

(No Model.)

J. ECKFORD.
Wood Screw.

No. 234,759.

Patented Nov. 23, 1880.

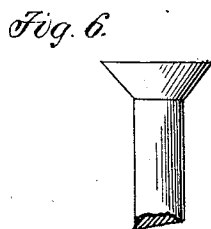
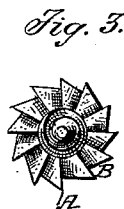
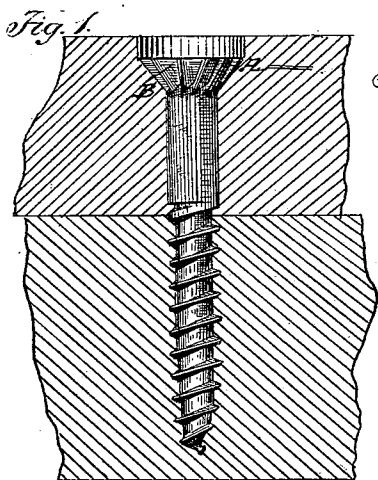


Fig. 4.

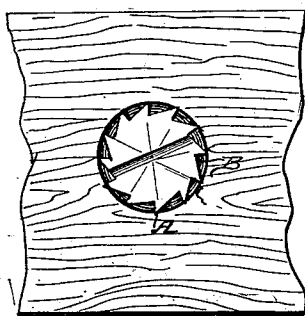
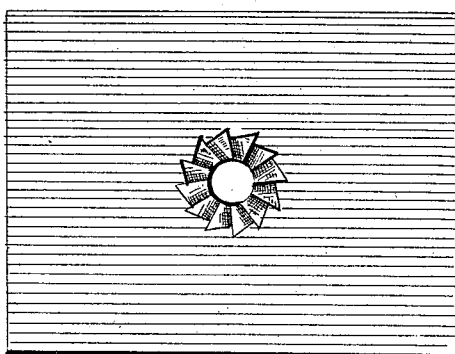


Fig. 5.



Witnesses
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UNITED STATES PATENT OFFICE.

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WOOD-SCREW.

SPECIFICATION forming part of Letters Patent No. 234,759, dated November 23, 1880.

Application filed July 30, 1880. (No model.)

To all whom it may concern :

Be it known that I, JOHN ECKFORD, a citizen of the United States, residing at San Antonio, in the county of Bexar and State of Texas, have invented certain new and useful Improvements in Countersinking Screw-Heads, of which the following is a specification.

The object of my invention is to make a self-countersinking screw-head that will work in all kinds of wood and clear itself of bore-dust.

My invention consists of a screw-head having on the under side or bevel thereof a series of bits or cutting-edges alternating with flat and deep interspaces or notches, said notches completely filling the circuit of the screw-head and the notches gradually increasing in width and depth from the screw-shank to the crown of the head, thus enabling the cutters to clear themselves.

In the accompanying drawings, Figure 1 is a side view of my improved screw, the head thereof being countersunk in a piece of wood, shown in section. Fig. 2 is a top view of my improved screw-head. Fig. 3 is a bottom of the complete screw. Fig. 4 is a top view of my screw-head, the same being countersunk in a piece of wood, as shown in Fig. 1. Fig. 5 is a top view of a die for stamping out or forming my screw-head. Fig. 6 is a side view of a blank screw-head before the same is forced into the die, Fig. 5, to form the cutting-edges and intervening notches.

In making my improved screw-head I take a suitable blank, as shown in Fig. 6, and force the same, while hot, into the die, Fig. 5, and thus stamp out the cutting-edges A and the intervening deep notches B, forming a circle or series of cutters alternating with deep notches, and completely filling the bevel or under side of the head. These cutters or edges A may be, say, a dozen, more or less, according to the

size of the screw-head and other circumstances, all projecting sharply like the cutting-edges in a worm-bit or auger. Both the cutting-edges A and the interspaces B increase in size from the shank or stem of the screw to the crown or outer edge of the head. The crown of the screw-head is completely serrated, as shown in Fig. 2, and the interspaces between the teeth or cutters are very deep, or of sufficient size and number to carry the bore-dust and throw the same out above the head, and thus completely clear themselves and prevent clogging.

This screw-head, when in operation, brings only the series of sharp edges in contact with the solid or uncut wood, as represented in Fig. 4. Both the cutting-edges and the interspaces have flat sides, and these planes meet at sharp angles, thus forming good cutters, or, in effect, a good working-bit or auger for boring the necessary countersink to receive the head of the screw, and also giving plenty of room in the interspaces for the bore-dust, which is freely ejected from the top of the screw even when the head has been completely sunk into the wood, as seen in Fig. 1.

Having thus described my invention, what I claim is—

In a countersinking screw-head having notches or cutting-edges on the under side or bevel thereof, the continuous series of cutters A and deep and flat interspaces or notches B completely filling the circle or bevel of the head, said notches opening through the top of the head, and thus forming the serrated crown, as shown in Fig. 2, substantially as and for the purposes set forth.

JNO. ECKFORD.

Attest:

WILLIAM E. ELLIS,
BONE STEPHENSON.