

J. A. JARVIS.

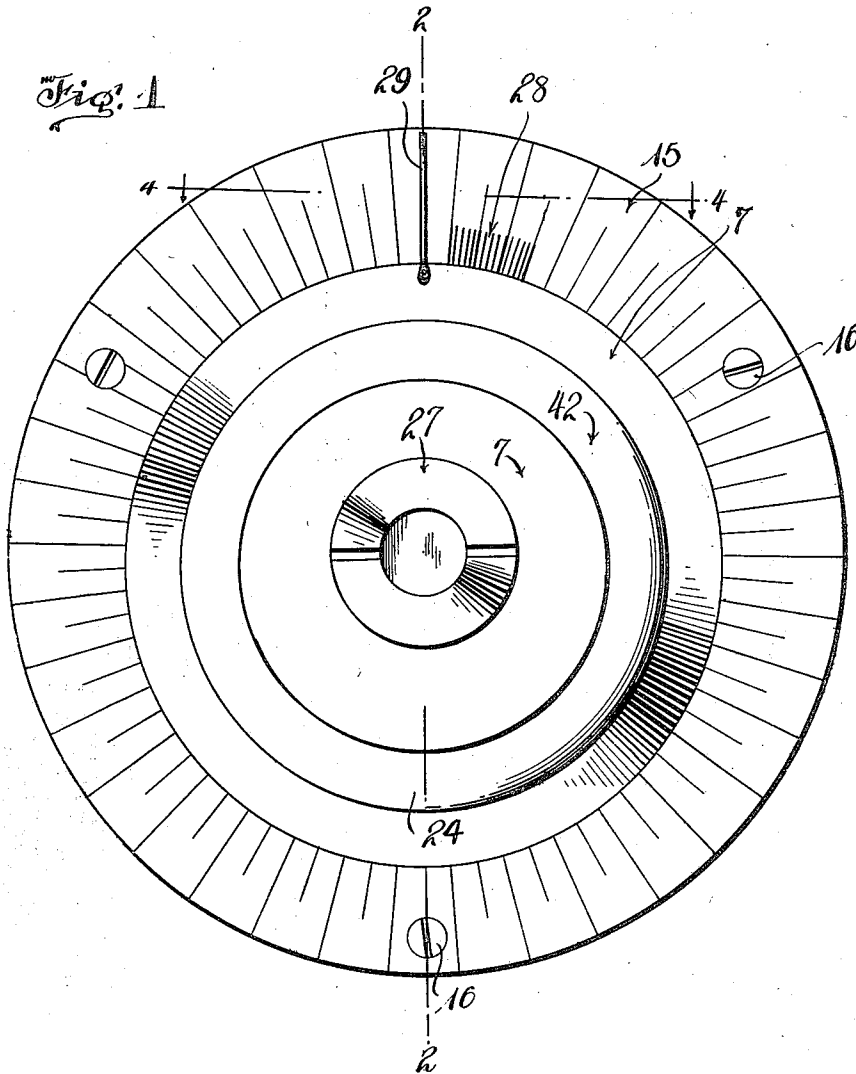
CHUCK.

APPLICATION FILED APR. 8, 1910.

981,566.

Patented Jan. 10, 1911.

