

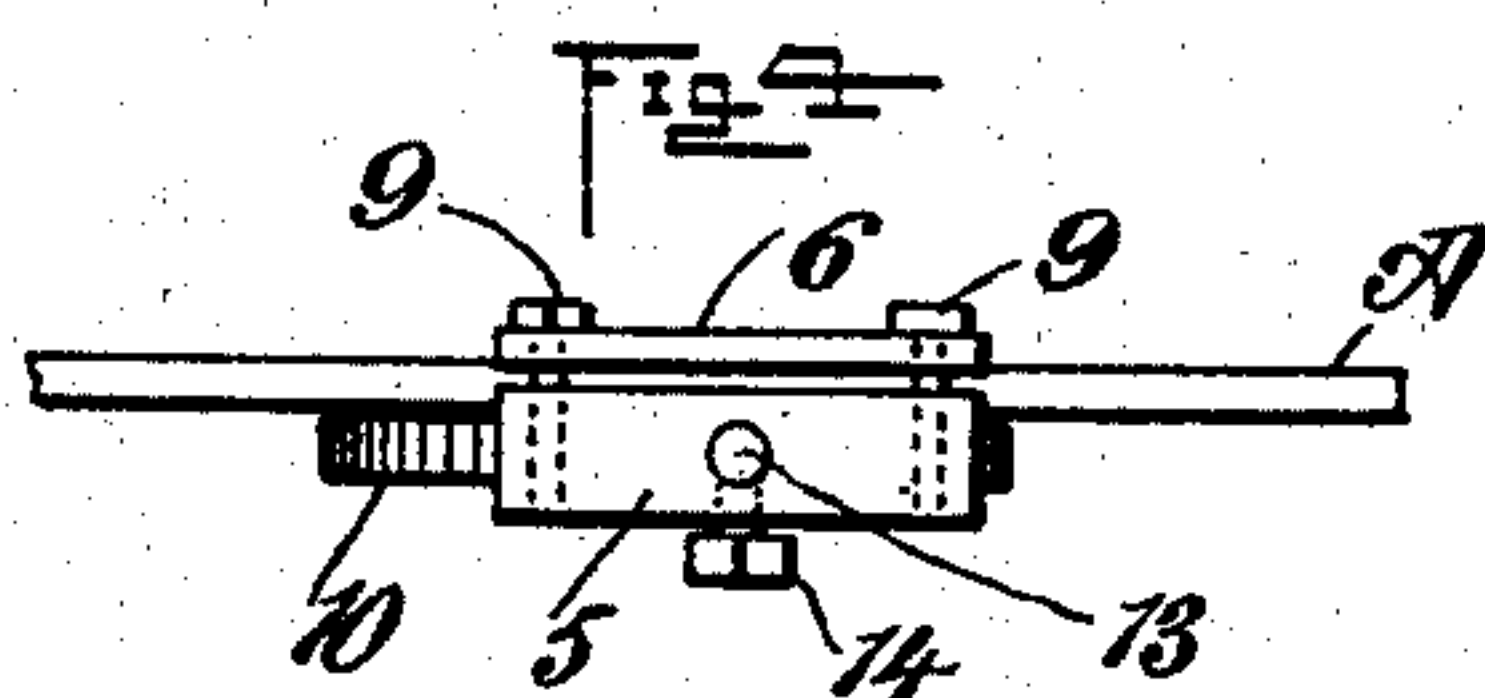
