A. Judson,

Lathe Chuck,

No. 84,698. Patented Dec. 8, 1868.

Fig. 1.

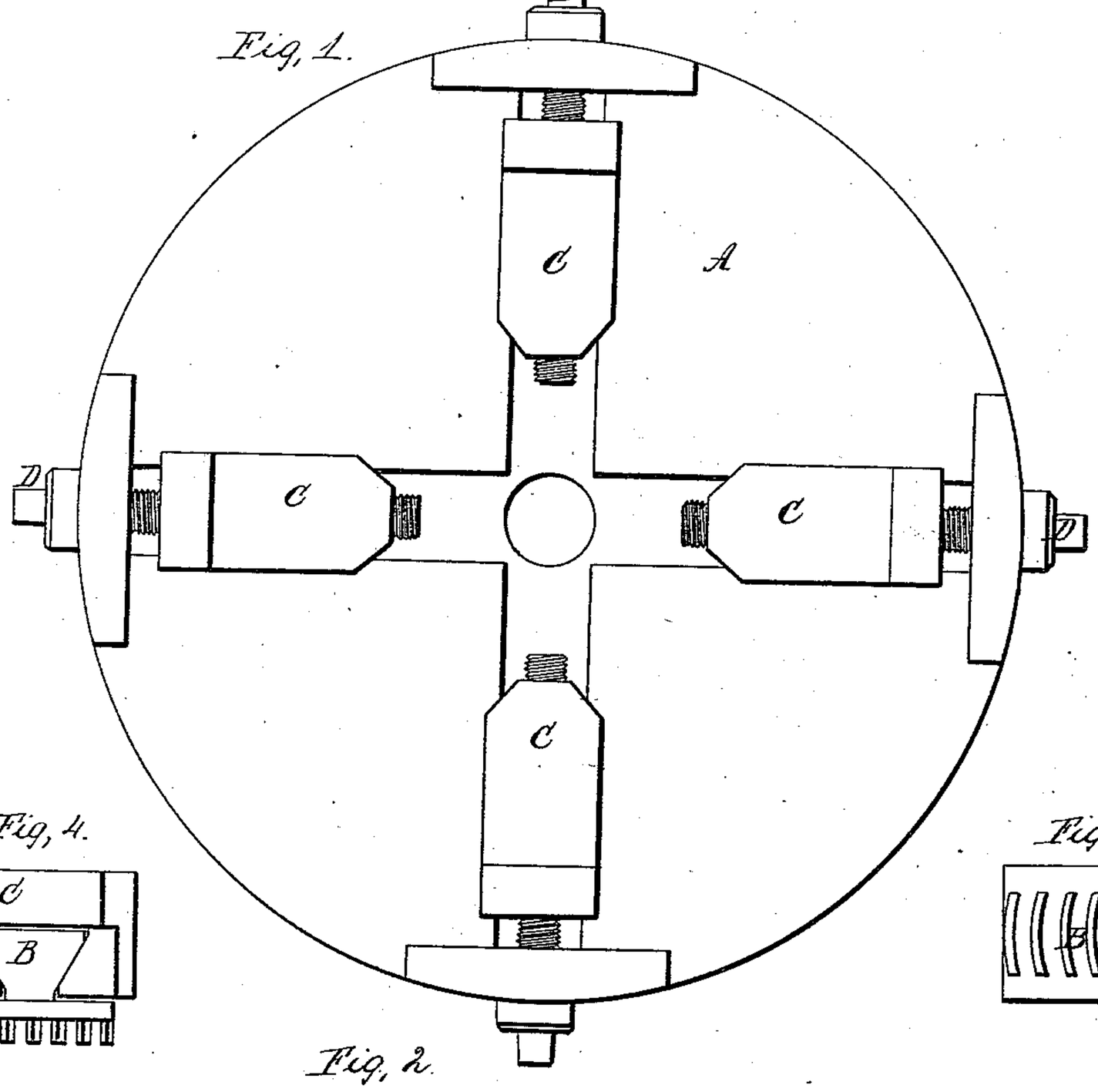


Fig. 4.

Fig. 5.

Fig. 2.

