

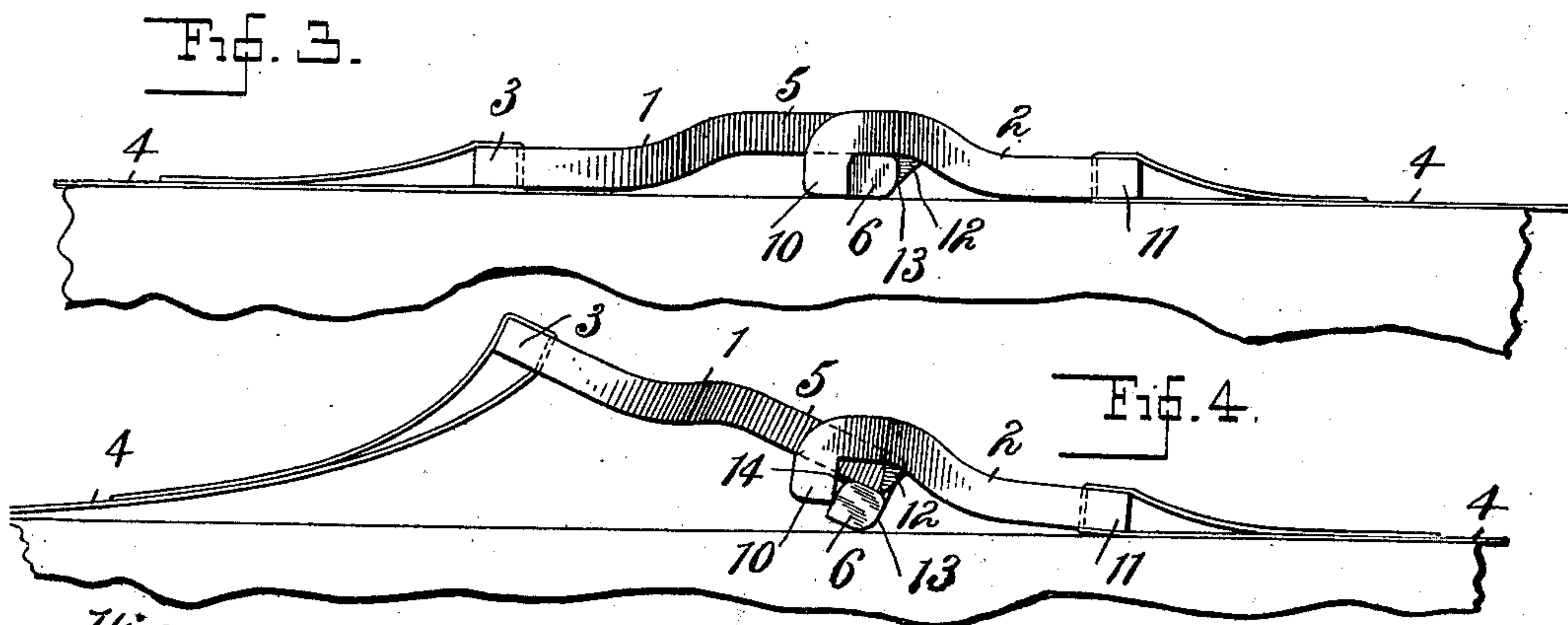
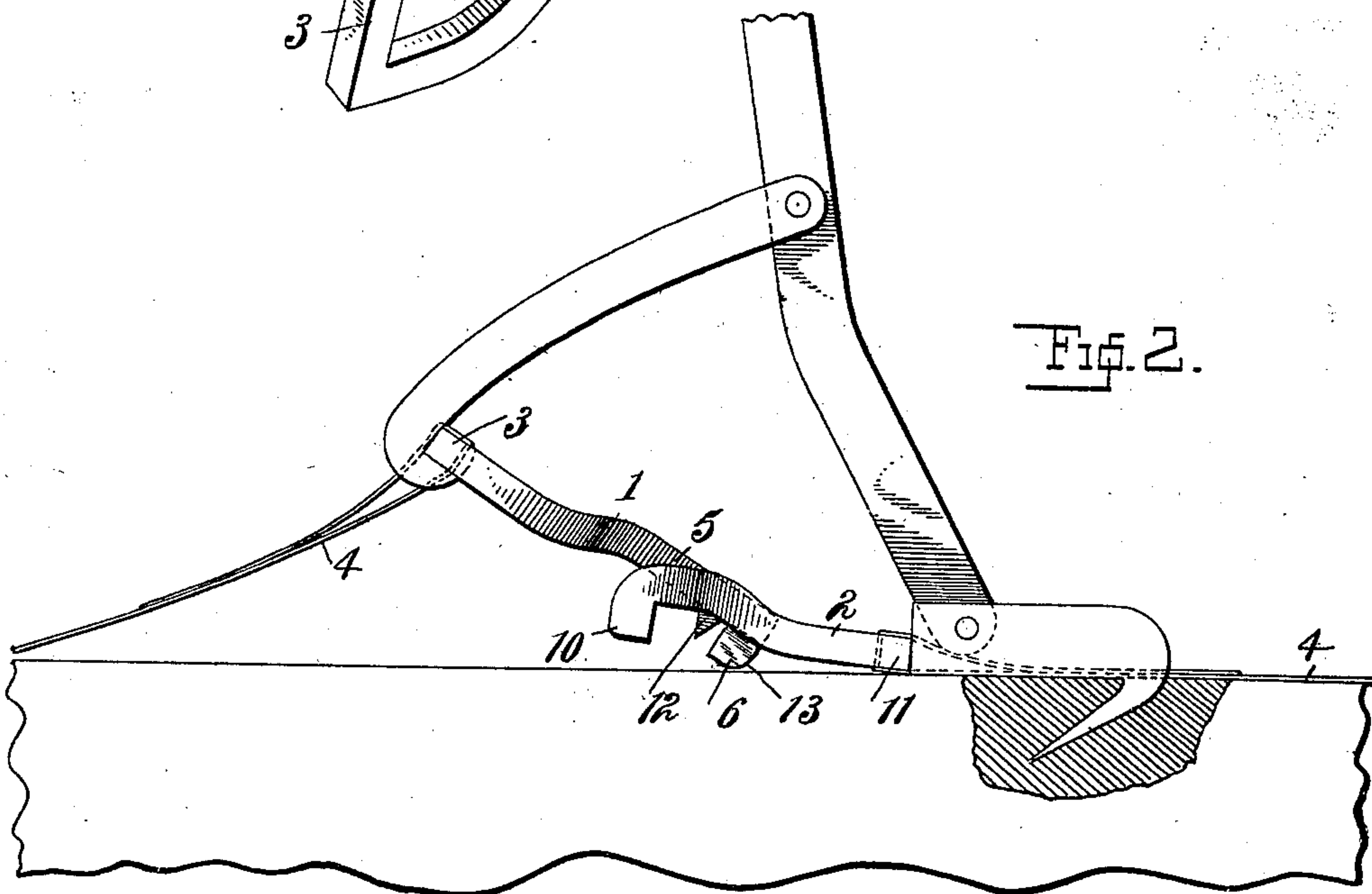
