

No. 791,027.

PATENTED MAY 30, 1905.

H. A. HEUPEL.  
CHUCK.

APPLICATION FILED JULY 8, 1904.

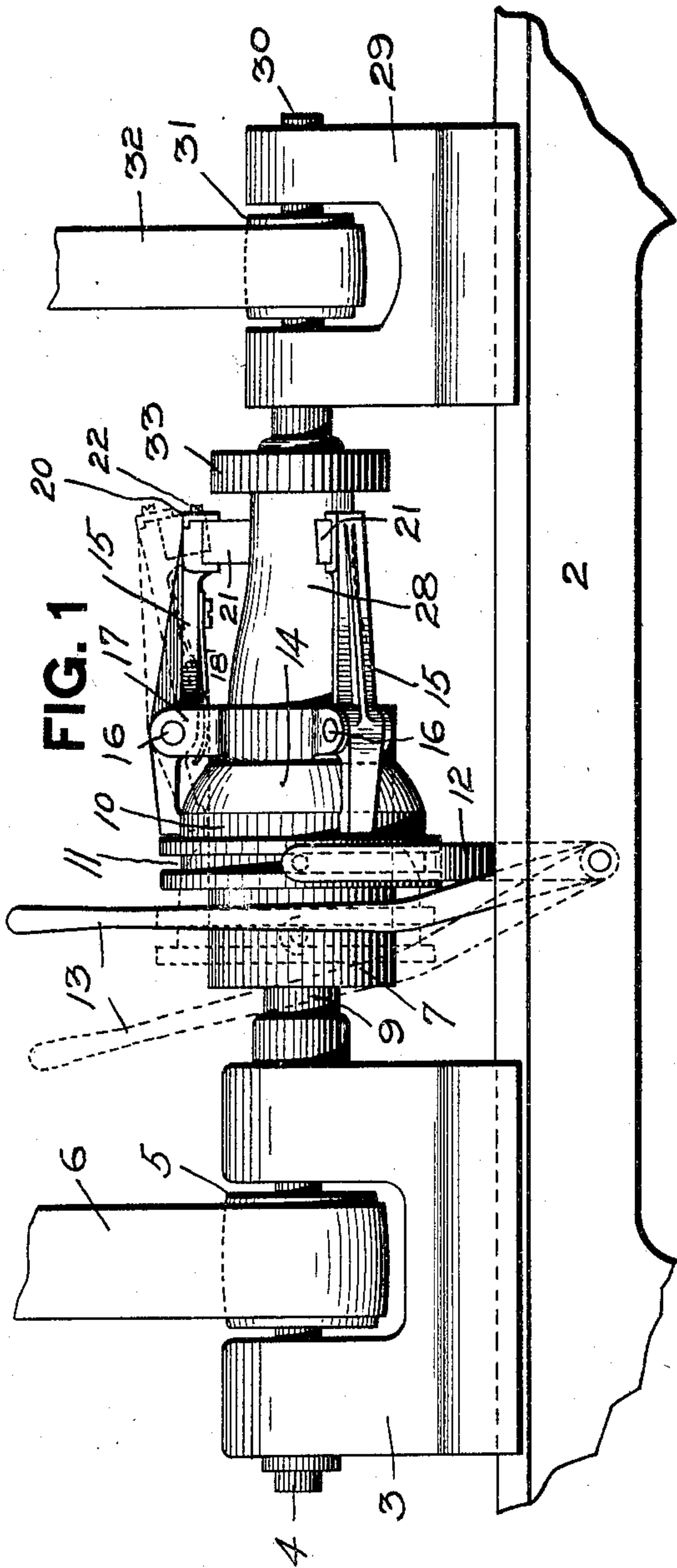
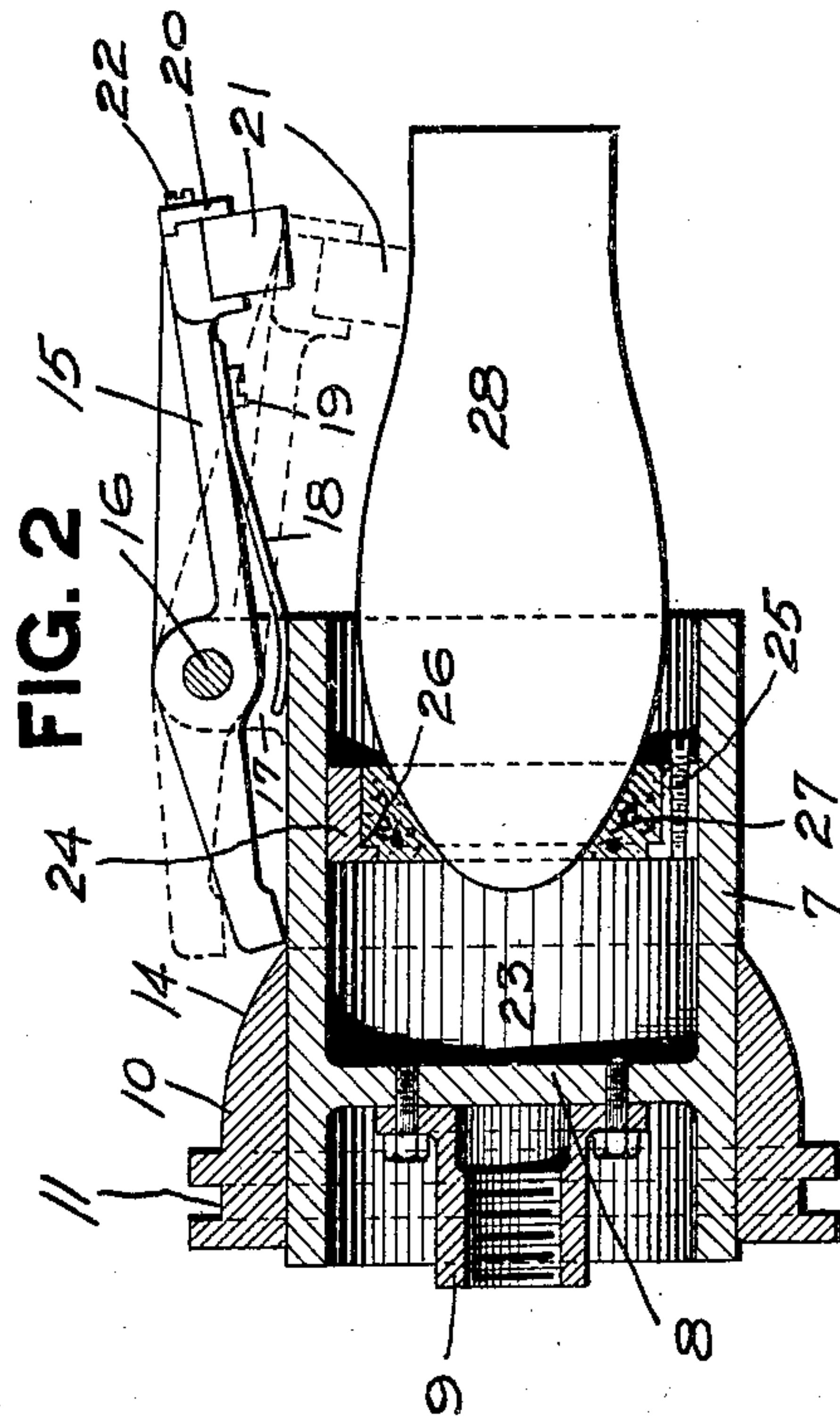
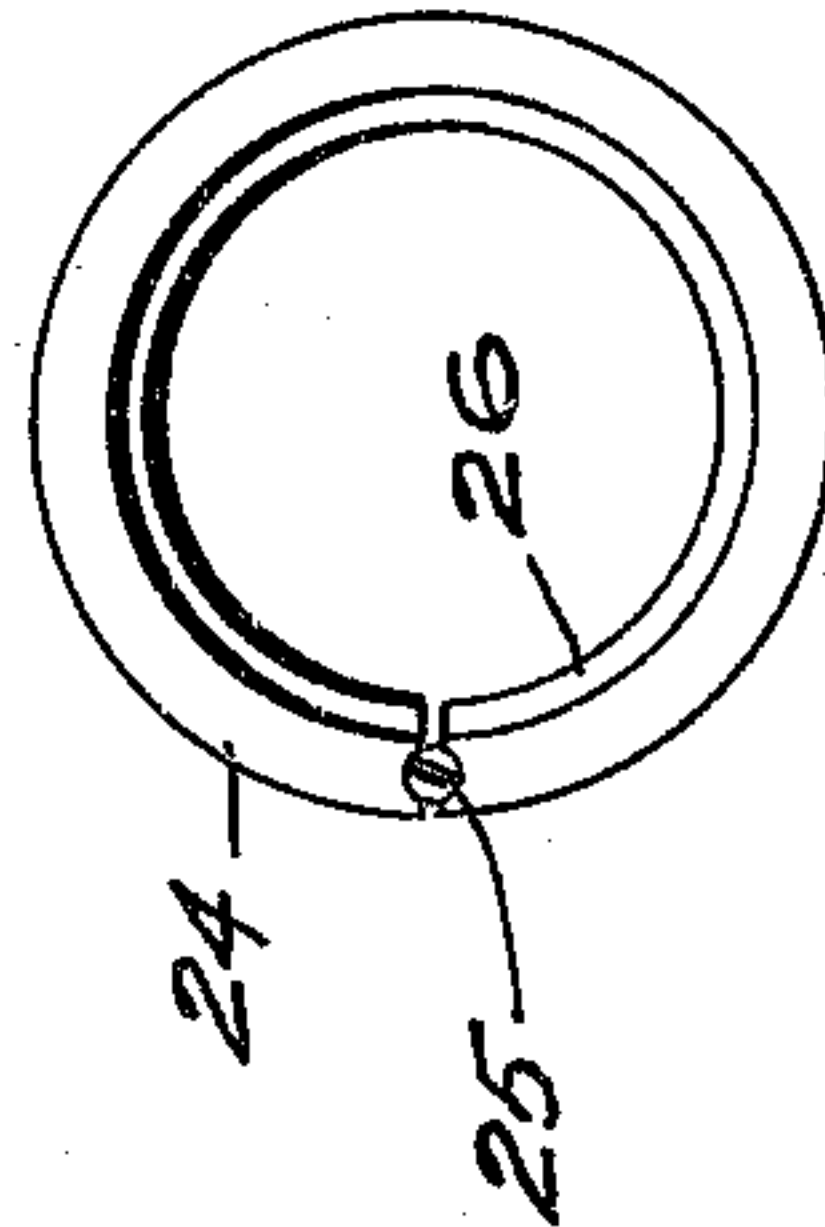


