No. 624,294. Patented May 2, 1899.

L. W. CANADY.

THROTTLE LEVER.

(Application filed Dec. 28, 1898.)

(No Model.) 2 Sheets—Sheet 1.

Fig 1

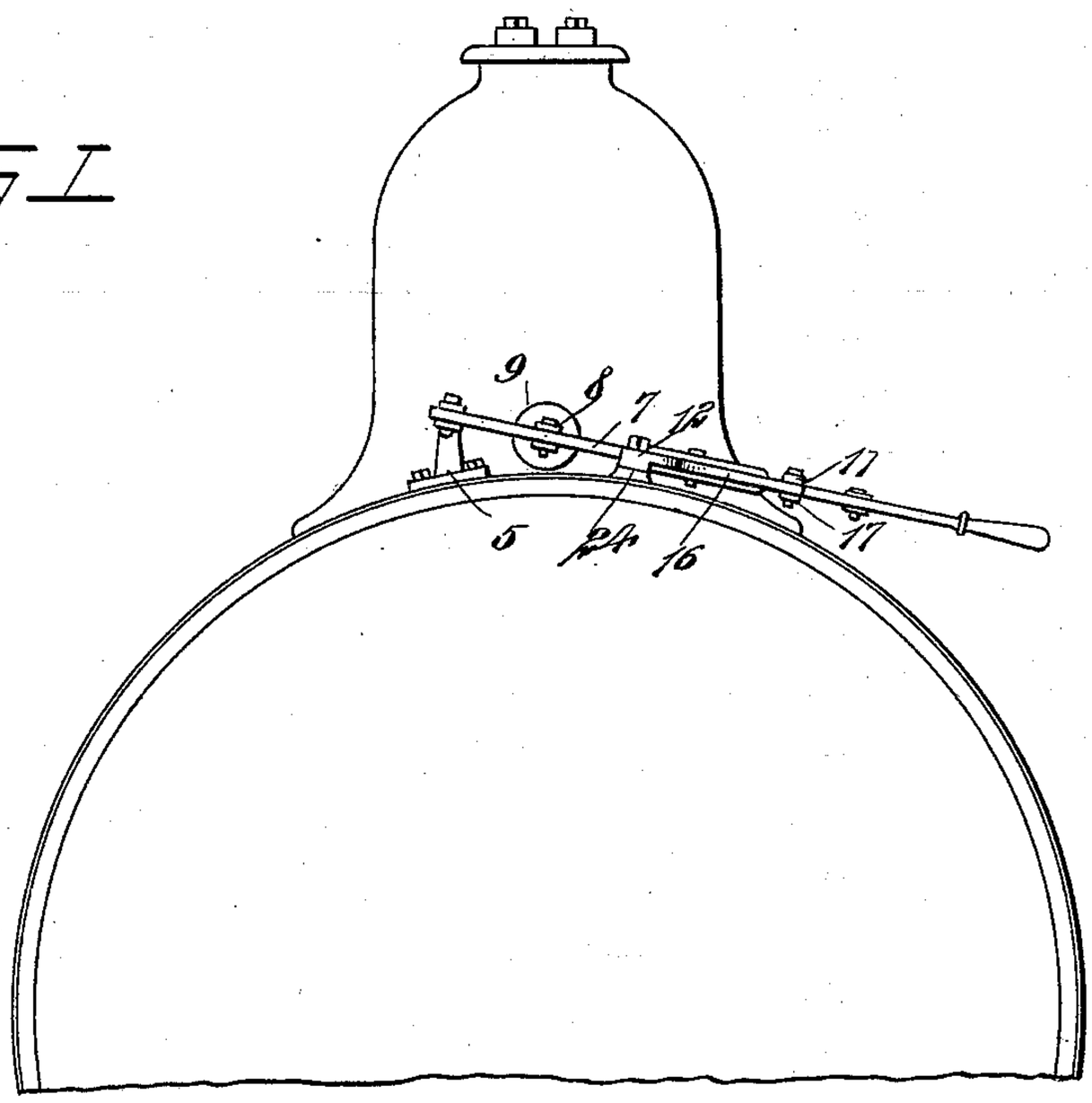

Fig 2

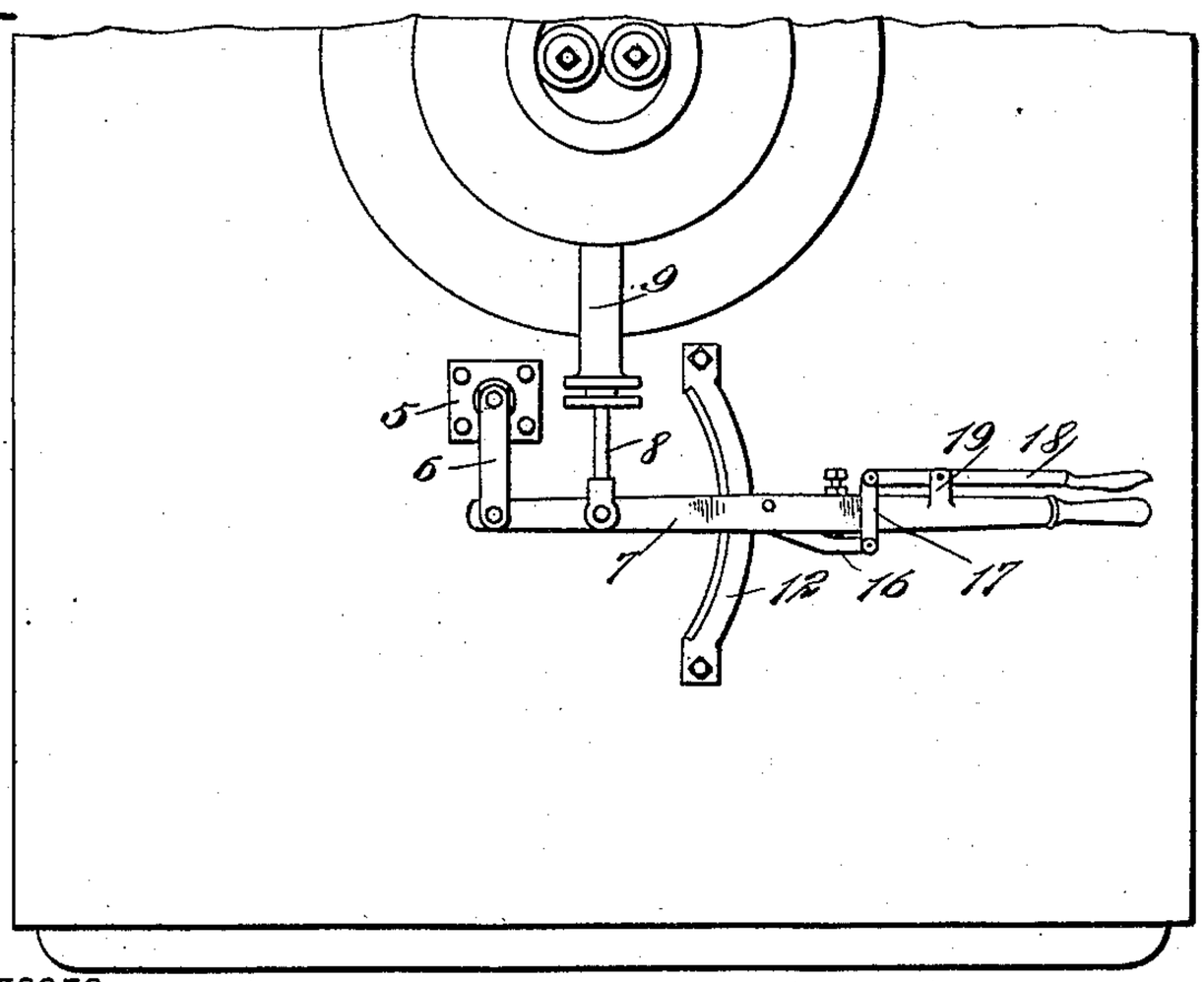

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FIG 3.