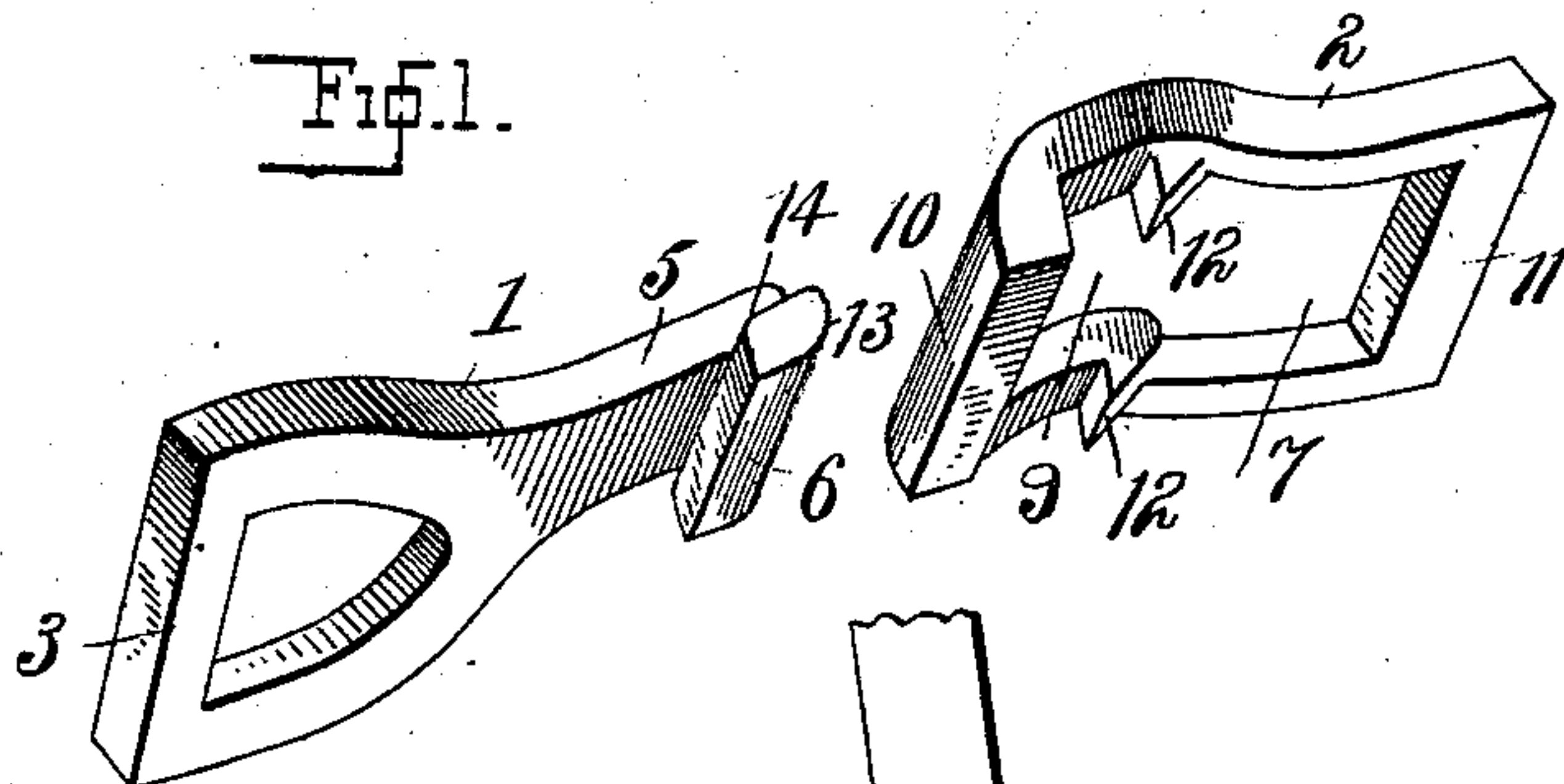
No. 658,090.