FIG. 3



WITNESSES.

*J. R. Keller*  
*G. Kremer*

INVENTOR.

*Herman A. Heupel*  
*By Kay F. H. H. H.*

# UNITED STATES PATENT OFFICE.

HERMAN A. HEUPEL, OF CHARLEROI, PENNSYLVANIA, ASSIGNOR TO  
MACBETH-EVANS GLASS COMPANY, OF PITTSBURG, PENNSYLVANIA,  
A CORPORATION OF PENNSYLVANIA.

## CHUCK.

SPECIFICATION forming part of Letters Patent No. 791,027, dated May 30, 1905.

Application filed July 8, 1904. Serial No. 215,825.

*To all whom it may concern:*

Be it known that I, HERMAN A. HEUPEL, a resident of Charleroi, in the county of Washington and State of Pennsylvania, have invented a new and useful Improvement in Chucks; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to chucks for holding articles of glassware during the grinding operation.

The object of my invention is to provide a simple form of chuck by means of which articles of different length may be held in the same chuck, whereby one chuck may be adapted for a number of different lengths of articles.

To these ends my invention comprises, generally stated, a holder adapted to receive one end of the article to be ground, said holder having a longitudinally-adjustable seat therein to support the inner end of the article and means for supporting the article projecting beyond the holder, all as fully hereinafter set forth and claimed.

To enable others skilled in the art to make and use my invention, I will describe the same more fully, referring to the accompanying drawings, in which—

Figure 1 is a side elevation of my improved chuck. Fig. 2 is an enlarged longitudinal section of the same. Fig. 3 is a detail of the ring-seat for supporting the inner end of the article to be ground.

Like numerals indicate like parts in each of the figures.

In the drawings the numeral 2 designates a portion of a suitable frame or support, at one end of which is mounted the head-block 3. Journaled within the head-block 3 is the shaft 4, and mounted upon said shaft is the pulley 5, driven by the belt 6. Mounted on the shaft 4 is the holder or drum 7, divided by the internal partition 8. Secured to this partition 8 is the threaded coupling 9, with which the threaded end of the shaft 4 engages.

Mounted upon the holder 7 is the sliding sleeve 10, said sliding sleeve having the an-

nular groove 11, with which the forked arm 12 engages. A lever 13 is pivoted to the forked arm 12, and by the operation of said lever said sleeve 10 is moved back and forth on the holder 7. The sleeve 10 has the tapering or conical portion 14, which is adapted to engage the inner ends of the arms 15, said arms being pivoted at 16 to lugs 17 on the holder 7. Three of these arms 15 are illustrated, although it is apparent that any number of such arms may be employed, according to the requirements. The inner ends of the arms 15 are normally held in contact with the exterior of the holder 7 by means of the springs 18, secured at 19 to the outer ends of the arms 15 and bearing against the holder 7 at their inner ends. The outer ends of the arms 15 are provided with the block-holders 20, adapted to receive and retain securely therein the clamping-blocks 21. These clamping-blocks may be formed of any suitable elastic material—such as cork, rubber, &c.—and the holding-faces of said blocks are made to conform to the contour of the article to be clamped thereby. These holders 20 are provided with the tightening-screws 22.

