

(No Model.)

J. N. SKINNER.

LATHE CHUCK.

No. 303,331.

Patented Aug. 12, 1884.

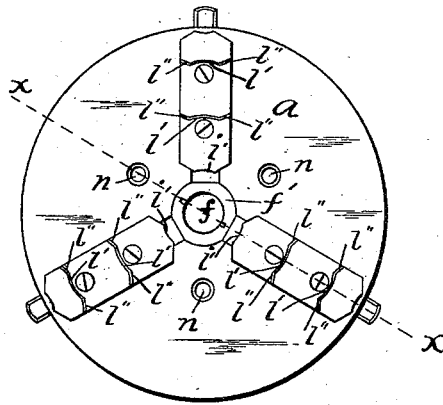


Fig. 1.

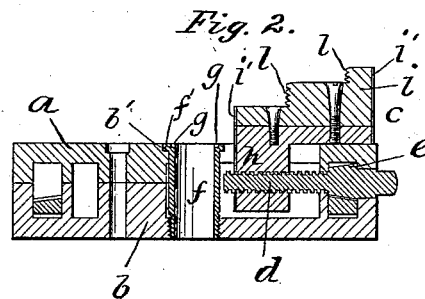


Fig. 2.

Fig. 4.

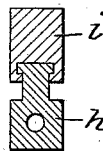
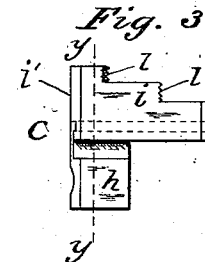


Fig. 3.



Witnesses.

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JAMES N. SKINNER, OF NEW BRITAIN, CONNECTICUT.

LATHE-CHUCK.

SPECIFICATION forming part of Letters Patent No. 303,331, dated August 12, 1884.

Application filed May 17, 1883. (No model.)

To all whom it may concern:

Be it known that I, JAMES N. SKINNER, of New Britain, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Lathe-Chucks; and I do hereby declare that the following is a full, clear, and exact description thereof, whereby a person skilled in the art can make and use the same, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Like letters in the figures indicate the same parts.

Figure 1 is a face view of a three-jaw chuck of my improved construction. Fig. 2 is a view in cross-section of same on plane denoted by line *x x* of Fig. 1. Fig. 3 is a detail side view of a jaw with holding-faces reversed. Fig. 4 is a view in section on plane denoted by line *y y* of Fig. 3.

My invention relates to the ordinary and well-known form of lathe-chucks; and it consists in the special combination of parts for holding the body-halves together.

In the accompanying drawings, the letter *a* denotes one body-half; *b*, the other body-half; *c*, the jaw as a whole; *d*, the threaded shaft bearing the pinion *e*, adapted to mesh into the ring-gear in the usual manner for changing the chuck from the independent to the combination form, or the reverse. Into the central opening, through the body-halves, the hollow bolt or sleeve *f* is fitted, screw-threaded to secure it in the threaded socket, and having the flanged head *f'* fitting in the countersunk seat *b'* in the body-half. Mortises *g g* or similar devices are provided as holding-places for a tool used in screwing the bolt into or out of its socket. This hollow bolt is especially serviceable in closing, as it does, the opening between the body-halves heretofore left at the sides of the central opening through the chuck. The jaw *c* is divided into two parts on a line in the direction of its length; and these parts may be called the "nut-section" *h*, as it bears the nut through which the shaft *d* operates, and the holding-section *i*. The holding-section *i* rests directly upon the face of the chuck, and has along its length and opening downward the T-shaped mortise. The nut-section *h* is adapted to be moved within the body of the chuck by means of the shaft *d*, which fits the threaded socket of the nut-section, and it has a T-shaped

tenon, which passes through the usual slot in the face of the chuck-body, and fits into the mortise in the holding-section *i*. These jaw-sections, when ready for use, are held together by means of the tapered screws, as shown in Fig. 2, and when so assembled the front body-part of the chuck, at the edges of the radial slots, fits into the grooves (see Figs. 3 and 4) left between the jaw-sections. When the jaws are holding any piece of work, the section *i* bears against the outside of front body-half and the nut-section against the inside, and any play or looseness of parts caused by wear can be taken up by shaving off the upper surface of the tenon and drawing the jaw-sections together with the tapering screws.

The holding-section is provided with the usual serrated or roughened holding-faces, *l*, on one or more steps, and these faces are concave at about the center *l'*, and chamfered at the edges *l''*, so that they are adapted to hold either a convex or a concave object. One special advantage of this feature in this regard is that the chuck, with the parts, as shown in Figs. 1 and 2, adapted to grasp the outside of any object, may be readily changed to grasp the inner surface of a hollow cylinder or the like by simply removing the screws, turning the holding-section end for end, (see Fig. 3,) and replacing and turning home the screws. In the latter position the grooved holding-face *i'* gives a long bearing and a firm hold for using a drill or the like.

The openings *n* through the chuck are for the purpose of holding the dog, to prevent work from rotating in the grasp of the chuck.

The flanged hollow bolt not only serves to exclude dirt from the interior of the chuck-body; but it also serves a more important purpose in binding the body-halves firmly together at the center.

When the jaws are used at the outer limit of their play in holding an object, the strain often springs up and breaks the body-half *a*, when the body-halves are united in the ordinary way.

I claim as my invention—

In a lathe-chuck, in combination, the body-halves bearing the countersunk and threaded sockets, and the flanged hollow bolt, all substantially as described.

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