

No. 621,598.

Patented Mar. 21, 1899.

J. G. BODENSTEIN.  
ICE PLOW OR MARKER.

(Application filed Sept. 10, 1898.)

(No Model.)

Fig. 1.

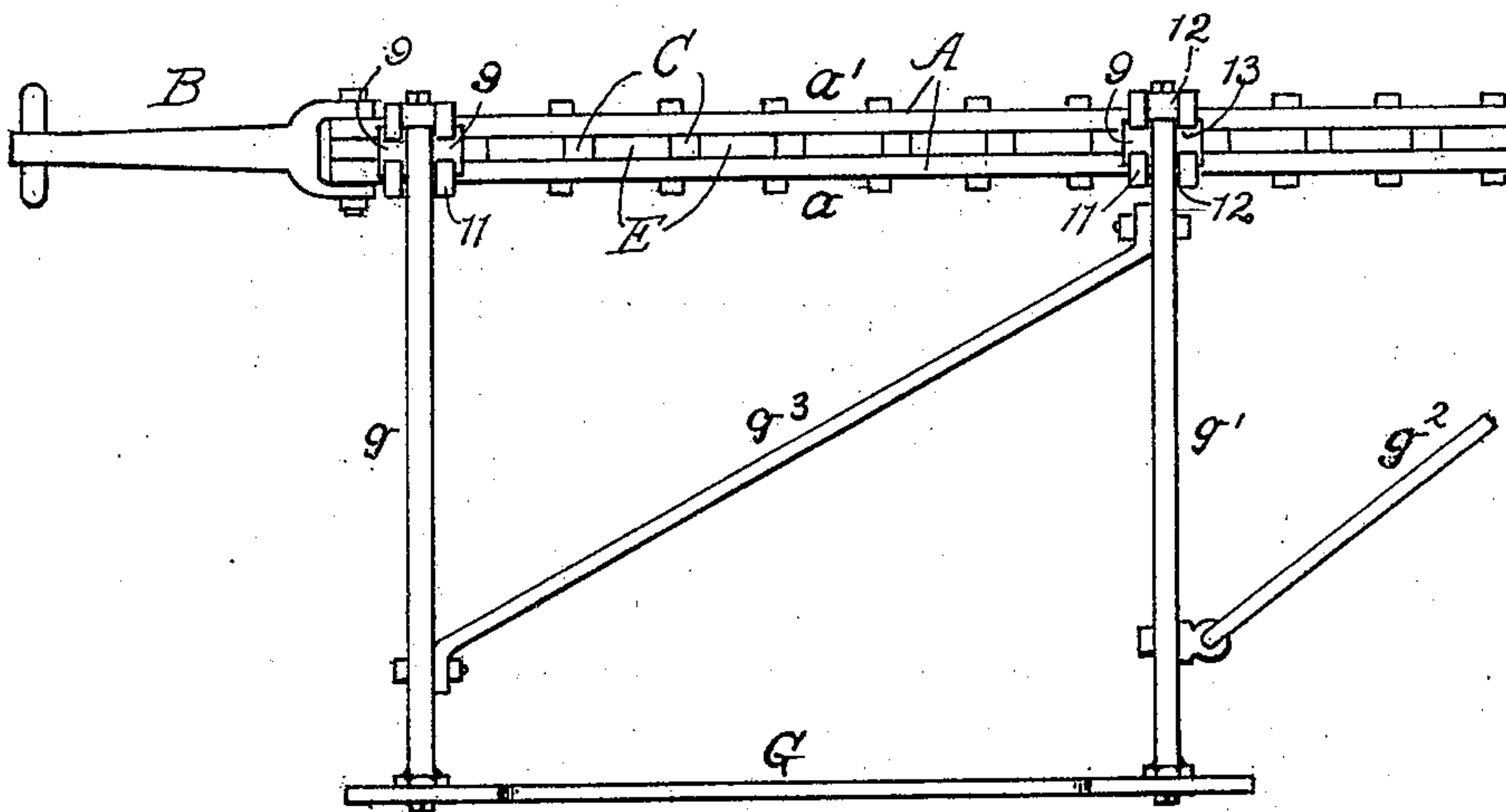


Fig. 2.

