

No. 843,501.

PATENTED FEB. 5, 1907.

W. A. SPARKS.

HOE.

APPLICATION FILED NOV. 28, 1906.

Fig. 1.

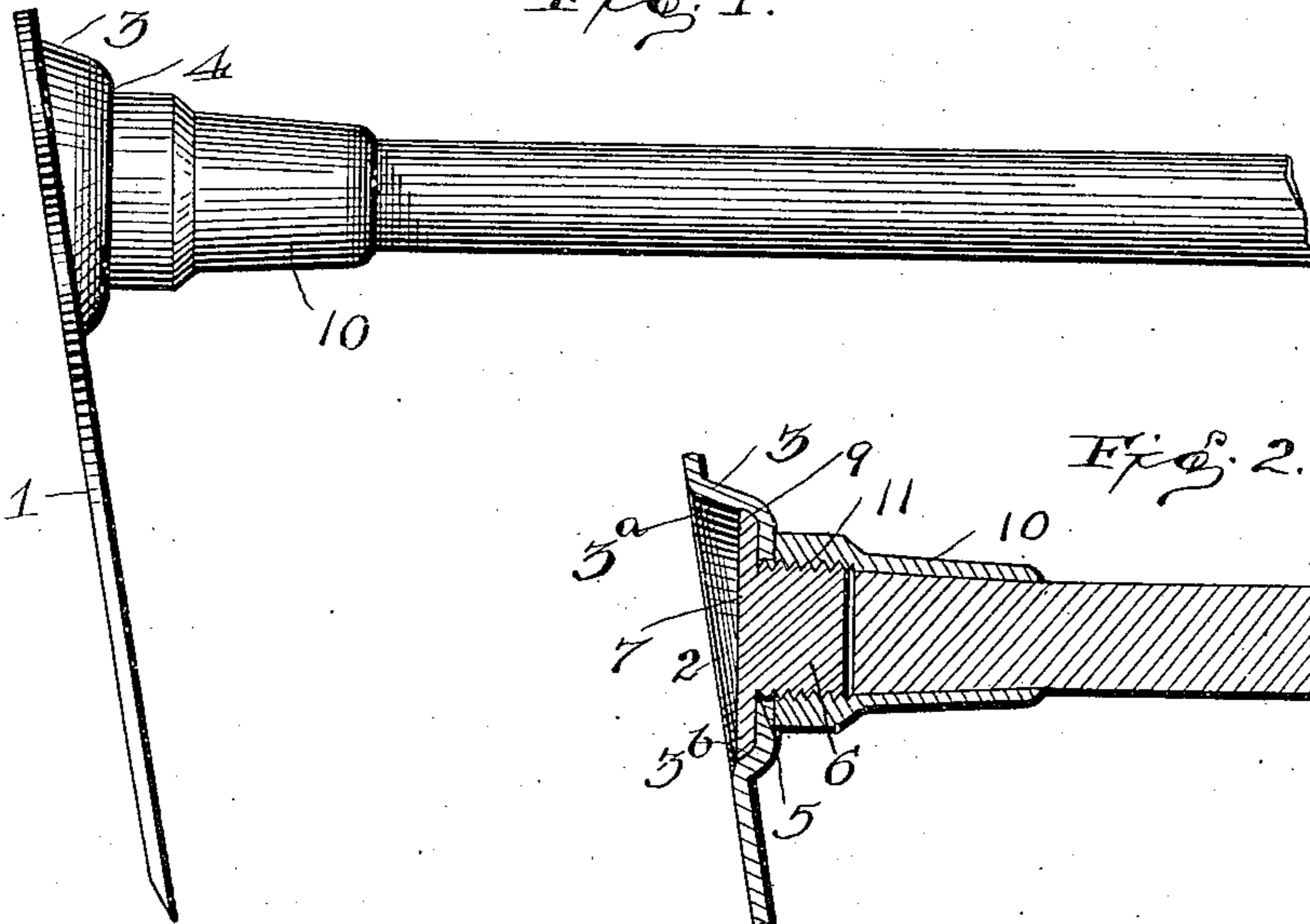


Fig. 2.

