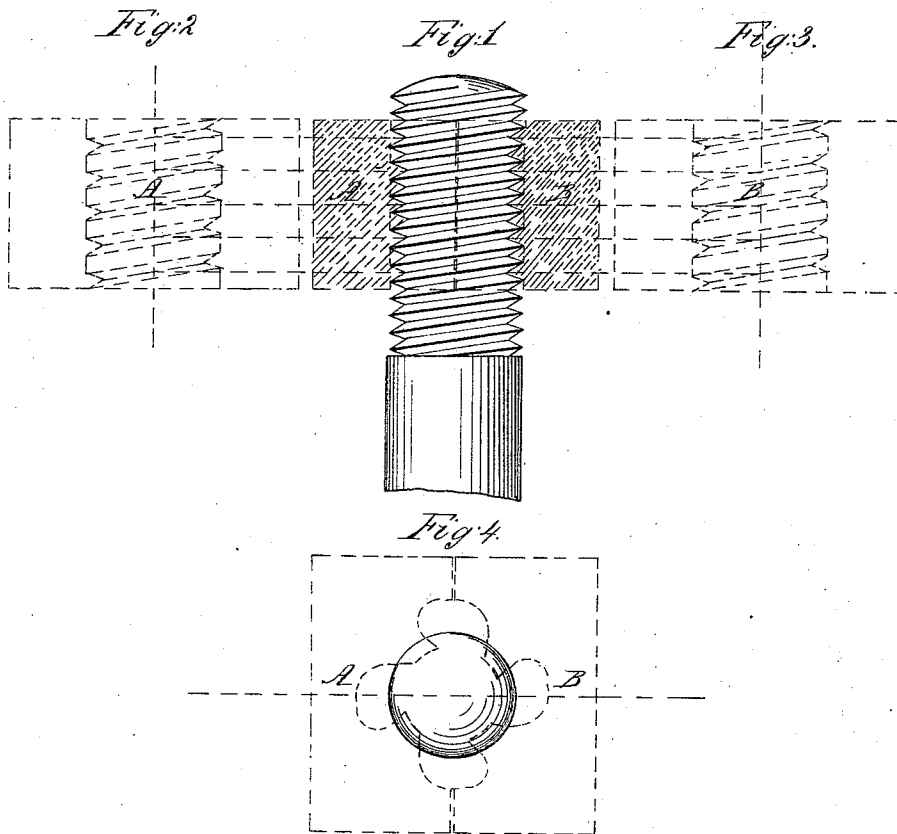


G. Grubel.

Tap and Die.

N^o 81,162.

Patented Aug. 18, 1868.



Witnesses.

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UNITED STATES PATENT OFFICE.

GEORGE GRÜBEL, OF NEW ORLEANS, LOUISIANA.

IMPROVEMENT IN TAPS AND DIES.

Specification forming part of Letters Patent No. **81,162**, dated August 18, 1868.

To all whom it may concern:

Be it known that I, GEORGE GRÜBEL, of New Orleans, in the parish of Orleans and State of Louisiana, have invented new and Improved Screw-Cutting Dies; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

Figure 1 represents a sectional view of my improved screw-die. Fig. 2 is an inner face view of one of the cheeks of the same. Fig. 3 is a similar view of the other cheek of the same. Fig. 4 is a plan or top view of the same.

Similar letters of reference indicate corresponding parts.

This invention relates to a new manner of arranging screw-cutting dies, with an object of reducing the friction, and of obtaining additional power.

The invention consists in omitting every other half thread in each cheek of the die, two such cheeks being supposed to constitute the whole die. Thereby the aforesaid desired result will be obtained.

A and B are the two cheeks, which constitute the screw-cutting die. In each of the

cheeks the second, fourth, sixth, eighth, &c., projecting rib is omitted, as indicated in Figs. 2 and 3, which, when the cheeks are set together, as in Fig. 1, will cause every other half circle of the complete thread to be omitted. Thereby ample room for the shavings is had, and many cutting-edges are produced by the projecting ends of each portion of thread, and the device will therefore work with less friction, and will require less power than the full unbroken thread.

The same invention is applicable to male-die screws for making nuts, in which case, also, alternate sections of the cutting-thread are removed.

I claim—

As my improvement of screw-cutting dies and taps, whose threads are divided transversely, so as to present two or more salient cutting-points, omitting every alternate thread, and arranging those that remain in alternation, so that the sections of cutting-thread following one another shall successively cut and give shape to opposite sides of the thread in the nut, or on the bolt which is being threaded or tapped, substantially as described.

GEORGE GRÜBEL.

Witnesses:

F. A. LOEHER,

GOTTL. BRENNENSTUHL.