S. A. DOBYNE.

SANDING WHEEL.

APPLICATION FILED NOV. 21, 1910.

999,436.

Patented Aug. 1, 1911.

2 SHEETS—SHEET 1.

Fig. 1.

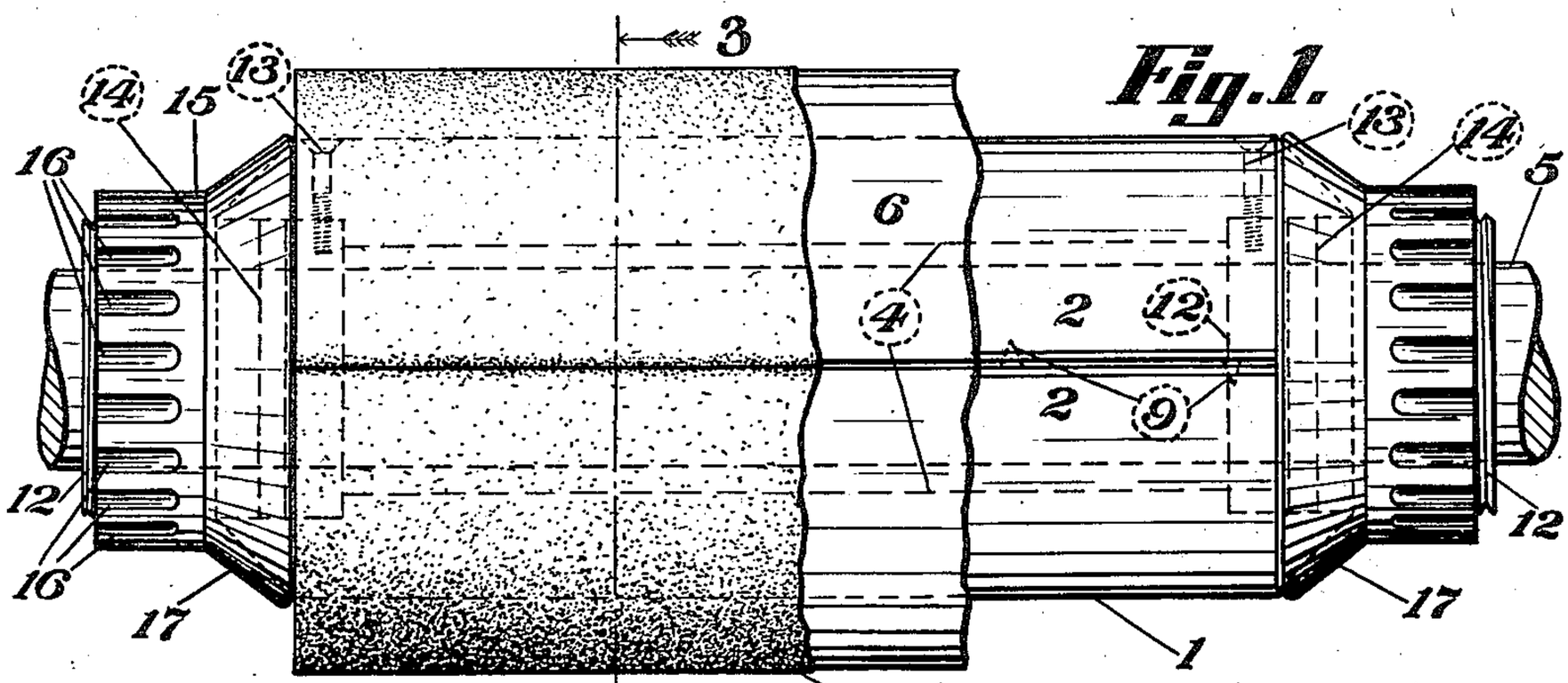



Fig. 2.