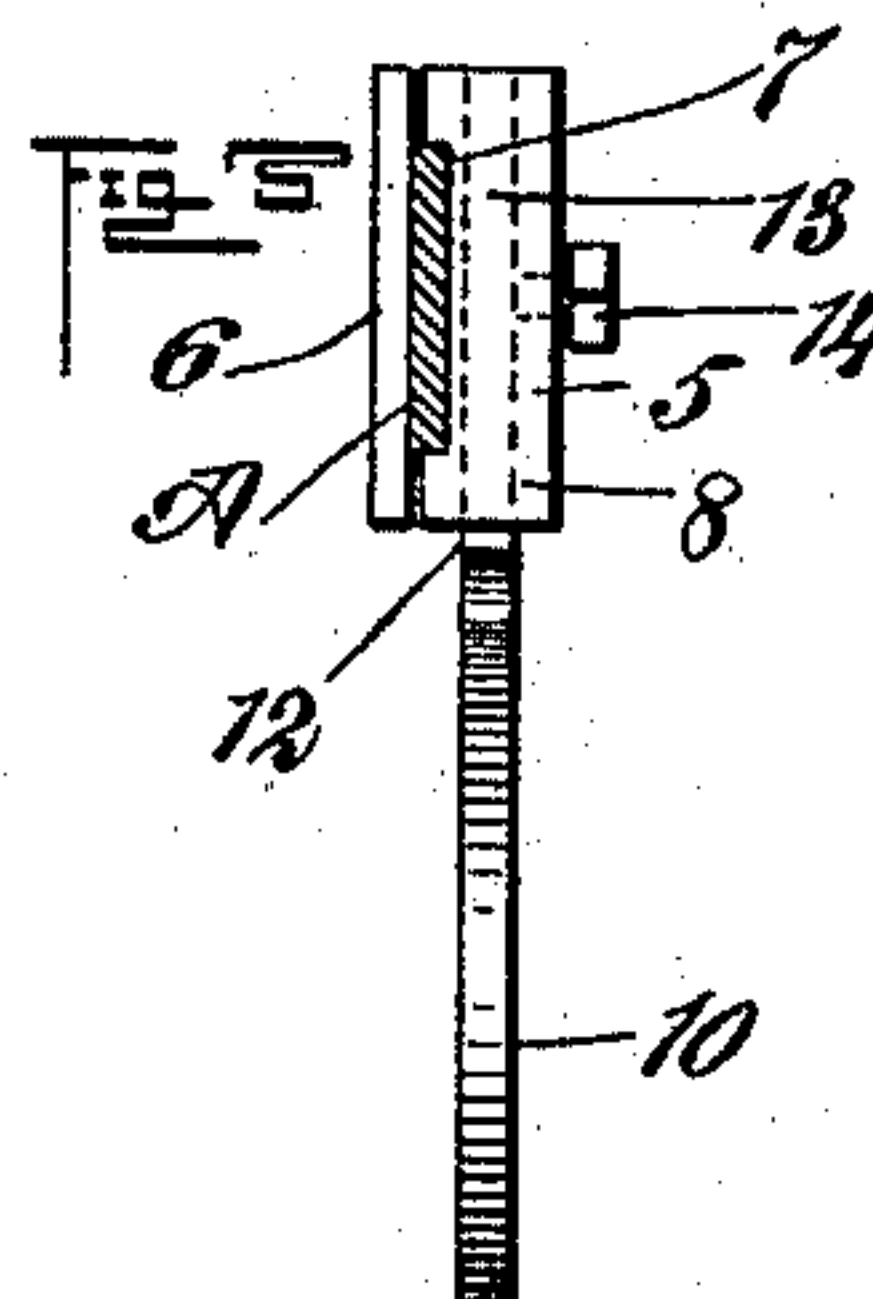
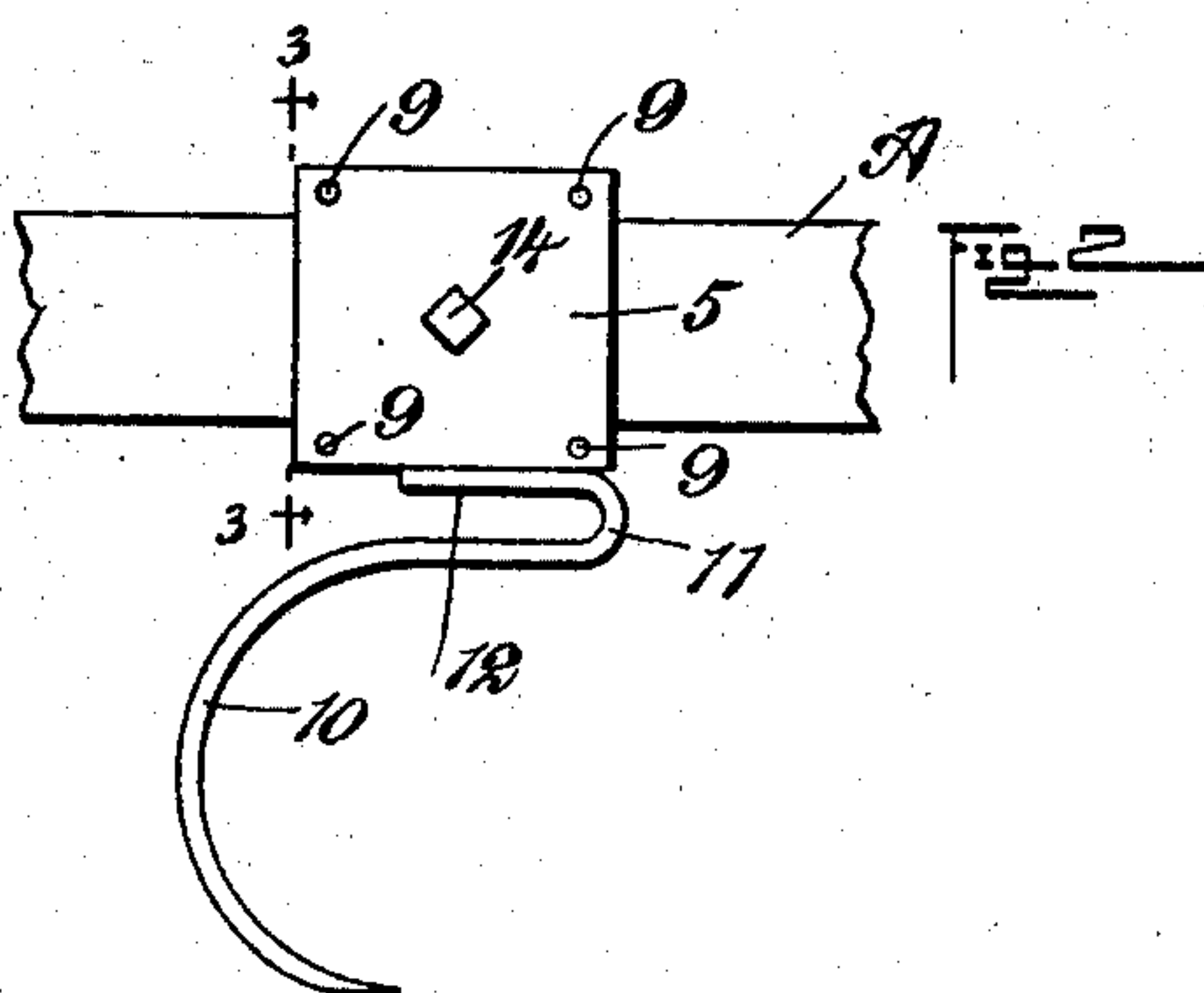
