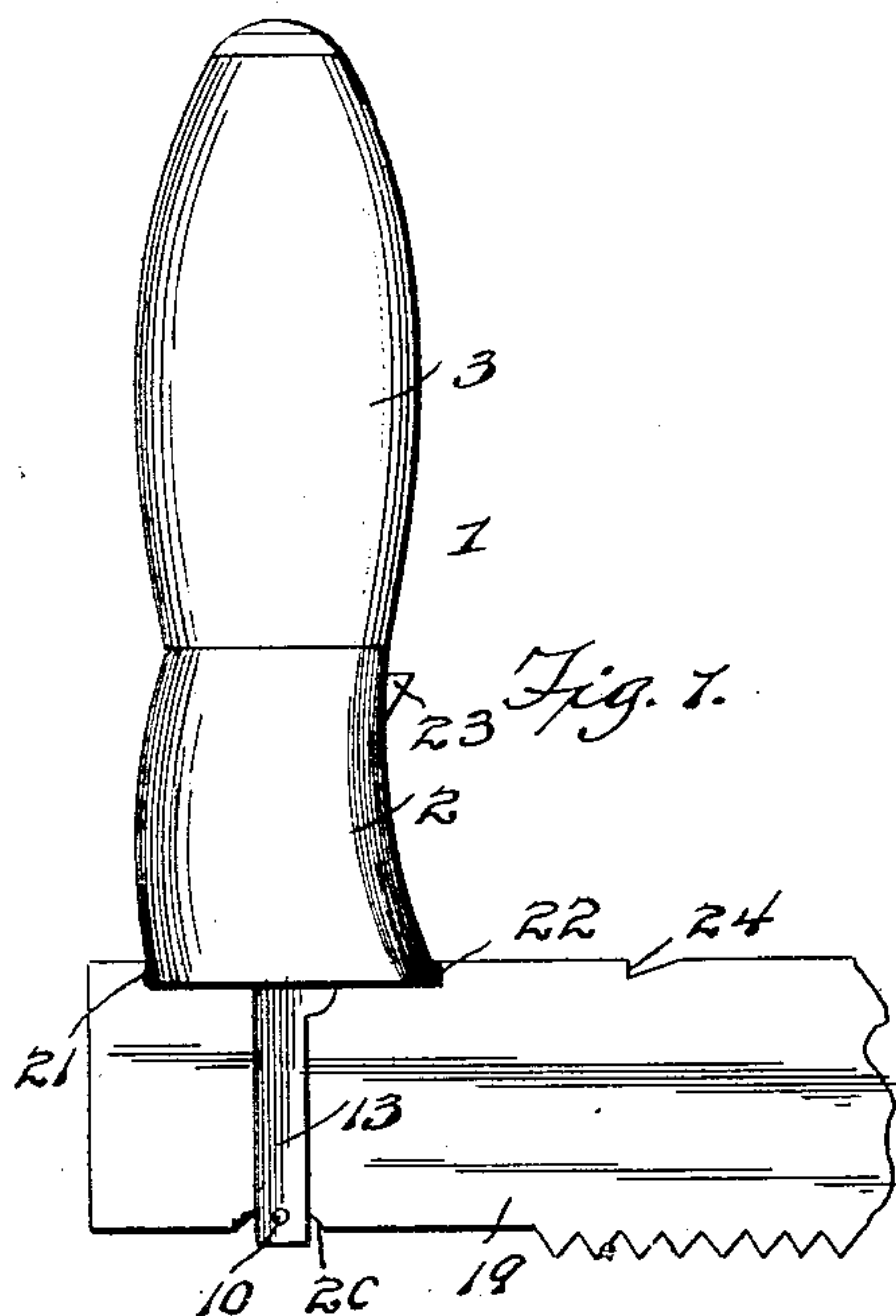
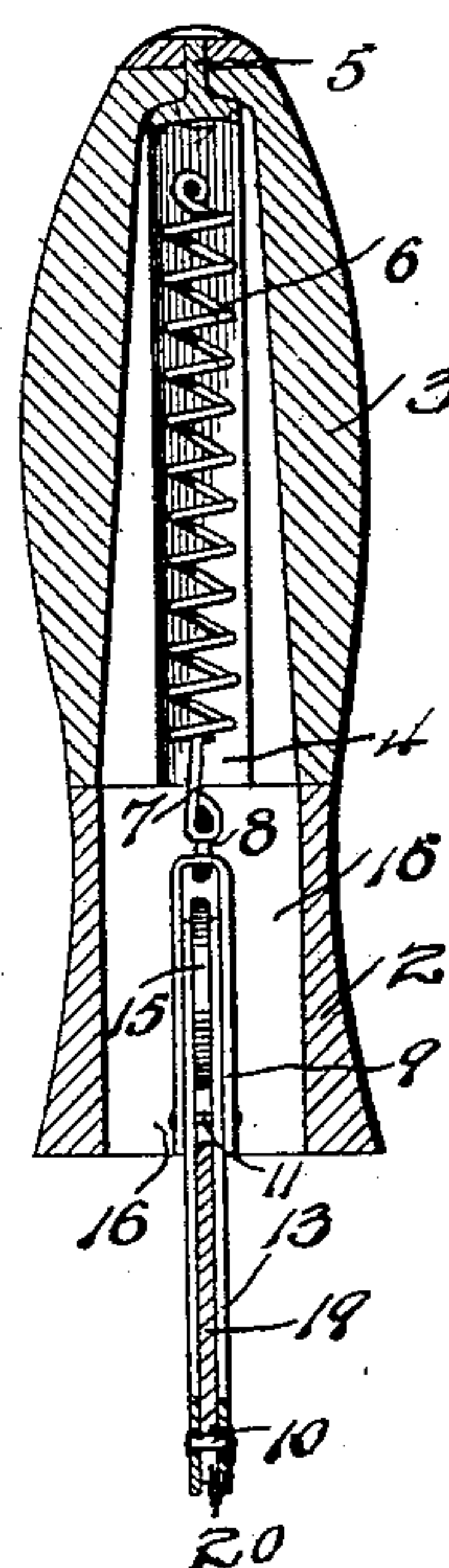


