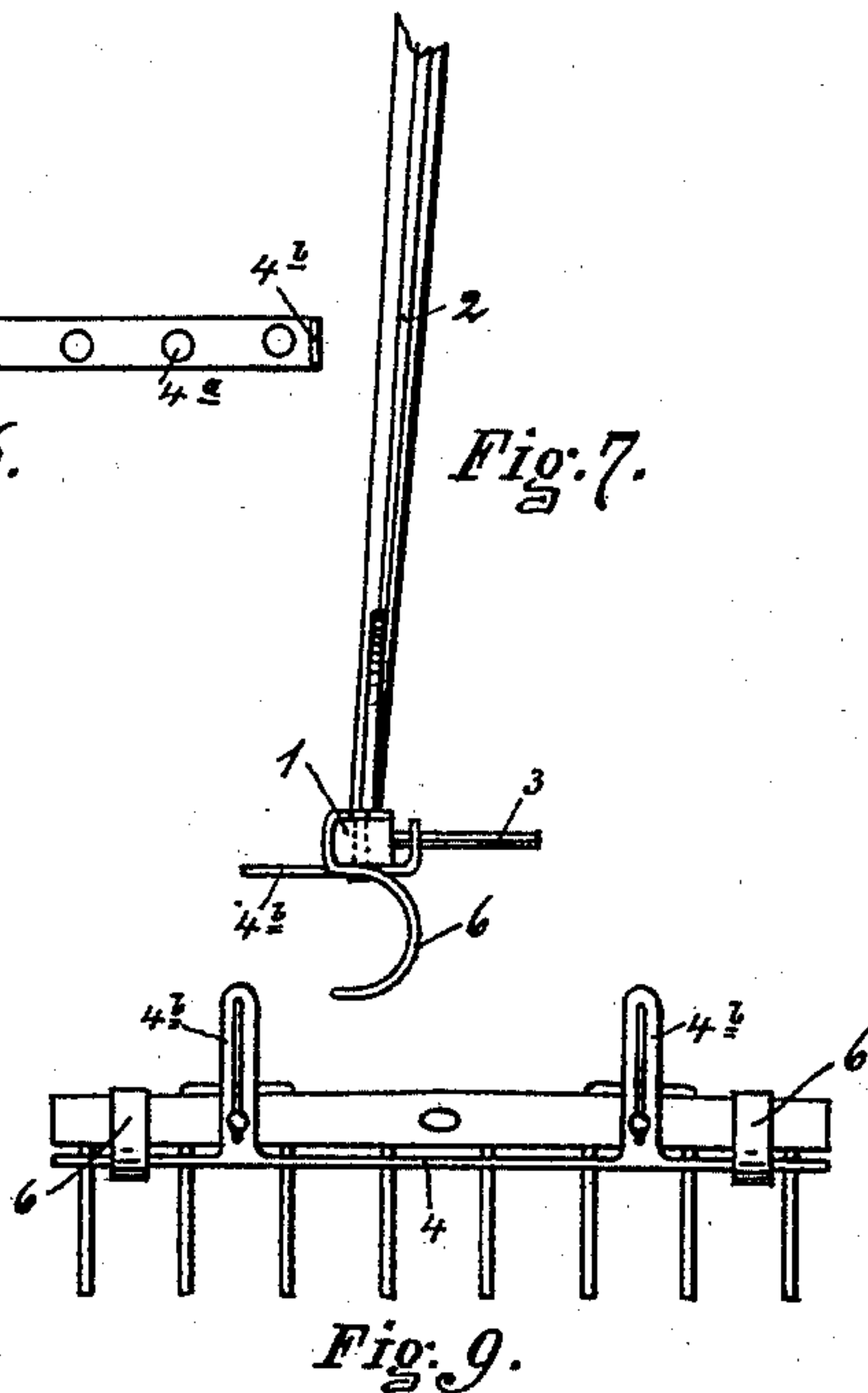