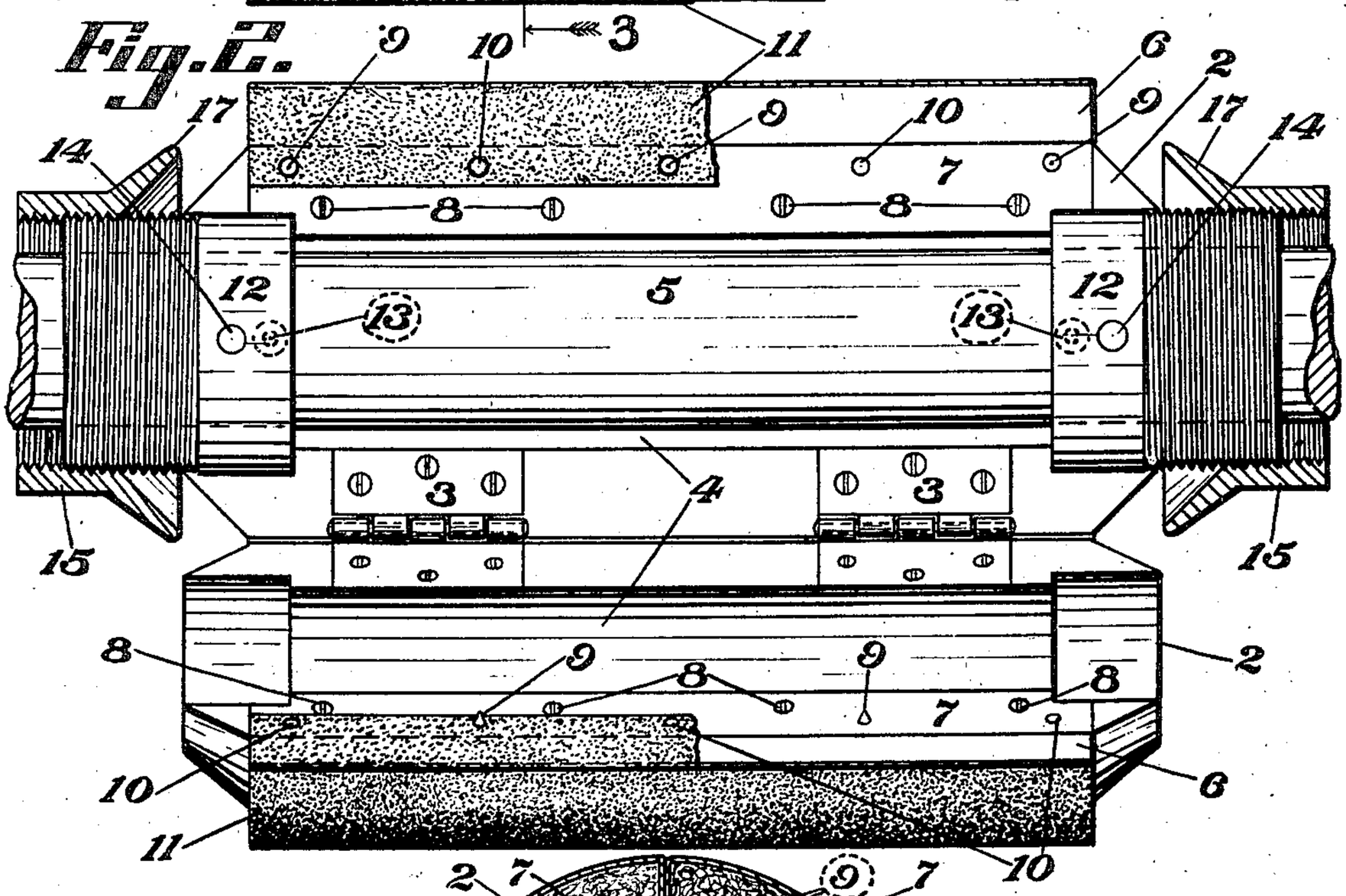
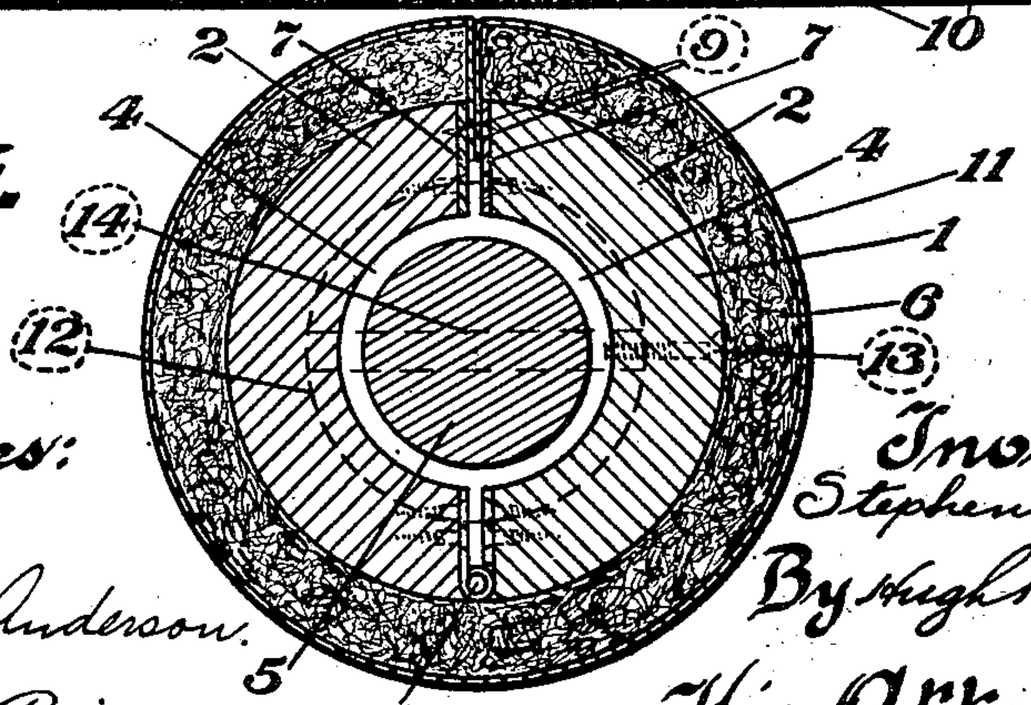



