

United States Patent Office.

JOHN O'CONNOR, OF BUFFALO, NEW YORK, ASSIGNOR TO HIMSELF AND
E. M. KETCHUM, OF THE SAME PLACE.

Letters Patent No. 69,577, dated October 8, 1867.

IMPROVED LATHE-CHUCK.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, JOHN O'CONNOR, of the city of Buffalo, in the county of Erie, and State of New York, (assignor to myself and E. M. Ketchum, of the same place,) have invented a certain new and improved Bolt-Centring Chuck for Lathes; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure I is a vertical section of my improvement.

Figure II is a side elevation of the same in working position upon a lathe.

Figure III is a vertical section of a modification of my improvement.

Figure IV is a top plan view of the same.

The nature of this invention relates to the construction of a device for holding round or square bolts or rods, and presenting their ends to the action of a centring tool upon the main spindle of a lathe, and consists of two horizontal jaws, which may be moved up or down, as required, by means of a screw passing vertically through the same, which screw is supported within a vertically adjustable box or frame, the whole device being firmly connected to the saddle-plate of the slide-rest of a lathe.

Letters of like name and kind refer to like parts in each of the figures.

A represents an L-shaped bracket, which is secured to the top of the saddle-plate of the slide-rest of a lathe in the same manner as the tool-stock, the latter being removed for that purpose. B represents an oblong box or frame, which is fitted against the perpendicular face of the bracket in such manner that it may be moved up or down upon said face, and adjusted at any required height by means of the screw-shank *c*, passing through the slot *a'* made in the bracket, and provided with a washer and nut, *c'*, upon its end. D D' represent two sliding jaws or clamp blocks, projecting horizontally from the open face of the box or frame B, their shanks, *d*, being fitted into the box in such manner that they allow their moving up or down, but not sidewise or rocking. A right-and-left screw, E, having bearings in the top and bottom of the box B, passes through the shanks of both blocks, one-half of such screw, having a right-hand thread, passing through and operating the upper block, and the other half, having a left-hand thread, operating the lower block. Hence, when the screw E is revolved, by means of the crank E' upon the top, or a hand-wheel or equivalent device, in one direction, the clamping blocks will approach each other, and if in the opposite direction, they will recede from each other. The under side of the upper block and the upper side of the lower one are provided with semicircular grooves *f f'*, which, when both blocks are brought into close contact, together form a horizontal circular opening. The edges of these grooves are made exactly parallel with each other, so that a round bar or rod, of a diameter larger than that of the grooves, may be placed and securely held between said edges in a horizontal position.

The operation of my improvement is substantially as follows: The tool-stock being removed from the saddle-plate of the slide-rest of the lathe, the centring-chuck is placed upon and secured to the latter in a like manner. Then the bolt or bar which requires to be centred is placed between the clamping blocks and laid in the groove *f'*. The crank E' being turned so as to cause the blocks to approach each other, the bolt may now be firmly clamped between them, and held in a horizontal position. Then, by moving the bracket A towards the centre of the lathe, and by raising or lowering the box or frame until the centre of the bolt or rod is precisely in line with the centre of the main driving-spindle of the lathe, the chuck may be adjusted in proper working position. After the chuck has been thus adjusted, the whole slide-rest is moved by any common or convenient manner sidewise, so as to present the end of the bolt or rod to the action of the centring-tool *g*. One end of the rod being centred, a single turn of the crank E' will release the rod, the other end of which may be presented to the centring-tool in a like manner.

By a slight modification in the construction of my improved chuck it may be used for a variety of other purposes. The most important of these is the holding bars for milling out "jaws." For this purpose the right-and-left screw E is removed, and replaced by a right-hand screw, L, which operates only one of the clamping blocks, the other one being made loose upon the screws. Two bars, *h h'* are then placed between the blocks, projecting upon one side of the box or frame B, and between these projecting ends the bar or jaw to be milled is secured by means of a bolt, *j*, clamping the blocks B together, holes *i* being made in the ends of the blocks for that purpose. This modification is represented in Figs. III and IV, together with a top view of a portion of a lathe and the milling-tool, clearly exhibiting its operation.

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

A bolt centring-chuck for lathes, constructed, arranged, and operating in the manner and for the purpose substantially as herein described.

JOHN O'CONNOR.

Witnesses:

B. H. MUEHLE,
EDW. WILHELM.