No. 737,179. PATENTED AUG. 25, 1903.

W. S. WARD.

SCREW DRIVER.

APPLICATION FILED APR. 13, 1903.

NO MODEL.

Fig. 1.

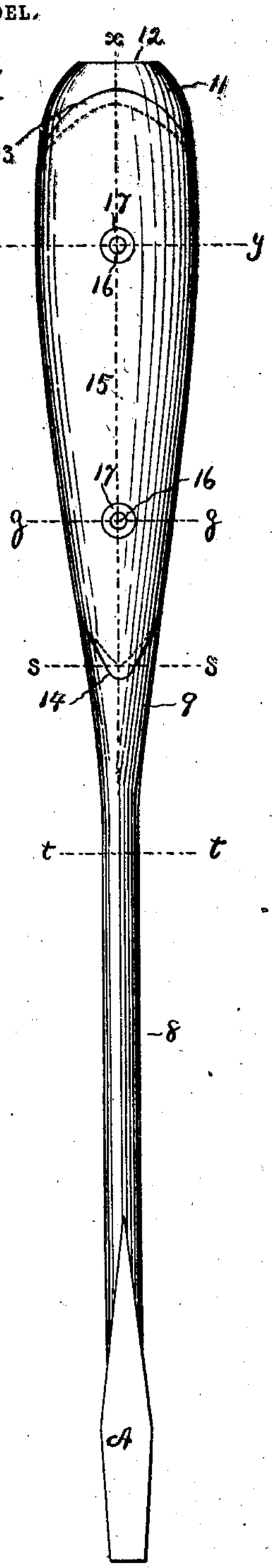

Fig. 2.

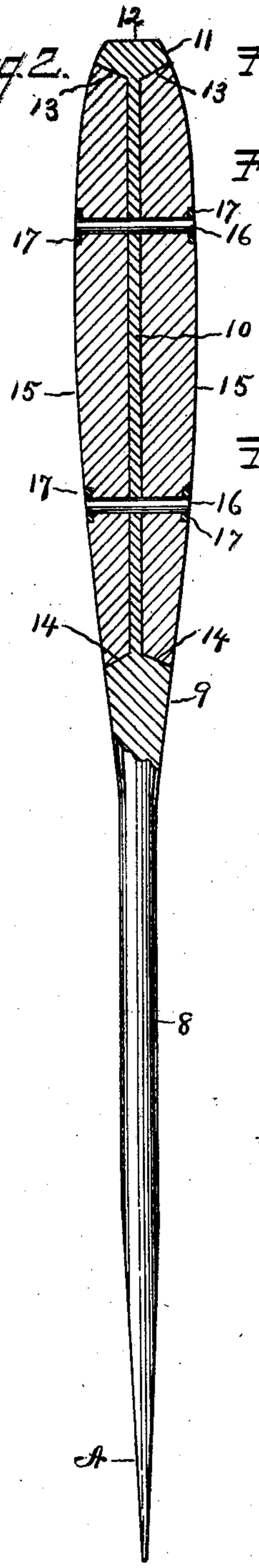

Fig. 3.

Fig. 4.

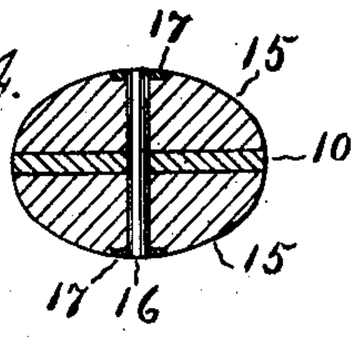

Fig. 5.

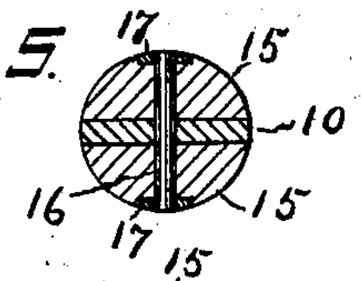

Fig. 6.

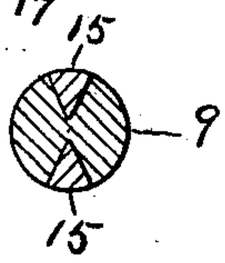

Fig. 7.