Fig. 3.




Witnesses:

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Harry H. Peiss.

Inventor:

Stephen A. Dobyne,

By Hugh K. Wagner,

His Attorney.

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2 SHEETS—SHEET 2.

Fig. 6.

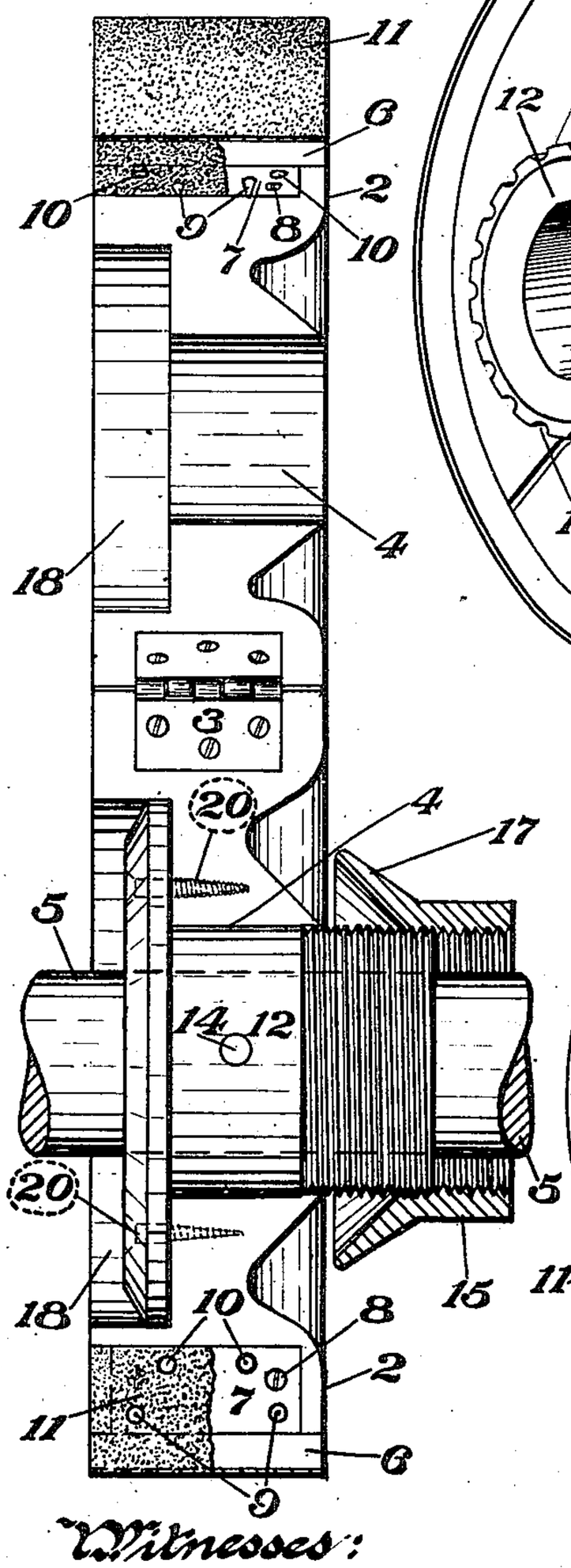



Fig. 4.