Within the cavity 23 of the holder 7 is the split ring 24, which is adapted to engage the inner walls of said holder. A screw 25 engages the threaded seats in the free ends of the ring 24, said screw being tapering, so as to act to expand said ring to fix it securely in position at any desired point within the drum or release it therefrom, so that it may be moved to any point within said drum. The ring 24 is provided with the shoulder 26, adapted to receive the elastic seat 27. The shape of the seat 27 may vary according to the contour of the article to be seated therein.

Mounted on the frame 2 is the sliding tail-stock 29, which has the shaft 30 journaled therein. A pulley 31 on said shaft 30 is driven by a belt 32. Any suitable mechanism may be employed for feeding the tail-stock 29 toward the article to be ground or withdrawing the same. Mounted on the end of the shaft 30 is a suitable grinding-wheel 33.



In the operation of my invention the ring 24 is first adjusted at the proper position within the holder 7, the position of said ring therein being regulated by the length of the article to be ground, while at the same time clamping-blocks of suitable size and dimensions are secured within the arms 15. The article 28 to be ground, which in the present instance consists of a bulb or shade closed at one end, is inserted in the chuck, with its inner end fitting in the seat 27, whereupon the operator throws the lever 13 to the position indicated in full lines in Fig. 1, which acts to advance the sleeve 10 and throw the outer ends of the arms 15 into contact with the outer end of the shade 28, as clearly indicated in Fig. 1. The grinding-wheel 33 is then put in operation and is fed forward, so as to keep in contact with the end of the shade to be ground until the shade has been ground to the proper degree, whereupon said grinder is withdrawn, and the operator by throwing the lever 13 into the position indicated in dotted lines, Fig. 1, releases the arms 15 from the shade, whereupon said shade is free to be removed and another inserted in its place, when the operation is again repeated. In case it is desired to grind articles of a shorter or longer length the ring 24 is freed by unscrewing the screw 25, and said ring is then adjusted at the proper position within the holder 7 and secured in that position.

What I claim is—

1. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder having a longitudinally-adjustable seat to receive the said article, and means for supporting said article in said seat.

2. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder having a longitudinally-adjustable seat to receive the inner end of said article, and means for supporting the outer end of said article.

3. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, a longitudinally-adjustable support within said holder adapted to receive said article, and means carried by said holder for supporting the said article in said seat.

4. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, a split ring engaging said holder and forming a seat for said article, and means for supporting said article in said seat.

5. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, a split ring within said member forming a seat for said article, a screw engaging said ring, and means carried by said holder for supporting said article in said seat.

6. In a chuck for holding articles of glass-

ware during the grinding operation, the combination of a holder, a longitudinally-adjustable elastic seat for receiving said article, and means for supporting said article in said seat.

7. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, a longitudinally-adjustable support within said holder to receive said article, an elastic seat in said support, and means for supporting said article in said seat.

8. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder having a longitudinally-adjustable seat to receive the inner end of said article, and means carried by said holder to support the outer end of said article.

9. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, means for supporting the inner end of said article, and arms carried by said holder adapted to support the outer end of said article.

10. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, a longitudinally-adjustable support for supporting the inner end of the article, swinging arms on said holder, and means for throwing said arms into contact with the outer end of said article.

11. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, a longitudinally-adjustable support for supporting the inner end of said article, spring-actuated arms, and means for throwing said arms into contact with the outer end of said article.

12. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, a longitudinally-adjustable support for supporting the inner end of the article, and arms carried by said holder adapted to support the outer end of said article, said arms having cushioned ends.

13. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, means for supporting the inner end of the article, pivotal arms carried by said holder adapted to support the outer end of said article, and a sliding sleeve on said holder adapted to engage the inner ends of said arms.

14. In a chuck for holding articles of glass-ware during the grinding operation, the combination of a holder, means for supporting the inner end of the article, pivotal arms carried by said holder adapted to support the outer end of said article, and a sliding sleeve having a conical portion adapted to engage the inner ends of said arms.

In testimony whereof I, the said HERMAN A. HEUPEL, have hereunto set my hand.

HERMAN A. HEUPEL.

Witnesses:

A. N. HEPLER,  
EMMA VERNON.