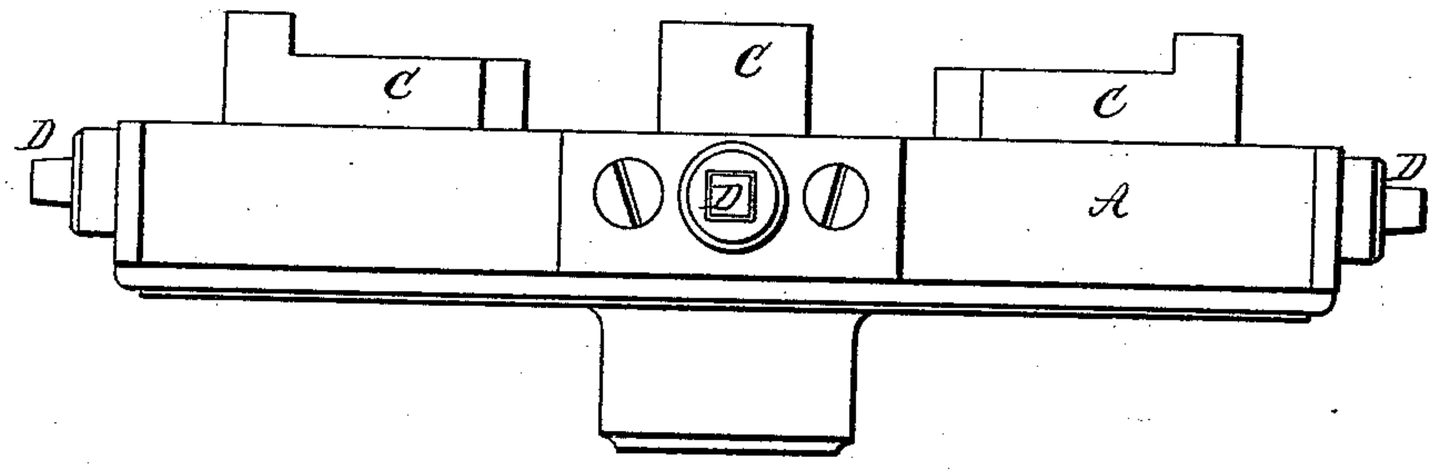


Fig. 3.

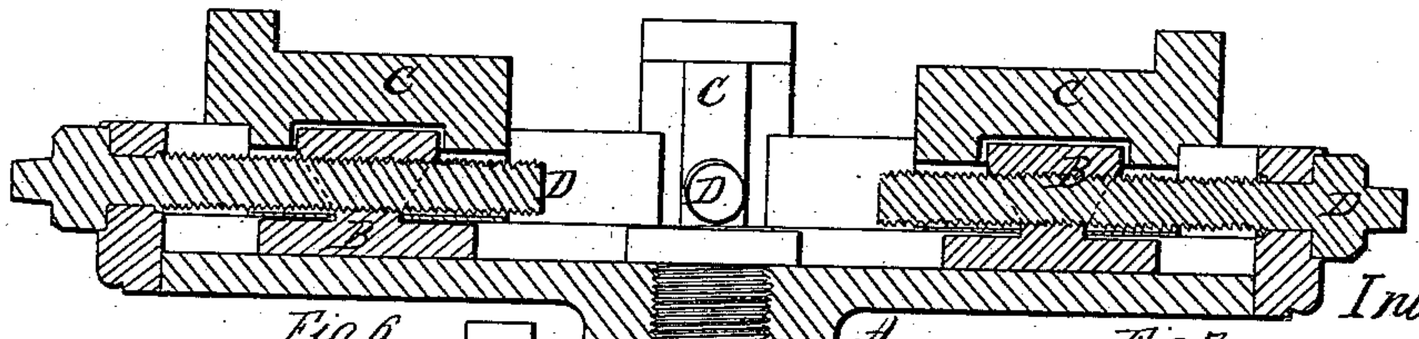


Fig. 6.

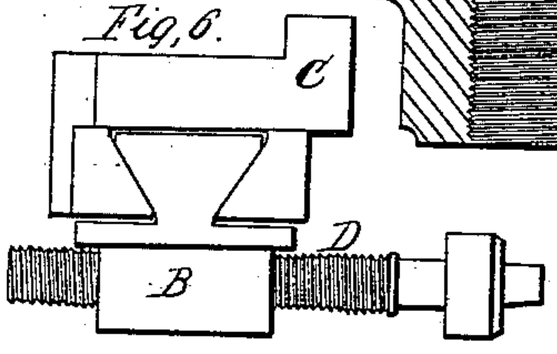
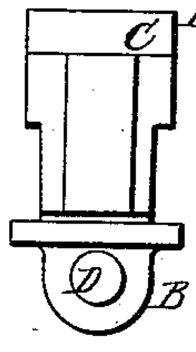


Fig. 7.