Patented Sept. 18, 1900.

C. E. MALLET.
BALE TIE.

(Application filed May 16, 1900.)

(No Model.)



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BALE-TIE.

SPECIFICATION forming part of Letters Patent No. 658,090, dated September 18, 1900.

Application filed May 16, 1900. Serial No. 16,860. (No model.)

To all whom it may concern:

Be it known that I, CHARLES E. MALLET, a citizen of the United States, residing at New York, in the county and State of New York, have invented certain new and useful Improvements in Bale-Ties, of which the following is a specification.

Bale-ties heretofore in use are not, as a rule, capable of either taking up or holding the bale-band in such manner as to retain the entire compression to which a bale has been subjected in the compress, so that it is an ordinary thing to lose one-half of the compression by the expansion of the bale after the compress-pressure is withdrawn.

Another disadvantage of ordinary bale-ties is that they are liable to become detached when the bale is subjected to compression—for example, when a number of bales are piled on top of each other or when they are forced into a place of storage or shipment. The slackening of the band on such occasions is apt to loosen the tie or buckle to such an extent as to free the band entirely, so that it is found that a very large proportion of the number of bales in storage will have one or more of the bands detached.

My object is to produce a bale-tie which will be capable of application in such manner as to take up substantially all the slack of the band, hold substantially the entire compression of the bale, and be prevented from accidental disengagement.

In the accompanying drawings, forming part of this specification, Figure 1 is a perspective view of the two parts of my bale-tie detached. Fig. 2 is a side elevation showing the first step in the process of fastening the tie upon a bale. Fig. 3 is a similar view showing the tie in place, and Fig. 4 is a similar view illustrating the method of detaching the tie.