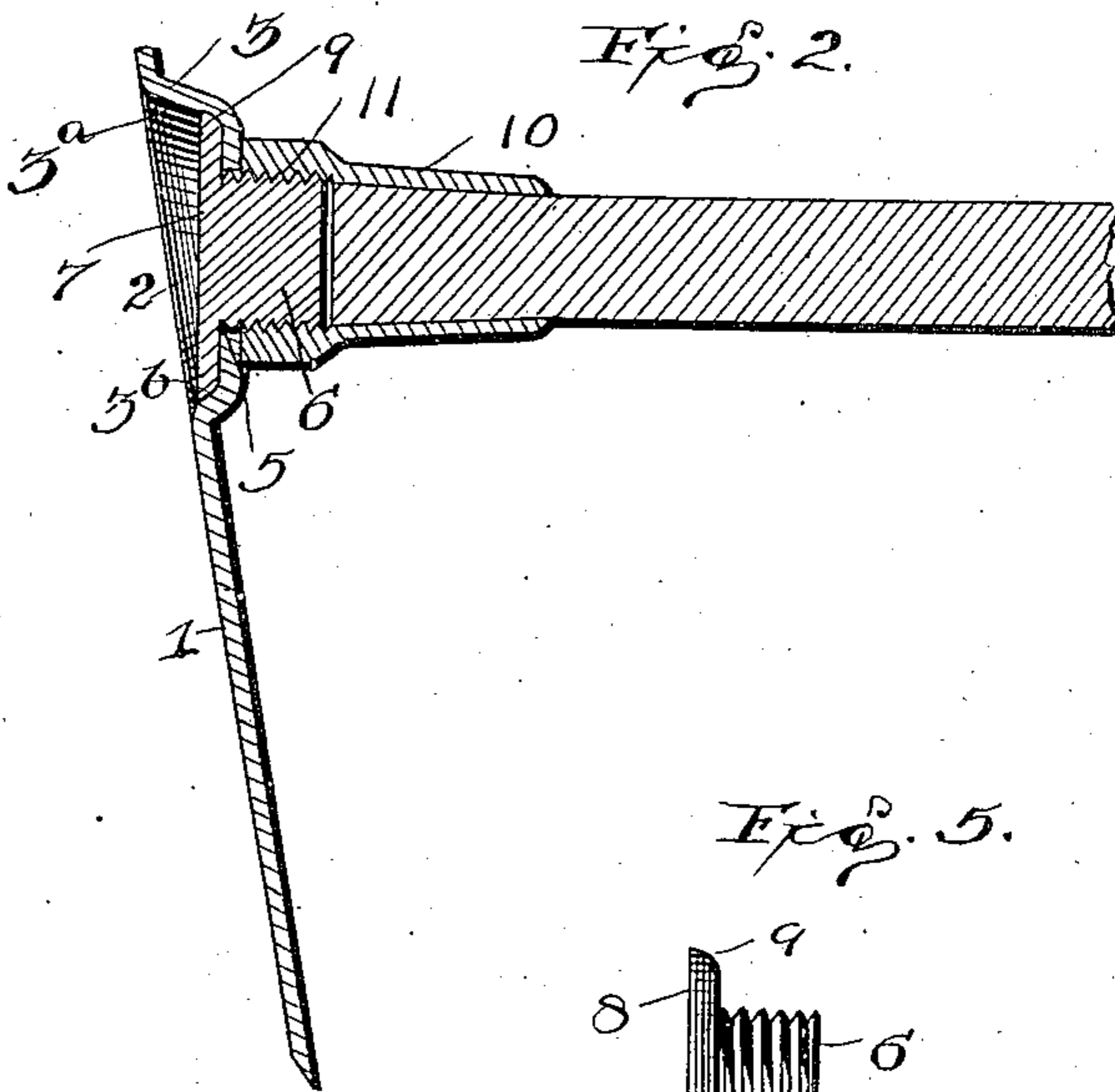


Fig. 3.