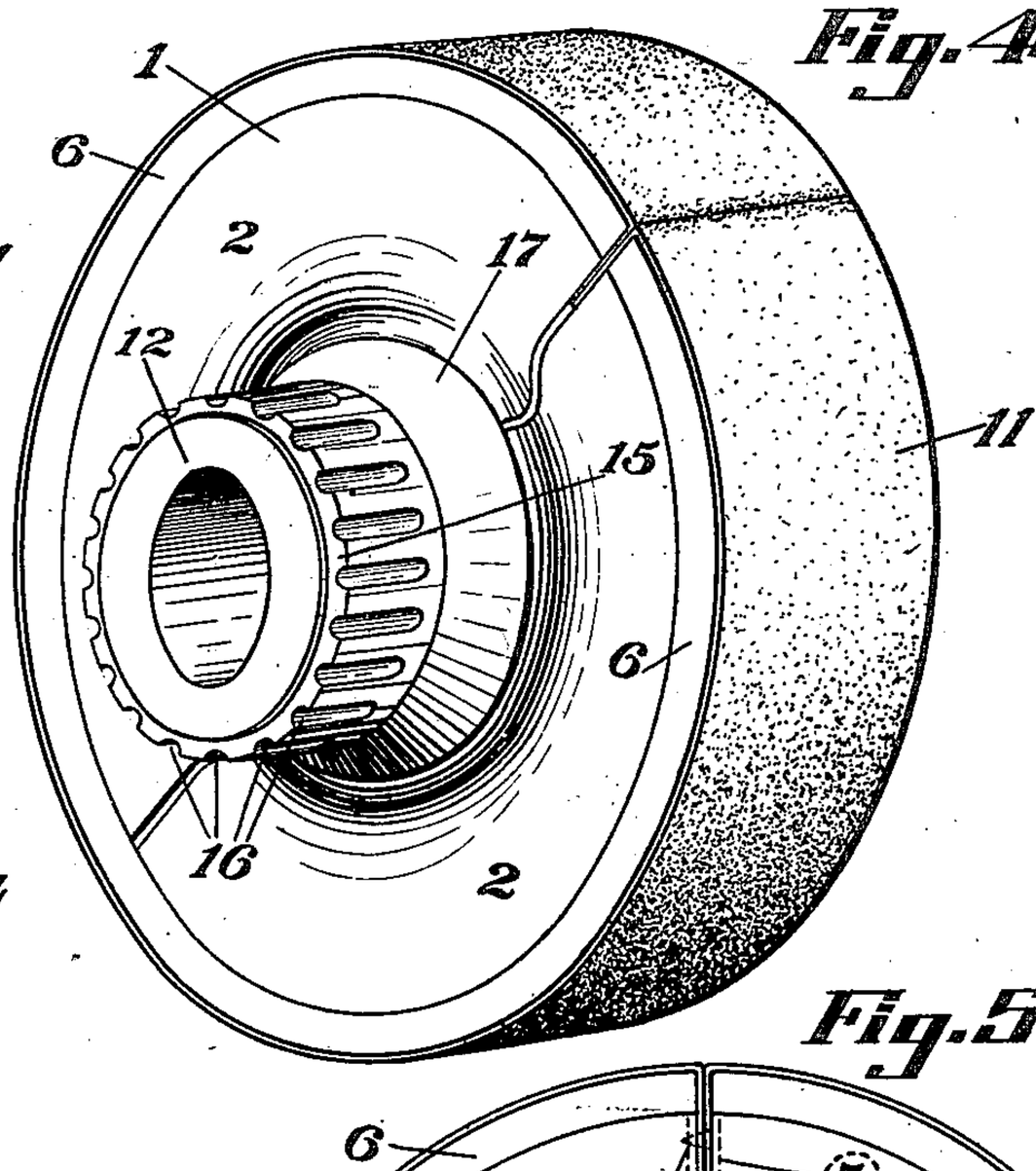
