

No. 648,955.

Patented May 8, 1900.

E. A. HENDRICKS & W. WOLLERT.

CHUCK FOR EMERY WHEELS.

(Application filed June 9, 1899.)

(No Model.)

2 Sheets—Sheet 1

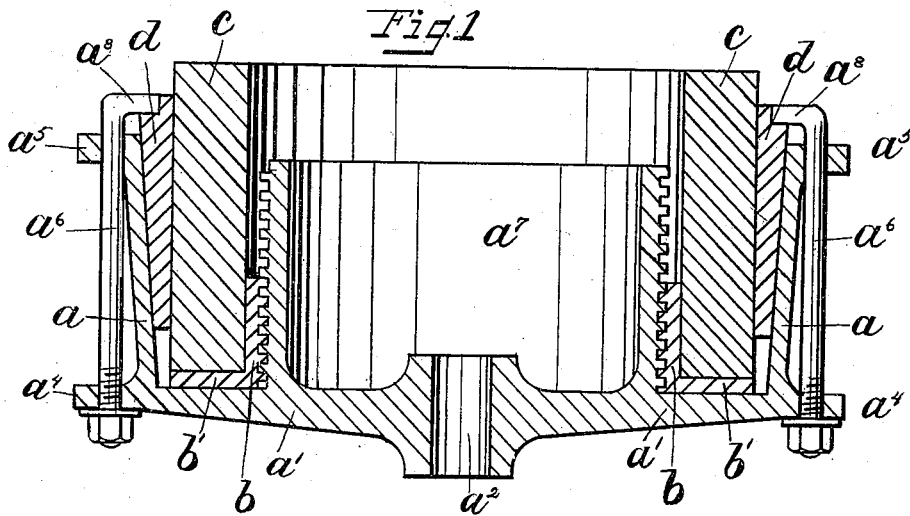


Fig. 2

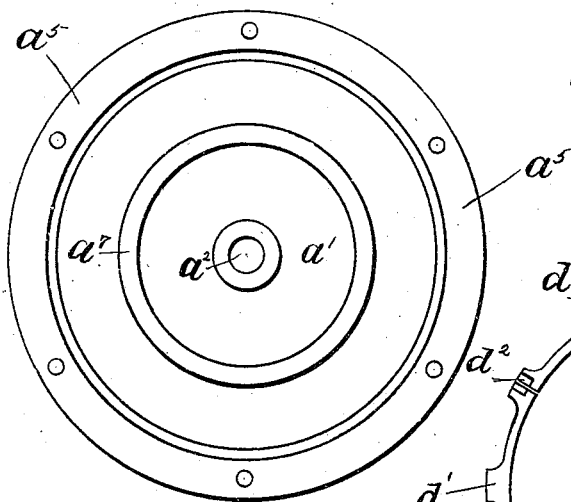


Fig. 4

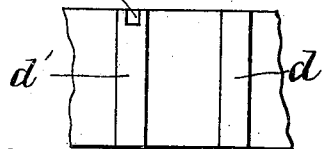


Fig. 3

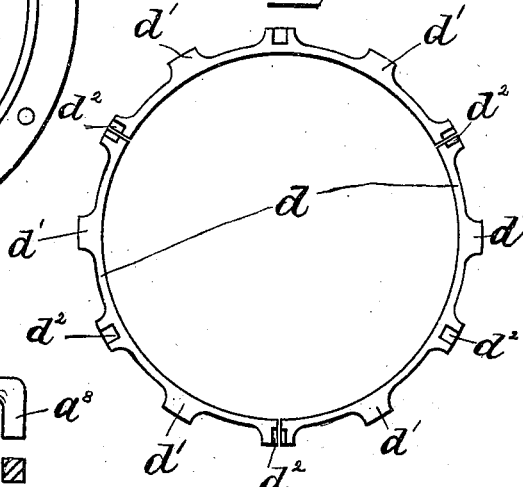
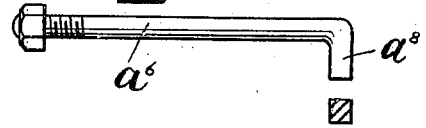


Fig. 5



Witnesses  
J. L. Walker  
Earl G. Weh

Inventors  
Edward A. Hendricks  
William Wollert  
By their Attorney and  
Paul T. O'Leary