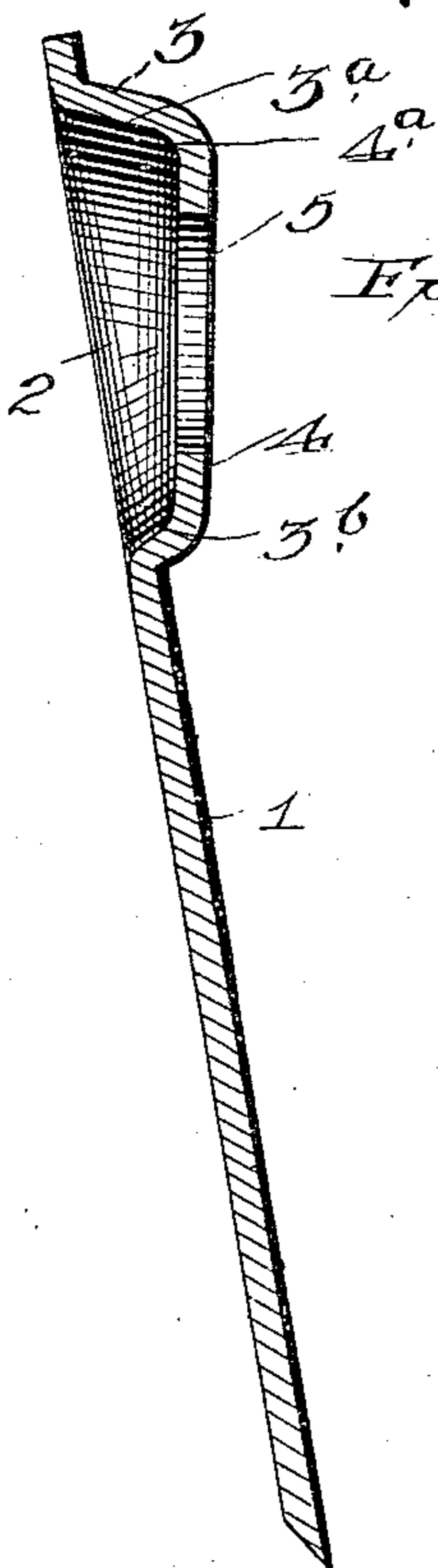


Fig. 5.