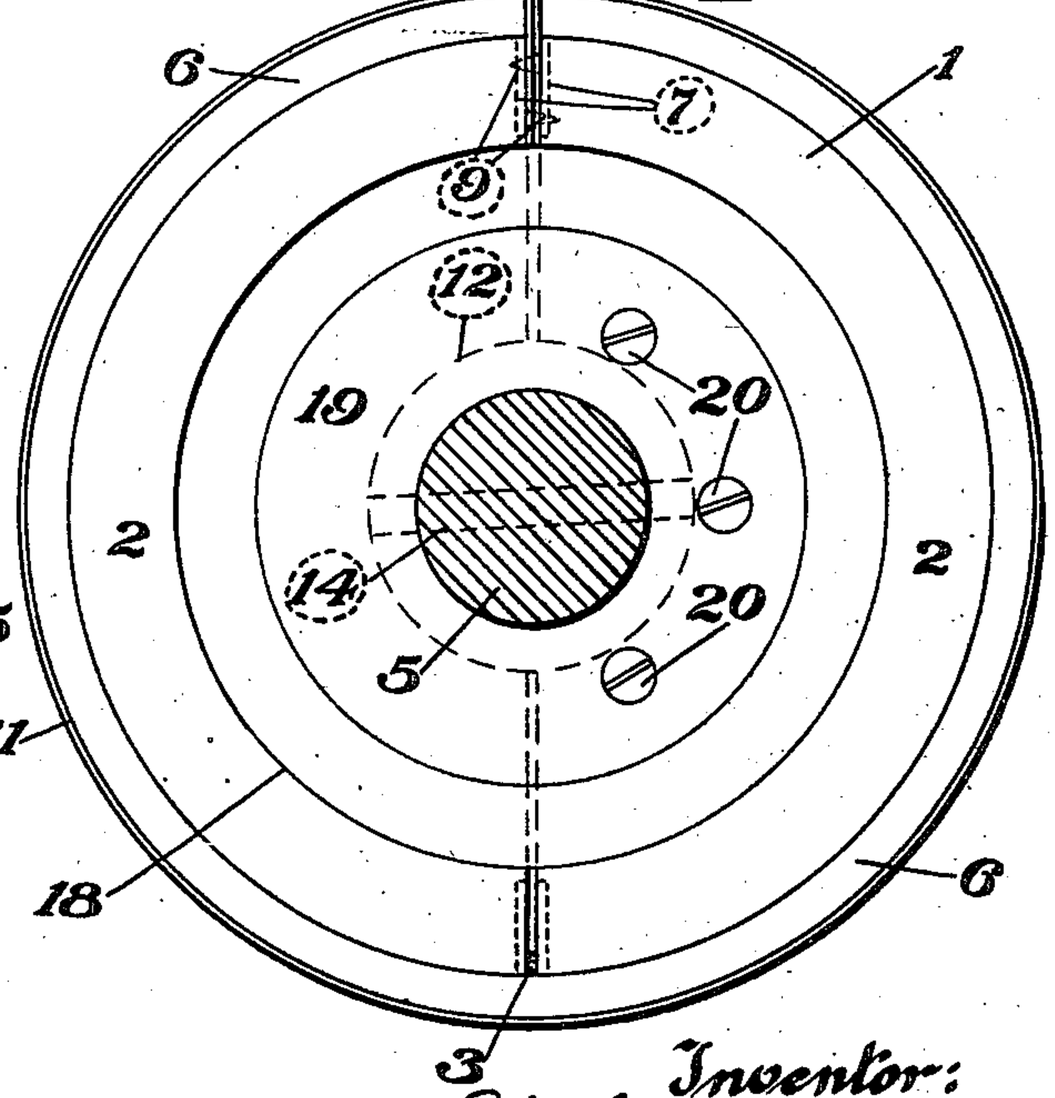