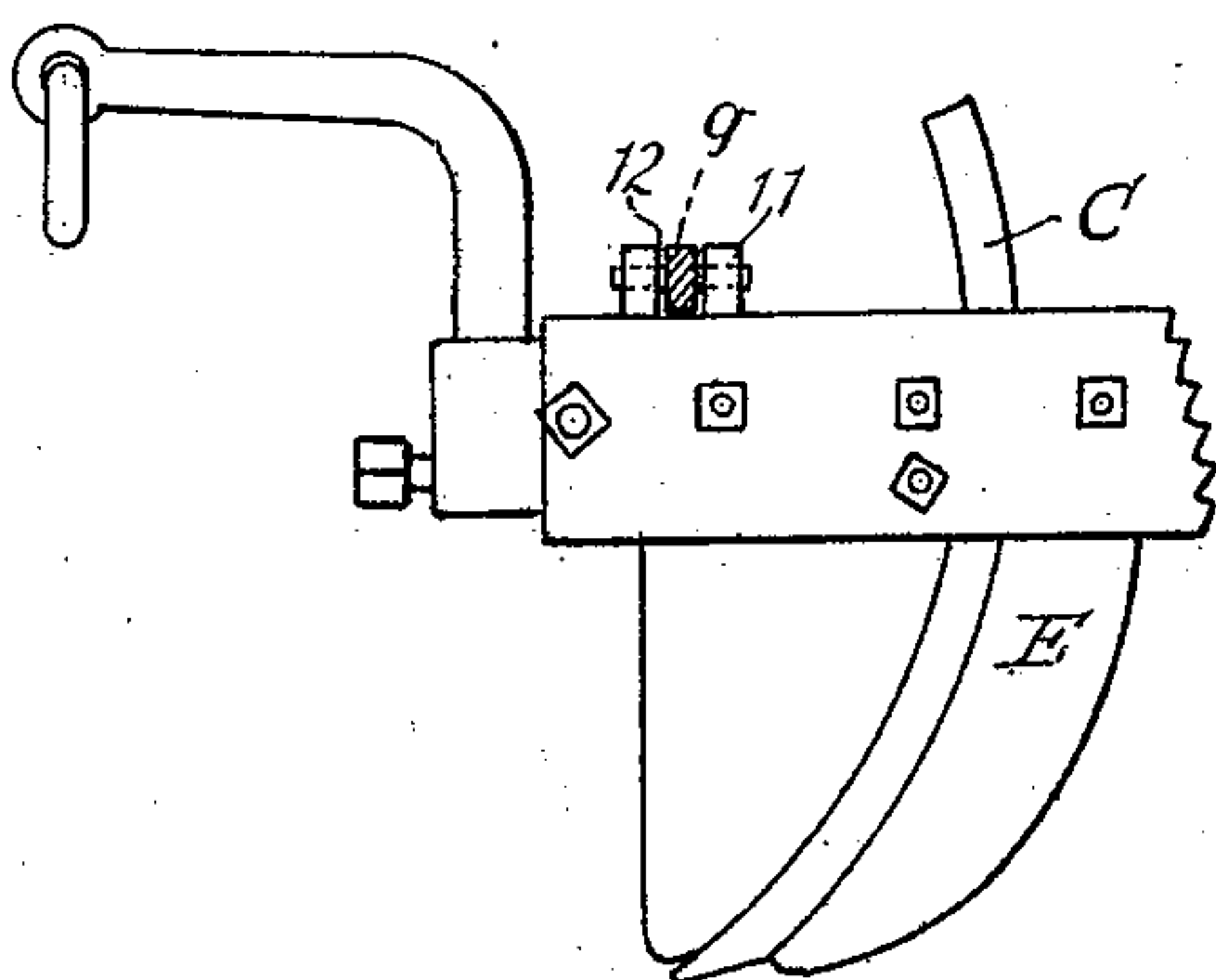
