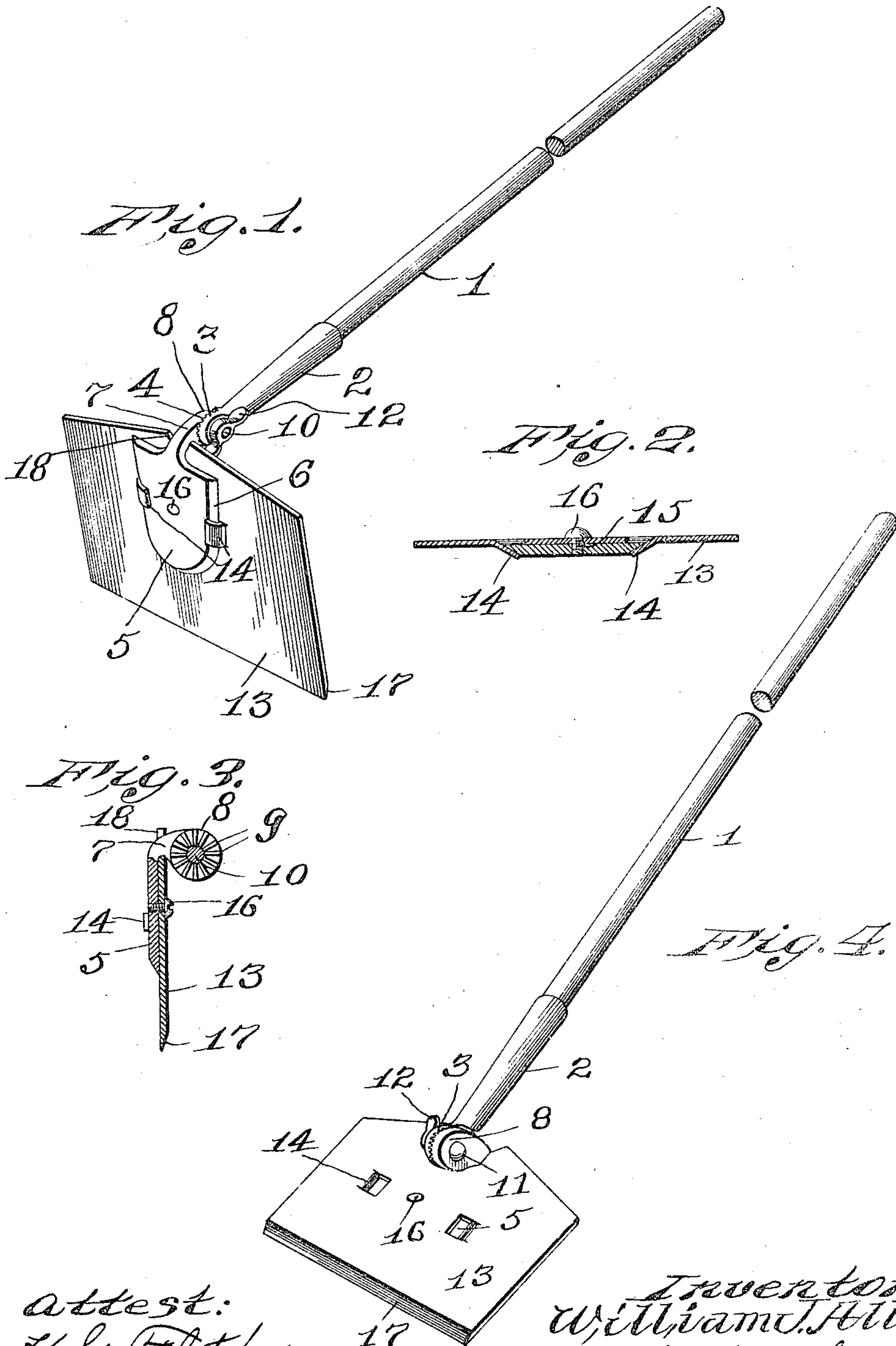


W. J. ALLIN.
 HOE.
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UNITED STATES PATENT OFFICE.

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HOE.

961,748.