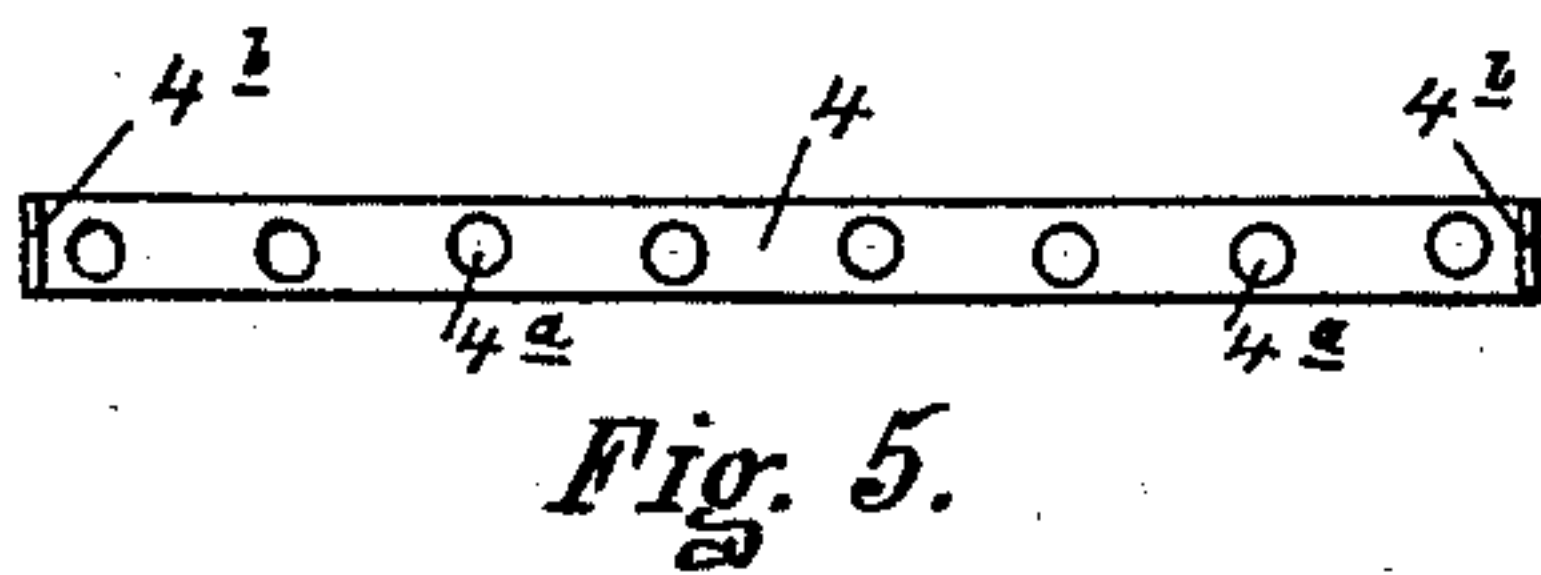
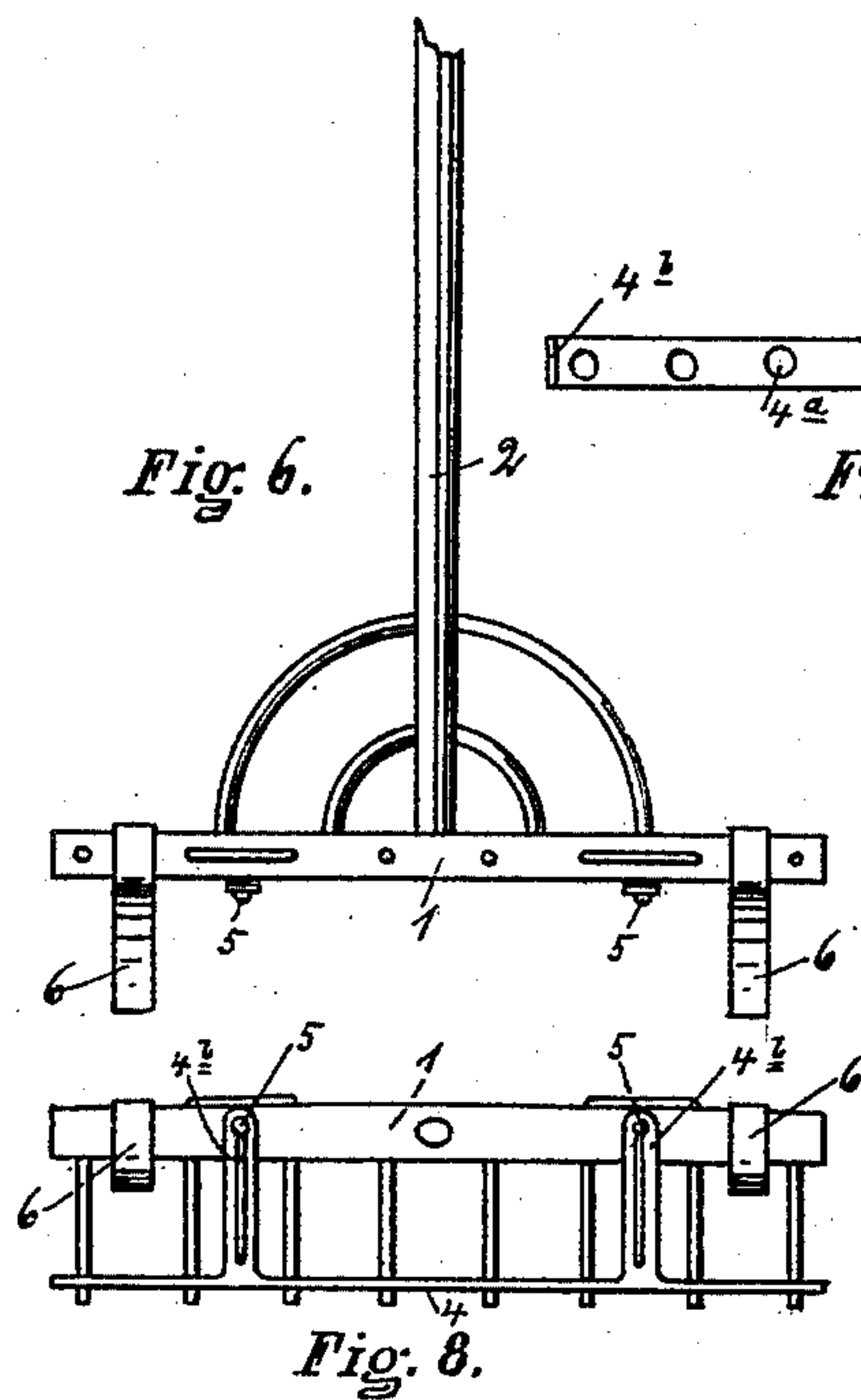
