

B. A. CARLSON & W. D. HART.
 COMBINED DIGGER AND SCRAPER.
 APPLICATION FILED MAR. 31, 1910.

976,631.

Patented Nov. 22, 1910.

2 SHEETS—SHEET 1.

Fig. 1.

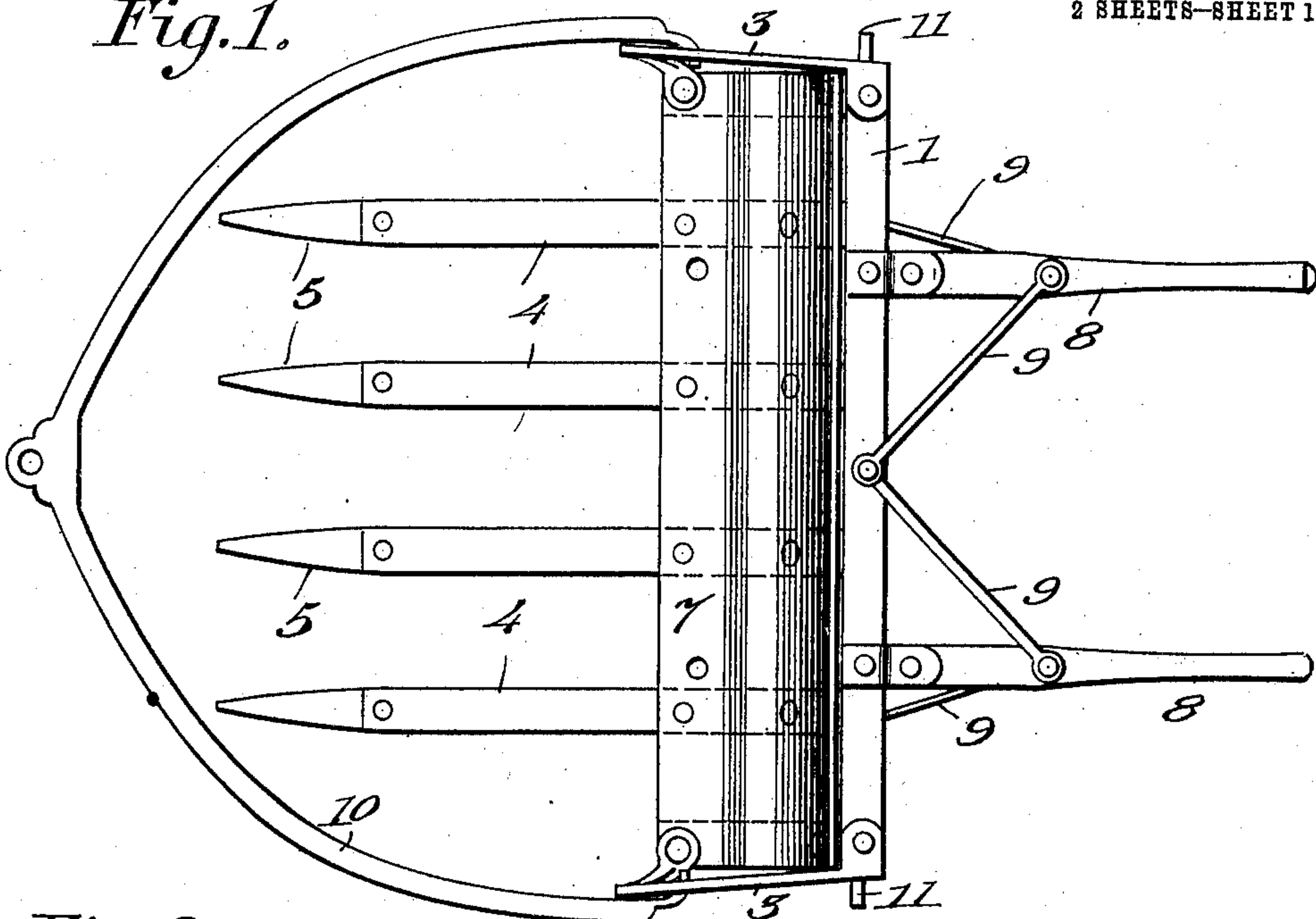
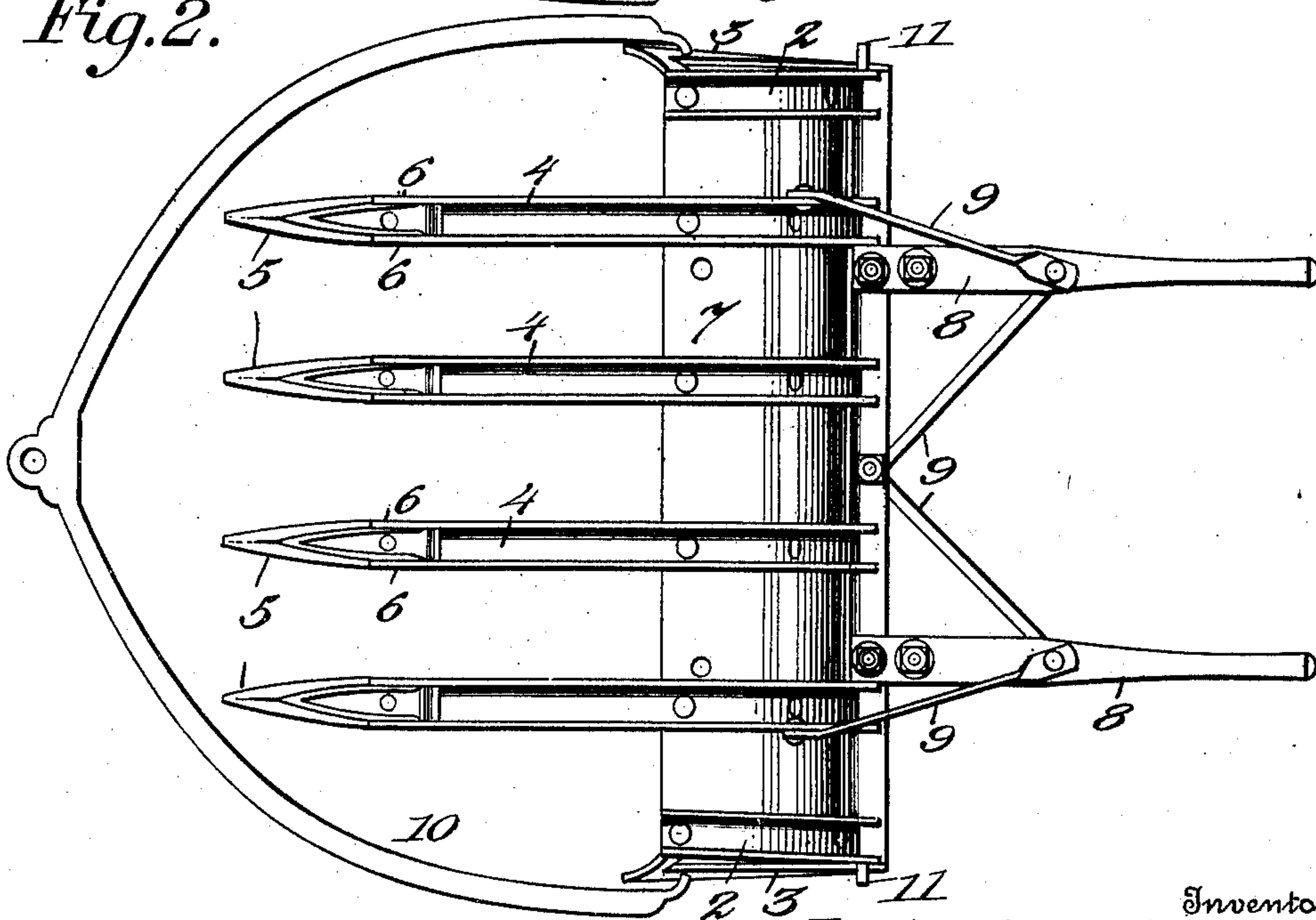