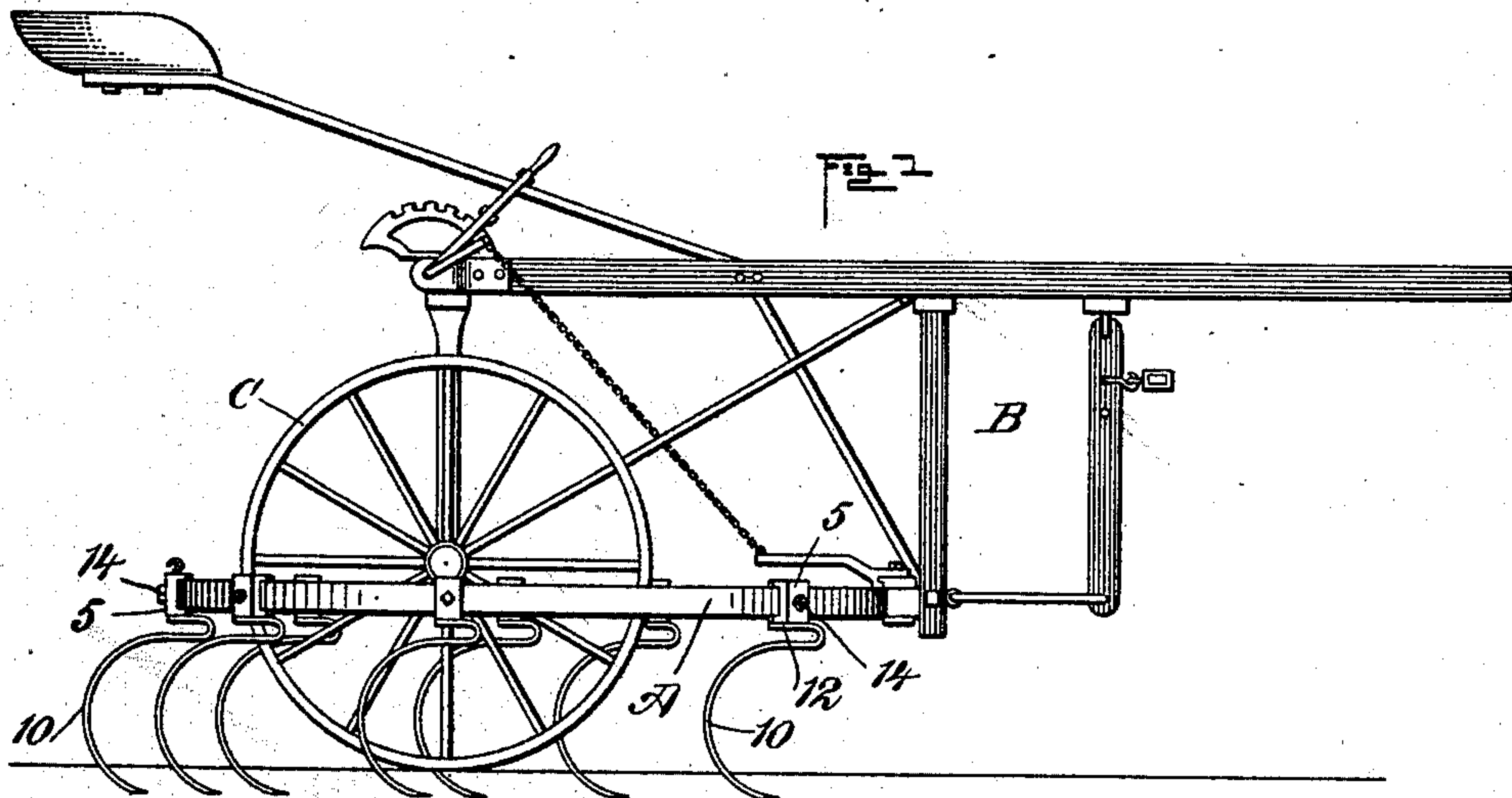
No. 714,642.