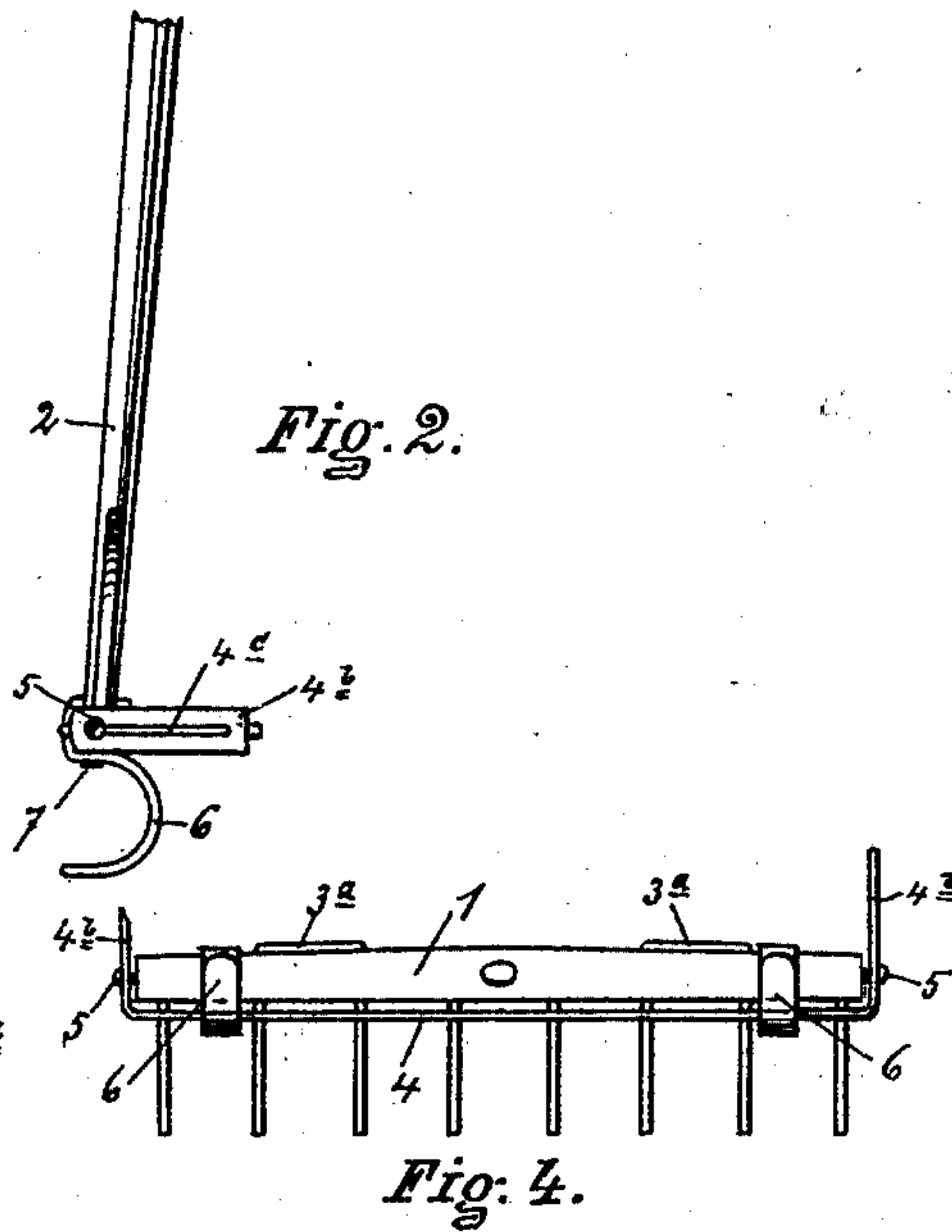
