

M. McANLY.
Chuck.

No. 224,345.

Patented Feb. 10, 1880.

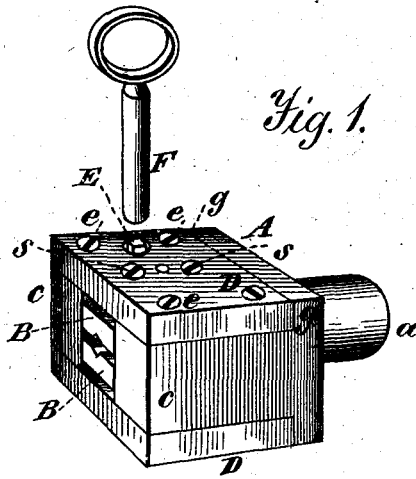


Fig. 1.

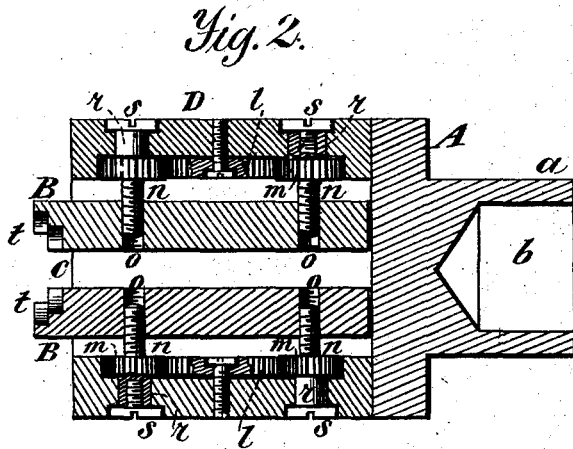


Fig. 2.

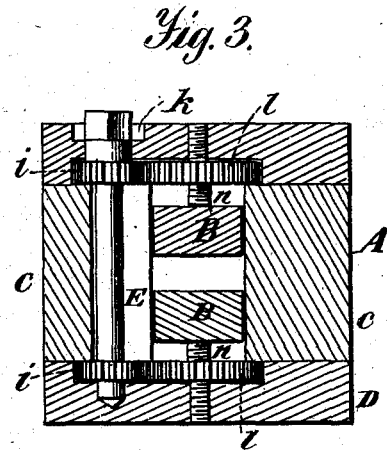


Fig. 3.

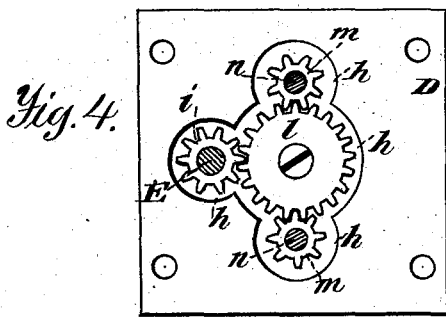


Fig. 4.

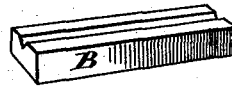


Fig. 5.



Fig. 6.

Witnesses.
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UNITED STATES PATENT OFFICE.

MILTON McANLY, OF FORRESTON, ILLINOIS.

CHUCK.

SPECIFICATION forming part of Letters Patent No. 224,345, dated February 10, 1880.

Application filed October 23, 1879.

To all whom it may concern:

Be it known that I, MILTON McANLY, of Forreston, in the county of Ogle and State of Illinois, have invented certain new and useful Improvements in Chucks; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to letters of reference marked thereon, which form a part of this specification.

This invention relates to chucks especially adapted for jewelers' use, but which may be employed for other purposes; and it consists in an improvement upon a chuck patented by me September 10, 1878, numbered 207,882, which improvement will be fully hereinafter described, and particularly pointed out in the claims.

In the drawings, Figure 1 represents a perspective view of my improved chuck and the key by which the gearing is operated to open and close the clamps. Fig. 2 represents a longitudinal section of the chuck, showing a modification of the clamps. Fig. 3 represents a transverse section of the chuck. Fig. 4 represents a detached view of one of the side plates of the chuck, showing the gearing by which the clamps are operated; Fig. 5, a detached view of one of the clamps; and Fig. 6, a sectional view of the same, showing the threaded recess in which one of the operating-screws works.

All of the parts of my improved chuck are constructed of steel.

The letter A indicates the supporting-frame of the chuck, which is a casting provided with a boss, *a*, having a recess, *b*, by means of which it may be fitted upon the mandrel of a lathe. Said frame is provided with jaws *c c*, having a space between, in which the clamps B are accurately fitted and adapted to work.

The letter D represents two side plates, secured to opposite sides of the jaws *c c* by means of screws *e* or otherwise, the rear ends of said plates resting against shoulders *g* on the frame A, to hold said plates against longitudinal strain. Each plate is provided on its inner side with a recess or series of recesses,

h, in which the cog-wheels and pinions for operating the screws for working the clamps are located.

The pinions *i* are mounted near the opposite ends of a shaft, E, which is located in a recess in one of the jaws *c*, and has its bearings in the opposite side plates, the said shaft at one end being squared and passing through an aperture, *k*, in one of the side plates, so that it may be operated by means of a suitable key, F. The said pinions *i* intermesh respectively with the cog-wheels *l*, which are journaled in their respective recesses in the side plates, D, and these cog-wheels intermesh with the pinions *m* at each side, the said pinions *m* being secured to the screws *n*, which work in the screw-threaded apertures or recesses *o* in the clamps B, whereby said clamps may be made to approach to or recede from each other uniformly, the screws of one clamp being left-handed and the other right-handed for this purpose. The said screws are provided with journals *r* at their outer ends, which have their bearings in the opposite plates D, and are confined therein by means of the broad-headed screws *s*, which turn freely with the journals.

The clamps are interchangeable, and, as shown in Fig. 2, project beyond the face of the clutch, and are provided at their forward ends with segmental recesses *t*, in order that they may hold wheels of different sizes at their peripheries. As shown in Figs. 5 and 6, the clamps are of such length as to be flush with the forward face of the chuck when in place, and are provided with a V-shaped longitudinal groove, in order to grasp and hold the shaft of a pinion or wheel or the shank of a tool. In this form of the clamps the recesses for the operating-screws do not extend entirely through the clamp, in order that the screws may not interfere with the article when chucked.

The operation of my invention will be evident from the above description without further explanation.

It will be perceived that by reason of the uniform movement of the clamps to and from each other the chuck will be self-centering, and will form an accurate and easily-adjusted chuck specially adapted to fine work.

Having thus fully described my invention, what I claim, and desire to secure by Letters Patent, is—

5 1. In combination with the clamps of a chuck, the adjusting right and left handed screws, provided with journals at their ends, and confined in their bearings in the side plates by means of screws, substantially as specified.

10 2. In combination with the movable clamps, the key-shaft provided with pinions near each

end, the cog-wheels in which said pinions intermesh, and the pinions on the adjusting-screws of the clamps, the whole arranged to operate substantially as specified. 15

In testimony that I claim the foregoing I have hereunto set my hand this 17th day of October, 1879.

MILTON McANLY.

Witnesses:

JOS. A. SKINNER,

SAML. ULRICH.