Patented Nov. 25, 1902.

F. G. HOAG.  
ADJUSTABLE CULTIVATOR TOOTH.

(Application filed Aug. 20, 1902.)

(No Model.)



WITNESSES:

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*H.*

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# UNITED STATES PATENT OFFICE.

FRANK G. HOAG, OF BATTLECREEK, MICHIGAN.

## ADJUSTABLE CULTIVATOR-TOOTH.

SPECIFICATION forming part of Letters Patent No. 714,642, dated November 25, 1902.

Original application filed March 4, 1902, Serial No. 96,610. Divided and this application filed August 20, 1902. Serial No. 120,316. (No model.)

*To all whom it may concern:*

Be it known that I, FRANK G. HOAG, a citizen of the United States, and a resident of Battlecreek, in the county of Calhoun and State of Michigan, have invented a new and Improved Adjustable Cultivator-Tooth, of which the following is a full, clear, and exact description.

My invention relates to improvements in adjustable cultivator-teeth; and the subject-matter of this application constitutes a division of a prior application for improvements in cultivators filed by me on March 4, 1902, Serial No. 96,610.

One object of the present invention is the provision of means for securely fastening the tooth of a cultivator to the machine-frame; and a further object is to allow the holding device and the tooth to be shifted back and forth on the frame, while the tooth can be adjusted vertically without disturbing the position of the holder, whereby the position of the tooth can be regulated at will.

A further object is to provide a simple and strong construction which may be manufactured cheaply, which is easily applied to or removed from the machine-frame, is durable and efficient in service, and can be adjusted in the proper directions with facility and ease.

With these ends in view the invention consists in the construction and arrangement of parts which will be hereinafter fully described and claimed.

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 side elevation of a cultivator of the class disclosed by my prior application and showing a series or gang of my improved adjustable cultivator-teeth applied thereto. Fig. 2 is an enlarged elevation of the cultivator-tooth applied to a part of the frame-bar. Fig. 3 is a transverse sectional elevation on the line 3 3 of Fig. 2, and Fig. 4 is a plan view of the part shown by Fig. 2.