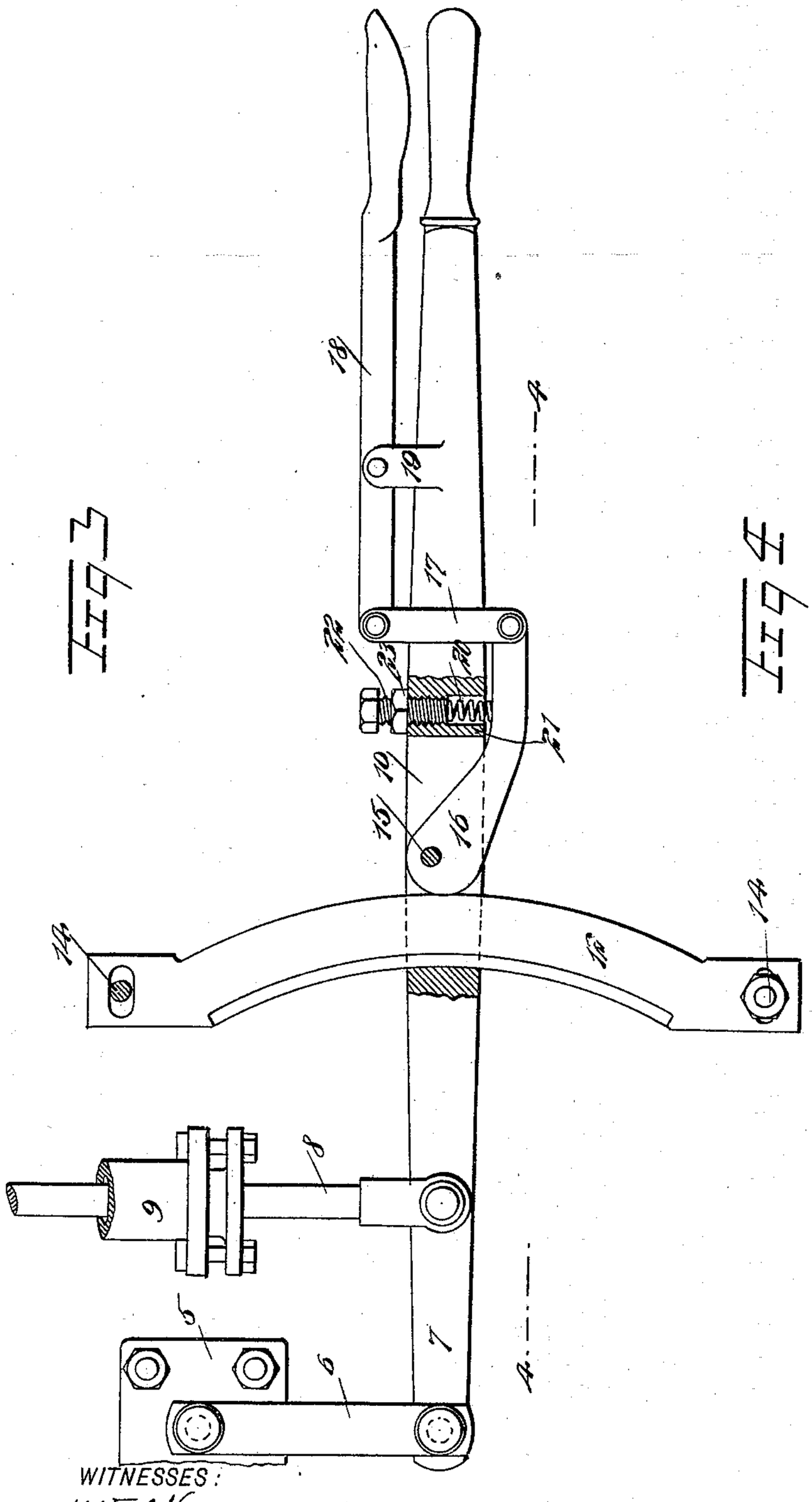
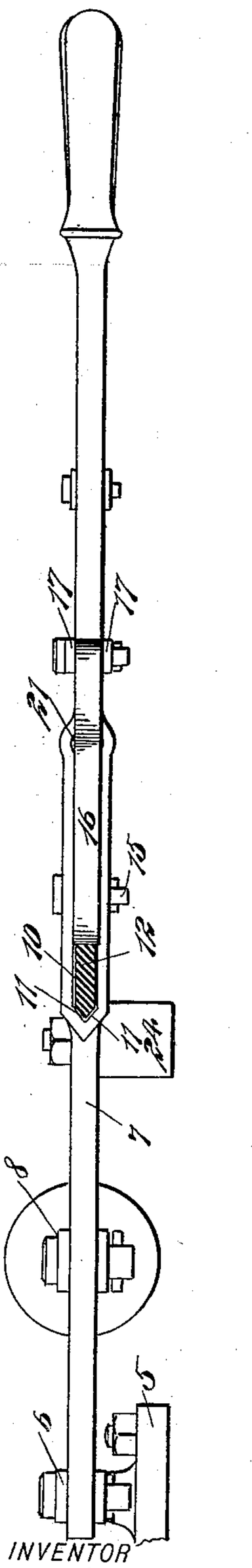


FIG 4.



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UNITED STATES PATENT OFFICE.

LORIN WINFIELD CANADY, OF EL PASO, TEXAS.

THROTTLE-LEVER.

SPECIFICATION forming part of Letters Patent No. 624,294, dated May 2, 1899.

Application filed December 28, 1898. Serial No. 700,514. (No model.)