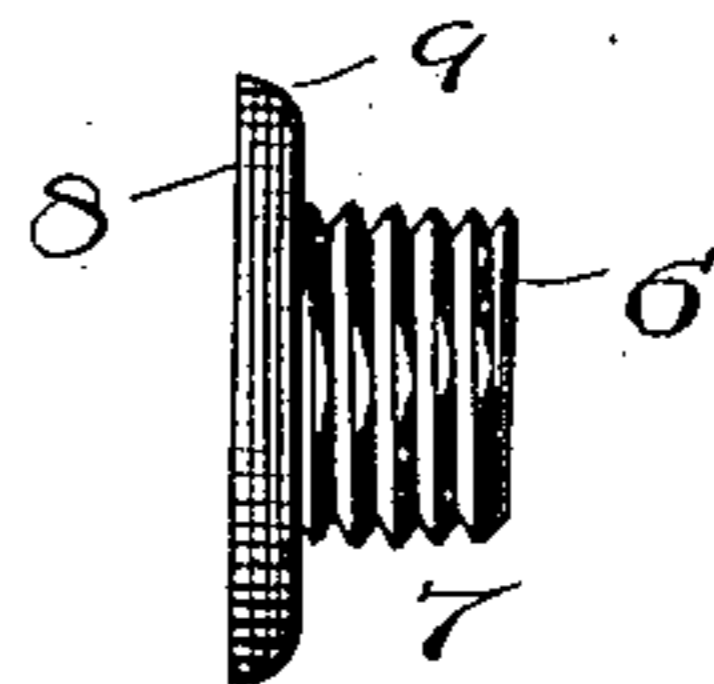
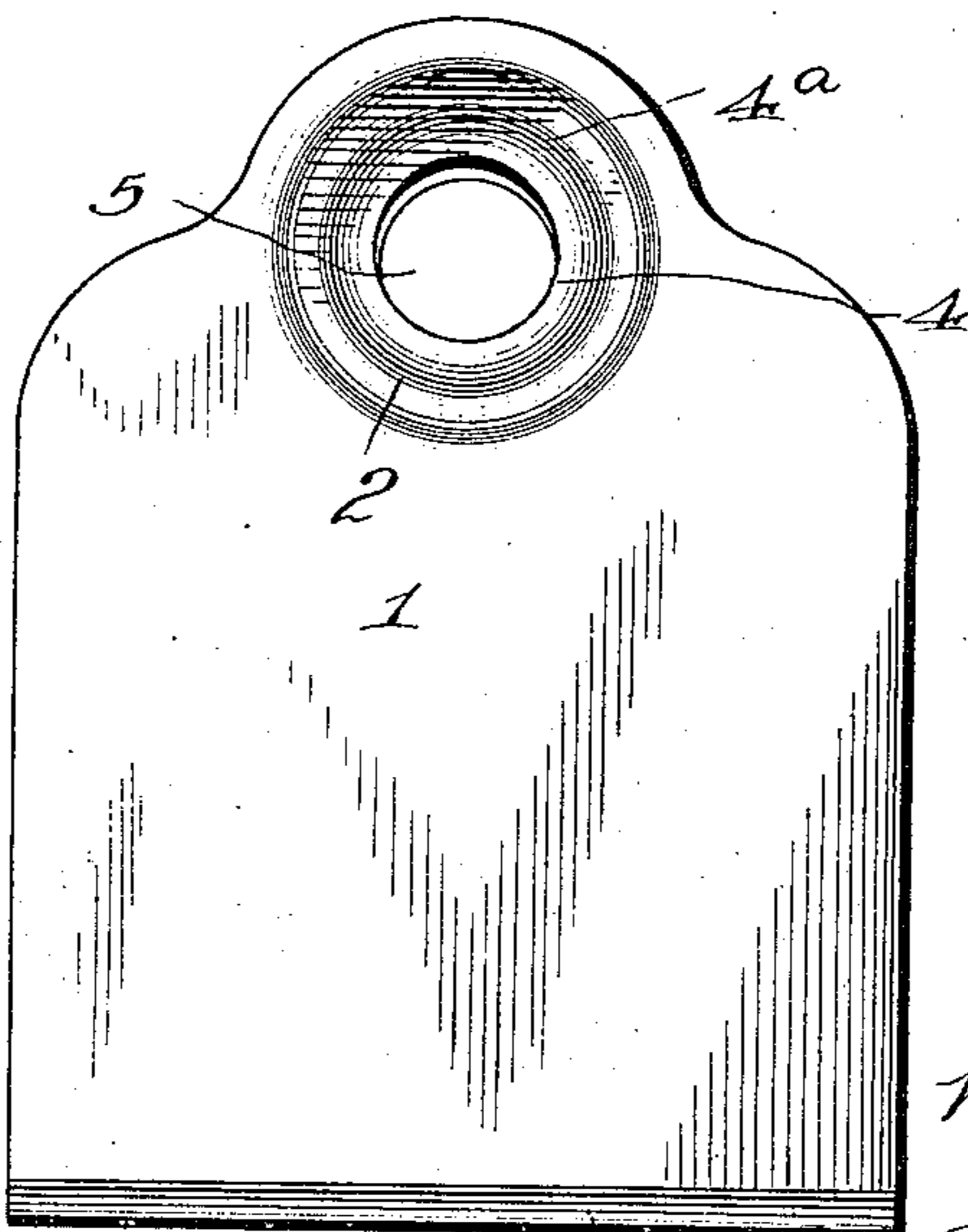


Fig. 4.



Witnesses

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# UNITED STATES PATENT OFFICE.

WILLIAM A. SPARKS, OF PARKERSBURG, WEST VIRGINIA.

## HOE.

No. 843,501.