Fig. 4.



Witnesses

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UNITED STATES PATENT OFFICE.

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FASTENING HANDLES TO CROSSCUT-SAWS.

SPECIFICATION forming part of Letters Patent No. 630,098, dated August 1, 1899.

Application filed April 7, 1898. Serial No. 676,774. (No model.)

To all whom it may concern:

Be it known that I, JOHN O'CONNOR, a citizen of the United States, residing at Ely, in the county of St. Louis and State of Minnesota, have invented certain new and useful Improvements in Fastening Handles to Crosscut-Saws; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

15 The invention relates to improvements in saw-handles.

The object of the present invention is to improve the construction of saw-handles and to provide a simple and comparatively inexpensive device adapted to connect the saw-handle detachably to the saw-blade and capable of enabling the handle to be arranged either at right angles to or parallel with the saw-blade, so that when the saw is not in use the handle may be turned down or folded against the blade to prevent it from catching in brush.

The invention consists in the construction and novel combination and arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings, Figure 1 is a side elevation of a saw-handle constructed in accordance with this invention. Fig. 2 is a longitudinal sectional view of the same, the handle being in operative position. Fig. 3 is a similar view, the handle being folded. Fig. 4 is a transverse sectional view on line 4 4 of Fig. 2.

40 Like numerals of reference designate corresponding parts in all the figures of the drawings.

1 designates a tubular saw-handle composed of inner and outer sections 2 and 3, the outer section receiving a substantially V-shaped support 4, composed of outwardly-converging sides, connected at their outer ends and provided thereat with a rivet or pin 5, which extends through a perforation at the outer end of the handle and secures the support to the same. The support, which extends from one end of the outer section 3 to the other, has

the outer end of a spiral spring 6 secured to it, and the inner end of the spring is provided with an eye 7, which is engaged with a link 8 of a connecting-piece 9. The connecting-piece, which is composed of two parallel sides connected at their inner ends, is constructed of a single strip of metal, doubled at the center and passed through the link 8, which forms a transverse opening at the inner end of the connecting-piece.

The outer end of the sides of the connecting-piece forms a fulcrum or support for a saw-blade-engaging frame, which is composed of two levers connected at their outer ends by a transverse fastening device 10 and pivoted between their ends at 11 to the said connecting-piece. The inner ends of the levers of the saw-blade-engaging frame 13 are provided with perforations to receive a pin 14, upon which a wheel 15 is mounted. The wheel 15, which operates within a bore or opening 16 of the inner section of the handle, is adapted to ride on the same to permit the parts to move frictionlessly in adjusting the handle to the positions hereinafter described. The bore 16, which is disposed at a slight angle, as clearly illustrated in Figs. 2 and 3 of the accompanying drawings, has a curved wall 17 and is contracted at its inner portion to form a pair of shoulders 18.

