

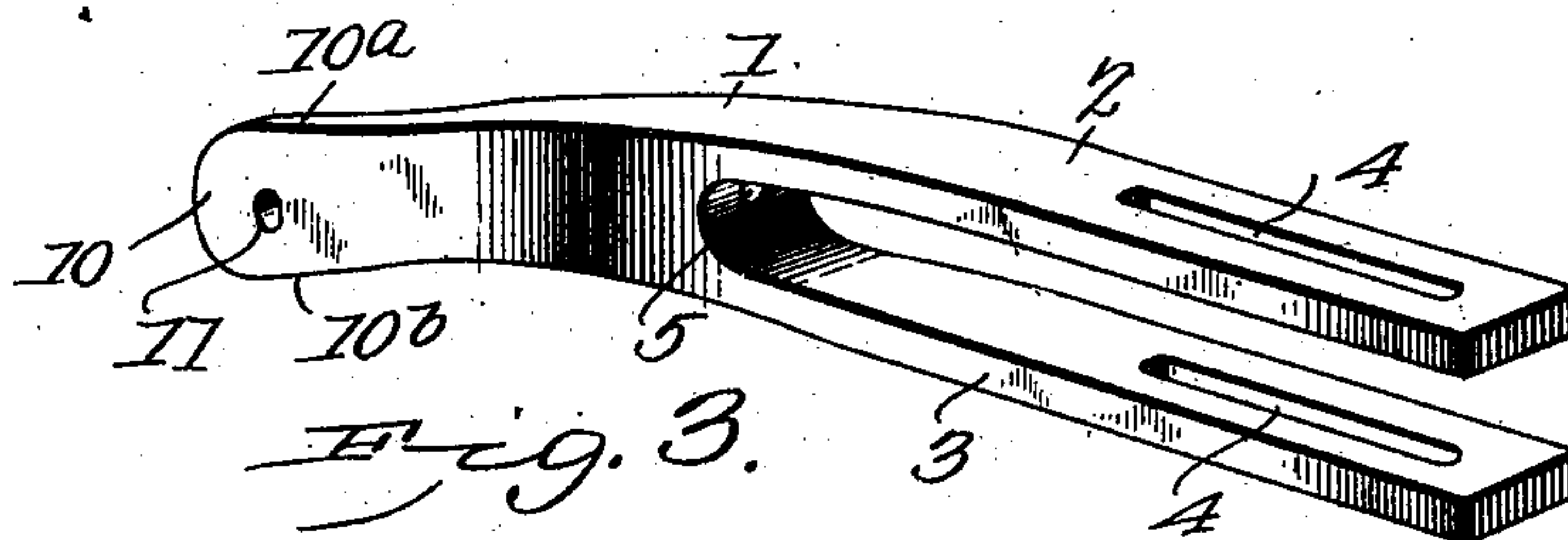
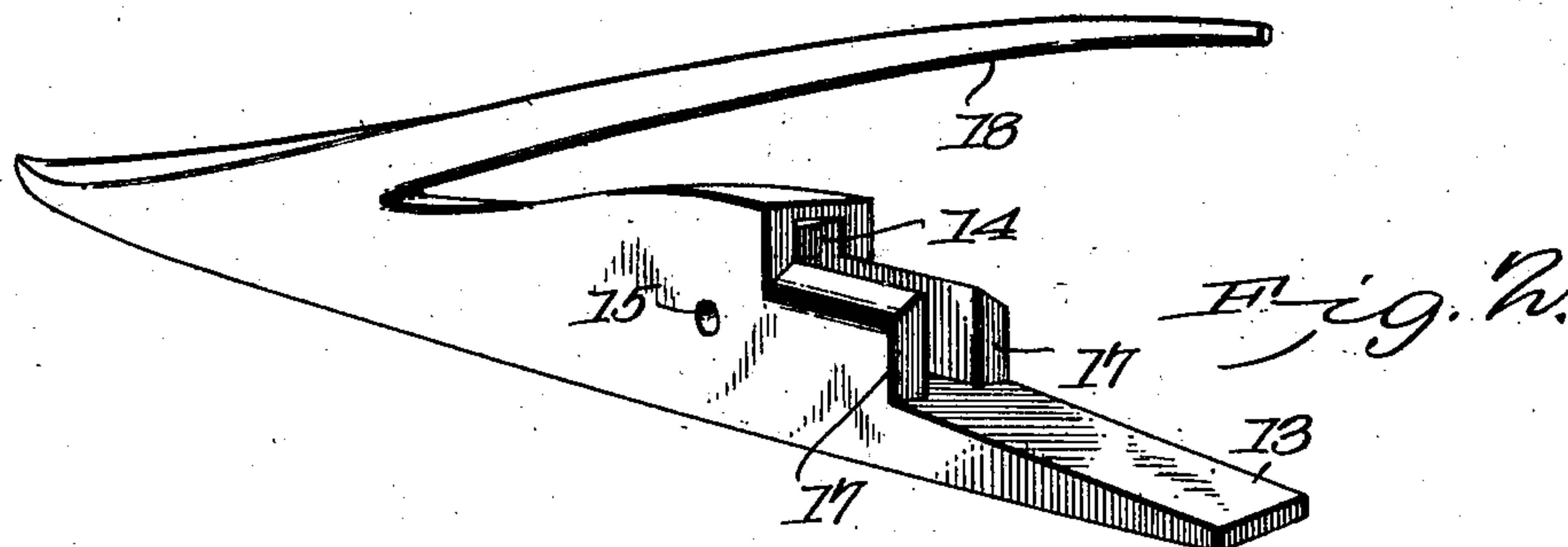