To all whom it may concern:

Be it known that I, LORIN WINFIELD CANADY, of El Paso, in the county of El Paso and State of Texas, have invented a new and Improved Throttle-Lever, of which the following is a full, clear, and exact description.

This invention relates to a throttle-lever adapted particularly for locomotives and constructed so that the valve may be readily opened and closed or held at any desired intermediate position.

This specification is the disclosure of one form of the invention, while the claims define the actual scope thereof.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the figures.

Figure 1 is a partial end elevation of a locomotive-boiler having my invention applied thereto. Fig. 2 is a partial plan view of the same. Fig. 3 is an enlarged plan view of the invention with parts broken away and in section, and Fig. 4 is a sectional elevation on the line 4 4 in Fig. 3.

The invention is applicable to locomotives of all types and may be arranged in various positions, according to the build of the locomotive, without in any way departing from the spirit of the invention. In the present instance I have shown it applied to the top of the boiler at a point forward of the boiler-head. It is obvious, however, that the position may be changed without in any degree affecting the essential parts of the invention.

Fastened to the boiler is a plate 5, to which is jointed a link 6, which has a hand-lever 7 pivoted to its rear end. Pivoted to the lever 7 is the stem 8 of the throttle, which stem in the action of the valve slides through the usual gland 9. The lever 7 is provided with a longitudinally-extending slot 10, the inner end of which is formed with two angularly-disposed walls 11, and extending transversely of the lever 7 and through the slot 10 is a quadrant 12, the ends of which are adjustably fastened to the boiler by means of bolts 14. The quadrant 12 is curved in the arc of the circle in which the lever 7 swings and has its inner edge formed with a V-bevel fitting snugly against the angularly-disposed walls 11 at the inner end of the slot 10. Fulcrumed in the slot 10 on a pin 15 is a cam-lever 16, which presses against the outer edge of the quadrant 12 and which serves to force the beveled inner edge of the bar against the walls 11 of the slot 10, thus locking the bar with the lever to prevent the movement of the lever. The quadrant 12 has its ends slotted to receive the bolts 14, so as to permit a slight movement of the quadrant 12 toward and from the walls 11. The quadrant 12 is supported at its ends on blocks 24, fastened to the boiler, one of which blocks is shown in Fig. 4. By these means the quadrant is held at the proper elevation above the boiler.

The cam-lever 16 extends out of the slot 10 and longitudinally of the lever 7 toward the free end thereof. The free end of the lever 16 is pivoted to two links 17, which lie one on each side of the lever 7 and which in turn are connected with a finger-lever 18, fulcrumed on an offset 19 of the hand-lever 7, the two levers 7 and 18 terminating at the same point, so that the engine-driver may grasp both levers to manipulate the lever 18 previously to throwing the lever 7. The cam-lever 16 is pressed normally against the quadrant 12, so that the lever 7 is held normally locked by means of an expansive spiral spring 20, fitted in a cavity 21, formed in the hand-lever 7. Screwing in said cavity 21 is a threaded pin 22, held by a jam-nut 23, by which to regulate the tension of the spring 20.

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

1. The combination of a hand-lever having a slot therein, the slot having two angularly-disposed walls at one end thereof, a quadrant loose in the slot of the lever and having a double-beveled edge adapted to engage with the angularly-disposed walls of the slot, and means for forcing the quadrant into such engagement.

2. The combination of a lever having two angularly-disposed walls formed thereon, a quadrant mounted transversely to the lever and having a double-beveled edge bearing against the angularly-disposed walls thereof, the quadrant being movable toward and from said walls, and means for forcing said bar into engagement with said walls.

3. The combination of a hand-lever hav-

ing a slot therein, a quadrant passed loosely through the slot, a cam mounted on the hand-lever and serving to engage the quadrant to lock the same with the hand-lever, the hand-lever having a cavity formed therein, an expansive spring fitted in said cavity and bearing against the cam, a screw mounted in the hand-lever and engaging the spring to regulate the tension thereof, and means on the hand-lever for moving the cam.

4. The combination of a hand-lever, a quadrant passed loosely through the slot in the hand-lever, a cam-lever mounted in the slot and having a portion extending out of the slot longitudinally with the lever, two links pivotally connected with said portion of the cam-lever and extending across the hand-lever respectively to opposite sides of the hand-lever, and a finger-lever in connection with the links and locked on the hand-lever.

5. The combination of a hand-lever, a quadrant extending transversely of the hand-lever, means for securing each end of the quadrant, such means permitting the movement of the quadrant bodily in a line longitudinal with the lever, and means on the lever for moving the quadrant to clamp the same against the lever.

LORIN WINFIELD CANADY.

Witnesses:
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