

No. 812,276.

PATENTED FEB. 13, 1906.

J. KILLEFER.
WEED CUTTER.

APPLICATION FILED OCT. 10, 1904.

Fig. 1.

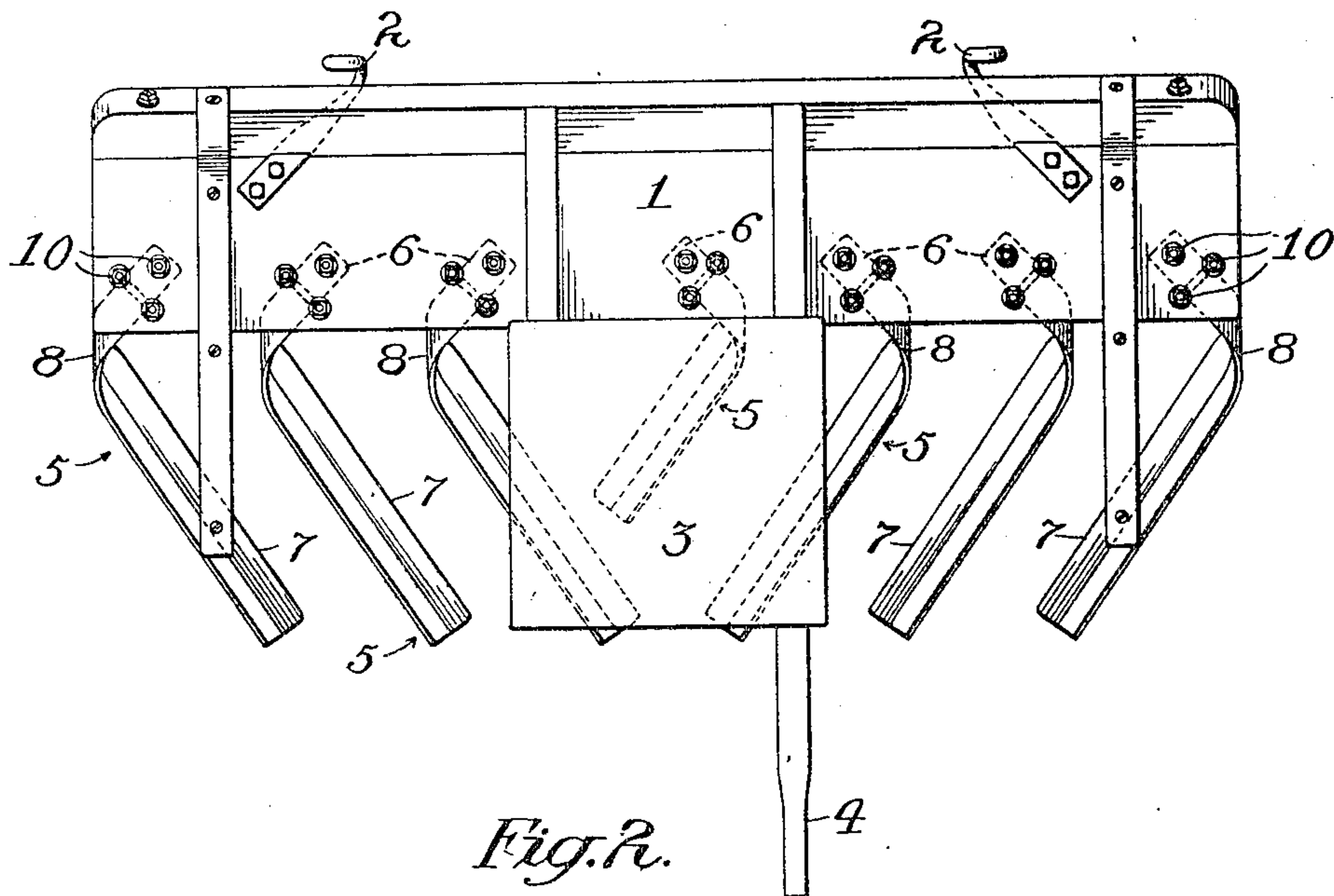


Fig. 2.