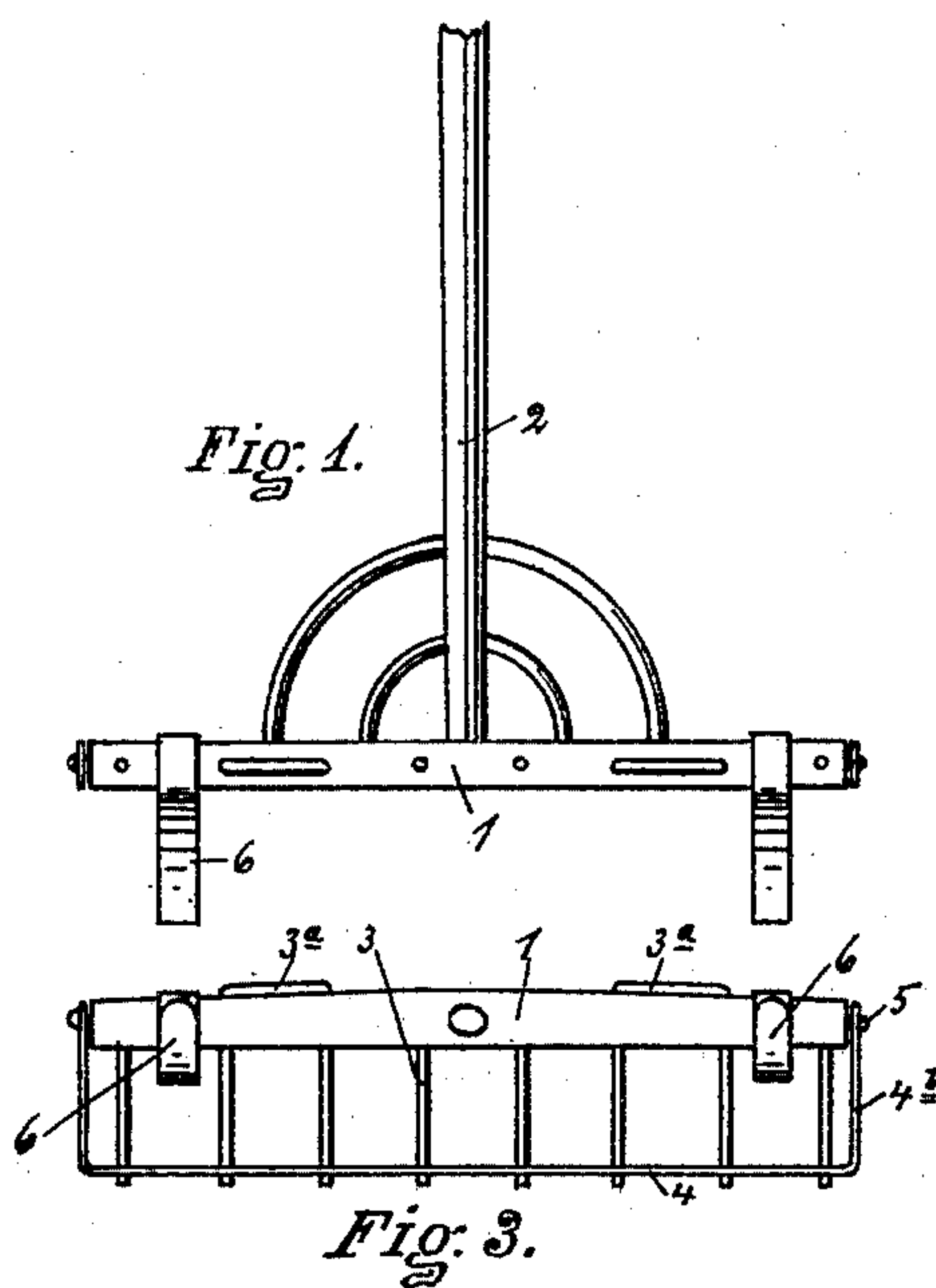


