

(No Model.)

M. GROO.  
BALE TIE.

No. 562,462.

Patented June 23, 1896.

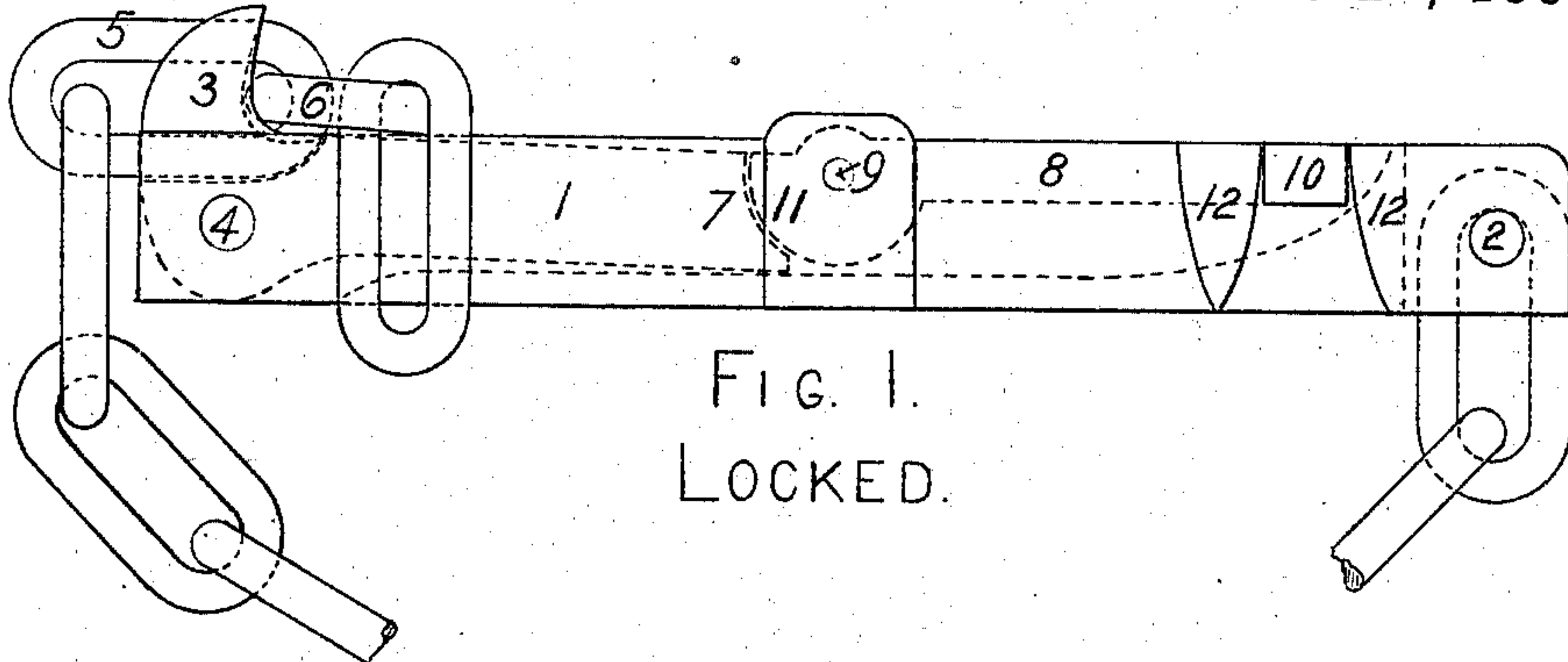


FIG. 1.  
LOCKED.

