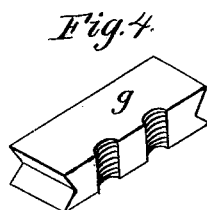
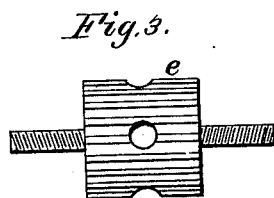
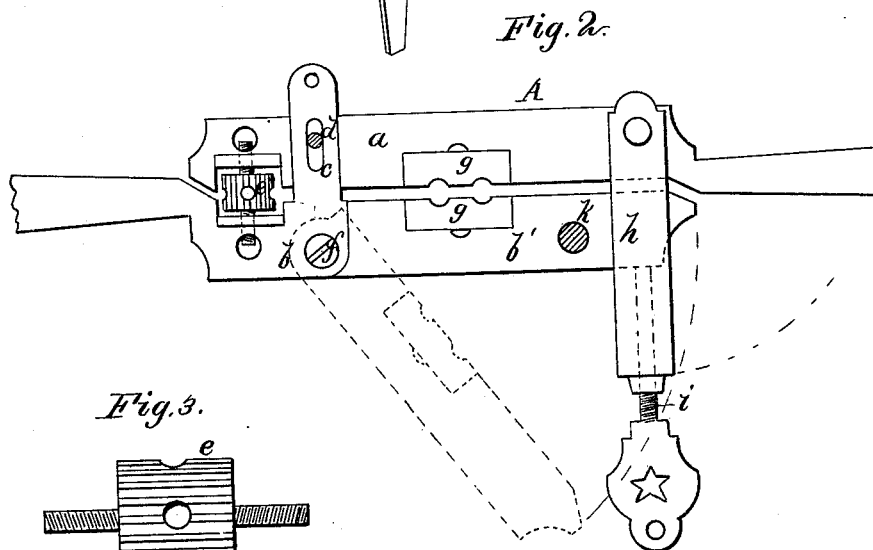
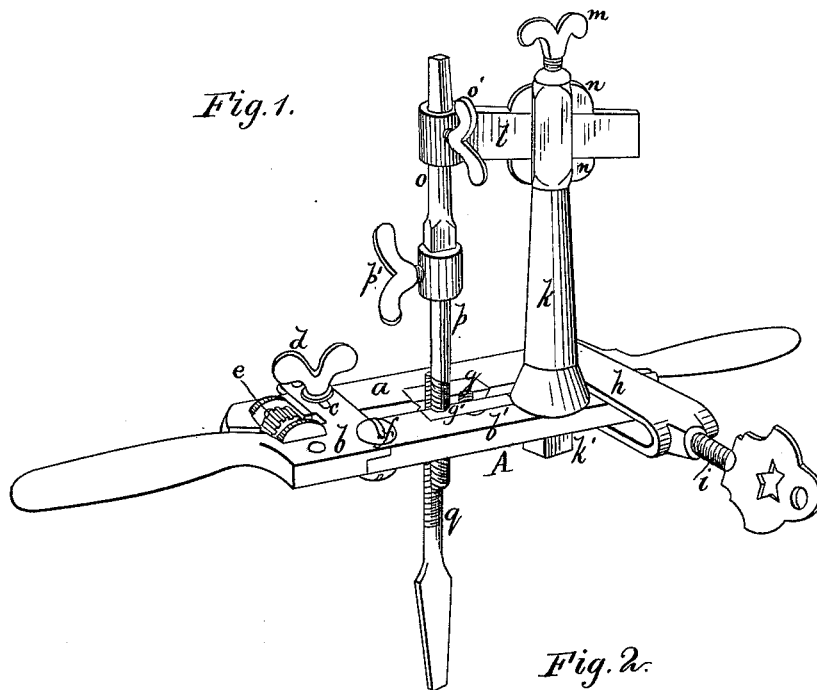


J. G. GEISER.

Plate for Holding Screw-Cutting Dies.

No. 220,601.

Patented Oct. 14, 1879.



WITNESSES:

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JOHAN G. GEISER, OF FORT CLARK, BRACKETTVILLE, TEXAS.

IMPROVEMENT IN PLATES FOR HOLDING SCREW-CUTTING DIES.

Specification forming part of Letters Patent No. **220,601**, dated October 14, 1879; application filed March 5, 1879.

To all whom it may concern:

Be it known that I, JOHAN G. GEISER, of Fort Clark, Brackettville, in the county of Kinney and State of Texas, have invented a new and useful Improvement in Plates for Holding Screw-Cutting Dies, of which the following is a specification.

In the accompanying drawings, Figure 1 is a perspective view of my improved screw-cutting die-plate. Fig. 2 is a plan view. Fig. 3 is an elevation of the adjusting-screw detached from the plate. Fig. 4 is a perspective view of one of the dies detached.

Similar letters of reference indicate corresponding parts.