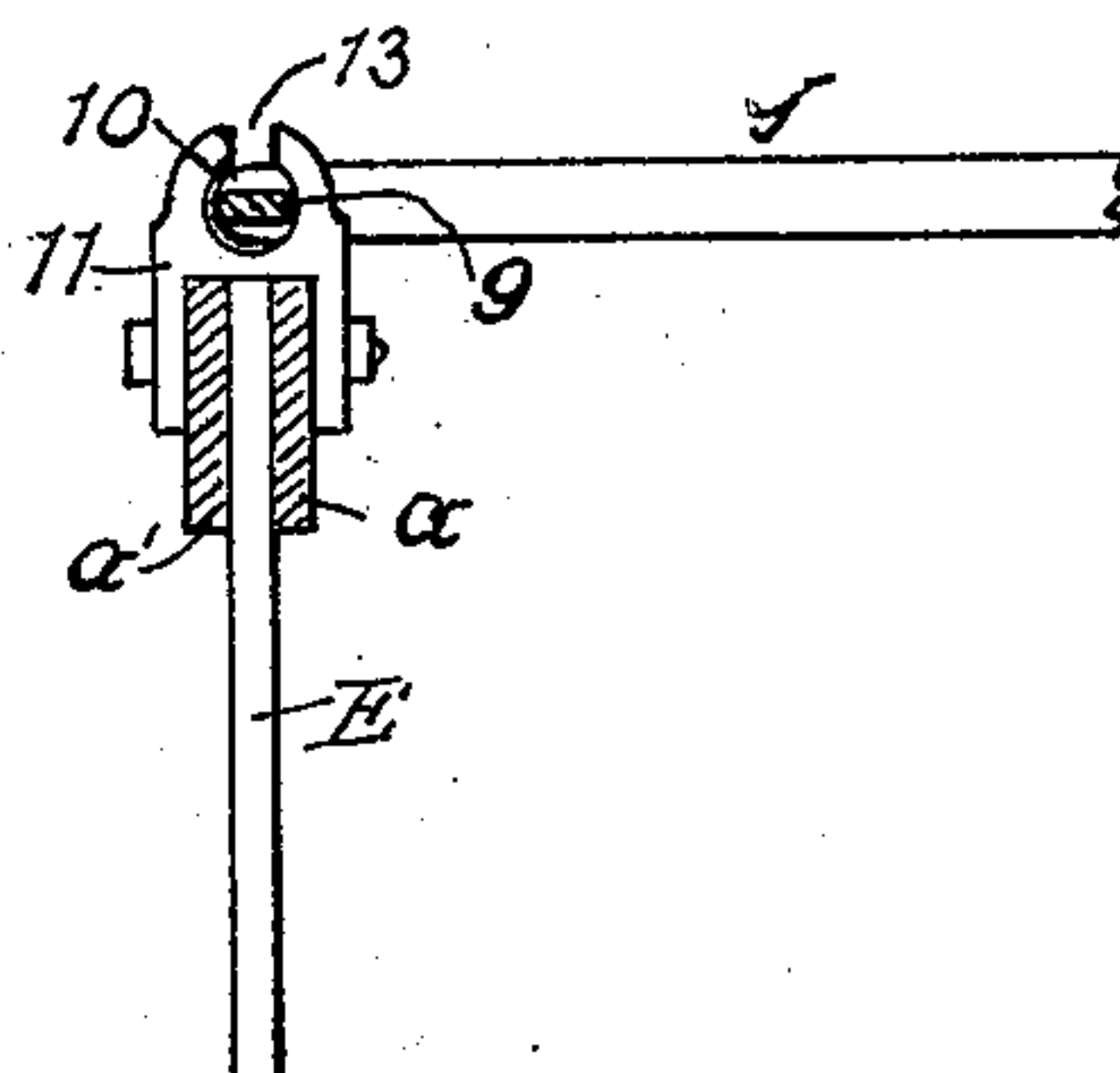