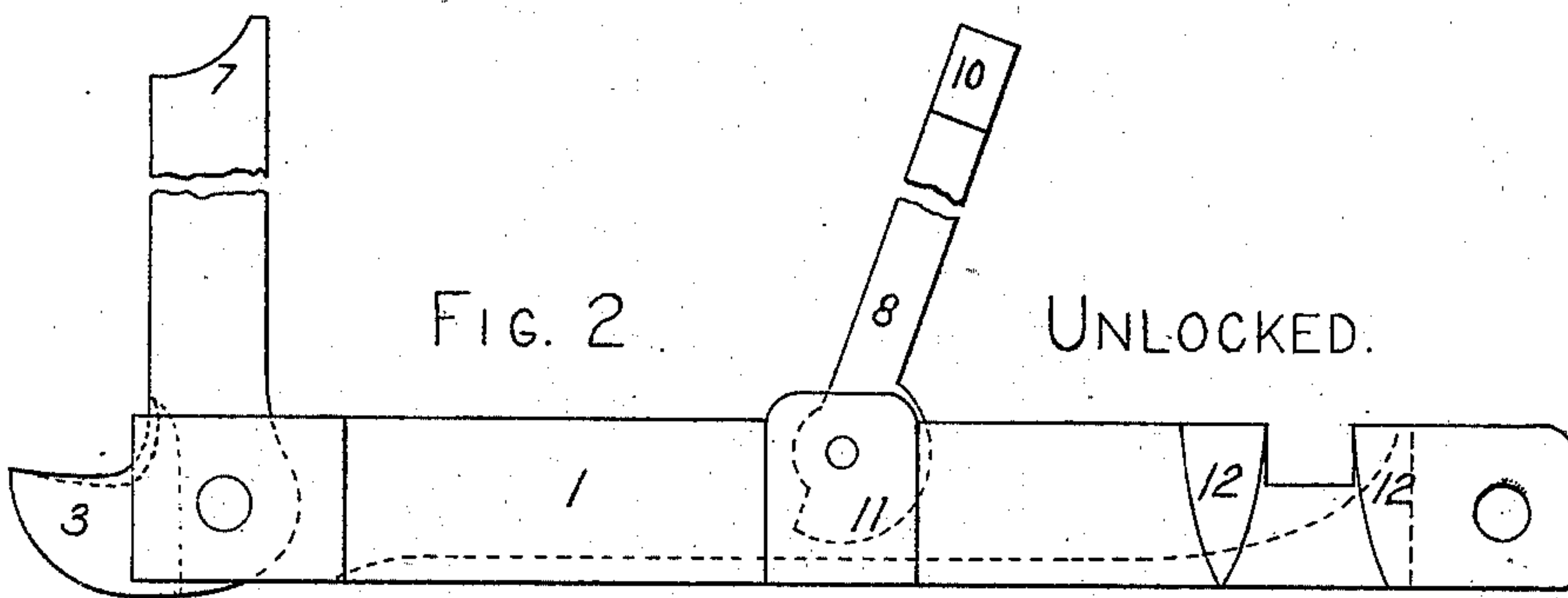


FIG. 2.  
UNLOCKED.

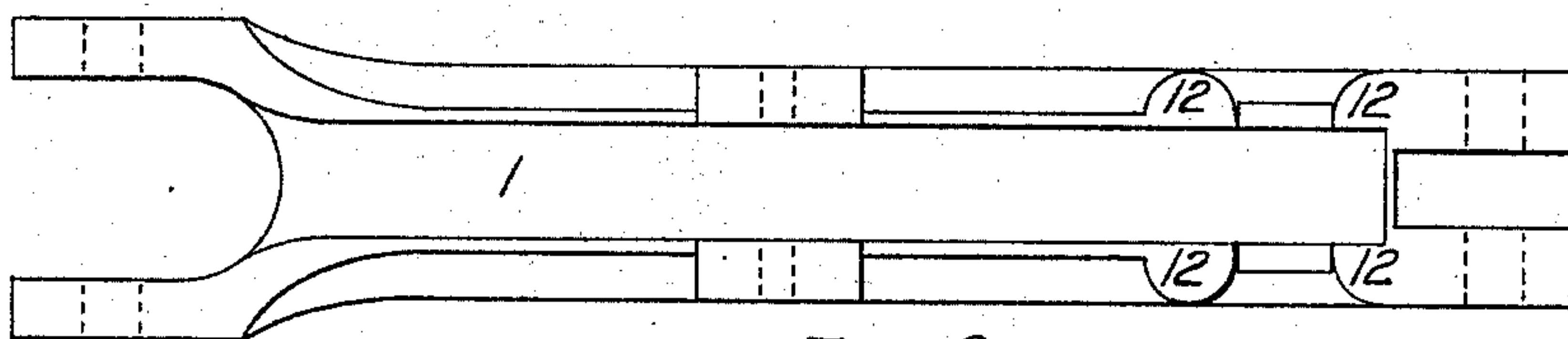


FIG. 3.