The frame 13 receives one end of a saw-blade 19, provided at its lower toothed edge with a notch or recess 20 for the reception of the transverse fastening device 10 and having shoulders 21 and 22 at its upper edge to engage the inner end of the handle. The shoulders 21 and 22, which are formed by recessing the saw-blade, receive the inner end of the handle between them, and the said handle is held in engagement with the blade by the coiled spring 6. The coiled spring 6 operates to draw the frame 13 and the connecting-piece inward, such movement being limited by the shoulders 18, and the handle is maintained in its position at right angles to the saw-blade by the said spring. As the bore is arranged at an angle and extends inward from the end of the saw-blade in the direction of the center thereof, the handle is adapted to be swung inward to fold the same upon the saw-blade, as clearly illustrated in Fig. 3 of the accompanying drawings, and

the outward and backward movement of the handle is limited by the antifriction-wheel engaging the shoulders 18. When the handle is rocked and is folded, the spring operates to draw the inner ends of the levers, or rather the periphery of the wheel, against the outer side of the handle, thereby forming a stop or lock and causing the handle to remain in its folded position. The handle is provided near the inner end of the section 3 with a lug 23, which engages a shoulder 24 of the blade, whereby the spring is effectually prevented from sliding the handle outward on the saw-blade. The inner end of the handle is provided with inner and outer notches or recesses 25 and 26, which receive the upper edge of the saw-blade and form opposite shoulders to prevent the handle from twisting thereon.

The invention has the following advantages: The saw-handle, which is simple and comparatively inexpensive in construction, is adapted when the parts are folded as illustrated in Fig. 3 of the drawings to be readily removed from and replaced on the saw-blade, and it is capable of being readily changed from its operative position at right angles to the blade to its folded position parallel with the same. When it is folded, it offers no obstruction, and in carrying the saw through woods it will not catch in brush. The antifriction-roller, which enables the parts to be readily adjusted, also forms a stop to limit the inward movement of the blade-engaging frame.

Changes in the form, proportion, size, and the minor details of construction within the scope of the appended claims may be resorted to without departing from the spirit or sacrificing any of the advantages of this invention.

What is claimed is—

1. A device of the class described comprising a hollow saw-handle provided with interior shoulders, a coiled spring arranged within the handle, and a saw-blade-engaging frame connected between its ends with the spring and adapted to engage a saw-blade at its outer end, and provided at its inner end with an antifriction-wheel adapted to ride on the interior of the handle, said friction-wheel being also capable of engaging the shoulders of the same, substantially as and for the purpose described.

2. A device of the class described comprising a hollow handle, a spring housed within the same, and a saw-engaging frame composed of a pair of levers connected between their ends with the spring and adapted to engage a saw-blade at their outer ends, said levers being capable of adjustment to arrange them longitudinally of the handle and at an angle to the same, substantially as described.

3. A device of the class described comprising a handle, a coiled spring mounted within the same, a saw-blade-engaging frame, a connecting-piece pivoted to the said frame at a point between the ends thereof and connected with the spring, and an antifriction-wheel mounted on the frame at the inner end thereof, substantially as described.

4. A device of the class described comprising a handle provided at its inner end with an angularly-disposed bore contracted to form shoulders, a coiled spring mounted within the handle, a connecting-piece composed of two sides and attached to the spring, a saw-blade-engaging frame composed of a pair of levers connected at their outer ends and fulcrumed between their terminals on the sides of the connecting-piece, and an antifriction device arranged at the inner ends of the levers and adapted to engage the shoulders of the handles, substantially as described.

5. In a device of the class described, the combination of a saw-blade provided at one edge with a notch and provided at its other edge with shoulders 21, 22 and 24, a frame engaging the notch, and a handle yieldingly and pivotally connected with the frame and engaging the shoulders 21 and 22 when in operative position and adapted to fold downward or inward into engagement with the shoulder 24, substantially as described.

6. In a device of the class described, the combination with a saw-blade, of a frame engaging the same at one side thereof, and a folding handle connected with the frame and yieldingly engaging the other edge of the saw-blade, said handle being arranged either at right angles to or parallel with the saw-blade, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN O'CONNOR.

Witnesses:

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JOHN DOLLAR.