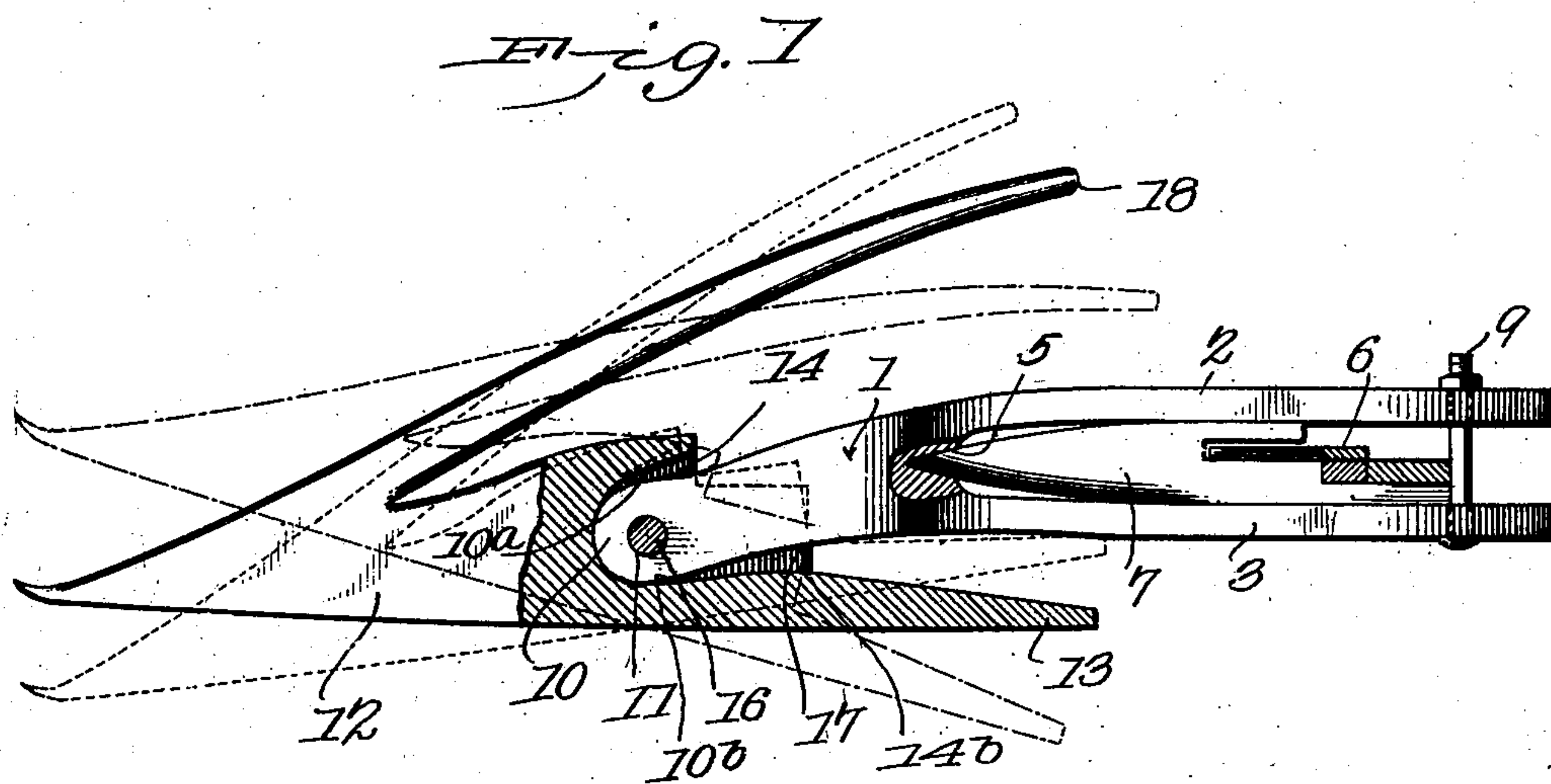
No. 756,114.