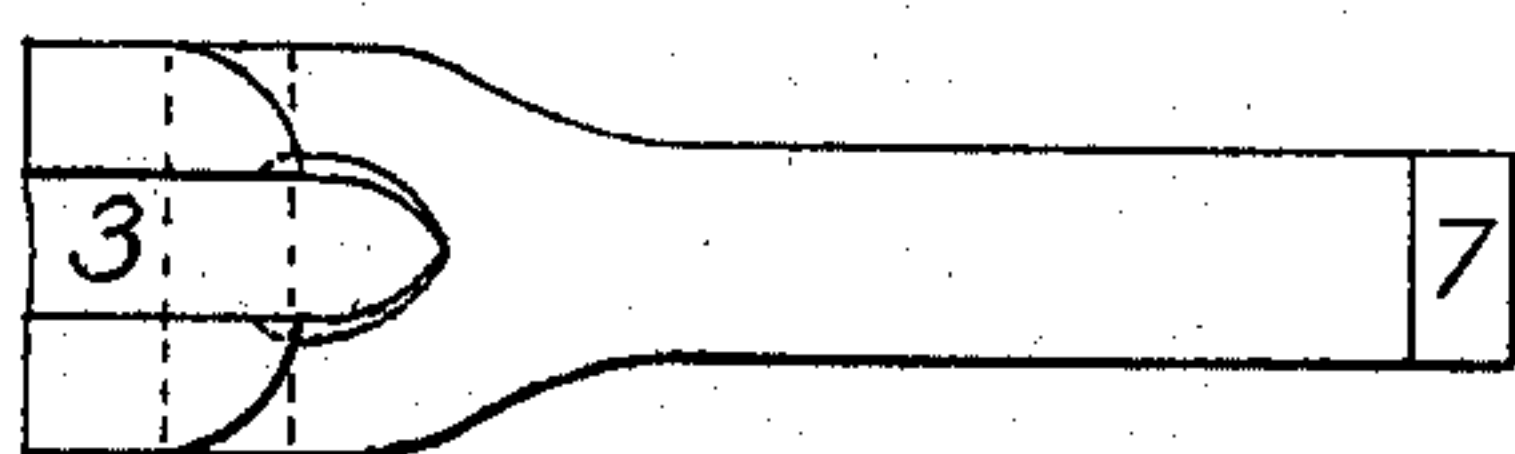


FIG. 4.