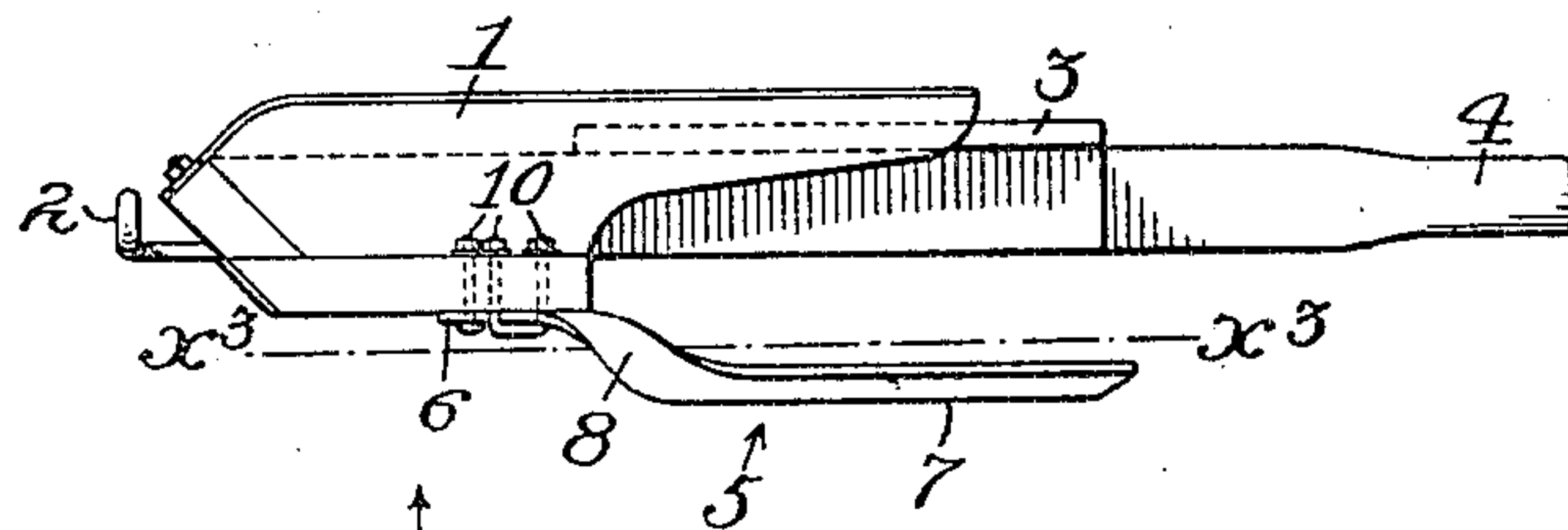
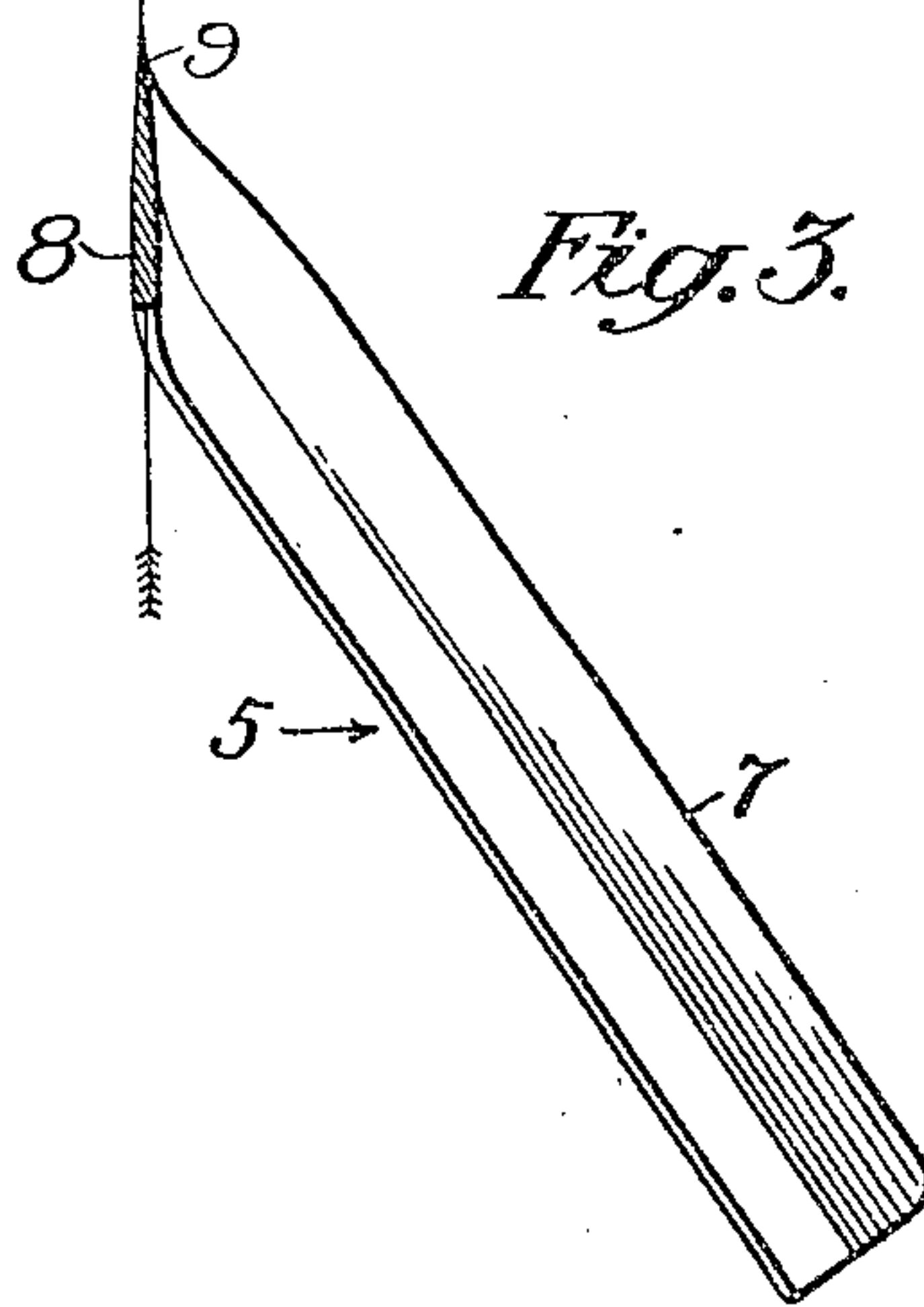