Fig. 2.



Witnesses

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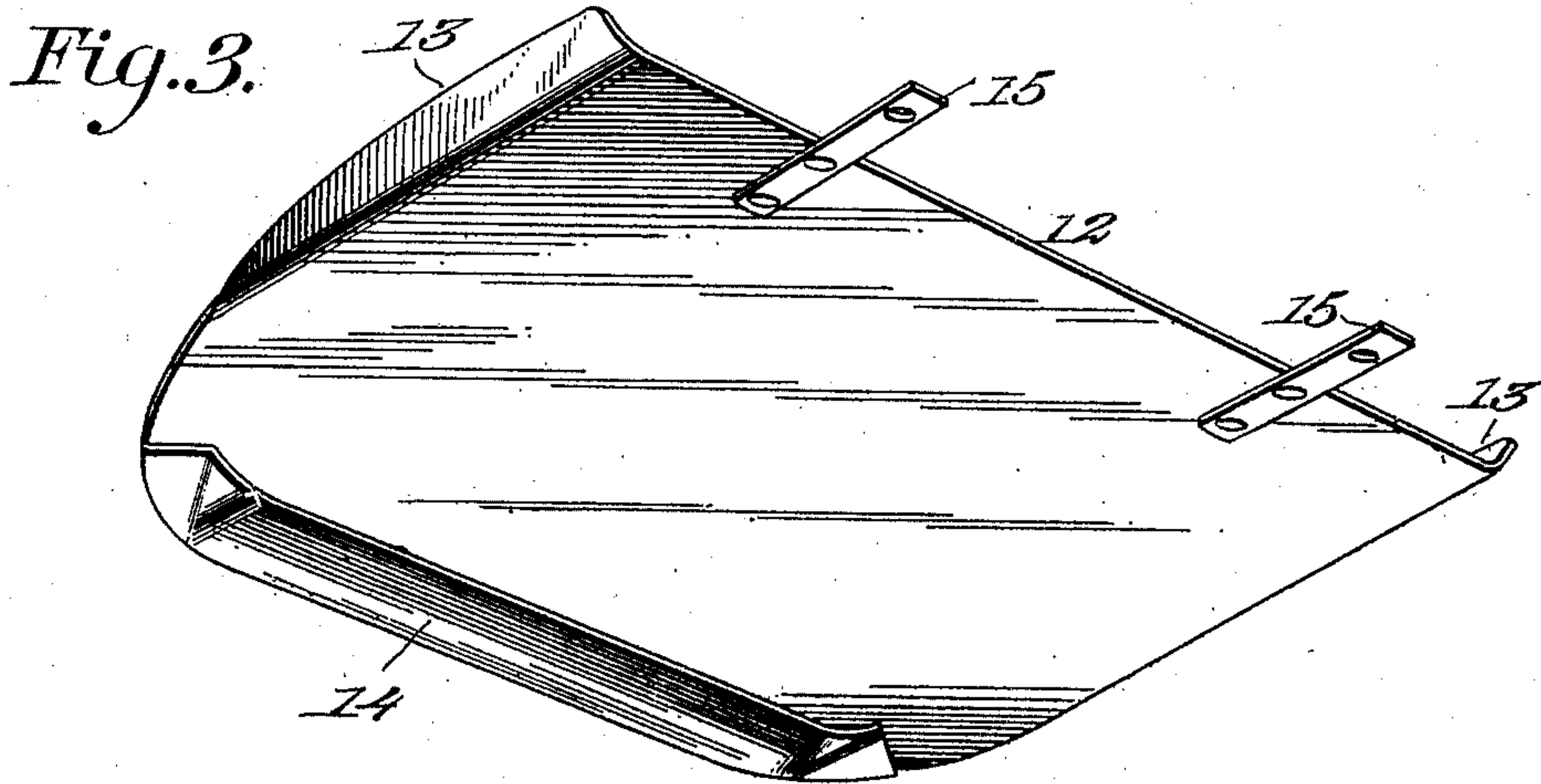


Fig. 4.