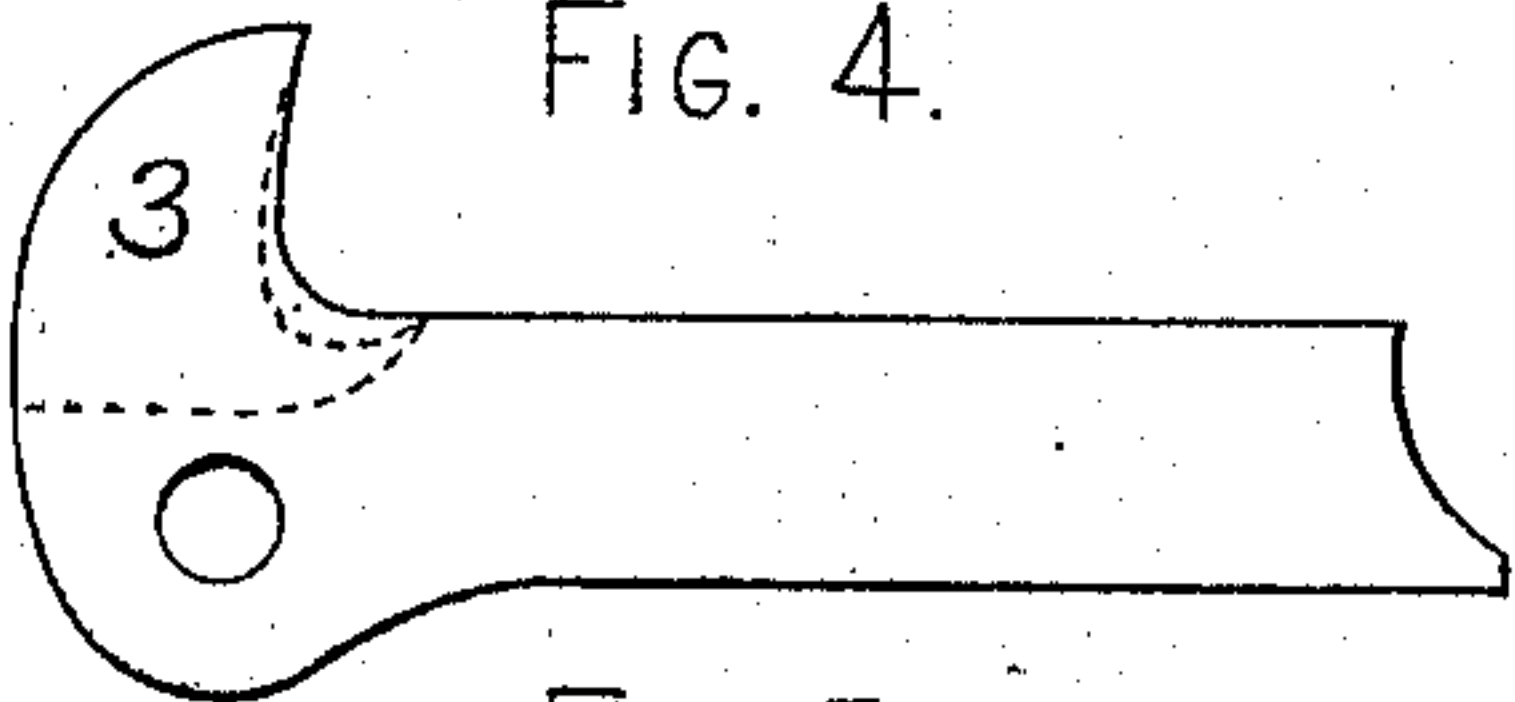


FIG. 5.

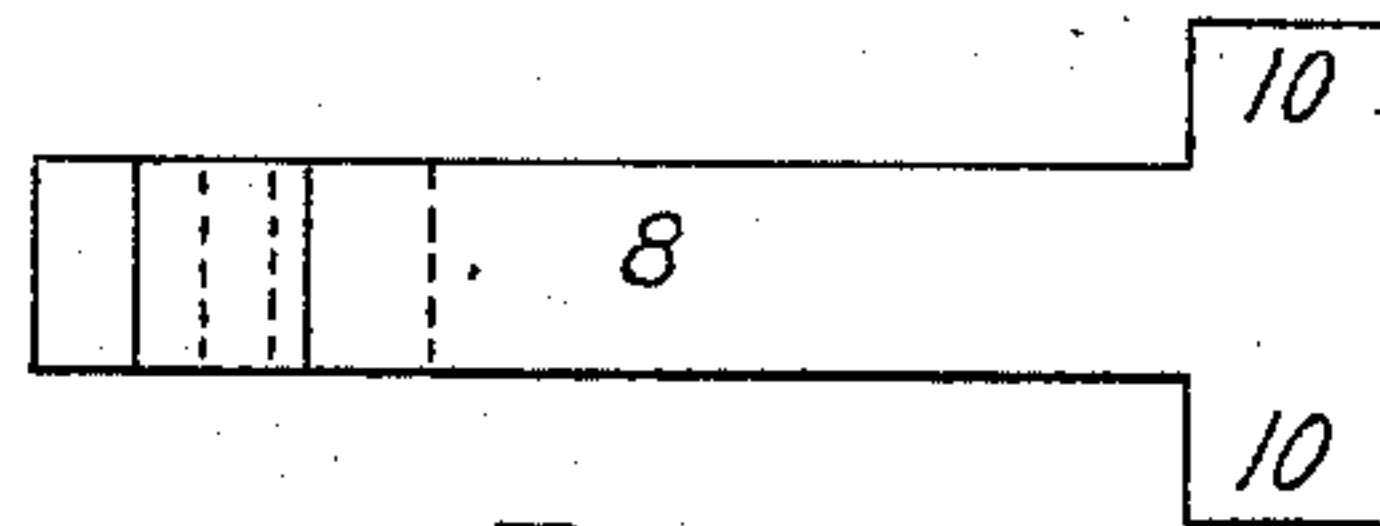


FIG. 6.

