

No. 858,826.

PATENTED JULY 2, 1907.

B. O. PRATT.
SPADE.

APPLICATION FILED DEC. 26, 1906.

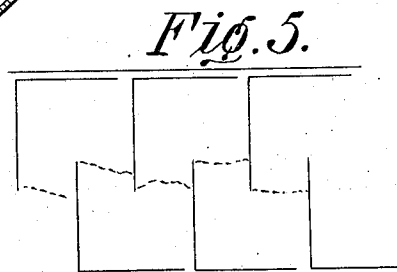
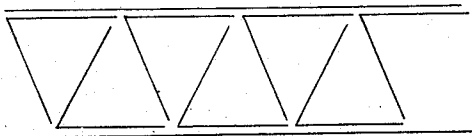
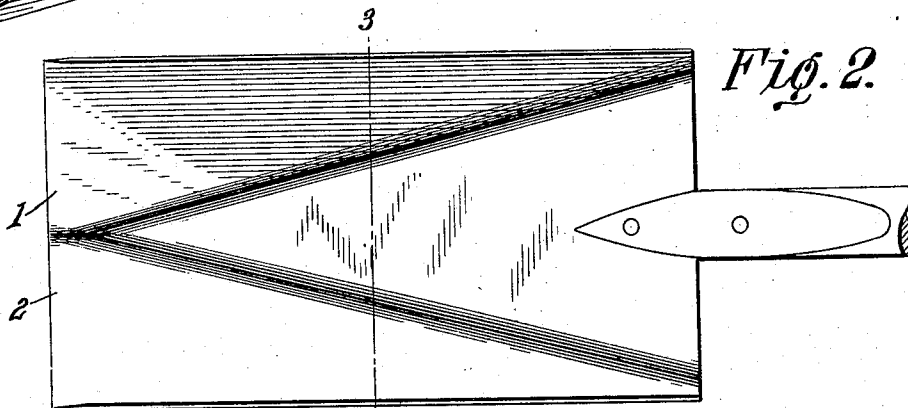
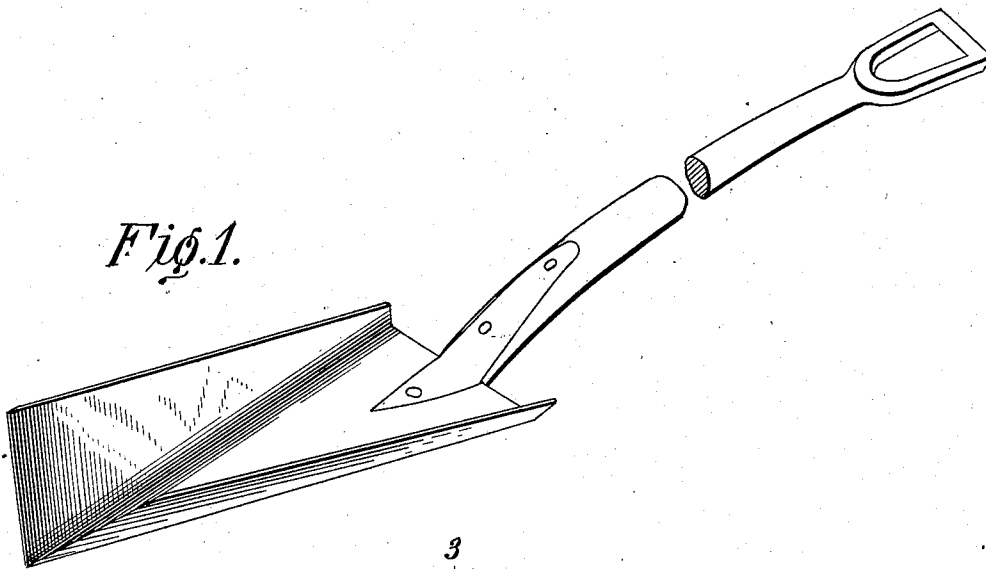


Fig. 4.

