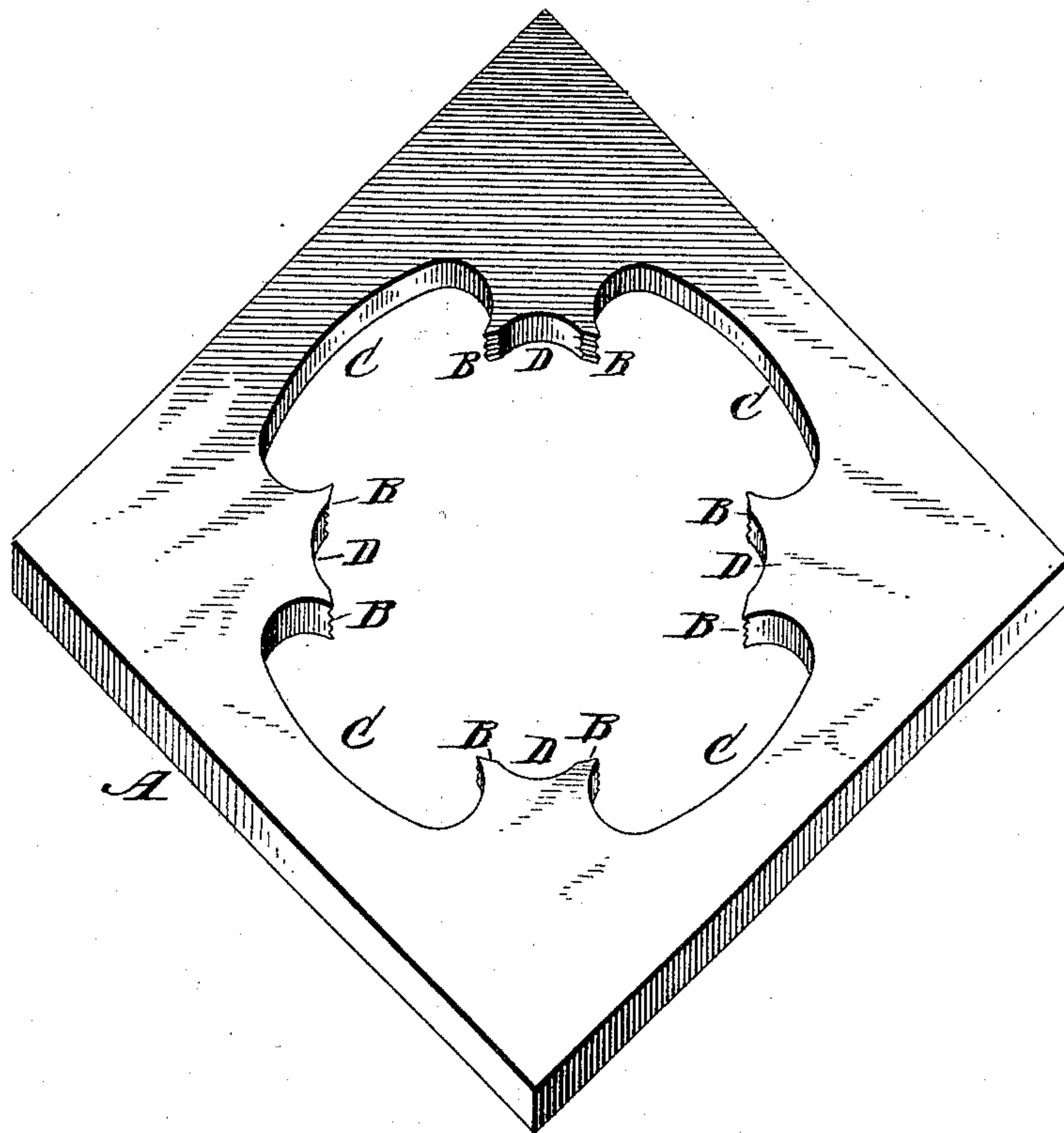


(No Model.)

G. L. ENGGREN.  
SCREW CUTTING DIE.

No. 433,334.

Patented July 29, 1890.



WITNESSES

*L. C. Hills*  
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# UNITED STATES PATENT OFFICE.

GUSTAV L. ENGGREN, OF BROOKLYN, NEW YORK.

## SCREW-CUTTING DIE.

SPECIFICATION forming part of Letters Patent No. 433,334, dated July 29, 1890.

Application filed November 12, 1889. Serial No. 330,015. (No model.)

*To all whom it may concern:*

Be it known that I, GUSTAV L. ENGGREN, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Screw-Cutting Dies; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the annexed drawing, making a part of this specification, and to the letters of reference marked thereon.

This invention relates to certain new and useful improvements in dies for cutting screws; and it has for its object to provide an improved die having a cut-out portion or space back of the cutting-points hollowed out in such manner that the friction is materially reduced at that part of the die without giving it any cutting-edge at this point, so that in the backward movement of the die no shavings are formed thereby; hence nothing to drag under and break and destroy the cutting-edge.

The novelty resides in the peculiarities of construction of the die, as more fully hereinafter described, shown in the drawing, and then particularly pointed out in the appended claim.

The invention is clearly illustrated in the accompanying drawing, which is a perspective view of my improved die.

Referring to said drawing by letter, A designates the die formed with the cutting points or edges B, between which are formed the spaces C to receive the cuttings or shavings made in the process of cutting the screw. Each cutting point or edge is cut away, as shown at D, to form a space, rounded, as shown, to dispense with or lessen friction, so that the die may be turned backward with less exertion and to prevent it making any shavings in that part of the die. It will thus be seen that any shavings that are formed in cutting the screw will be cleaned away on turning the die backward by the tooth back of the one that made the shaving, and as there are no shavings formed in the hollow back of the cutting-edge there will be nothing to drag under and break the cutting-edge.

What I claim as new is—

The die described, consisting of a plate having an opening therein, the cutting portions B, the spaces D between each pair of cutters, and the spaces C, as set forth.

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

GUSTAV L. ENGGREN.

Witnesses:

C. A. ENGGREN,  
H. McLAUGHLIN.