

HOE.

APPLICATION FILED MAR. 6, 1909.

Patented July 20, 1909.

2 SHEETS—SHEET 1.

928,590.



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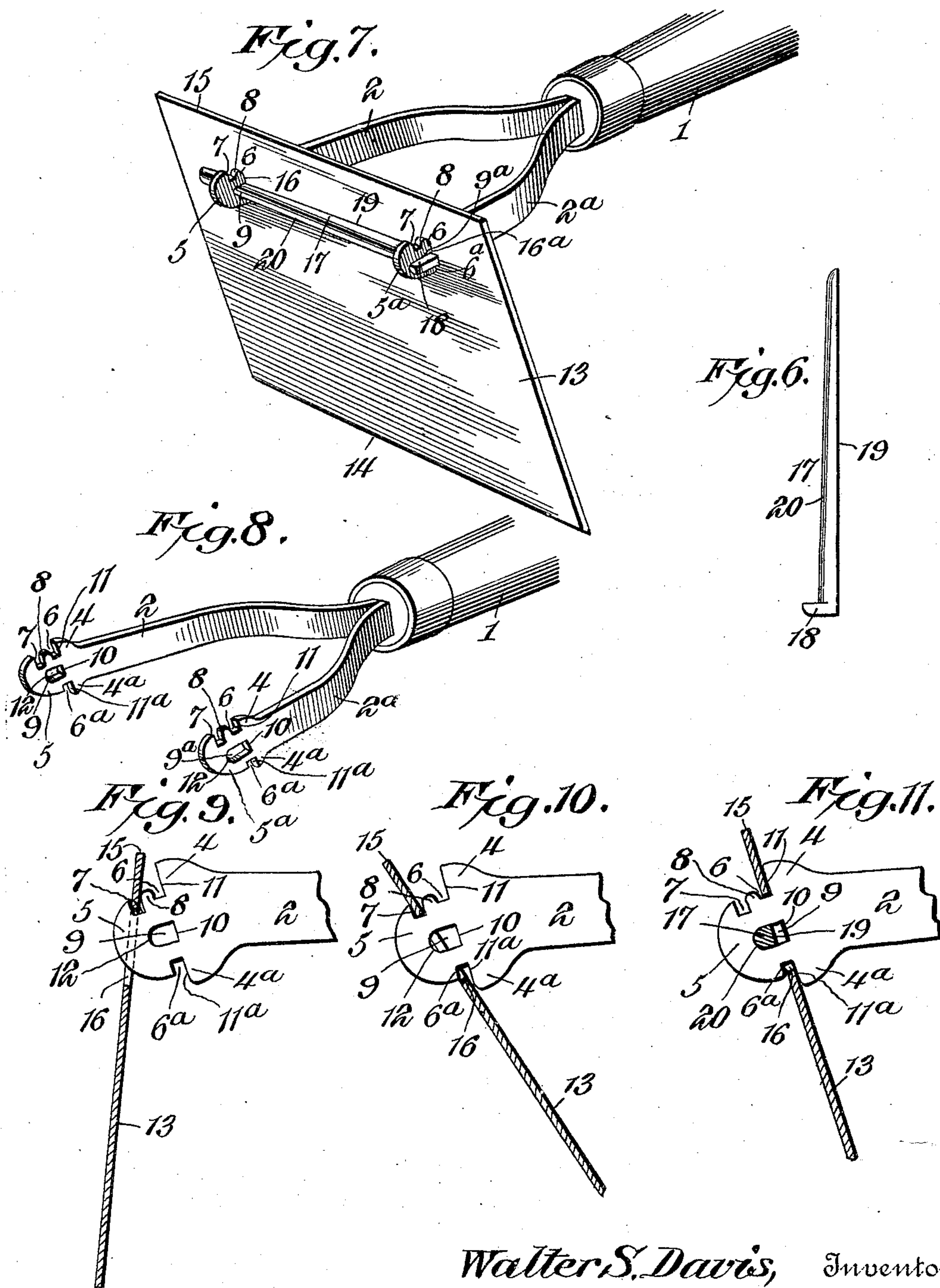
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2 SHEETS—SHEET 2.



