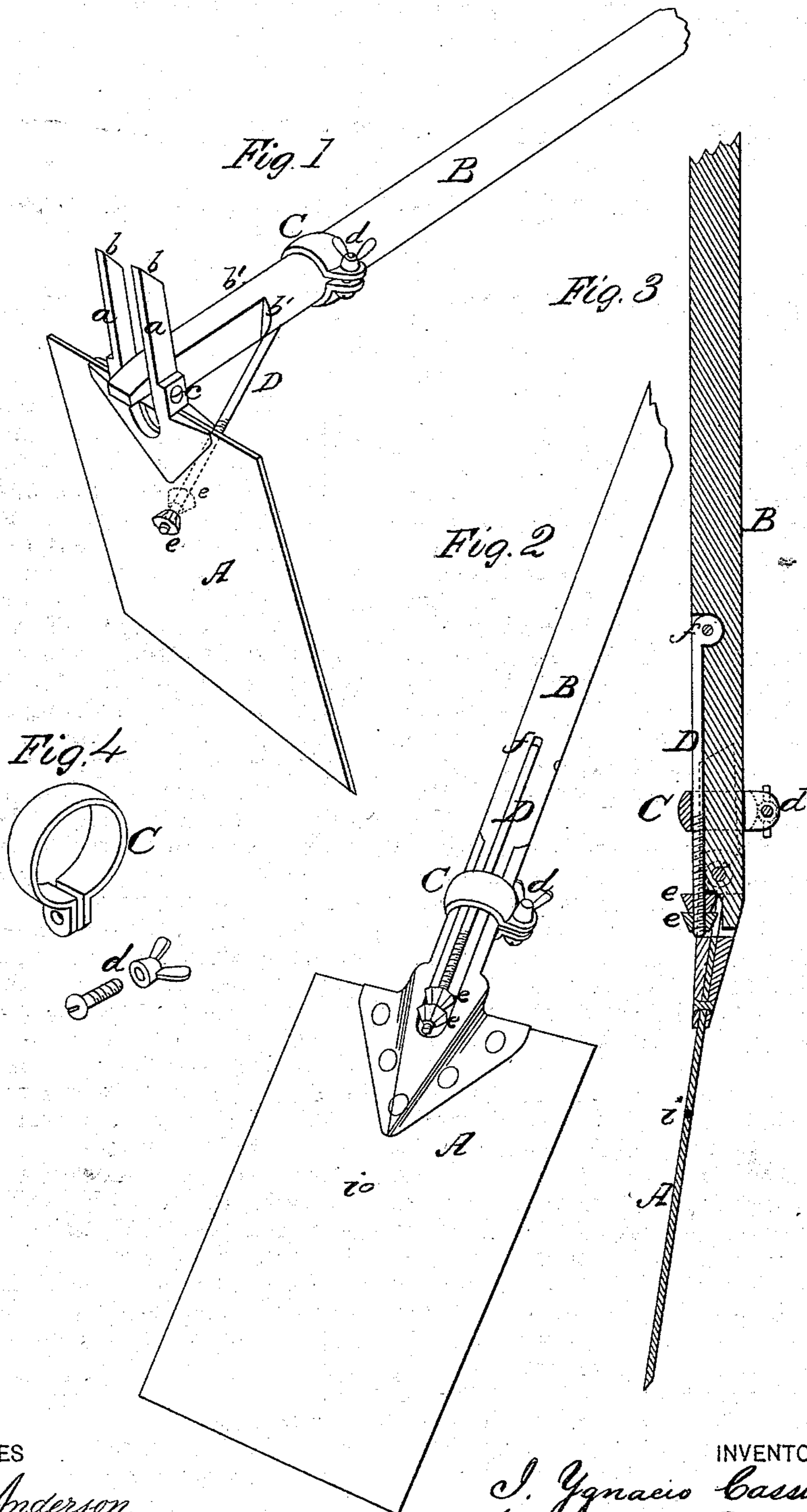


I. Y. CASSIANO.
Combined Spades and Hoes.

No. 154,018.

Patented Aug. 11, 1874.



WITNESSES
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UNITED STATES PATENT OFFICE.

I. YGNACIO CASSIANO, OF SAN ANTONIO, TEXAS.

IMPROVEMENT IN COMBINED SPADES AND HOES.

Specification forming part of Letters Patent No. **154,018**, dated August 11, 1874; application filed June 13, 1874.

To all whom it may concern:

Be it known that I, I. YGNACIO CASSIANO, of San Antonio, in the county of Bexar and State of Texas, have invented a new and valuable Improvement in Convertible Spades or Hoes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawings is a representation of a perspective view of my hoe, and Fig. 2 is a perspective view of my spade. Fig. 3 is a sectional view of my spade, and Figs. 4 are detail views.

The object of my invention is to obtain an implement which can be converted either into a spade or a hoe; and it consists in pivoting the spade or hoe blade to the handle by two re-enforces formed on the blade, in combination with an adjustable bracing-ring and a pivoted brace, as will be hereinafter explained.

The following is a description of my invention:

In the annexed drawings, A designates a rectangular blade formed like the blade of a common hand-spade, and B designates the handle thereof. On the upper end of the blade A two shanks or re-enforces, *a a*, are formed or secured, the inner sides of which are parallel to each other and flat, and the outer sides are rounded to conform to the shape of the handle B. The shanks *a a* have their upper ends beveled, as shown at *b b*, and between these shanks the flattened portion of the handle B is received and secured by means of the pivot *c*. The pivot *c* allows the blade A to be adjusted, as shown in Fig. 2, for use as a spade; also to be adjusted, as shown in

Fig. 1, for use as a hoe. When the blade A is adjusted as a spade it is rigidly held by means of the beveled ends *b b* of the shanks *a a* bearing against corresponding beveled shoulders *b' b'* on the handle B; also, by means of a clamping-ring, C, which is slipped down over the shanks *a a*, and tightened by means of a screw, *d*.

The spade is converted into a hoe by slipping the ring-clamp C off of the shanks and adjusting the blade A at a proper angle with respect to the handle B, then securing the blade and handle rigidly together by means of a brace-rod, D, and nuts *e e*. The brace-rod D is pivoted, at *f*, in a groove made in the handle, so that when it is desired to use the implement as a spade the rod D can be adjusted in its groove, so as to allow the ring C to be slipped over the shanks *a a* for holding the blade in proper position.

When converted into a hoe the rod D is adjusted by passing its free end through an opening, *i*, in the blade A, and securing it rigidly in that position by the two pyramidal nuts *e e*, which are screwed upon the end of this rod, one in front and the other back of the blade, with the apexes of the nuts toward each other.

What I claim as new, and desire to secure by Letters Patent, is—

In a combined convertible spade and hoe, the combination of the sliding clamp C, the pivoted brace-rod D, and nuts *e e*, as and for the purpose set forth.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two subscribing witnesses.

I. YGNACIO CASSIANO.

Witnesses:

P. M. KENNERLY,
JAMES MCSORLEY.