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To all whom it may concern:

Be it known that I, WILLIAM J. ALLIN, a subject of the King of Great Britain, and resident of Clarendon, Arkansas, have invented certain new and useful Improvements in Hoes, of which the following is a specification containing a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention relates to improvements in hoes, the object of my invention being to provide a connection between the socket and blade whereby the blade may be held in various positions relative to the socket.

A further object of my invention is to provide a means whereby the blade may be detachably connected with the socket and handle.

For the above purposes my invention consists in certain novel features of construction and arrangement of parts as will be hereinafter more fully set forth, pointed out in my claims and illustrated in the accompanying drawings, in which:

Figure 1 is a perspective of the complete hoe; Fig. 2 is a sectional plan showing a construction whereby the blade may be detached from the handle; Fig. 3 is a vertical sectional elevation illustrating the blade as applied to a removable handle section; and Fig. 4 is a perspective of the complete hoe in a position to be used as a scraper or shovel.

Referring by numerals to the accompanying drawings: 1 designates a handle of ordinary wooden construction.

2 designates a socket secured to the end of the handle. This socket is preferably made with a reduced flattened end 3 having radial teeth 4 formed on one of its faces.

5 designates a plate having beveled side margins 6 and a reduced integral neck 7 the end of which is enlarged and flattened to form a head 8 and 9 designates radial teeth on said flattened head adapted to engage with the teeth 4 of the socket 2.

10 designates a bolt having a head 11 at one end, which bolt is inserted through openings formed in the head 8 and reduced flattened end 3 of the socket 2.

12 designates a winged nut which is adapted to co-act with the bolt 10 to clamp the socket 2 and plate 5 together.

13 designates a blade which is preferably constructed of a single piece of sheet steel

and is provided with projections 14 stamped out of its body portion arranged to engage the beveled margins of the plate 5.

15 designates an opening formed in the plate 5 which is internally threaded.

16 designates a set screw which is inserted through the blade and seated in the opening 15 thereby securing the blade 13 to the plate 5.

17 designates the beveled lower margin of the blade 13 and 18 designates a depression formed in the upper margin of the plate 13 arranged to embrace the neck 7 of the plate 5.

It is obvious by the construction of a hoe as shown that, by reason of the adjustment between the handle and blade, I have provided a hoe which may be adjusted so that operators of various statures may give a proper working angle to the hoe blade.

It is obvious further that by the construction shown and by referring to Fig. 4, that this blade may be sharpened on its rear lower edge. In this connection it is to be noted that by use of the ordinary solid connection between the handle and blade the sharpening has been done on the front lower edge of the hoe blade.

By the construction of a hoe as shown the device may be used as an ordinary hoe or the blade may be positioned as shown in Fig. 4 and employed as a scraper or shovel. By reason of the means shown for detaching the blade from the plate 5 the blade may be removed in order to provide for the replacing of the same or a different blade.

While I have shown and described a detachable and adjustable blade as applied to a socket it is obvious that a tang and ferrule may be employed instead of the socket, and, while I have shown a blade having a single cutting edge, I do not wish to be understood as limiting myself to this form of blade as I may employ a blade having cutting edges on either one or both of the side margins and its lower margins without departing from the spirit of my invention.

I claim:

1. In a hoe, a socket formed of a single piece of metal, a head formed integral with said socket, radial teeth formed on said head, a plate, a head on said plate, radial teeth formed on the head of said plate, means for clamping the heads of the plate and socket together, a blade, integral portions struck from the body of the blade to engage the

plate and a set screw for detachably securing the blade to said plate.

2. In a hoe, the combination of a socket, a head formed integral with said socket, teeth
5 radially arranged on said head, a plate having a reduced neck and inclined side margins, a head formed integral with said neck, teeth carried by said head arranged to engage said teeth on the head of the socket and
10 a blade having projections struck from its body portion adapted to engage the inclined margins of said plate.

3. In a hoe, the combination of a handle, a head having radial teeth secured to said han-

dle, a plate, a head on said plate, radial teeth 15 formed on the head of said plate, means for clamping the heads together, a blade, integral portions struck from the body of the blade to engage the margins of said plate and a set screw for detachably securing the 20 blade to said plate.

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

WILLIAM J. ALLIN.

Witnesses:

W. J. BROWN,

W. F. McCALL.