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UNITED STATES PATENT OFFICE.

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HOE.

No. 928,590.

Specification of Letters Patent.

Patented July 20, 1909.

Application filed March 6, 1909. Serial No. 481,787.

To all whom it may concern:

Be it known that I, WALTER S. DAVIS, a citizen of the United States, residing at Ruston, in the parish of Lincoln and State of Louisiana, have invented a new and useful Hoe, of which the following is a specification.

My invention relates to hoes, and more particularly to that class especially adapted for cultivating cotton and the like.

The object of my invention is to provide a tool of the class described, having a reversible blade in order that the same can either be used as a chopping hoe, or as a scraper whenever it is desired to push or scrape young grass, etc., from the off-side of a plant.

While the invention is primarily intended for the above-described purpose, I do not wish to limit myself to this usage, as it will be apparent that the same can be employed for many analogous purposes.

Another object of the invention is to provide a novel means for detachably securing the blade to the tang of the handle.

The invention comprises a rectangular blade, one edge of which forms a scraper and the opposite edge a chopping or cutting hoe. Intermediate of but parallel to these two edges, are two spaced openings in which the respective ends of a forked or bifurcated tang are detachably secured by a novel means.

In the drawings, Figure 1 is a perspective view of the assembled tool, showing the preferred form of my invention; Fig. 2 is a perspective view of a portion of the handle and the forked tang; Fig. 3 is a detail sectional view showing the first step in the application of the blade to the tang; Fig. 4 is a detail sectional view showing the second step in the application of the blade to the tang; Fig. 5 is a detail sectional view showing the blade in position and secured to the tang by a lock pin; Fig. 6 is a perspective view of the lock pin; Fig. 7 is a perspective view of the assembled tool, showing a modified form of my invention; Fig. 8 is a perspective view of a portion of the handle and the forked tang; Fig. 9 is a detail sectional view showing the first step in the application of the blade to the tang; Fig. 10 is a detail sectional view showing the second step in the application of the blade to the tang; Fig. 11 is a detail sectional view showing the blade in

position and secured to the tang by a lock pin.

Like numerals of reference designate corresponding parts in all the figures of the drawings.

Referring to the drawings, 1 designates a handle of ordinary construction in which a forked or bifurcated tang, preferably formed of flat metal and comprising two outwardly curved arms, 2 and 2^a, respectively, is secured by any means.

In the preferred form of my invention as illustrated in Figs. 1 to 6, inclusive, it will be seen that at each end of the arms and at opposite sides of the ends the metal is widened to form opposite shoulders, 4 and 4^a, which are arranged at an angle with respect to the arms, the upper shoulder, 4, being in advance of the lower shoulder, 4^a. The arms are further provided with integral curved heads, 5 and 5^a, respectively, which are arranged beyond the shoulders 4 and 4^a, and are preferably provided with depending lugs 21 and 21^a, respectively, said lugs extending down below the shoulders 4 and 4^a. The ends, 22 and 22^a, of these lugs are respectively spaced from and substantially parallel to the shoulders 4 and 4^a of the tang. The ends 22 are further provided with curved notches, 23 and 23^a, which are respectively arranged opposite to the shoulders 4 and 4^a of said tang. Each of the heads is respectively provided with openings 9 and 9^a which are arranged intermediate of the notches 23 and 23^a and the upper edge of the curved head, one opening being smaller than the other for the purpose hereinafter described.

The invention further comprises an angular blade 13, formed of sheet metal, and provided with a cutting edge 14 and a scraping edge 15, which are arranged opposite to each other. The blade is further provided with openings 16 and 16^a, which are arranged intermediate of the two edges 14 and 15. These openings are parallel with the edges, and are preferably arranged nearer the scraping edge 15 than the cutting edge 14. These openings are also spaced a distance equal to the space between the heads of the forked tang and are of a depth substantially equal to the width of the head directly in advance of the shoulders 4 and 4^a.