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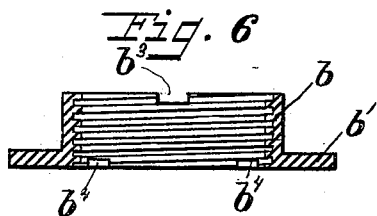
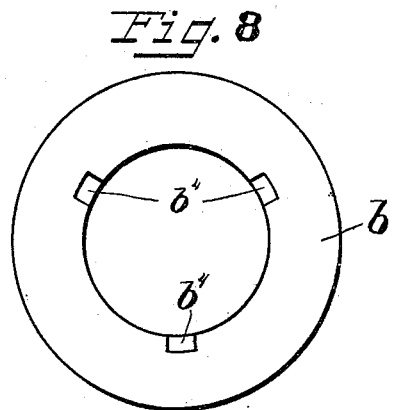
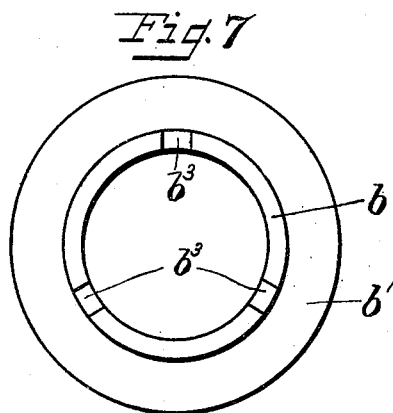
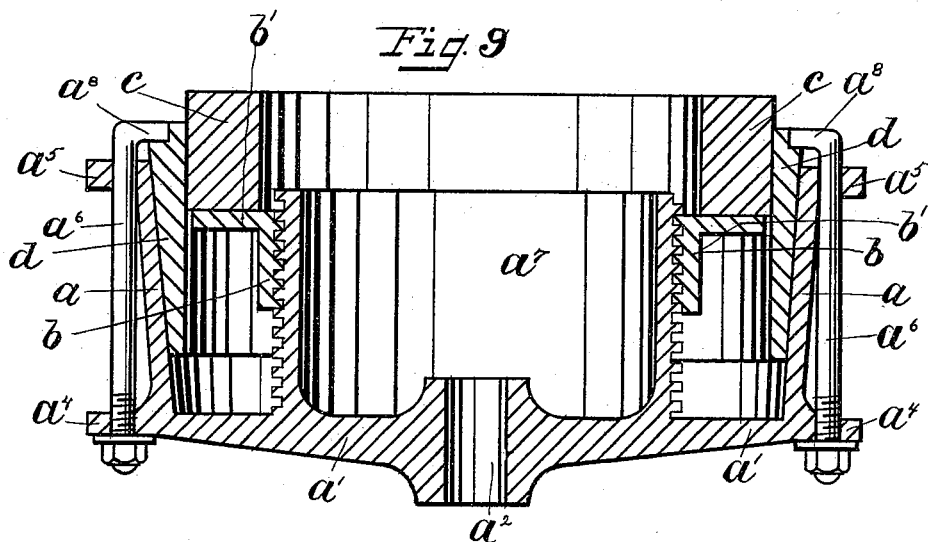
E. A. HENDRICKS & W. WOLLERT.

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2 Sheets—Sheet 2.



Witnesses  
J. L. Walker  
Earl G. Welch

Inventors  
Edward A. Hendricks  
William Wollert  
By this Attorney  
Samuel D. Phelps

# UNITED STATES PATENT OFFICE.

EDWARD A. HENDRICKS AND WILLIAM WOLLERT, OF CARPENTERSVILLE,  
ILLINOIS, ASSIGNORS TO THE SAFETY EMERY WHEEL COMPANY, OF  
SPRINGFIELD, OHIO.

## CHUCK FOR EMERY-WHEELS.

SPECIFICATION forming part of Letters Patent No. 648,955, dated May 8, 1900.

Application filed June 9, 1899. Serial No. 719,888. (No model.)

*To all whom it may concern:*

Be it known that we, EDWARD A. HENDRICKS and WILLIAM WOLLERT, citizens of the United States, residing at Carpentersville, in the county of Kane and State of Illinois, have invented certain new and useful Improvements in Chucks for Emery-Wheels, of which the following is a specification.

Our invention relates to improvements in chucks for emery-wheels, and it especially relates to that class of chucks which are adapted to clamp or inclose the outer surface of the wheel, leaving one end thereof exposed for use.

The object of our invention is to improve upon the construction of devices of this character heretofore employed and provide means for securely clamping the wheel within the same and at the same time rendering the same easily and quickly adjustable to compensate for wear thereon. We attain this object by the construction shown in the accompanying drawings, in which—

Figure 1 is a sectional view of a device embodying our invention. Fig. 2 is a plan view of the outer shell or casing of the device. Fig. 3 is a plan view of the retaining ring or wedge, and Fig. 4 is a detail of the same. Fig. 5 is a view of one of the clamping-bolts. Fig. 6 is a sectional view of the adjusting ring or nut; and Figs. 7 and 8 are top and bottom views, respectively, of the rings. Fig. 9 is a sectional view of the device, showing the adjusting-nut for the wheel reversed.

Like parts are represented by similar letters of reference in the several views.