3 SHEETS—SHEET 1.



Witnesses
Ernest Strocker
Francis Boyle

Inventor
Joseph A. Jarvis

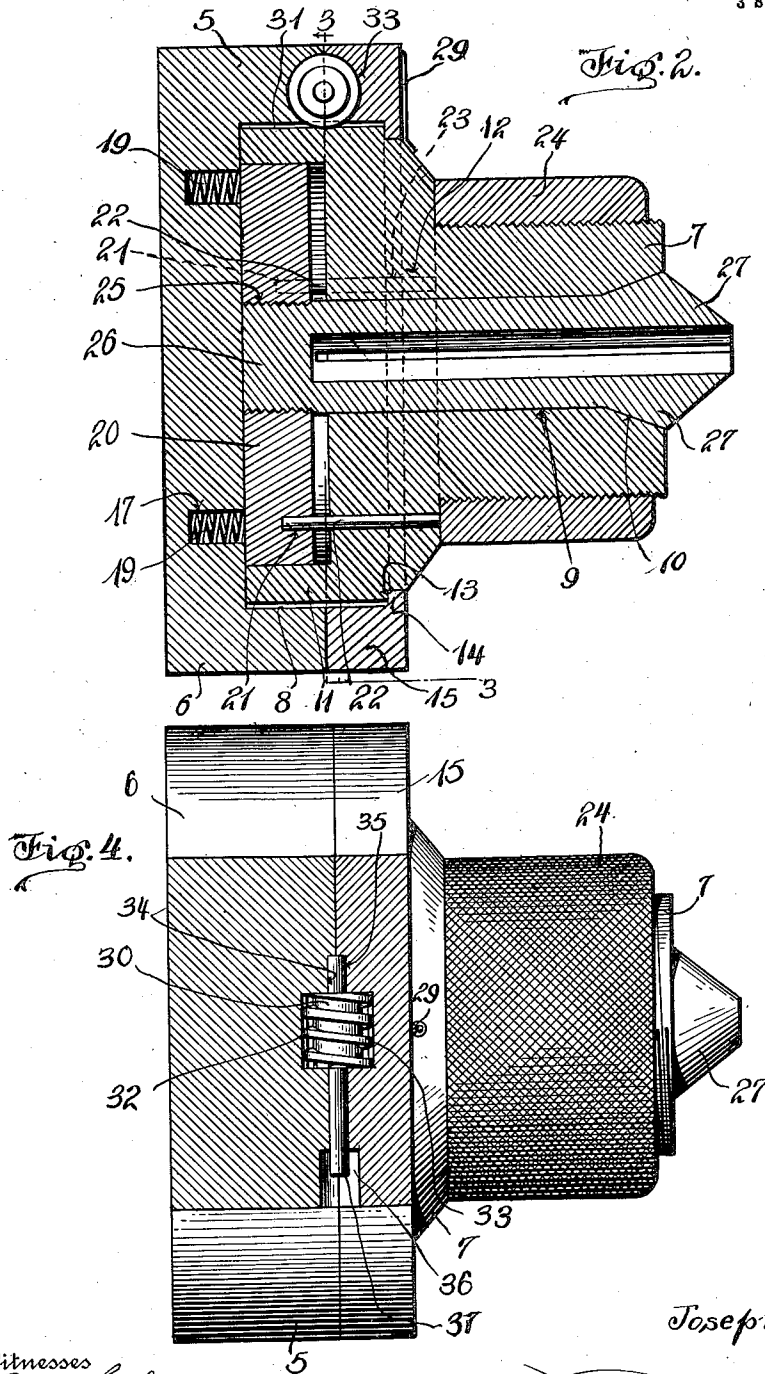
By *Charles Chandler*
Attorney

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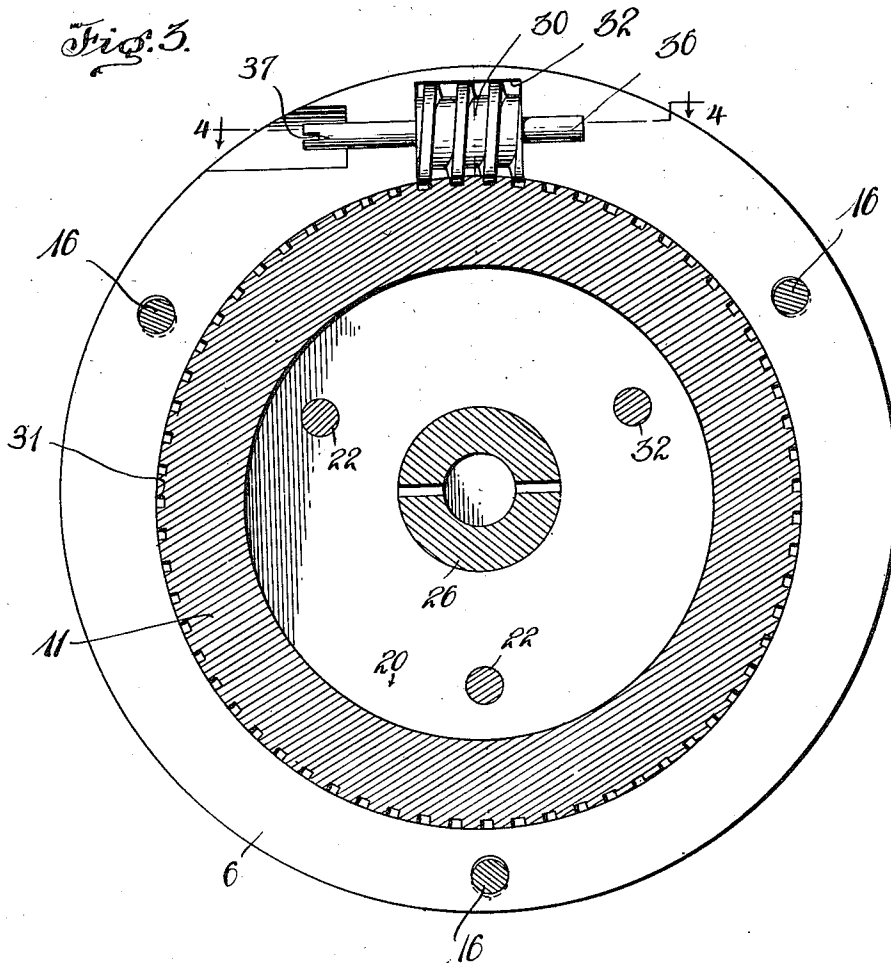
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3 SHEETS-SHEET 3.

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UNITED STATES PATENT OFFICE.

JOSEPH A. JARVIS, OF LYNN, MASSACHUSETTS.

CHUCK.

981,566.

Specification of Letters Patent. Patented Jan. 10, 1911.

Application filed April 8, 1910. Serial No. 554,167.

To all whom it may concern:

Be it known that I, JOSEPH A. JARVIS, a citizen of the United States, residing at Lynn, in the county of Essex, State of Massachusetts, 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.

This invention relates to new and useful improvements in chucks and it has more particular reference to a chuck in which novel means are provided for obtaining selected adjustments of the tool holder, eccentric to the center of the work.

In connection with a chuck having the above general characteristics, the invention aims as a primary object to provide a novel construction, combination and arrangement of parts, the details of which will appear in the course of the following description in which reference is had to the accompanying drawings, forming a part of this specification, like characters of reference designating similar parts, throughout the several views, wherein:—

Figure 1 is a front elevation of a chuck constructed in accordance with the present invention. Fig. 2 is a central longitudinal sectional view of the chuck. Fig. 3 is a section on the line 3—3 of Fig. 2, looking in the direction of the arrow. Fig. 4 is a horizontal section on the line 4—4 of Fig. 1.

The body of the chuck is designated generally by the numeral 5 and comprises a major section 6 and a section 7 eccentrically adjustable with relation thereto. The section 6 has a dished face 8, the curved wall of which is eccentric to the outer curved wall of said section 6. The section 7 is formed with a longitudinal bore 9 having a flaring front end 10. Said section 7 at its rear end is provided with a projecting annular flange 11 which is eccentric to the bore 9 and which lies in contact with the curved wall of the dished face 8. The flange 11 is offset from the body of the section 7 by an annular web 12 formed adjacent its upper edge with an annular shoulder 13 to accommodate an annular inwardly extending flange 14 formed on a clamping ring 15, the latter having its central opening eccentric to its periphery and being secured to the section 6 by screws 16, which latter are

passed through the ring 15, and threaded into said section 6.

