

(No Model.)

G. D. TUCKER.  
SCREW THREADING TOOL.

No. 336,024.

Patented Feb. 9, 1886.

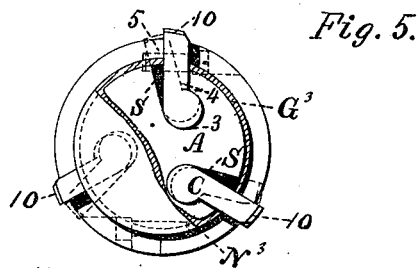
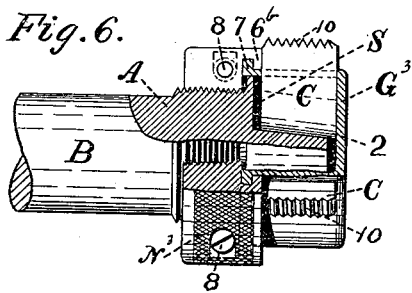
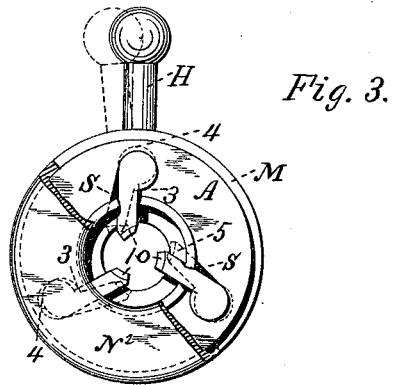
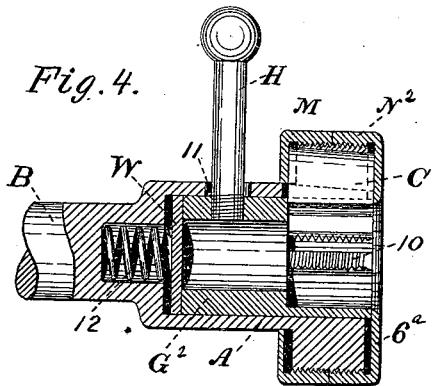
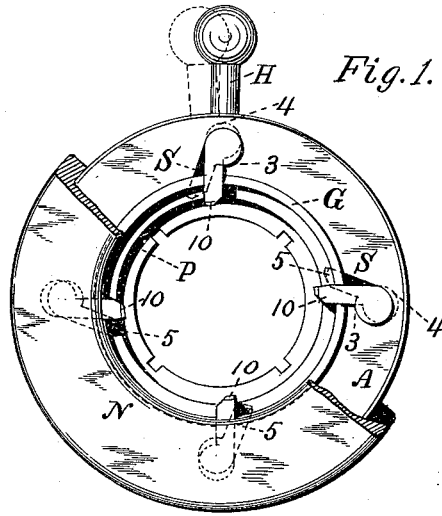
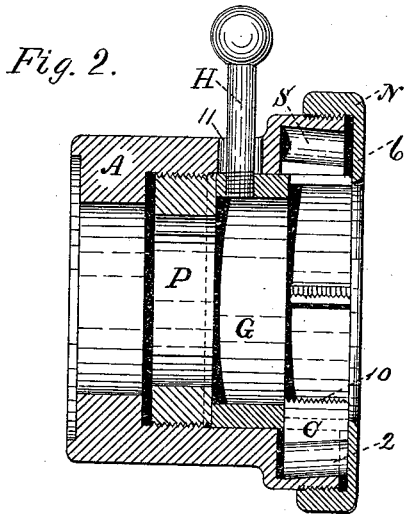
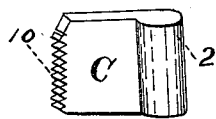


Fig. 7.



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# UNITED STATES PATENT OFFICE.

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## SCREW-THREADING TOOL.

SPECIFICATION forming part of Letters Patent No. 336,024, dated February 9, 1886.

Application filed May 25, 1885. Serial No. 166,577. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE D. TUCKER, a citizen of the United States, residing in the city and county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Threading-Tools, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof.

This invention relates to that class of threading-tools which are furnished with oscillating chasers, arranged to be adjusted to a larger or smaller diameter, as the case may be, in order that the tool may be quickly withdrawn after threading a piece.

The principal object of my invention is to provide a tool of that class in which the chasers shall be adjustable to permit some variation in the diameter of the threads made thereby; and it is equally applicable to tools for cutting either external or internal threads by a slight modification in the form and arrangement of the parts for holding and operating the chasers.

The invention consists in certain combinations, which will first be described in connection with the drawings and afterward pointed out in the claims.