My invention relates to hand-plates for holding screw-cutting taps and dies; and it consists in certain novel features of construction, whereby screw-threads may be more conveniently cut than heretofore, and whereby left-hand taps may be formed from blanks by right-hand screw-cutting devices, as hereinafter fully described.

The plate A consists of the parallel plates *a b*, connected together by the rigid arm *c*, that projects from *b*, and is connected to *a* by a butterfly-screw, *d*, that passes through a slot in *c*, so that plate *a* may be adjusted on arm *c* and clamped.

A nut, *e*, in a recess between plates *a b*, and connecting with the plates by a right-and-left-hand screw, is made use of to adjust the distance apart of the plates.

The portion *b'* of plate *b* is fitted to swing on a pivot-pin, *f*, as shown by dotted lines in Fig. 2, for convenience in removing the dies *g g*. The parts are retained closed by the yoke *h*, that is hung on *a*, so that it may be swung upon the end of *b'*, and the parts then clamped by the screw *i*, that is fitted in the moving end of *h*. By this construction the dies can be quickly placed or removed, and the parts adjusted for the diameter of screw that is to be cut. The further use of the adjusting devices will be explained hereinafter.

Upon the portion *b'* of plate *b* is rigidly connected a post, *k*. The base of *k* is formed with a stud that passes through a hole in *b'*, and a nut, *k'*, beneath *b* retains the post firmly, and so that it may be removed when not required for use.

The upper end of post *k* is slotted to receive the arm *l*, which is adjustable lengthwise in post *k*, and is to be clamped by screw *m*. I provide bearing-strips *n n* in the slot of post *k* at the upper and under side of arm *l*. These pieces extend upon arm *l* at each side of the post, and give a long bearing to the clamping-screw, whereby the arm *l* is more firmly held.

The outer end of arm *l* is cut with a round aperture in a vertical direction, through which aperture the blank-holder *o* passes loosely, and may be clamped therein by a screw, *o'*. At its lower end the holder *o* is mortised to receive a blank, *p*, that is held in place by a screw, *p'*.

In simply cutting a screw by the dies *g*, or in forming a die with a tap, the post *k* and its attached parts will not be required. The plate A will then be used in connection with a vise, in the usual manner.

For cutting a left-hand screw upon a blank to form a left-hand tap by means of right-hand screw-cutting dies, the device is arranged as shown in Fig. 1, in which the following adjustments are made: One of the hard right-hand-threaded dies *g* is allowed to remain in the plate *a*. The other right-hand-threaded die is removed, and a brass, copper, or other soft-metal block, *g'*, is put in its place, which block has simply a seat in its edge without any threads. An unthreaded blank, *p*, from which the left-hand tap is to be made, is then tightly fixed in the blank-holder *o* by the screw *p'*, which holder and blank are temporarily secured by the tightening of screw *o'*. A hardened right-hand steel tap, *q*, is then fitted to the thread of the hard right-hand die *g* in plate *a*, and the blank *p* brought forcibly against the same by the clamping devices of the plate. The screw *o'* is then loosened, so that the plate and its appurtenances can revolve without turning the blank on its axis. The tap *q* is then fixed rigidly in a vise, and the blank-holder and blank held and kept from rotating by a wrench applied to its squared end. Now, these positions being retained, a rotation of the plate A by its handles will cause the right-hand tap *q* to cut a left-hand thread on the blank *p*, in the following manner: The hard die *g* and hard tap *q* being connected by their threads, a rotation of the plate which carries hard die *g* causes the plate and appurtenances to move up

or down around the fixed tap *q* as a center, and the blank *p* being held from moving on its own axis, it is swung by its soft-metal seat or backing-block (without turning on its axis) around the tap *q*, whose threads cut in said blank a left-hand thread. As the metal of the blank being cut is harder than the brass block *g'*, said thread is not destroyed by said block, but in turn cuts in the soft block a left-hand female thread. The left-hand tap thus cut is afterward finished, and may be used for cutting left-hand threads in nuts or dies.

By means of the devices thus described any special screw may be cut, and a great desideratum supplied for the use of instrument-makers, inventors, and others.

Having thus described my invention, what I claim as new is—

1. The plate *A*, for holding screw-cutting

dies, consisting of plates *a* and *b*, hinged portion *b'*, arm *c*, nut *e*, hinged yoke *h*, and screw *i*, all combined as shown and described.

2. The combination, with the holding-plate *A* for screw-cutting dies, of the rigid post *k*, adjustable arm *l*, and blank-holder *o*, as and for the purpose described.

3. The screw-cutting plate having a hard-metal die, *g*, and soft-metal block *g'*, in combination with the cutting-tap *q* and a device for holding the blank suspended and immovable as to axial rotation between the die and block *g* and *g'*, and in contact with the tap *q*, substantially as described.

JOHAN GOTTLIEB GEISER.

Witnesses:

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