In applying the blade to the forked tang, the first step necessary is to position the depending lugs 21 and 21^a, respectively, in the

corresponding openings 16 and 16^a of the blade, as clearly illustrated in Fig. 3 of the drawings. The blade is then lifted until the lower edges of the said openings engage the
 5 respective notches 23 and 23^a, as illustrated in Fig. 4 of the drawing. The said notches are then used as pivots and the blade is swung around to a position shown in Fig. 5 of the drawing. In this view it will be observed
 10 that the shoulders 4 and 4^a, respectively, bear against one side of the blade and at the top and bottom of the openings 16 and 16^a of said blade, and the depending lugs 21 and 21^a, respectively, engage the opposite sides
 15 of the blade below the shoulders 4 and 4^a, respectively. It will be also observed that because of the angle of the shoulders 4 and 4^a, respectively, in relation to the arms 2 and 2^a of the tang, the lower portion of the blade is
 20 brought under the said tang.

A lock pin 17 having a head 18 is preferably formed of metal, and is provided with a flat side 19 and a curved side 20, the two sides converging to the end opposite the
 25 head 18. This pin is passed through the openings 9, 9^a, of the heads, the flat side 19 being adapted to bear against the blade. Because of the fact that the pin is tapered, it will be readily apparent that the pin, as it is
 30 formed in the said openings, will cause the blade to be tightly gripped between the shoulders, 4, 4^a and the said pin.

Whenever it is desired to use the tool as a scraper, the said tool is turned over so that
 35 the scraper is underneath. In this connection it will be noted that the blade is now inclined rearwardly, so that in practice, the operation of scraping or pushing away of material is greatly assisted.

40 In the modified form of my invention as illustrated in Figs. 7 to 11, inclusive, a handle 1, of ordinary construction is provided, in which is secured a bifurcated tang comprising two outwardly curved arms, 2 and 2^a, respectively. At each end of the arms and at
 45 opposite sides of the ends, the metal is widened to form opposite shoulders, 4, 4^a, which are arranged at an angle with respect to the arms, the upper shoulder 4 being in advance of the lower shoulder 4^a. The arms
 50 are further provided with integral curved heads 5 and 5^a, respectively, which are arranged beyond the shoulders 4 and 4^a, and are preferably of a width equal to the width
 55 of the arms of the tang. Oppositely arranged notches, 6, 6^a, are, respectively, formed in the heads adjacent to and in the same plane as the shoulders 4, 4^a, the lower notch 6^a being preferably deeper than the
 60 upper one. The upper edge of each head is further provided with a second notch 7, which is spaced from the upper notch 6 by a curved projection 8. Each of the heads is, respectively, provided with openings, 9, 9^a,
 65 which are arranged intermediate of the oppo-

site notches 6, 6^a, one opening being smaller than the other for the purpose hereinafter described. The rear wall 10 of each opening is arranged substantially in alinement with
 70 the rear walls 11, 11^a, of the said notches, and the front wall 12 is preferably curved. These openings are also spaced a distance equal to the space between the heads of the forked tang, and are of a depth substantially
 75 equal to the distance between the bottom of the upper notch 7 and lower edge of the curved head.

In applying the blade to the forked tang, the first step necessary is to position the top walls of the openings, 16, 16^a of the blade,
 80 respectively, in the upper notches 7, 7, of the tang heads, as shown by reference to Fig. 9 of the drawings. The blade is then swung under the forked tang until the blade bears against the lower shoulders 4^a, as shown by
 85 reference to Fig. 10 of the drawings. The blade is then lifted so that the bottom walls of the openings of the blade bear against the bottoms of the lower notches 6^a. The blade is then swung outwardly while the top walls
 90 of the openings of the blade are moved over the curved projection 8, and into the upper notches 6. Thus, it will be seen by reference to Fig. 11 of the drawings, that the blade is arranged within the notches 6 and 6^a, and
 95 because of this fact, the blade is positioned at an angle with respect to the forked tang.