The bale-tie consists of two rigid members 1 2, the first or tongue portion 1 having a body part 3 to receive the end of the wire or band 4, a tongue 5, and a straight cross-bar 6, located beneath the forward end of the tongue, while the second or loop part 2 has a cross-slot 7 slightly longer than the cross-bar 6, a contracted slotted portion 9 of slightly-greater width than the tongue 5, a straight pendent cross-bar 10 to receive and take the bearing

of the cross-bar 6, and a body part 11, to which the other end of the band or tie-wire is attached. The tongue 1 has the upward bend or arch (shown in the side elevations) and the loop portion a smaller bend or arch, so that the cross-bars 6 and 10 are brought when together substantially into the line of pull of the bale-tie. The loop portion 2 has acute-angular teeth or projections 12, one on each side, providing between said teeth and the cross-bar 10 a substantially-rectangular bearing for the cross-bar 6. The cross-bar 6 has rounded portions 13 and 14 to promote the easy insertion and detachment of the tie.

In applying the tie the separate portions 1 and 2 are placed on the ends of the band or wire when the same are placed around the bale. They are then strained together by the tool (shown in Fig. 2) and the tongue portion inserted in the loop portion, as shown in Fig. 2. When the tool is detached, the expansion of the bale carries the parts to the position shown in Fig. 3, where the cross-bars 6 and 10 will be strained against each other by the tension of the band or wire, and the teeth 12 prevent any inward motion of the tongue portion on the loop portion should the tension of the band be slackened—as, for example, by pressure being applied to the bale—and thus prevent accidental disengagement of the tie. The flat surfaces of the cross-bars 6 and 10 make a perfectly-even bearing, while the rounded surfaces permit the easy ingress and egress of the cross-bar 6 when the parts are turned to the positions shown in Figs. 2 and 4 for insertion and removal.

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

1. A bale-tie comprising a tongue portion having a narrow neck and a cross-bar extending at right angles thereto and projecting beyond each side of said neck, and a loop portion having an opening wider than the length of the cross-bar, a narrow slot to engage the neck of said tongue portion, a cross-bar for engaging the cross-bar of the tongue and locking projections or teeth, all arranged and adapted to operate substantially as set forth.

2. A bale-tie comprising a tongue portion having a narrow neck and a cross-bar extending at right angles thereto and projecting be-

- yond each side of said neck, and a loop portion having an opening wider than the length of the cross-bar of the tongue portion, a narrow slot for engaging the neck of said tongue
- 5 portion, a cross-bar for engaging the tongue cross-bar, and locking-teeth, the cross-bar of the loop being in a different plane from the sides of the loop adjacent thereto, substantially as and for the purpose set forth.
- 10 3. A bale-tie comprising a tongue portion having a narrow neck and a cross-bar extending at right angles thereto and projecting beyond each side of said neck, and a loop portion having an opening wider than the length
- 15 of the cross-bar of the tongue portion, a narrow slot for engaging the neck of said tongue portion, a cross-bar for engaging the tongue cross-bar and locking-teeth, the cross-bar of the tongue portion being in a different plane
- 20 from the neck portion adjacent thereto substantially as set forth.
4. A bale-tie comprising a tongue portion having a narrow neck and a cross-bar extending at right angles thereto and projecting beyond each side of said neck, and a loop
- 25 portion having an opening wider than the length of the cross-bar, a narrow slot to engage the neck of said tongue portion, a cross-bar for engaging the cross-bar of the tongue and lock-

ing projections or teeth, having the inclined rear surfaces and the rectangular front surfaces, the first to permit automatic insertion of the rear end, and the second to lock it securely in place, substantially as set forth.

5. A bale-tie comprising a tongue portion 35 formed with a body part, a tongue having an upward bend, and a cross-bar, located beneath the forward end of the tongue in the same plane as the body, and having portions extending beyond the edges of the tongue, 40 and the looped portion formed with a body part, having a cross-slot slightly longer than the length of the cross-bar of the tongue, and also a contracted slot of less width than the length of the cross-bar and having an upward 45 bend; a pendent cross-bar located at the forward end of the contracted slotted portion in the same plane as the cross-bar of the tongue, and acute-angular teeth down which the cross-bar of the tongue is adapted to slide into place, 50 and providing between said teeth and the cross-bar of the loop portion an approximately-rectangular bearing for the cross-bar of the tongue.

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