

(No Model.)

E. M. CROSS.  
Emery Wheel.

No. 235,214.

Patented Dec. 7, 1880.

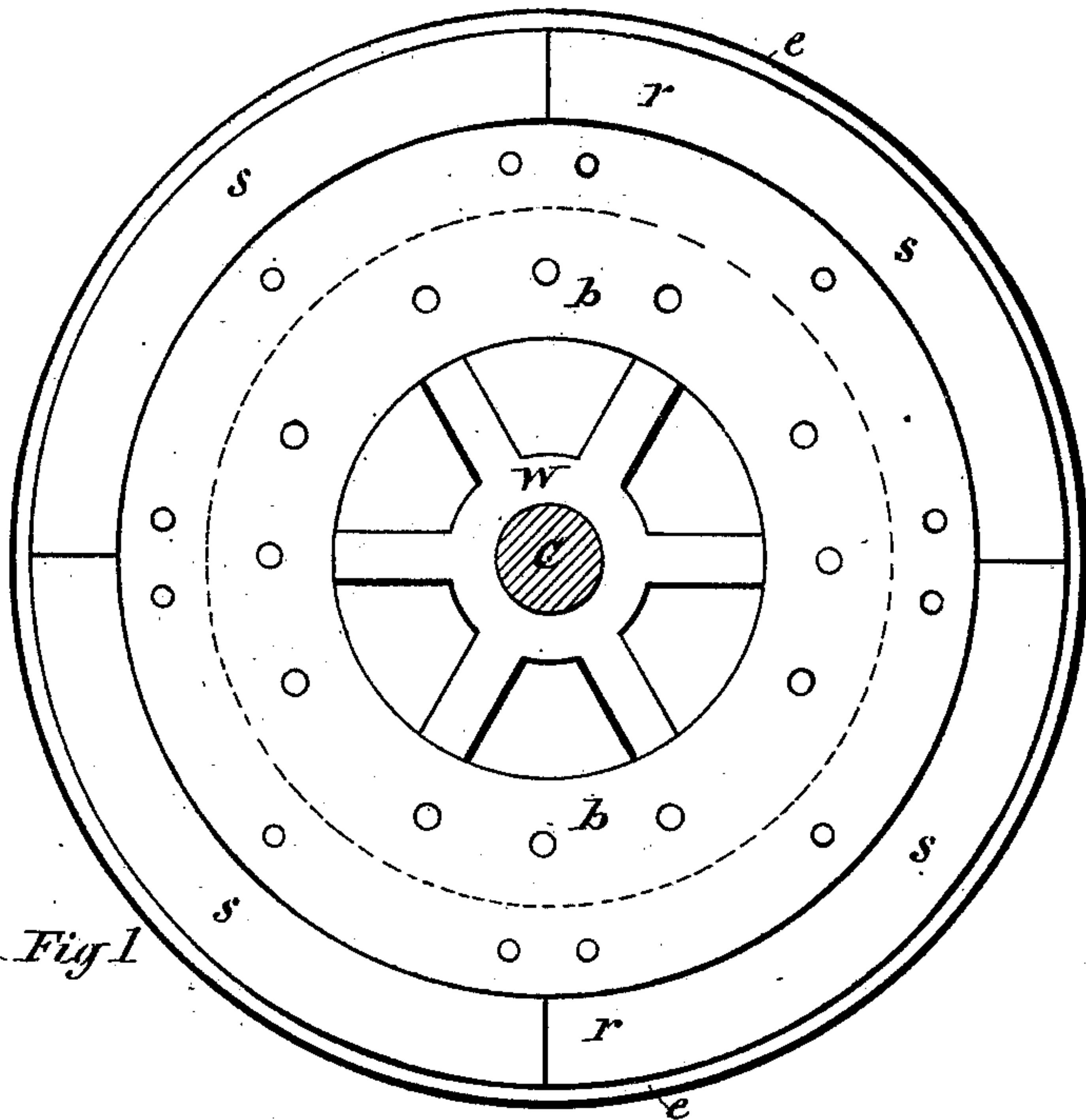


Fig. 1

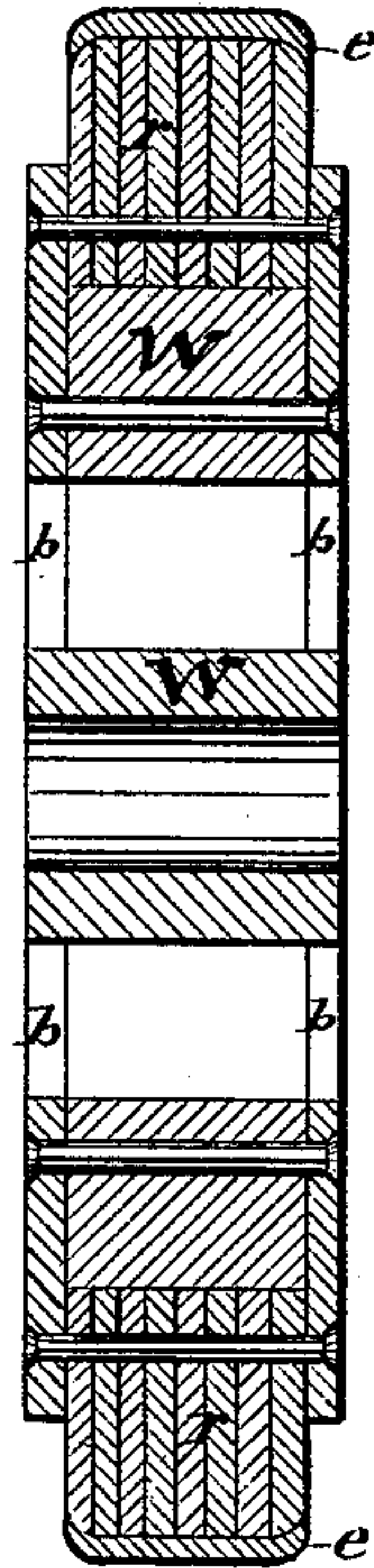


Fig. 2