PATENTED MAR. 29, 1904.

C. HERMAN.
ATTACHMENT FOR MOWING MACHINES.

APPLICATION FILED OCT. 13, 1903.

NO MODEL.



Witnesses
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UNITED STATES PATENT OFFICE.

CHARLES HERMAN, OF INSTITUTE, WISCONSIN.

ATTACHMENT FOR MOWING-MACHINES.

SPECIFICATION forming part of Letters Patent No. 756,114, dated March 29, 1904.

Application filed October 13, 1903. Serial No. 176,920. (No model.)

To all whom it may concern:

Be it known that I, CHARLES HERMAN, a citizen of the United States, residing at Institute, in the county of Door and State of Wisconsin, have invented a new and useful Attachment for Mowing-Machines, of which the following is a specification.

This invention relates to a vine-lifting attachment for mowing-machines, and it may be described as an improvement on the device for which Letters Patent of the United States No. 689,803 were granted to myself on the 24th day of December, 1901.

In the latter patent above referred to were included a bracket attachment to the fingers of the cutting apparatus of a mowing-machine, and said bracket attachment was connected by means of a knuckle-joint with a shoe carried thereby and adapted to travel upon the ground in advance of the cutting apparatus, said shoe being provided with a rearwardly-extending vine-lifting arm. By my present improvement I provide a bracket-arm adapted for connection with a finger of the cutting apparatus. I also provide a shoe having an upwardly and rearwardly extending vine-lifting arm, and I finally provide a pivotal connection between the shoe and the bracket-arm which is more simple and more efficient than the so-called "knuckle-joint" shown and illustrated in my former patent.

In the accompanying drawings, Figure 1 is a longitudinal sectional view showing my invention applied to the cutting apparatus of a mowing-machine in operative position, dotted lines being employed to indicate a different position. Figs. 2 and 3 are perspective detail views showing the shoe and the bracket-arm separated from each other.

Corresponding parts in the several figures are indicated by similar numerals of reference.

1 designates a bracket which is bifurcated to form rearwardly-extending arms 2 and 3, each of which has a longitudinal slot 4. The bracket is provided with a recess 5 in the rear wall thereof between the arms 2 and 3. The latter are in practice placed in engagement with the cutting apparatus of a moving-machine, said cutting apparatus 6 being inserted between the arms 2 and 3 with the point of a finger 7 en-

gaging the recess 5, a bolt 8, inserted through openings 9 in the slots 4, serving to clamp the bracket device securely upon the cutting apparatus. The front end of the bracket 1 terminates in a rounded projection or nose 10, having a transverse opening 11.