(No Model.)

O. M. KNOX.
HAND RAKE.

No. 453,011.

Patented May 26, 1891.



WITNESSES.
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UNITED STATES PATENT OFFICE.

ORVILLE M. KNOX, OF ONEIDA, NEW YORK.

HAND-RAKE.

SPECIFICATION forming part of Letters Patent No. 453,011, dated May 26, 1891.

Application filed December 15, 1890. Serial No. 374,718. (No model.)

To all whom it may concern:

Be it known that I, ORVILLE M. KNOX, of Oneida, in the county of Madison and State of New York, have invented certain new and useful Improvements in Hand-Rakes; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form part of this specification.

My invention relates to improvements in rakes.

In the drawings which accompany and form part of this specification, and in which similar figures of reference refer to corresponding parts in the several figures, Figure 1 shows a top view of my improved rake. Fig. 2 shows a side view of the same. Fig. 3 shows the rake-head and clearer-bar down. Fig. 4 shows the rake-head with clearer-bar up. Fig. 5 shows a top view of the clearer-bar removed. Fig. 6 shows a top view of a modified form of construction. Fig. 7 shows an edge view of same. Figs. 8 and 9 show head with modified form of clearer-bar both down and up.

Referring more specifically to the reference-numerals marked on the drawings, the rake-head is indicated by 1, which is of wood and provided with a suitable handle 2 and rake-teeth 3, preferably of metal, and which may be made in pairs, as shown at 3^a. Running on the teeth is a clearer-bar 4, provided with an opening 4^a for each tooth, which opening is preferably of much larger diameter than that of the tooth.

4^b are retainers secured on or formed integral with the clearer-bar and have slotted openings 4^c, through which pass screws 5, which in the construction shown in Figs. 1 to 5 pass into the end of the head and in the construction shown in the balance of the figures pass into the side of the head and secure the clearing-bar to the head.

Adjacent to each end and projecting rearward I provide a guide-shoe 6, which is formed of a thin flat strip of metal and is bent to conform to the front and top of the

head and extends and curves substantially in the form of a semicircle to its free end and is secured to the head by a rivet 7 passing through the head and which rivet and conforming portion of shoe also serves the useful purpose of keeping the head from splitting.

The purpose of this improved rake is to provide a rake that is easily and readily "gaged" as to degree with which the teeth engage the surface on which it is operated in either a forward or backward movement and the depth of cut being determined by the top of the loose surface (if any) which passes between the teeth, and these features are in part accomplished by providing the guide-shoes with broad bearing-face and making them of the peculiar shape described. The further purposes is to provide in a rake a simple device for readily and effectually clearing the teeth of obstructions, and these improvements are of such form that they can be marketed as attachments and readily applied to the ordinary commercial hand-rake.

The operation of the device will be readily understood without any special description, it being only necessary to remark that the "cut" is gaged by varying the angle of the handle in relation to the surface being operated upon and that the clearer operates by its own gravity, the retainer acting as guides and preventing the clearing-bar from becoming displaced.

What I claim as new, and desire to secure by Letters Patent, is—

The combination, in a rake, of a head and handle, teeth secured in the head, a movable clearing-bar having a perforation for each tooth, and slotted retainers for securing the clearing-bar to the head, projecting pins secured in the head and engaging the retainers in the slots, and rearwardly-extending semicircular guides secured to the head adjacent to each end, substantially as set forth.

In witness whereof I have affixed my signature in presence of two witnesses.

ORVILLE M. KNOX.

Witnesses:

GEO. E. KIRKPATRICK,
NELSON G. STARK.