(No Model.)

H. GRUNER.

ENGRAVER'S CHUCK.

No. 520,778. Patented June 5, 1894.

FIG. 4.

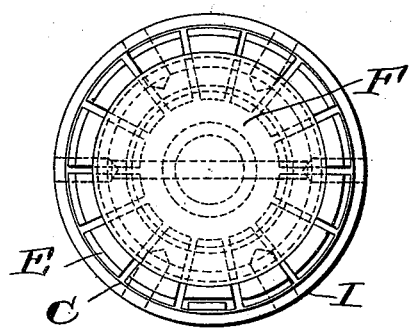
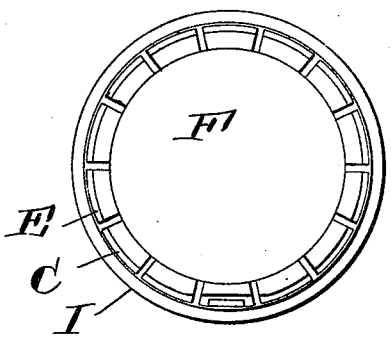


FIG. 3.



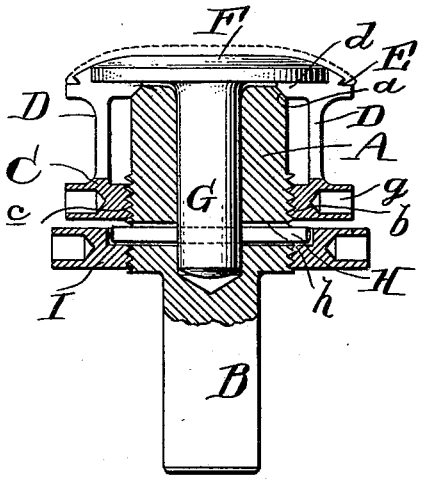


FIG. 2.

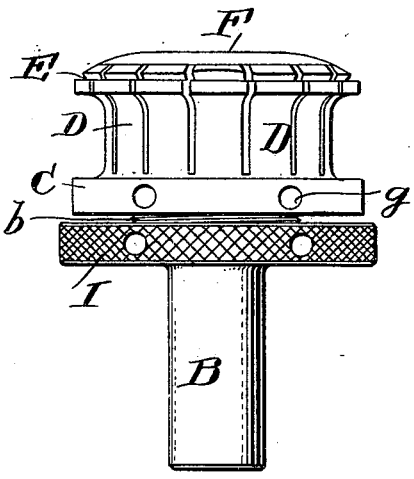


FIG. 1.

WITNESSES:

Henry Druey

Wm. H. Ward Hunt

INVENTOR:

Henry Gruner,

By his attorney,

Paul Bakewell

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

HENRY GRUNER, OF PHILADELPHIA, PENNSYLVANIA, ASSIGNOR TO THE KEYSTONE WATCH CASE COMPANY, OF SAME PLACE.

ENGRAVER'S CHUCK.

SPECIFICATION forming part of Letters Patent No. 520,778, dated June 5, 1894.

Application filed May 22, 1893. Serial No. 475,137. (No model.)

To all whom it may concern:

Be it known that I, HENRY GRUNER, of the city and county of Philadelphia and State of Pennsylvania, have invented an Improvement in Engravers' Chucks, of which the following is a specification.

My invention relates to engravers' chucks, and consists of certain improvements which are fully set forth in the following specification and shown in the accompanying drawings.

My invention relates particularly to chucks for clamping and holding objects, such as watchcase backs, covers or bezels, while they are operated upon by an engraving or knurling tool.

My improved chuck is particularly designed for holding watch case backs and covers, but it may be used for clamping other objects also.

My invention relates solely to the devices for clamping and holding the objects, and is not in any way concerned with the engraving or ornamenting operations, which may be performed by hand or by machinery in any of the well known methods.

The object of my invention is to clamp the object to be operated firmly in the chuck, and at the same time to properly and evenly support its back so that the metal may not yield under the action of the engraving or knurling tool.

In the accompanying drawings I have shown a chuck adapted to be applied to a lathe spindle and rotated. It will be understood, however, that the chuck may be stationary, if desired.