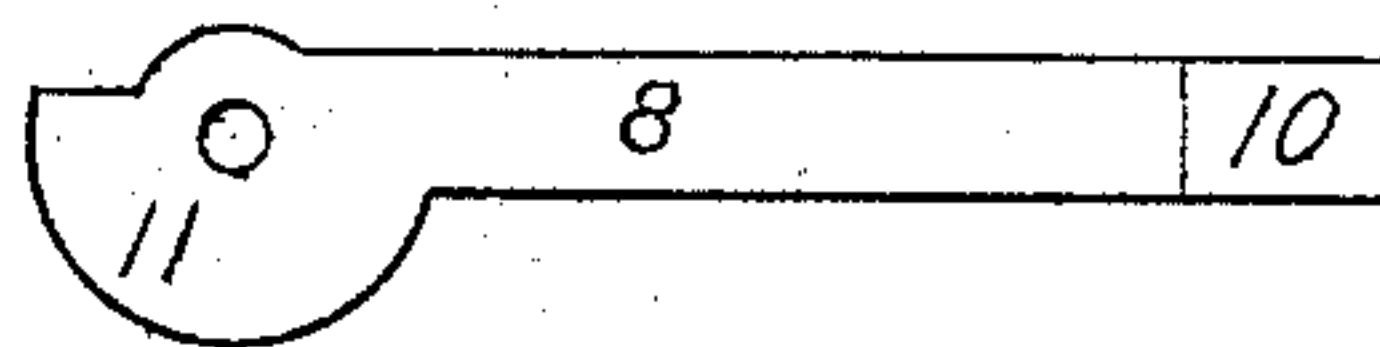


FIG. 7.

Witnesses.

*J. A. Chamberlain.*  
*John H. Gardner*

Inventor.

*Mahlon Groo.*

per. *A. J. Gardner.*  
Attorney.

# UNITED STATES PATENT OFFICE.

MAHLON GROO, OF GRAHAMSVILLE, NEW YORK.

## BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 562,462, dated June 23, 1896.

Application filed December 19, 1895. Serial No. 572,663. (No model.)

*To all whom it may concern:*

Be it known that I, MAHLON GROO, a citizen of the United States, and a resident of Grahamsville, in the county of Sullivan and State of New York, have invented certain new and useful Improvements in Bale-Ties, of which the following is a specification.

My invention relates to improvements in bale-ties.

The objects of my invention are to provide a tie, first, that may be conveniently locked about the bale; second, that may be secured against accidental release, and, third, that may be easily released when desired and be preserved for repeated use.

I attain the objects of my invention by the mechanism illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of my device, its several parts being in a locked position. Fig. 2 is a side elevation of the same, its several parts being in their unlocked positions. Fig. 3 is a detail top view of the frame of the locking device. Fig. 4 is a detail top view of the pivoted hook. Fig. 5 is a detail side elevation of the pivoted hook. Fig. 6 is a detail top view of the locking-lever. Fig. 7 is a detail side elevation of the locking-lever.

Like numerals of reference indicate like parts in all the figures of the drawings.

In Fig. 1 the frame 1 is bifurcated at each end, and provided at one end with a transverse pin 2, which passes through a link at one end of the chain and connects the chain permanently to the frame. At the other end the frame is provided with a hooked lever 3, pivoted to the frame by the pin 4, the hooked end of the lever being bifurcated and adapted to receive between its sides one of the links 5 of the chain. The adjacent link 6 abuts against the sides of the hook and prevents the chain from being withdrawn in a longitudinal direction away from the frame. The shank end 7 of the hooked lever 3 is concaved, adapting it for receiving the locking-lever 8, which is pivoted to the frame by the pin 9. The end of the locking-lever is provided with lugs 10, that engage with recesses in the frame and form a means whereby the end of the locking-lever may be raised to disengage its convex end 11 from the concave

end 7 of the hooked lever. The lugs 10 are protected from being accidentally struck and raised by abutments 12 on the outside of the frame that project beyond the outer edges of the lugs.

It is obvious that when the shank end 7 of the hook is pressed down for the purpose of locking it in position the locking action of the lever 8 automatically takes place, for, let the lever 8 be in its locked position, the end 7 of the hook striking the end 11 will raise the lever far enough to allow the end 7 to take its locked position, when the lever 8 will fall into its locked position to securely hold the hook.

As the tension upon the chain is increased the pressure of the concave end 7 of the hooked lever against the convex end 11 of the locking-lever is proportionally increased, and the locking-lever is thus held more securely in its position.

In Fig. 2 I have shown the locking-lever raised so as to release the hooked lever. When the locking-lever is in this position, the pull upon the chain, caused by the tendency of the bale to spread, turns the hooked lever about on its pivot into the position shown in this figure, and the chain is released from the hook.

In order to more clearly show the form in which I construct my invention, I have shown in Figs. 3, 4, 5, 6, and 7 detail views of its several parts.

Having described my invention, what I claim is—

In a bale-tie the combination of a frame, a bifurcated hook pivoted therein, a chain adapted to be held by the hook at any portion of its length, a locking-lever adapted to secure the hook and provided with lugs protruding over the sides of the frame when the lever is in its closed position, and abutments on the frame to guard the lugs from accidental displacement.

Signed at Washington, in the District of Columbia, this 17th day of December, A. D. 1895.

MAHLON GROO.

Witnesses:

JOHN W. GARDNER,  
N. D. ADAMS.