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ANSON JUDSON, OF BROOKLYN, NEW YORK.

Letters Patent No. 84,698, *dated December* 8, 1868.

IMPROVED LATHE-CHUCK.

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

Specification of certain Improvements in Chucks for Lathes, Planing-Machines, &c., invented by ANSON JUDSON, of Brooklyn, in the county of Kings, and State of New York.

Nature and Object of the Invention.

In the previous construction adopted in the manufacture of chucks, the resolution of the force between the power applied and the resistance encountered as the chuck was drawn up, has had a tendency to throw the article chucked away from the face-plate of the lathe, or the bed of the planer or shaping-machine, which tendency has rendered it very difficult to keep articles being chucked snugly to the face-plate or bed, and consequently difficult to secure them truly in position.

My invention consists in the construction of the jaws of the chuck, and the nuts or their equivalent by which said jaws are connected to the screws or other device by which these jaws are operated, in two parts, so connected to each other that the action of the nut or its equivalent upon the jaw of the chuck shall have a tendency to keep the work snugly to the face-plate or bed, instead of crowding it therefrom, substantially as herein more fully set forth.

Description of the accompanying Drawings.

Figure 1 is a face view of a lathe-chuck, embodying my improvement, in which figure each jaw of the chuck is represented as being operated by an independent screw.

Figure 2 is a side view of the same.

Figure 3 is a central axial section of the same.

Figure 4 is a detail view, showing a construction suitable to be adopted in what is known as the scroll-chuck. This figure gives a side view of one of the jaws of the chuck, and of the device by which said jaw is connected to the scroll.

Figure 5 shows a back-side view of the piece shown in fig. 4, for connecting the jaw to the scroll.

Figure 6 is a side view of a jaw, nut, and screw adapted to be used upon a planing or shaping-machine, and may also, perhaps, be used upon some forms of lathe-chucks.

Figure 7 is an end view of the same.

General Description.

A represents the face-plate or frame of the chuck, which face-plate or frame is of similar construction to that usual in the construction of the common chuck with independent screws. It is provided with T-shaped grooves to receive the nuts B by which the jaws C are operated.

The nuts B are made in similar form of cross-section to that usual for the inner part of the jaw through which the screw passes in the ordinary chuck; but the part which connects with the jaw is made to dovetail into it, as shown in figs. 3, 4, and 6, in such a manner that when the force of the screw is applied in chucking the article to be secured, the pressure of this dovetail portion of the nut will have a tendency to draw the jaw down snugly upon the face-plate or bed, and thus prevent the work from being forced away from said face-plate or bed.

The jaw C is formed with two projections or hooks extending down into the face-plate, and embracing the dovetail portion of the nut, as shown in figs. 3, 4, and 6; and in fig. 3 the screw D, by which the nut, and consequently the jaw, are operated, passes through these inwardly-projecting parts of the jaw, but these parts are not threaded so as to form any nut, the screw being allowed to slide freely through them.

In figs. 6 and 7, the screw D is placed below these parts of the jaw, and does not pass through them, while in figs. 4 and 5 the nut or block B is represented as being constructed with threads on its inner side, adapted to the scroll-plate which is often used in the construction of lathe-chucks.

The effect of making the nut and jaw in two parts, and so constructing them that the nut shall work upon inclined surfaces upon the jaw, as herein described, is that the jaw is, in the act of chucking the work, always drawn inward, so as to bear truly against the face-plate instead of the chucking-end of the said jaw, being naturally thrown out from the face-plate by the action of the screw; consequently the work which is being chucked is never driven away from the face-plate, but is always held firmly thereto.

It is obvious that the angle of these surfaces of contact between the parts B and C may be varied as the caprice of the manufacturer, or the particular uses for which the different individual chucks may be intended, may dictate, or the forms of these surfaces somewhat modified, as, for example, by making them curved instead of straight, without essentially affecting the operation or changing the nature of the device; and it is even very possible that the two parts, B and C, might be connected by links instead of inclined planes, and made to successfully embody this invention, and accomplish its purpose and design; but I do not recommend this latter construction.

Claim.

I claim, as my invention, the improvement in chucks herein described; that is to say—

Making the jaw C and the nut B, or its equivalent, in two or more parts, instead of in a single piece, as has formerly been done, and so combining these parts that the action of the part B upon the part C shall draw the latter snugly to the face-plate or bed, substantially as hereinbefore set forth.

ANSON JUDSON.

Witnesses:

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