In the present invention I employ a clamp consisting of the members 5 6, adapted to be held laterally on a suitable frame and to firmly hold the tooth therein. The member 5 of the clamp is in the form of a flat plate

which is considerably thicker than the member 6, and this thickened flat member 5 is provided in one side or face thereof with a recess 7, the latter opening through the front and back edges of said clamp member. Said member is furthermore provided with a vertical socket 8, (shown by dotted lines in Fig. 3,) said socket extending centrally through the thickened member and opening through the top and bottom edges thereof. This vertical socket is disposed quite close to the recess 7, and said socket may open into or communicate with this recess for a part of its length. The other clamp member 6 is in the form of a flat plate and arranged to be applied laterally against that side of the member 5 having the recess 7. The two members 5 6 are secured together by a series of bolts 9, which pass through the members near the corners thereof and outside of the recess 7.

10 designates a cultivator-tooth, which is preferably of the form shown by Figs. 1 and 2—that is to say, the tooth is curved nearly throughout its length, while the upper portion thereof is bent at 11 backwardly upon itself to form the arm 12, which lies over the curved part of the tooth and is spaced relatively thereto. This arm 12 of the tooth is provided with an upstanding shank 13, which is adapted to fit snugly in the vertical socket 8 of the clamp member 5. This shank is secured adjustably in the socketed clamp member by a binding-screw 14, which is mounted in a threaded or tapped opening of said clamp member and is adapted to impinge the shank. In the raised position of the tooth shown by the drawings the arm 12 bears against the underside of the clamp member 5; but it is evident that the tooth may be lowered by moving the shank 13 downwardly in the socket 8 of the clamp member 5, after which the clamping-screw 14 should be tightened against the tooth-shank in order to hold the tooth firmly in its adjusted position.

In Fig. 1 a part of the tooth-carrying frame is indicated at A, said frame being of an oval shape in plan view, as disclosed by my prior application. This frame is suitably connected to a carrying-frame, (indicated generally at B,) and this carrying-frame is equipped with the ground-wheels C. The machine shown



by Fig. 1 is represented herein merely for the purpose of showing my improvements applied to an agricultural machine; but it is evident that the improved adjustable tooth may be used on any desired form of cultivator.

My improved tooth is adapted to be shifted back and forth on the carrying-frame A and to be adjusted vertically with respect thereto. The clamp is easily applied to the frame A by first fitting the member 5 laterally thereto in a manner to receive a part of the frame in the recess 7, after which the member 6 is applied to the opposite side of the frame, and the bolts 9 are attached to the members in a manner to couple them together and draw them firmly against the frame-bar. The clamp cannot become displaced vertically on the frame, because the latter is received in the recess 7 in a manner to have firm bearing against the flanges of the clamp member 5, which are formed by said recess. The clamp is held against displacement in a horizontal plane on the frame-bar by the bolts drawing the two members 5 6 laterally into tight engagement with said frame-bar. The shank of the tooth is held firmly in the clamp member 5 by the binding-screw 14; but, if desired, the shank may have lateral engagement with the frame-bar A, because the socket 8 may communicate with the recess 7, thus permitting the shank to be clamped laterally by the bolts 9, which draw the parts firmly together.

Having thus described my invention, I

claim as new and desire to secure by Letters Patent—

1. An adjustable cultivator-tooth comprising a flat clamp member provided in one side with a recess which opens laterally through the end edges and one face of the same, and also provided with a vertical socket, another flat clamp member applied laterally to that side of the socketed member having said recess, means for securing the two members detachably together, a tooth having a shank fitted in the socket of the first clamp member, and means for adjustably securing the tooth-shank in place.

2. An adjustable cultivator-tooth, comprising a thick flat clamp member provided with a recess in one side and with a vertical socket at one side of said recess, a flat clamp member applied laterally against the recessed side of the thick clamp member, bolts for laterally uniting the two clamp members, a tooth bent upon itself to form an arm which is provided with an upstanding shank adapted to fit the socket, and a binding-screw mounted in the clamp member to impinge said tooth-shank.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

FRANK G. HOAG.

Witnesses:

FRED R. DOWSETT,  
ARZA ROBINSON.