Fig. 5.

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# UNITED STATES PATENT OFFICE.

STEPHEN A. DOBYNE, OF ST. LOUIS, MISSOURI, ASSIGNOR TO CHAMPION SHOE MACHINERY COMPANY, OF ST. LOUIS, MISSOURI, A CORPORATION OF MISSOURI.

## SANDING-WHEEL.

999,436. Specification of Letters Patent. Patented Aug. 1, 1911.

Application filed November 21, 1910. Serial No. 593,331.

*To all whom it may concern:*

Be it known that I, STEPHEN A. DOBYNE, a citizen of the United States, residing at the city of St. Louis and State of Missouri, have invented certain new and useful Improvements in Sanding-Wheels, of which the following is a specification.

This invention consists of an improved sanding wheel or roll that is particularly adapted for use in the manufacturing and repairing of shoes, boots, and other articles.

In the accompanying drawings forming part of this specification, in which like numbers of reference denote like parts wherever they occur, Figure 1 is a side elevation of a sanding wheel with part of its covering broken away; Fig. 2 is an interior view of same; Fig. 3 is a transverse sectional view on the line 3—3, Fig. 1; Fig. 4 is a perspective view of a sanding wheel; Fig. 5 is an end elevation of the wheel depicted in Fig. 4; and Fig. 6 is an interior view of the wheel depicted in Fig. 4.

The wheel or roll 1 is formed of wood, metal, or other suitable material and is divided longitudinally into semicylindrical halves 2 that are attached to each other by hinge or hinges 3. The inner surface of each half 2 is provided with a groove 4 which extends longitudinally thereof and, when said halves are folded together so that their inner surfaces meet, the grooves 4 unite to form an opening to allow a shaft 5 to extend therethrough. The periphery of wheel 1 is covered with felt 6 or other suitable material, said felt being glued or secured by other means to the periphery of said wheel and extending from the free edge of one half 2 to the free edge of the other half 2. Each half 2 is preferably provided with a metal plate 7 that is secured to the inner surface of same by means of screws 8, or the like. Said plate bears pin projections 9 and contains apertures 10, and is preferably located adjacent the free edge of half 2. The pins 9 and apertures 10 of one plate 8 are so arranged relative to the openings 10 and pins 9, respectively, of the other plate 8 that, when the halves 2 are folded together so that their inner surfaces meet the pins 9 and apertures 10 of one plate enter and receive apertures 10 and pins 9, respectively, of the other. The felt 6 is covered with a piece of emery-paper or sand paper 11, or the like, and the ends of said paper are bent over the free edges of halves 2 in order to be attached to pins 9 of plates 8 and thereby be held in place.