In the drawings: Figure 1 is a side elevation of my improved engraver's chuck. Fig. 2 is a vertical sectional view of the same. Fig. 3 is a plan view of the chuck; and Fig. 4 is a similar view illustrating some of the concealed parts by dotted lines.

A is the stem or body of the chuck, which may be provided with the shank B adapted to be received in the lathe spindle or in a clamp or vise, if the chuck is to be stationary. The front edge of the stem or body A is beveled as at *a*, and the rear portion of the body is provided with external screw threads *b*.

C is an annular clamping piece adapted to fit upon the body A, and is provided with internal screw threads *c* for attachment to the threads *b* of the body. The piece C is split longitudinally from the front so as to form a series of spring tongues D. The spring tongues so formed are provided with beveled portions *d* which are seated upon the beveled edge *a* of the body A.

The outer front edge of the piece C is provided with an annular undercut E. The rear of the piece C is suitably constructed to permit the piece to be screwed in either direction upon the threaded body A. In the drawings I have shown it provided with recesses *g* adapted to receive a key. When the piece C is screwed down upon the body A the beveled portions *d* of the spring tongues D are pressed upon the beveled edge *a* of the body and the spring tongues D are pressed outwardly.

F is a back supporting plate or disk, fitting within the outer end of the annular piece C and having its outer surface *f* curved or shaped to correspond with the inner surface of the watch case cover or other object to be clamped. The plate F is provided with a stem G which extends within a socket in the body A.

H is a pin or projection carried by the stem G and projecting laterally through a slot *h* in the body A below the piece C.

I is an internally threaded nut carried by the threaded body A below the pin H and adapted when it is screwed up upon the body A, to strike the pin H and force the stem G and its plate F forward.

When a watch case cover or other object is to be placed on the chuck, the piece C is moved slightly forward so that the spring tongue pieces are not under tension. The under cut rim of the cover may then fit loosely over the under cut E of the piece C. The piece C is then screwed down and the spring tongues D are forced outwardly by the beveled face *a* acting on the portions *d*, so that the edge of the under cut E fits tightly under the rim of the cover and thus clamps it securely. The nut I is then screwed forward, and striking the projecting pin H it carries it forward in the slot *h*, moving the stem G and pressing the plate F firmly against the inner face of the watch case cover. The cover is then firmly clamped and supported upon the chuck

for the purpose of applying the engraving or knurling tool. The plate F firmly supports the cover throughout its surface so that it may not yield under the pressure of the engraving or knurling tool. To unclamp the cover the piece C is screwed forward to relieve the tension upon the tongues D, which then contract and release the rim of the cover.

While I prefer the minor details of construction which have been shown, they may be varied without departing from the principles of my invention.

What I claim as new, and desire to secure by Letters Patent, is—

1. A chuck consisting of a stationary body, an annular clamping piece carried by the stationary body and movable longitudinally thereon and provided with a spring clamping edge, and a back supporting plate carried by the stationary body and located within the spring clamping edge of the clamping piece, provided with a stem extending into the stationary body which carries a projection extending laterally through the body.

2. A chuck consisting of a stationary body, an annular clamping piece carried by the stationary body and movable longitudinally thereon and provided with a spring clamping edge, and a back supporting plate carried by the stationary body and located within the spring clamping edge of the clamping piece, provided with a stem extending into the stationary body which carries a projection extending laterally through the body, and means carried by the body to act upon the projection of the stem and move the back supporting plate.

3. A chuck consisting of a stationary body, an annular clamping piece carried by the stationary body and movable longitudinally thereon and provided with a spring clamping edge, and a back supporting plate carried by the stationary body and located within the spring clamping edge of the clamping piece, provided with a stem extending into the stationary body which carries a projection extending laterally through the body, and a movable nut carried by the body and adapted to strike the projection of the stem.

4. A chuck consisting of the stationary body A having the beveled edge *a*, the annular clamping piece C carried by the body A and movable thereon having the spring clamping tongues D having beveled faces *d* resting on the beveled edge *a* of the body A, the plate F located within the spring tongues D, provided with the stem G extending into the body A, the pin H carried by the stem G extending laterally through a slot in the body A, and the threaded nut I carried by the body A and adapted to act on the pin H.

In testimony of which invention I have hereunto set my hand.

HENRY GRUNER.

Witnesses:
H. M. KAIN,
C. H. HALL.