Specification of Letters Patent.

Patented Feb. 5, 1907.

Application filed November 28, 1906. Serial No. 345,457.

*To all whom it may concern:*

Be it known that I, WILLIAM A. SPARKS, a citizen of the United States, residing at Parkersburg, in the county of Wood and State of West Virginia, have invented certain new and useful Improvements in Hoes; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to certain new and useful improvements in hoes, and more particularly to that class of hoes having interchangeable blades; and it consists in a novel and durable method of securing the blade to the handle, whereby the use of a beveled washer between the blade and the socket-piece on the handle to give the proper inclination to the blade is eliminated.

The invention consists in the features of construction hereinafter described and specifically claimed.

In the accompanying drawings, forming a part of this specification, Figure 1 is a side elevation of a hoe constructed in accordance with my invention. Fig. 2 is a longitudinal vertical sectional view thereof. Fig. 3 is an enlarged central vertical sectional view of the blade. Fig. 4 is a front elevation of the blade, and Fig. 5 is a detail view of the shank-piece.

In the drawings, 1 represents the blade, of any desired dimensions, having a depression, socket, or offset portion 2, which is preferably circular. Said depression has a wall 3, which extends rearwardly and tapers slightly inward. The depression is deeper at the top 3<sup>a</sup> than at the bottom 3<sup>b</sup>, as shown in Fig. 3. Hence the rear face or bottom 4 of the depression is inclined to the face of the blade. The rear face 4 is provided with an aperture 5 to permit the passage of the screw-threaded shank 6 of the shank-piece 7. Said shank-piece has an extending flange 8, which is preferably arranged perpendicular to the axis of the screw-threaded shank. The edge of the said flange is preferably rounded off, as at 9, to conform to the concave surface 4<sup>a</sup>, formed at the junction of the wall 3 with the rear face 4 of the depression to permit the shank-piece to fit the depression snugly.

The socket-piece 10 for the handle is interiorly tapered toward the far end of the han-

dle. When the handle is inserted, far end first, into the socket-piece, said taper prevents the handle from being pulled from the socket-piece, owing to the fact that the handle is of greater diameter at the blade or near end. The socket-piece has a screw-threaded portion 11 to receive the screw-threaded shank of the shank-piece.

When the shank-piece is inserted in the depression with the shank 6 extending through the aperture 5 and screwed into the socket-piece, the inclined face 4 coming in contact with the perpendicular face of the socket-piece, the blade will be given the necessary inclination relative to the handle. By this method of securing the blade to the handle I do away with the wedge-shaped washer, which is usually inserted between the blade and the socket-piece to give the necessary inclination to the blade, together with the inclined flange on the shank-piece, upon which it is extremely difficult to cut threads.

I claim—

1. A hoe comprising a handle, a blade having a socket therein and means arranged in said socket to clamp the blade to the handle whereby said blade is set at an angle to the handle while the socket and said means for clamping the blade to the handle are in line with said handle.

2. A hoe comprising a handle having a socket-piece secured thereto, a blade having a depression therein, an aperture arranged in the rear face of the said depression, a shank-piece having an integral shank and an extending flange, said shank adapted to extend through said aperture and clamp the blade to the socket-piece.

3. A hoe comprising a handle having a socket-piece secured thereto, a blade having a depression therein, an aperture arranged in the rear face of the said depression, said rear face being arranged at an angle with the blade, and a shank-piece having an integral shank and a perpendicularly-extending flange, said shank extended through the aperture, whereby the blade is clamped to the socket-piece.

4. A hoe comprising a handle, a socket-piece secured to said handle, a blade having a depression therein, said depression having a wall extending rearwardly and tapering inward, an aperture arranged in the rear face

of the said depression, said rear face being inclined to the blade, a socket-piece having an integral shank and a perpendicularly - extending flange, said flange adapted to engage  
5 the walls of the depression, and said shank adapted to extend through the aperture and clamp the blade to the socket-piece.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. SPARKS.

Witnesses:

CLYDE B. JOHNSON,  
J. RILEY McCOLLUM.