The wheel 1 depicted in Figs. 1 and 2 is relatively long and both ends of same are preferably tapered. The ends of said wheel encircle a pair of externally screw-threaded collars 12 that is fastened to one of the halves 2 by means of set-screws 13, or the like. Said collars are secured to shaft 5 by pins 14 or other suitable means, and preferably extend beyond the ends of said wheel. A pair of internally screw-threaded sleeves 15 fit upon collars 12, respectively, and contain corrugations 16, or the like, in their peripheries in order to facilitate the turning of same upon said collars. Each sleeve 15 is provided with an outwardly-flaring flange 17, which is arranged to encircle a tapered end of wheel 1 in order to hold the halves 2 of said wheel firmly in engagement with each other. When the halves 2 of wheel 1 are held together by the flanges 17 of sleeves 15, the pins 9 project into apertures 10 and hold the ends of paper 11 firmly between plates 7, when it is desired to place a fresh piece of paper around said wheel, the sleeves 15 are turned on collars 12 so as to cause flanges 17 to release the tapered ends of wheel 1 and thereby allow the halves 2 to be spread apart, whereby the ends of the old piece of emery-paper can be detached from pin 9 and a new piece of emery-paper can be substituted in lieu of the old piece. In order to hold the halves 2 of wheel 1 firmly together while the shaft 5 rotates said wheel, one of said collars is provided with right-handed thread and the other of said collars with a left-handed thread, and said shaft is rotated in the direction to cause sleeves 15 to have a tendency to tighten their grips upon the tapered ends of said wheel.

The wheel 1 depicted in Figs. 4 and 5 is relatively narrow and for this reason only one end of same is tapered. Each half 2 of said wheel is provided with a depression 18 into which a flange 19 on collar 12 projects, said flange being fastened to one of the halves 2 by screws 20 or other suitable means. Said collar 12 is secured to shaft 5 by a pin 14, or the like, and extends beyond the tapered end of said wheel in order to receive a sleeve 15. The flange 17 of said sleeve is adapted to encircle the tapered end of said

wheel and, also, to hold halves 2 of same firmly together. The periphery of felt 6 is covered with a strip of emery-paper, and the ends of said paper are attached to pins 9 in order to be held between plates 7 as hereinabove described.

The peripheries of the wheels 1 hereinabove described are preferably cylindrical and it should be understood that same can be made convex or concave or conical, if so desired. The emery-paper 11 that covers a wheel 1 can be readily replaced by fresh emery-paper, as hereinabove described without the necessity of removing said wheel from shaft 5.

I claim:

1. In combination with a shaft, a collar rigidly mounted on said shaft and having its outer end exteriorly threaded, a hollow member formed with a recess conformably receiving the collar, means to secure said member rigidly to said collar, a second hollow member hinged to the first named member and having a recess conformably receiving said collar, said members conjointly extending over and completely inclosing the unthreaded portion of the collar, each of said members having one end thereof tapered, and a sleeve threaded internally to engage the threaded part of said collar and formed with an inner flaring flange to engage said tapered ends of the hollow members.

2. In combination with a shaft, a collar rigidly mounted on said shaft and having its outer end exteriorly threaded, a hollow member formed with a recess conformably receiving the collar, an annular flange encircling the shaft and being of greater diameter than said collar, the adjacent end of said member being formed with a depression to conformably receive said flange, a second hollow member hinged to the first named member, and having a recess to conformably receive said collar and a depression in one end to conformably receive said flange, said members conjointly extending over and completely inclosing the unthreaded part of said collar and the entire width of the flange, each of said members having their opposite ends tapered, and a sleeve threaded on said threaded part of the collar and having a flared end to engage the tapered ends of said members.

In testimony whereof I have hereunto affixed my signature in the presence of two witnesses.

STEPHEN A. DOBYNE.

Witnesses:
GLADYS WALTON,
GEORGE G. ANDERSON.