Fig. 3.



Witnesses:-
Frank L. A. Graham.
A. P. Knight

Inventor,
John Killefer:
by Townsend Bros
His Attys

UNITED STATES PATENT OFFICE.

JOHN KILLEFER, OF LOS ANGELES, CALIFORNIA.

WEED-CUTTER.

No. 812,276.

Specification of Letters Patent.

Patented Feb. 13, 1906.

Application filed October 10, 1904. Serial No. 227,832.

To all whom it may concern:

Be it known that I, JOHN KILLEFER, a citizen of the United States, residing at Los Angeles, in the county of Los Angeles, State of California, have invented new and useful Improvements in Weed-Cutters, of which the following is a specification.

An object of this invention is to provide a weed-cutter with cutting blades or knives of such shape as to reduce to a minimum the wear or scouring effect of the earth on the knives.

Another object of the invention is to reduce to a minimum the resistance offered by the knife to the forward movement through the earth. The knives for this purpose are generally made by bending a strip or bar in such manner that the shank or bar for attachment to the cutting-frame lies above and substantially at right angles to the cutting part, the shank and the cutting part being connected by a bend or curve in the bar. In the usual manner of manufacture the effect of bending the bar over in this manner is to form an inward curve or concavity at the bend—that is to say, the bar at the curve will be convex at its outer face and concave on its inner face. This portion of the bar, which may be termed the "throat," will in practice be set substantially in the line of draft, but, owing to its curvature in a longitudinal direction, it presents considerable resistance to the forward movement of the bar through the earth. It is also found in practice that the wear on this part of the bar is so great, owing to the shape thereof, that it is worn through to the extent of rendering the blade useless long before the cutting portion of the blade has reached its limit of usefulness.