12 designates the shoe, which is provided with a flat under side and upturned point, enabling it to ride over the ground in the manner which is usual in a device of this character. The shoe is provided with a rearwardly-extending heel-plate 13, and it has a recess 14 for the accommodation of the point 10 of the bracket member, which has a bearing in the bottom of said recess, the side walls of said recess being provided with perforations 15 for the passage of a connecting-pin 16, which extends transversely through the perforations 15 in the side walls of the recess and 11 in the point of the bracket member. The bottom of the recess 14 is inclined forwardly and downwardly, and the heel-plate 13 is inclined downwardly and rearwardly from a central point or hump 14^b, which separates the recess from the heel-plate. The body of the shoe is made of such a height that the recess 14 may be made amply large enough to play freely upon the point of the bracket member with which it is thus pivotally connected, the extreme different positions being illustrated in full and in dotted lines in Fig. 1 of the drawings. The point 10 of the bracket member is also made with slightly-diverging upper and lower edges 10^a and 10^b, either of which provides an extended bearing-surface when the shoe is at the respective limits of its pivotal movements. This is especially important when the upper edge of the bracket member abuts against the top of the recess 14, the extended bearing-surface thus provided serving to insure the parts against breakage. When the bracket member 1 engages the bottom of the recess 14, the parts are reinforced by the hump 14^b, and the downward slope of the heel-plate 14 corresponds with the shape of the under side of the bracket member and enables the parts to naturally assume their relative positions. The walls 17 of the recess are extended rearwardly, thereby reinforcing the bracket member and insuring durability of construction without

interfering with the freedom of movement in a vertical plane of the shoe relatively to the bracket member, which is connected with the mowing-machine.

5 The shoe 12 is provided with an upwardly and rearwardly extending vine-lifting arm 18, which is preferably formed integral with the said shoe member.

10 It will thus be observed that my improved device comprises only two members—namely, the bracket member and the shoe member—in addition to the pivotal pin 16 and the bolt required to connect the bracket member with the cutting apparatus of the mowing-machine.

15 The operation of this invention will be readily understood from the foregoing description, taken in connection with the drawings hereto annexed. One of these devices is attached to each of the fingers of a cutter-bar of a mowing-machine when the latter is to be employed for the purpose of cutting vines, such as pea-
20 vines, or when the grain to be cut is down and matted. The material to be cut will by the improved attachment be lifted over the cutting apparatus, so as to be effectively operated upon by the latter. By my present improvement it will be seen that the end of the arm 1 at all times abuts upon the inner end of the recess 14, which is provided with an extended
25 bearing-surface, whereby strain upon the pivotal connecting-pin is absolutely avoided. This is found to be of extreme importance in devices of this class where considerable strain upon the shoes which constitute the attachment is exercised during the progress of the
30 machine. By my former invention, reference to which has hereinbefore been made, (Patent No. 689,803,) this objection was overcome by forming a kuckle-joint which had bearing
35 against the inner end of the recess in the shoe. This, however, was found objectionable, owing

to the necessity for the presence of a top or covering plate for the connection of the parts, which was liable to breakage, and also to the fact that more or less lateral vibration was
45 apt to take place. These objections are completely overcome by my present invention in a simple and effective manner.

Having thus described my invention, I claim— 50

1. In a device of the class described, the combination with a shoe having a downwardly and forwardly sloping recess and a rearwardly-extending, downwardly-sloping heel-plate which coöperates with the bottom of the recess to form an intermediate hump or raised
55 portion, of a bracket member having upper and lower, slightly-diverging edges and a rounded front end contacting with the inner end of the recess, the edges of the bracket member forming extended bearing-surfaces adapted to contact with the upper and lower sloping walls of the recess, and a pivotal connecting-pin. 60

2. In a device of the class described, a bracket member adapted for connection with a finger of a cutting apparatus, said bracket member having a forwardly-extending arm with a rounded end and divergent upper and lower surfaces, in combination with a shoe
65 having a recess, the inner end of which forms a bearing for the rounded end of the arm, and a pivotal connecting-pin whereby the rounded point of the arm is retained in such contact. 70

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses. 75

CHARLES ^{his} × HERMAN.
mark

Witnesses:

JACOB DEHOS,
ANDREW NELSON.