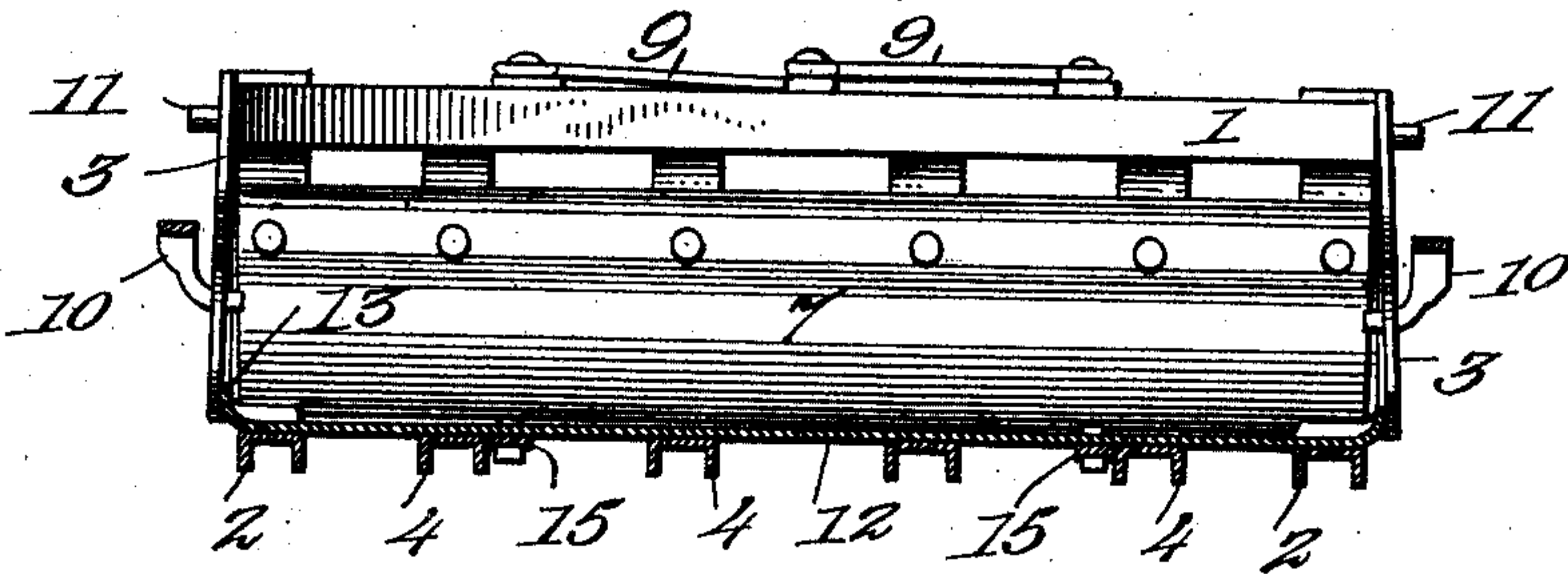
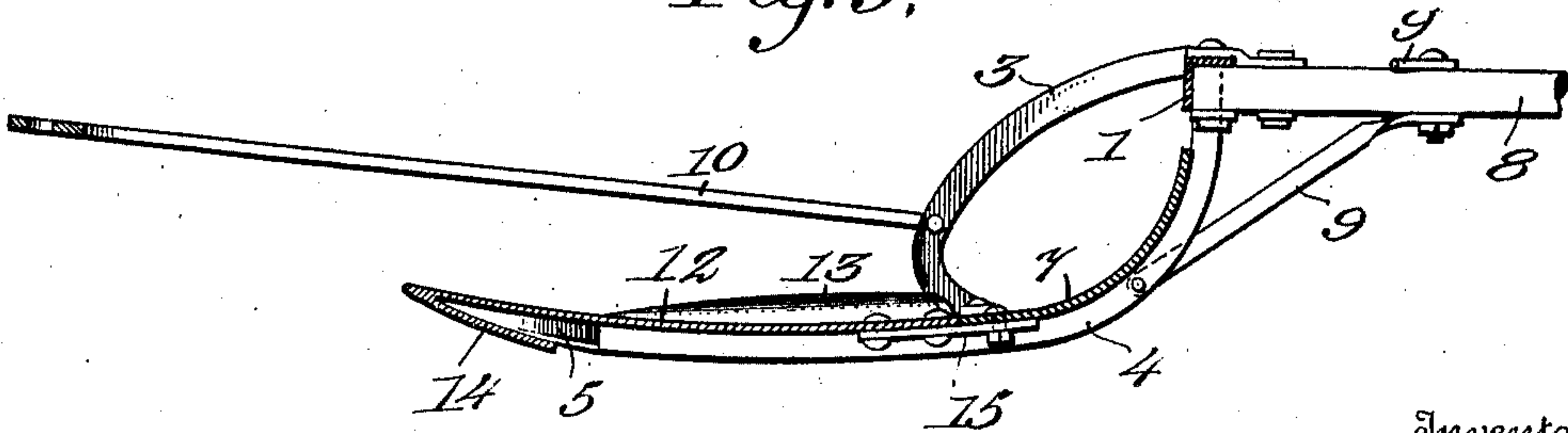


Fig. 5.



Witnesses

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UNITED STATES PATENT OFFICE

BENJAMIN A. CARLSON AND WILLIAM D. HART, OF SIOUX FALLS, SOUTH DAKOTA.

COMBINED DIGGER AND SCRAPER.

976,631.

Specification of Letters Patent.

Patented Nov. 22, 1910.

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To all whom it may concern:

Be it known that we, BENJAMIN A. CARLSON and WILLIAM D. HART, citizens of the United States of America, residing at Sioux Falls, in the county of Minnehaha and State of South Dakota, have invented new and useful Improvements in Combined Diggers and Scrapers, of which the following is a specification.

This invention relates to combined diggers and scrapers, and it has for its objects to provide a simple and efficient tool for cutting and loosening sod, for loosening dirt where the same has become caked and compacted and for other like purposes, a further object of the invention being to combine with the said tool an attachment which may be easily applied and whereby the device will be converted into a scraper for transporting dirt, manure and the like and which may be used in making excavations and for other general purposes to which this class of devices may be applied.