WITNESSES:
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UNITED STATES PATENT OFFICE.

BENJAMIN OSCAR PRATT, OF LYNCHBURG, OHIO.

SPADE.

No. 858,826.

Specification of Letters Patent.

Patented July 2, 1907.

Application filed December 26, 1906. Serial No. 349,436.

To all whom it may concern:

Be it known that I, BENJAMIN OSCAR PRATT, a citizen of the United States, residing at Lynchburg, in the county of Highland and State of Ohio, have invented a new and useful Spade, of which the following is a specification.

This invention relates to improvements in spades, and has for its object the provision of a spade particularly suited for ditch digging that will cut each spadeful of earth free from all adjoining earth and will trim the sides of a ditch perpendicular and true with the minimum amount of labor.

The object of the invention is accomplished in the construction hereinafter described, claimed, and shown in the accompanying drawings, in which,—

Figure 1 is a perspective view of a spade constructed in accordance with this invention; Fig. 2 is a plan of the same; Fig. 3 is a transverse section on line 3—3 of Fig. 2; Figs. 4 and 4^a illustrate diagrams of cuts made with this spade, the former showing how cuts may be made in a wide ditch while the latter figure shows its use in a narrow ditch. Fig. 5 shows a diagram of cuts made with a right-angled spade.

Referring to the drawing, it may be seen that the spade is formed with two straight cutting edges; these edges are arranged so as to meet at an angle of between 75 and 90 degrees. At the cutting edges the sides or wings 1 and 2 of the blade of the spade meet to form a sharp V-shaped groove between them; this groove gradually changes from the sharp V-shape at the cutting edge to a curved formation which grows wider and flatter as the top end of the spade is approached, so that at the top edge the spade is nearly flat with narrow slightly upturned sides. The sides or wings of the spade converge in width from the cutting edges to the top of the spade but remain flat. The purpose of the change in the shape of the groove between the sides of the spade is to free the spade from the dirt behind it in the cutting process and to prevent the dirt from sticking within the spade. Were the spade constructed of two flat sides meeting in a sharp groove extending uniformly from the cutting edge to the top of the spade, the earth would

fit closely to the sides at all points and the back surface of the spade would fit snug against the dirt back of it when in operation and the air pressure or "suction", as it is commonly called, would make it very difficult to lift the spade from the ground and also very difficult to throw the dirt from the spade.

The purpose of having the cutting edges of the spade meet at less than a right angle is to adapt it for use in narrow ditches in which one cutting edge could be used to cut the side of the ditch while the other edge would meet a similar opposite cut of the spade, as shown in the diagram of Fig. 4, thus obviating the necessity of breaking the earth as would be the case were the sides of the spade at right angles to each other, as is shown by the dotted lines in the diagram in Fig. 5.

By this improved construction the process of digging a ditch is accomplished with a minimum of labor and with workmanlike results.

Having thus fully described the invention, what is claimed and desired to be secured by Letters Patent is:—

1. In a spade, a blade formed of two sides meeting to form a substantially V-shaped cutting edge, the sides of the spade converging in width as they recede from the cutting edge, and the cross-section of the spade changing gradually from a sharp angled formation at the cutting edge to nearly flat face with relatively narrow sides extending upwardly therefrom at the upper end of the spade.

2. In a spade, a blade formed of two sides meeting to form a groove having an angular cross-section at one end and a nearly flat cross-section at the opposite end, substantially as described and for the purpose set forth.

3. In a spade, a blade having an approximately flat body or back broad at its upper end and tapering to a point at or near the cutting edge, and sides on said body inclining upwardly and outwardly therefrom, said sides gradually increasing in width from the upper end of the blade to the cutting edge where they meet at a sharp angle.

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

BENJAMIN OSCAR PRATT.

Witnesses:

ALFRED J. CRAMTON,
JOHN C. PRATT.