Fig. 3.



WITNESSES

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## ICE PLOW OR MARKER.

SPECIFICATION forming part of Letters Patent No. 621,598, dated March 21, 1899.

Application filed February 10, 1898. Serial No. 669,855. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN G. BODENSTEIN, a citizen of the United States, residing at Staatsburg, Dutchess county, New York, have  
5 invented certain new and useful Improvements in Ice Plows or Markers, of which the following is a specification.

This invention relates to improvements in ice-plows, the improvements being applicable  
10 not only to "ice-plows," properly so called, but also to markers, which are similar to plows in construction and operation, but are of lighter build.

My invention comprises an improved mode  
15 of attachment of the swing-guide.

In the accompanying drawings, which form a part of this specification, Figure 1 is a plan view of an ice-plow provided with my improvement. Fig. 2 is a sectional detail end  
20 view of the front portion thereof. Fig. 3 is a transverse section showing the swing-guide-attaching device.

Mounted in the frame A in the usual manner are tooth-supporting plates E, upon which  
25 rest the insertible teeth C, said teeth being curved, as shown, and being inserted endwise between the successive plates E and between the side bars  $a$   $a'$  of frame A.

G represents the swing guide-plate, connected to the main frame A by arms or rods  $g$   $g'$ , each of which engages with said main frame by a lock or catch consisting of T or L shaped ends or side extensions 9 on said arms engaging in slots formed in brackets  
35 11 on the frame A, said side extensions being in the general plane of the guide-frame G  $g$   $g'$ . Each of said brackets has a circular bore or channel 10, adapted to receive the flat cross-pieces 9 on arms C and permit same to  
40 turn freely therein. At the top of this bore or channel 10 is a longitudinal slot 13, which is comparatively narrow, so that the flat cross-piece 9 cannot pass flatwise through this slot, but can pass edgewise through same. A cross-  
45 channel 12 is also formed in the bracket to receive the arm  $g$  or  $g'$  as the latter swings down on one side or the other. The longitudinal slot 13 in the front bracket is preferably inclined at a slight angle from a longitudinal line, so that when the swing guide-frame is in a central or vertical position the  
50 T or L arms cannot be detached from the

slots by a simple upward movement, such as might accidentally take place in shifting the said frame from one side to the other from  
55 the rear of the plow or marker. To detach the swing guide-frame from the main frame of the plow, the said guide-frame is first raised to a vertical position. Then the rear T or L arm, which lies in under the longitudinally-extending slot 13, can be raised through said slot, and the guide-frame may be turned horizontally to bring the other T or L arm into alinement with the overlying slot, whereupon it may be passed through  
60 same, and the whole guide-frame thus removed from the plow. The main object of such removal is to enable the substitution of a different size of guide, and as this often has to be done while the plow is coated with ice  
65 the advantage of a readily-detachable construction such as above described is evident.

$g^2$  is the usual swing-rod, which is connected to the swing guide-frame by an eye-joint and at its rear end is connected to the plow-handle frame in the usual manner, this being no  
75 part of my invention.

$g^3$  is a diagonal brace-rod for the swing guide-frame.

The slots 13 being at the top of and centrally located over the channels 10 and the side extensions 9 being in the general plane of the guide-frame G  $g$   $g'$ , it is apparent that the said frame can only be removed when it is raised to a vertical position and is locked  
85 when down on either side.

When the swing-guide is down on either side, the locking devices above described interlock with one another to prevent any disengagement of the guide-frame by jarring.  
90

The brackets 11 being rigidly attached to the main frame of the plow form substantially portions thereof, and it is evident that the necessary slots 10, 12, and 13 could be formed directly in the plow-frame, if desired.  
95

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

1. In an ice-plow, the combination with the main frame thereof, having portions formed  
100 with longitudinal channels, and slots located centrally above said channels, said slots being narrower than said channels, of a swing guide-frame having arms with flat sidewise



extensions located in the general plane of the guide-frame engaging in said channels and capable of passing edgewise but not flatwise through said slots so as to free the guide-  
5 frame when it is in a vertical position but to lock it when down on either side.

2. In an ice-plow, the combination with the main frame thereof, having portions formed with longitudinal channels and with slots  
10 above said channels, of a swing guide-frame

having bars with side extensions engaging in said slots and channels, one of said slots being angularly placed so as to prevent disengagement of the swing guide-bar therefrom until the guide-frame is turned at an angle.

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Witnesses:

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