With these and other ends in view which will readily appear as the nature of the invention is better understood, the same consists in the improved construction and novel arrangement and combination of parts which will be hereinafter fully described and particularly pointed out in the claims.

In the accompanying drawings has been illustrated a simple and preferred form of the invention, it being, however, understood that no limitation is necessarily made to the precise structural details therein exhibited, but that changes, alterations and modifications within the scope of the invention may be resorted to when desired.

In the drawings,—Figure 1 is a top plan view of a digger constructed in accordance with the invention. Fig. 2 is a bottom plan view of the same. Fig. 3 is a perspective detail showing the scraper attachment in inverted position. Fig. 4 is a longitudinal sectional view of the device with the scraper attachment in position. Fig. 5 is a transverse sectional view of the same.

Corresponding parts in the several figures are denoted by like characters of reference.

The frame of the improved implement comprises a head bar or cross bar 1 of L-shaped angle iron or steel, the same being provided with downwardly and forwardly curved side pieces 2, 2 which are preferably made of U-shaped angle iron or steel, said side members being reinforced by arcuate

braces 3 connecting their forward ends with the ends of the head bar 1. A plurality of teeth 4, 4, which are also preferably constructed of U-shaped angle iron or steel and which are curved at their rear ends to correspond with the curves of the side members 2, 2, are secured intermediate said side members upon the head bar 1, where they are preferably spaced equidistantly, said teeth being provided at their front ends with sharp-pointed prongs or cutters 5, the same being firmly secured between the flanges 6 of the teeth, as shown. A curved shield or body 7 of heavy sheet metal is mounted upon the side members 2, 2 and upon the curved portions of the teeth, which latter are thereby securely assembled and connected together. Handles 8 reinforced by braces 9 are secured upon the head bar 1 from which they extend in a rearward direction, and a draft bail 10 is pivotally connected with the arcuate braces 3, said bail lying in the path of stop members 11 extending laterally adjacent to the ends of the head bar, thereby serving to check the rotation of the digger or scraper when the latter is tilted in the act of discharging a load.

The use of the improved digger constructed as herein described will be readily understood; draft is attached to the bail 10, and the device is guided by the rearwardly extending handles which may be slightly elevated to permit the teeth to dig into the ground to the required depth, after which by bearing down upon the handles, the sod or soil will be cut and loosened, a quantity of material being readily transported upon the outer faces of the teeth in conjunction with the curved shield 7.

When the device is to be utilized as a scraper, an apron 12 is provided, said apron being of a width equal to the total width of the implement and provided at its edges with slightly upturned flanges 13, the rear ends of which will lie adjacent to the brace members 3, while the rear edge of the apron will abut upon the front edge of the shield 7.

The apron 12 is provided on its underside, adjacent to its front edge with a pocket 14 which may be formed of a separate strip of metal bolted or otherwise secured upon the underside of the apron, or it may be formed by bending rearwardly a portion of the material of which the apron is constructed, said pocket serving to receive the points of the prongs 5 which will thus be protected from

direct engagement with the ground. The apron is provided adjacent to its rear edge with rearwardly extending straps 15, and said straps, as well as the shield 7, will be provided with apertures for the passage of bolts, whereby the parts may be temporarily connected together in a secure and efficient manner. The use of the device as a scraper does not deter from that of scrapers of ordinary well known construction.

As will be seen from the foregoing description, an implement is provided which may be usefully employed for various purposes by simply attaching or removing the apron, as may be required.

The construction is simple and thoroughly efficient for the purposes for which it is provided.

Having thus described the invention, what is claimed as new, is:—

1. In an implement of the character described, a head bar, curved end members connected therewith, correspondingly curved teeth secured upon the head bar, a shield secured upon the end members and upon the curved portions of the teeth, sharp-pointed prongs at the front ends of the teeth, and an

apron supported upon the teeth and having a pocket detachably engaging the prongs, said apron abutting upon the front edge of the shield.

2. In an implement of the character described, a head bar having rearwardly extending handles, curved end members connected with the head bar, correspondingly curved teeth secured upon the head bar, a shield secured upon the end members and the curved portions of the teeth, arcuate braces connecting the front ends of the end members with the head bar, a draft rail connected with said braces, stop members extending from the head bar in the path of the bail, an apron supported upon the teeth and having a pocket detachably engaging the same, and means for detachably connecting the apron with the shield.

In testimony whereof we affix our signatures in presence of two witnesses.

BENJAMIN A. CARLSON.
WILLIAM D. HART.

Witnesses:

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