From the foregoing, it is thought that the construction, operation and many advantages of the herein described invention will
 100 be apparent to those skilled in the art, without further description, and it will be understood that various changes in the size, shape, proportion and minor details of construction may be resorted to without departing from
 105 the spirit or sacrificing any of the advantages of the invention.

Having thus described my invention, what I claim as new and desire to secure by Letters-Patent, is:

1. A tool of the class described consisting of a handle provided with arms, each arm having a notched head, a blade provided with openings located intermediate of its
 115 edges and adapted to receive the notched heads, and a key connecting said heads for securing the blade in the notches thereof.

2. A tool of the class described consisting of a handle provided with arms, each arm provided with oppositely arranged shoulders
 120 located near the ends thereof, a head integral with and extending from said shoulders and provided with a notch, a blade having openings adapted to receive the notched heads
 125 said shoulders bearing against the inner side of the blade above and below the openings to form a bearing surface or backing for the blade, and means adapted to coact with said heads for clamping the blade against the
 130 shoulders.

3. A tool of the class described consisting of a handle, a tang secured to the handle and having spaced arms, each arm having a notched head, openings respectively arranged in each of the heads, a blade having openings and adapted to receive the notched heads, and a key engaging the openings in both of the heads and adapted to clamp the blade in the notches of said heads.

10 4. A tool of the class described, consisting of a handle provided with outwardly curved arms, each arm having oppositely arranged shoulders that are arranged at an angle with respect to the arms, curved heads integral with the arms and arranged beyond the shoulders, each head being respectively provided with a depending lug, each lug being provided with an end which is parallel to but spaced from the shoulders of the tang, a curved notch arranged in the end of said lug and directly opposite one of the shoulders, openings formed in the heads above said notches, a blade having openings adapted to receive the notched heads, and a tapered locking pin adapted to engage in the openings of the heads and thereby clamp the blade in the notches and against the shoulders.

5. A tool of the class described, consisting of a handle provided with spaced arms, each arm having two vertically disposed shoulders, one shoulder on each arm arranged in advance of the other shoulder on the same arm, integral curved heads projecting from the arms beyond the shoulders and provided with depending lugs which project below the lower shoulders and are spaced therefrom, said heads being provided with a notch in advance of the lower shoulder, a blade having openings adapted to receive the heads and bear against the shoulders, and means for holding the blade in contact with said shoulders.

6. In a tool of the class described, the combination with a blade having a pair of spaced openings, arms having heads on their

ends, which heads are passed through the openings of the blade, shoulders provided on the arms in rear of the heads to bear against one side of the blade above and below said openings, lugs depending from the heads and bearing against the face of the blade below the shoulders, and means carried by the heads to lock them to the blades.

7. A tool of the class described, consisting of a handle provided with outwardly curved arms, each arm having oppositely arranged shoulders that are arranged at an angle with respect to the arms, curved heads integral with the arms and arranged beyond the shoulders, each head being respectively provided with a depending lug, each lug being provided with an end which is parallel to but spaced from the shoulders of the tang, a curved notch arranged in the end of said lug and directly opposite one of the shoulders, a blade having openings adapted to receive the notched heads, and means carried by the heads to clamp the blade against the shoulders.

8. A tool of the class described, consisting of a handle provided with arms, each arm provided with oppositely arranged shoulders located near the end thereof, heads integral with and extending from the arms at said shoulders and provided with notches, a blade having openings adapted to receive the notched heads, said shoulders bearing against the inner side of the blade above and below the openings to form a bearing surface or backing for the blade, and a key connecting the heads for clamping the blade against the shoulders.

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

WALTER SHIELDS DAVIS.

Witnesses:

T. S. GLATHARY,
C. C. THURMAN.