J. RICH.

Watchmaker's Lathe.

No. 113,095. Patented March 28, 1871.

Fig. III.

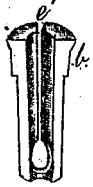


Fig. IIII.

Fig. I.

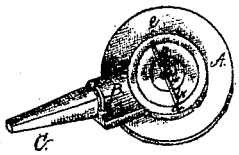
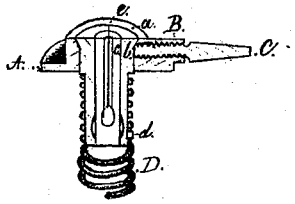


Fig. II.



Witnesses.

William Pettingell

William Wadsworth

United States Patent Office.

JOHN RICH, OF PAINESVILLE, OHIO

Letters Patent No. 113,095, dated March 28, 1871; antedated March 27, 1871.

IMPROVEMENT IN CHUCKS FOR LATHES.

The Schedule referred to in these Letters Patent and making part of the same.

I, JOHN RICH, of Painesville, in the county of Lake and State of Ohio, have invented certain Improvements in Lathe-Chuck Face-Plates, of which the following is a specification.

My invention relates to a face-plate for chucks, which is attachable to the self-centering chuck invented and patented by JOHN RICH.

Said face-plate is composed of the disk A, collar *a*, cylinders *b* and *c*, box B, and set-screw C.

a is a collar formed on the disk A; the interior of said collar is turned out true, with a bevel formed in its interior, near the upper edge, said bevel receiving and holding securely the divided cylinder *b*, said cylinder having a beveled projection formed on its upper end, which fits into the beveled seat in the collar *a*, and prevents the cylinder from passing downward below the level of the edge of the collar *a*.

In the interior of the cylinder *b* is a still smaller cylinder, *c*, which is divided like the cylinder *b*.

Both cylinders, when in position in the collar *a*, have the cut or division *e* in line.

The set-screw C acts against the side of the cylinder *b*, and, when screwed in, forces the two parts of the cylinder together, causing both halves of the cylinder to grasp securely any article that may be placed between them; the screw C passes through the box B, which is secured to the disk A, and made in one piece with the collar *a*, making it both light and strong. The cylinder *c* can be removed, thus allowing any article to be placed and secured in the cylinder *b*. If the article is too small for the interior of the cylinder *b*, the cylinder *c* is placed in the interior of the cylinder *b*; then, by turning up the set-screw, it will be firmly held in position.

The coiled spring D is used to attach the face-plate to the chuck, when a hollow mandrel is used, by passing down the interior of the hollow mandrel, and is secured to the same in any convenient manner. The cylinder *b* is passed into the interior of the coil of the spring.

All the parts are shown in section in Figure II of drawing.

This face-plate is designed for the use of jewelers and others who require a light, nice, and easy-to-adjust face-plate; and, when it is combined and used with the chuck invented by JOHN RICH, the advantage over all other face-plates is easily seen, this being self-centering.

Description of the Accompanying Drawing.

Figure I, view of face-plate with all parts complete and embodying my invention.

Figure II, transverse section of the same.

Figure III, view of cylinder *b*.

Figure IV, view of cylinder *c*.

General Description.

The construction of this invention is as follows:

The disk A has the collar *a* formed and attached firmly to it. The interior is turned out true, with a bevel cut in its interior, near the upper edge, to receive a corresponding beveled projection, which is formed on the upper end of the divided cylinder *b*. Said cylinder is passed into the interior of the collar, and through the hole in the center of the disk A.

Any article to be acted on, and of a size which will pass into the interior of the cylinder *b*, is placed between the halves, which are opened by the spring formed by the longitudinal cut *e*, and are held by the closing together of the two parts by the pressure of the screw C. If the article is too small the smaller cylinder *c* is placed in the interior of the cylinder *b*, and acted on in the same manner by the screw C.

Any number of cylinders may be used and graduated to fit any size of work.

The face-plate is attached to the lathe-plate by the spring D, when a hollow mandrel is used, by passing the end of the spring into the interior of the mandrel. Said mandrel has a longitudinal slot cut in it to allow a screw-pin to slide back or forth in it. The end of the coiled spring D which passes into the mandrel has the screw-pin secured to it, and is secured to its place by a nut.

The action of the spring D is this: by loosening the nut and sliding the pin outward the end of the spring is thrown out clear of the hollow in the mandrel. The face-plate can be attached to the end of the spring by screwing the shank formed by the cylinder *b* into the interior of the coil, the pin on the shank following the coil. When the face-plate is secured to the spring the pin is drawn back, carrying the spring back into the hollow of the mandrel, where it is secured in its place by the nut, thus forming the necessary tension to secure the face-plate to the mandrel by elongating the spring.

I claim as my invention—

1. The improved tool, herein described, consisting essentially of the disk A and the raised collar *a*, the clamping-screw C, and two or more split cylinders, *b c*, to be inserted one within the other, or not, as occasion may require.

2. The coiled spring D, in combination with the disk A, collar *a*, cylinders *b* and *c*, and screw C, substantially as and for the purpose as hereinbefore set forth.

JOHN RICH.

Witnesses:

WILLIAM PETTINGELL,

WILLIAM WADSWORTH.