My invention consists in forming this bent portion of the cutting-bar in such manner that it will lie straight in the line of draft, thereby presenting a minimum of resistance to the draft, enabling it to last as long or even longer than the body of the cutting-blade. By this I also provide for the ready sharpening of the cutting-bar without undue wear on the throat thereof and by forming the bend in the bar so that the faces of the curved portion are in line with the line of draft avoid the accumulation of soil in front of the throat of the bar.

The accompanying drawings illustrate the invention.

Figure 1 is a plan of a weed-cutter provided with blades. Fig. 2 is a side elevation

thereof. Fig. 3 is a horizontal section of one of the cutters on line $x^3 x^3$ in Fig. 2.

1 designates the frame for supporting and drawing the weed-cutter, which frame may be of any usual or suitable construction and provided with draft means 2, platform 3, and handle 4 in the usual manner.

5 designates the cutters, which are formed with a shank 6 for attachment to the frame 1 and with a knife or blade portion 7, the shank and knife portions extending at an angle to one another and being connected by a curved or bent portion 8. The portion 8 is bent as though about one side of a cylinder parallel with the line of draft. In bending the bar in this manner the natural tendency of the metal is to draw up or out at the edges and in at the center, and in forming cutters I resist or overcome this tendency and bring the bend of the cutters parallel to a straight cylindrical segment whose outer and inner sides extend longitudinally or parallel to a straight line—namely, the line of draft.

The cutting portion 7 of the cutters is provided with a sharpened or knife edge in the usual manner, and this knife-edge may be continued up and around the bend 8, as indicated at 9.

The cutters are fastened to the frame 1 by bolts or clips, (indicated at 10,) with their shanks 6 extending rearwardly at an angle, the bends 8 extending downwardly from the shanks and being throughout substantially parallel to the line of draft and the cutting portions 7 extending from the bends 8 rearwardly at a reverse angle to the shanks and with a slight forward dip, as shown in Fig. 2.

As the draft-frame 1 is drawn over the ground the cutters and cutting portions 7 of the cutters will be drawn along slightly below the surface of the ground, and the connecting portion or bend 8 will also pass through or into the ground and be drawn therethrough. The arrow in Fig. 3 indicates the line of draft for said portion.

Referring to the drawings, it will be seen that each blade is provided with a shank which is so attached to an implement that the forward edge thereof may encounter the soil throughout substantially the entire length of the shank. This is an important feature of my invention, because the shank portion of a tooth, being near to the point of attachment, cannot yield like the rear or underground portion of the tooth when it encounters an obstacle, and should therefore be constructed to

meet the soil in a squarely edgewise manner, so as to meet as few obstacles as possible and be adapted to cut its way through such obstacles as it necessarily meets.

5 It is clear that with the bend of the cutter so formed and mounted the wear thereon due to the scouring action of the earth will be reduced to a minimum, as will also the frictional resistance offered to the draft movement. It is found, as a matter of fact, that
10 with this construction and arrangement the cutting portion 7 wears away mostly at the extreme tip and the wear at the throat is negligible, with the result that the life of the tool
15 is prolonged to the greatest possible limit.

What I claim is—

A weed-cutter provided with a cutting-blade having a substantially flat, straight, underground portion extending rearwardly par-

allel with the surface of the earth, the cutting edge of said underground portion inclined laterally to the direction of draft, a shank for attaching said blade to an implement, and a bent portion connecting the shank to the straight portion, the forward
25 edge of said bent portion being in position to encounter the soil throughout substantially the entire length thereof and lying in the plane of the side of a cylinder parallel with the line of draft.
30

In testimony whereof I have hereunto set my hand, at Los Angeles, California, this 3d day of October, 1904.

JOHN KILLEFER.

In presence of—

GEORGE T. HACKLEY,
JULIA TOWNSEND.