In constructing our improved device we employ an outer shell or casing which consists of an outer rim *a*, open at one end but closed at the other by a portion *a'*, which is provided with a bearing or sleeve *a<sup>2</sup>* for the driving-shaft of the device. The outer rim *a'* is provided with peripheral flanges *a<sup>4</sup>* *a<sup>5</sup>*, which flanges are perforated at suitable intervals for the reception of clamping-bolts *a<sup>6</sup>*, any suitable number of which may be employed, six being shown in the present construction. The end portion *a'* of this outer shell or casing is provided with an inwardly-

extending hub *a<sup>7</sup>*, screw-threaded on its outer periphery, and on this hub *a<sup>7</sup>* there is adapted to fit a screw-threaded adjusting nut or ring *b*, one end of which is provided with an annular flange *b'*, the emery-wheel *c* being seated on this adjusting-nut *b* and bears against the flange *b'* thereof.

Between the wheel *c* and the outer rim *a* we place a clamping ring or wedge *d*, the inner periphery of which is adapted to snugly fit the wheel *c* the entire width of the wedge or ring. The outer periphery of the wedge or ring is formed tapering, as shown in Fig. 1, the outer rim *a* of the shell or casing being formed at such an angle as to correspond to the taper of the wedge or ring *d* and present an even surface thereto throughout the width thereof. In order to lighten the construction of this ring *d* and prevent the same from sticking in order that the same may be easily removed, we preferably plane out portions of the periphery thereof from side to side, leaving tapered projections or ribs *d'*, and in order that the said wedge may conform to the slight variations in the sizes of the emery-wheels used we also preferably construct the said ring in sections of any suitable number, three sections being shown in this case, as illustrated in Fig. 3 of the drawings. Any number of the ribs or projections *d'* may be employed, twelve being shown in the drawings. The wedge or ring having been inserted in place, the same is caused to tightly clamp the emery-wheel by firmly wedging the said ring between the wheel and the outer rim *a* by means of the tightening-bolts *a<sup>6</sup>*, and to accomplish this we provide the said bolts with right-angled ends *a<sup>8</sup>*, which are adapted to fit in sockets *d<sup>2</sup>*, formed in the end of said wedge or ring adjacent thereto. There being six tightening-bolts in the present case, we have shown the sockets formed in the end of each alternate rib or projection *d'*. The ends *a<sup>8</sup>* of said bolts having been inserted in the sockets the bolts are tightened by means of the nuts on the opposite ends thereof and the parts thus firmly clamped together. By this construction it will be seen that the emery-wheel will be clamped evenly and

truly for the entire width of the wedge or ring and cannot get out of balance. The construction also renders the device perfectly safe to the operator, as no more of the stone need be exposed than is necessary in use. The wheel can be readily adjusted to compensate for wear by simply loosening the clamping-bolts  $a^2$  and by inserting a suitable tool to engage with the sockets  $b^3$  in the end of the adjusting-nut  $b$ , turning the adjusting-nut so as to move the wheel the required distance. As the wheel wears and the flanged end of the nut reaches the outer threads of the hub, so that further movement thereof in that position is impossible, the said nut may be reversed, as shown in Fig. 9, in order to still further adjust the remaining part of the stone, the other side of the flanged portion of the nut in this case bearing against the end of the stone or wheel and being provided with sockets  $b^4$  to enable the same to be turned by a suitable tool in like manner.

Having thus described our invention, we claim—

1. In an emery-wheel chuck, an outer inclined rim, an emery-wheel within said outer rim, a retaining ring or wedge interposed between said wheel and rim, extending substantially over the full width of said wheel, and means for tightening said ring or wedge in said rim, substantially as specified.

2. In an emery-wheel chuck, an outer casing, a wheel within said casing, said casing being provided with an inwardly-extending

screw-threaded hub, a screw-threaded nut on said hub, one end of said nut being provided with a flange adapted to bear against the inner end of said wheel for the purpose of adjusting said wheel, substantially as specified.

3. In an emery-wheel chuck, an outer casing open at one end, the side of said casing being formed inclined as described, an emery-wheel in said casing and a sectional retaining ring or wedge interposed between said wheel and outer casing, the inner periphery of said retaining-ring being adapted to snugly fit the outer periphery of said wheel, and the outer periphery of said retaining-ring being formed tapering to correspond to the incline of said casing, clamping-bolts on said outer casing formed with projections at one end to engage recesses in said retaining-rings, said outer casing being provided with an inner screw-threaded hub, a screw-threaded nut or sleeve, on said hub, a flange on said nut or sleeve adapted to bear against the end of said wheel to hold it in different positions of adjustment, and means for tightening said clamping-bolts to clamp said wheel in said outer casing, substantially as specified.

In testimony whereof we have hereunto set our hands this 3d day of June, A. D. 1899.

EDWARD A. HENDRICKS.  
WILLIAM WOLLERT.

Witnesses:

WALTER F. WALKER,  
WM. A. DUNTON.