Recesses 17 are formed in the dished face 8 to receive expansive coil springs 19, which latter bear against a plate 20 having its annular edge in contact with the inner face of the flange 11. The plate 20 is formed in one face thereof with a plurality of recesses 21 in which are disposed the ends of pins 22, which project loosely through openings 23 in the web 12. The section 7 has its body portion externally threaded to receive a follower ring 24, which is designed to engage the ends of the pins 22 and to force said pins, as well as the plate 20, inwardly of the section 6. The said plate 20 has a central threaded opening 25 in which is engaged the tool holder 26, the latter being disposed in the bore 9 and including spring jaws 27, which are designed to spring outwardly by virtue of their natural resilience and to be drawn inwardly by reason of engagement with the flaring mouth 10 of the bore 9, this action of the jaws 27 being had by movement of the plate 20.

The face of the web 12 is flush with the adjacent face of the ring 15, which latter is provided with calibrations 28 of any desired degree. The web 12 is provided on its face with a radial pointer 29 which extends out over the ring 15 and by means of this pointer the degree of eccentricity of the bore 9 in the different adjusted positions of the member 7 with relation to the member 6 may be read on the scale 28. The means for effecting adjustable movement of the member 7 comprises a worm 30, which is engaged with worm teeth 31 formed on the outer face of the flange 11. The worm 30 is disposed in an opening afforded by recesses 32 and 33 formed in the section 6 and in the ring 15, which recesses, at each end thereof, have registering extensions 34 and 35 to receive as bearings, a stem 36, upon which the worm 30 is carried, the said stem being formed at one end with a transverse opening 37 to permit of the rotation of said stem by means of a suitable instrument, as for example, a screw-driver. It will thus be seen that by turning the worm 36 in the manner described, the section 7 is turned so as to vary the eccentric position and degree of the bore 9. It will further be apparent that when the ring 24 is turned toward the web 12, the plate 20 will be forced inwardly and the jaws 27 tightened upon

the tool in the manner described, and that when said ring 24 is turned away from the web 12, the springs 19 will force the plate 20 outwardly, whereby the jaws 27 will, of themselves, disengage the tool.

The invention is simple in its structural details, inexpensive to manufacture, and practical and efficient in use.

What is claimed is:

1. In a chuck, a major member having a dished face, a member having a central bore in its body portion and having an offset flange disposed in said dished face, a plate disposed within the confines of said flange and having sliding movement toward and away from said body portion, springs for forcing said plate toward said body portion, and manually operable means for forcing said plate away from said body portion, combined with a tool holder secured to said plate, disposed in said bore and having spring jaws designed to expand and to be contracted upon movement of said plate toward or away from said body portion.
2. In a chuck, a member having a dished face formed with an annular wall, a second member having a flange lying in contact with said annular wall and having a longitudinal bore, a ring attached to said first named member and having a flange overlying the face of said second member, said ring having an eccentric opening surrounding said second member, the wall of said opening lying in contact with the annular face of said second member, said annular face being eccentric to said bore, said ring having its outer face formed with a calibrated scale, said second member being provided on its outer face with a radially disposed pointer pointing toward said scale and manually operated means for effecting

a rotatable adjustment of said second member in either direction.

3. In a chuck of the type set forth, a major member having a dished face formed with a curved wall, a member formed at one end thereof with an annular flange seated in said dished face and lying in contact with said curved wall, said flange being offset from the body portion of said last named member by an annular web, said dished face being formed with recesses, a plate disposed within the confines of said flange and having sliding movement toward and away from said web, springs disposed in said recesses for moving said plate toward said web, said plate being formed with a central threaded opening, the body portion of said last named member being formed with a central bore in registry with said threaded opening and having a flaring mouth, said web being formed with openings therethrough, pins passing loosely through said openings and having their ends contacting with said plate, said body portion being formed with external screw threads, and a threaded ring mounted upon said body portion, and serving as a follower to engage the ends of said pins, combined with a tool holder, having an end disposed in said threaded opening, said tool holder being disposed in said bore and being formed with resilient jaws tending to spring outwardly and designed to be contracted by engagement with said flaring mouth.

In testimony whereof, I affix my signature, in presence of two witnesses.

JOSEPH A. JARVIS.

Witnesses:

CHARLES LEIGHTON,
ARTHUR H. BROWN.