Figure 1 is a front view, partially in section, showing my invention as applied to large tools for cutting external threads, such, for instance, as those on large steam and water pipes and fittings. Fig. 2 is a longitudinal sectional view of the same tool. Fig. 3 is a front view, also partially in section, of a smaller tool embodying my invention, the tool being especially adapted for use in screw-machines for cutting external threads of smaller diameter. Fig. 4 is a longitudinal sectional view of the tool shown in Fig. 3. Fig. 5 is a front view of a similar tool for cutting internal threads. Fig. 6 is a longitudinal view, partially in section, of the form of tool shown in Fig. 5. Fig. 7 is a perspective view of one of the renewable oscillating chasers which are shown in Figs. 3 and 4.

Similar characters designate the same parts in all the figures.

In the drawings, A designates the body of the tool, which body is made in various shapes

and sizes, these being determined by the kind of work for which and the conditions under which the tool is to be used. The form of body shown in Figs. 1 and 2 is adapted to be secured to the face-plate of a lathe or pipe-threading machine, while those shown in Figs. 3 to 6 generally have a shank, B, for insertion into the turret of a screw-machine. A series of sockets, S, usually three or more in number, are formed in the body A, substantially as shown in the several front views, and into these sockets the chasers C are fitted, so as to be oscillated therein, as shown by dotted lines 5 in said front views. The circular part 2 of the sockets and chasers is inclined to the axis of the body, as clearly shown in the sectional views, and by lines 3 and 4 in Figs. 1, 3, and 5. This circular part of the chasers constitutes a pivot on which said chasers oscillate. The chasers are held into the sockets by a flanged nut, N, Figs. 1 and 2, the flange of which, 6, rests against the front end of said chasers, or in Figs. 3 and 4 said nut is lettered N<sup>2</sup>, and its said flange 6<sup>a</sup>, but its operation is the same as in Figs. 1 and 2. In Figs. 5 and 6 said nut is lettered N<sup>3</sup>, and it has there a differently-formed flange, 6<sup>b</sup>, which engages with the guard G<sup>3</sup>, as in Fig. 6, which guard there has a flange, 7, for that purpose. The chasers are held forward against the flange by a nut, of which I have shown three modifications. Thus, as in Fig. 4, it may be formed as at M, similarly to the flanged nut N<sup>2</sup>, and bear directly on the chaser. It may be formed integrally with nut N<sup>3</sup>, and also bear against the chaser directly, as in Fig. 6, or it may be a separate nut, P, and bear against the guard G, this being so made as to bear against the chasers, as in Fig. 2. As shown in Fig. 6, the nut N<sup>3</sup> is made in two parts for convenience in putting together the parts of the tool, the parts of said nut being held together by screws 8 in the usual manner. Guard G<sup>3</sup> has slots, as shown best in the front views, through which the threaded parts 10 of the chasers project. These slots fit the chasers closely, so that by turning the guard said chasers may be thrown into their working position 10, or into their idle or open position 5, as may be desired. For effecting that result, the body

A may be slotted, as at 11, and a handle, H, inserted through said slot into guard G or G<sup>2</sup>. When the nut is not so made as to hold guard G<sup>2</sup> forward against flange 6<sup>a</sup>, I employ a washer, 5 W, and a spring, 12, for that purpose, as in Fig. 4. This arrangement allows the chasers to be adjusted longitudinally while protecting their sockets from dirt and chips.

The operation of my improved threading- 10 tool is substantially the same as the operation of others of its class, and will be fully understood from the description and drawings by those acquainted with said class of tools.

In using either form of tool shown, the chas- 15 ers are first adjusted in their sockets to bring them to the desired diametrical position, and thrown into their working position, when the required thread is cut in the usual manner. The motion of the tool (or piece being threaded, 20 as the case may be) is then reversed, which operation acts, by the friction of the threads on the chaser-teeth, to throw said chasers into their open position, as shown by dotted lines 5. In this position the chaser-teeth stand en- 25 tirely outside of their working position, so that the threaded piece may be instantly with-

drawn without waiting for the tool to be run off, as by the old way.

Having thus described my invention, I 30 claim—

1. The combination of a threading-tool 35 body, having chaser-sockets inclined to its axis, oscillating chasers in said sockets, a guard covering said sockets and having slots through which project the said chasers, and 35 means, substantially as described, for effecting the longitudinal adjustment of the chasers in said sockets, substantially as set forth.

2. The combination, in a threading-tool, of 40 a body, A, which has chaser-sockets inclined to its axis, and is threaded for an adjusting-nut, oscillating chasers fitted to slide in said sockets, an adjusting-nut fitted to said thread and constructed to bear against one end of the 45 chasers, and means, substantially as described, for keeping the chasers against said nut, substantially as set forth.

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