Witnesses.
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 737,179. Patented August 25, 1903.

UNITED STATES PATENT OFFICE.

WILLIAM S. WARD, OF PLANTSVILLE, CONNECTICUT, ASSIGNOR TO H. D. SMITH AND COMPANY, OF PLANTSVILLE, CONNECTICUT.

SCREW-DRIVER.

SPECIFICATION forming part of Letters Patent No. 737,179, dated August 25, 1903.

Application filed April 13, 1903. Serial No. 152,323. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM S. WARD, a citizen of the United States, residing at Plantsville, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Screw-Drivers, of which the following is a specification.

My invention relates to improvements in screw-drivers; and the object of my invention is efficiency of the article.

In the accompanying drawings, Figure 1 is a side elevation of my screw-driver. Fig. 2 is a longitudinal section on the line *x* of Fig. 1, the rivets and part of the screw-driver being shown in elevation. Fig. 3 is a view showing the end face of the butt. Fig. 4 is a transverse section, partly in elevation, on the line *y y*, Fig. 1. Fig. 5 is a like view on the line *z z*, Fig. 1. Fig. 6 is a transverse section on the line *s s* of Fig. 1. Fig. 7 is a like view on the line *t t* of Fig. 1.

The blade A gradually merges into the lower end of the round shank 8, while the upper end of the said round shank is joined by the conoidal bolster 9. In continuation of the bolster is the flat handle-web 10, the upper end of which web is joined by the handle-butt 11, having a hammer-face 12 at its extreme upper end. The butt 11 joins the web on a curved line in side view with a slanting or beveled face 13, as shown, the base of the said face being indicated by the curved broken line at the upper part of Fig. 1. The junction of the handle-web and bolster forms a similar face 14 and presents a figure in side view that may be described as a V with the bottom rounded. The base of this face is in like manner indicated in broken lines in Fig. 1. The blade, shank, bolster, handle-web, and butt are all formed integral of one piece of drop-forged metal.

On each side of the handle-web the handle-scales 15, preferably of wood, are fitted, the ends of the said handle-scales being fitted to the faces 13 and 14 to assist in holding the said scales in place. The scales and handle-web are perforated for the reception of the rivets 16, which rivets are provided with washers 17 at their ends. The butt is oval, and the handle-scales are flatted and rounded for the major part of their length, with a gradual decrease in the oval form toward the lower end, so as to present in end view and cross-section the various forms shown in Figs. 3 to 7 at the points respectively opposite the said figures.

The hammer-face 12 will often be found very convenient, the screw-driver as a whole being heavy enough and firm enough to make the said hammer-face effective. The screw-driver is very firm, substantial, and solid, while at the same time it is of a graceful and effective form and particularly convenient to handle.

I deem the conoidal shape of the bolster and lower part of the handle, merging from an elliptical cross-section into the circular one of the blade-shank by a gentle taper without any shoulder or abrupt break, as important, because it permits the operator while maintaining a firm grip upon the main portion of the handle to bring his finger and thumb down upon the bit-shank to control the point of the blade with great nicety. I also deem as important the particular form of the handle-scale-receiving faces of the bolster and butt of the metal part of the tool, which are readily manufactured by drop-forging.

I claim as my invention—

1. As a new article of manufacture, the herein-described screw-driver, consisting of the blade, the round shank, conoidal bolster, handle-web, and butt all formed in one piece, and the handle-scales secured to the said handle-web, the handle portion being elliptical in cross-section for the most part, but gradually merging with the conoidal bolster by a gentle taper into the circular tool-shank, thus providing for a firm grasp while facilitating a nice control by pressure of the finger and thumb upon the shank of the tool.

2. As a new article of manufacture, the herein-described screw-driver, consisting of

the blade, the round shank, conoidal bolster, handle-web, and butt all formed in one piece of drop-forged metal shaped as described, the handle portion being elliptical in cross-section for the most part, but gradually merging with the conoidal bolster by a gentle taper into the circular tool-shank, thus providing for a firm grasp while facilitating a nice control by pressure of the finger and thumb upon the shank of the tool.

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