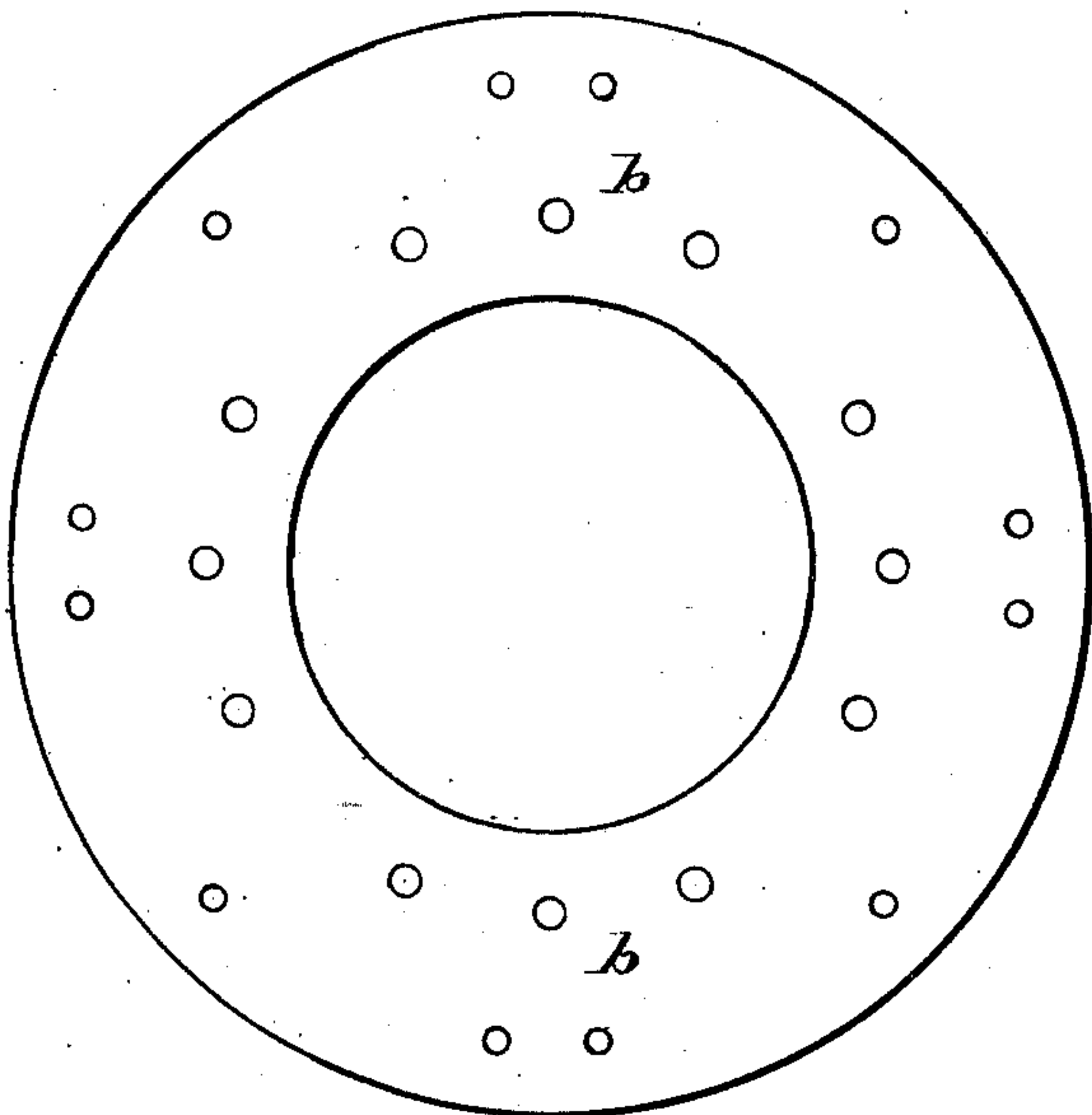


Fig. 3

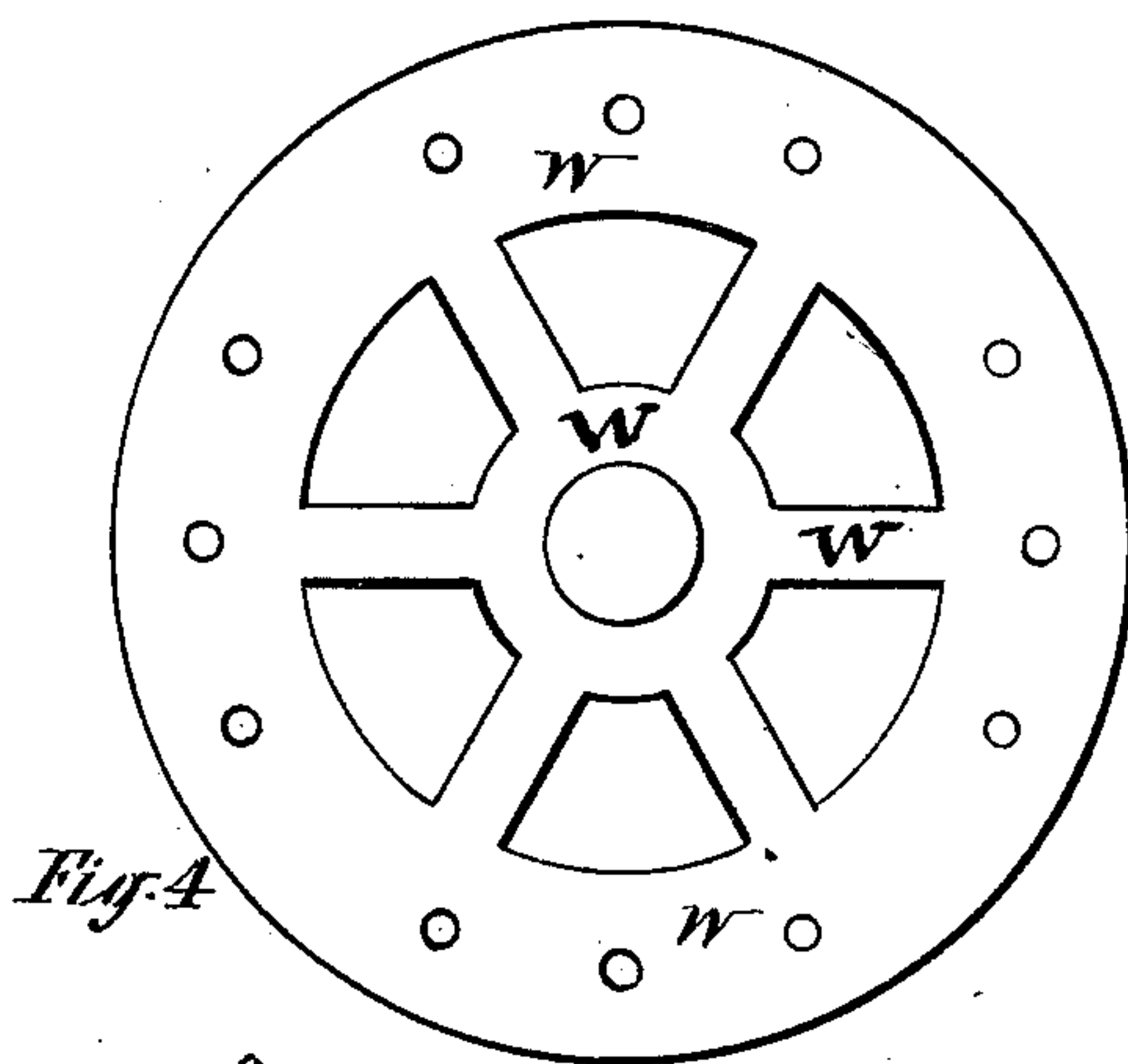


Fig. 4

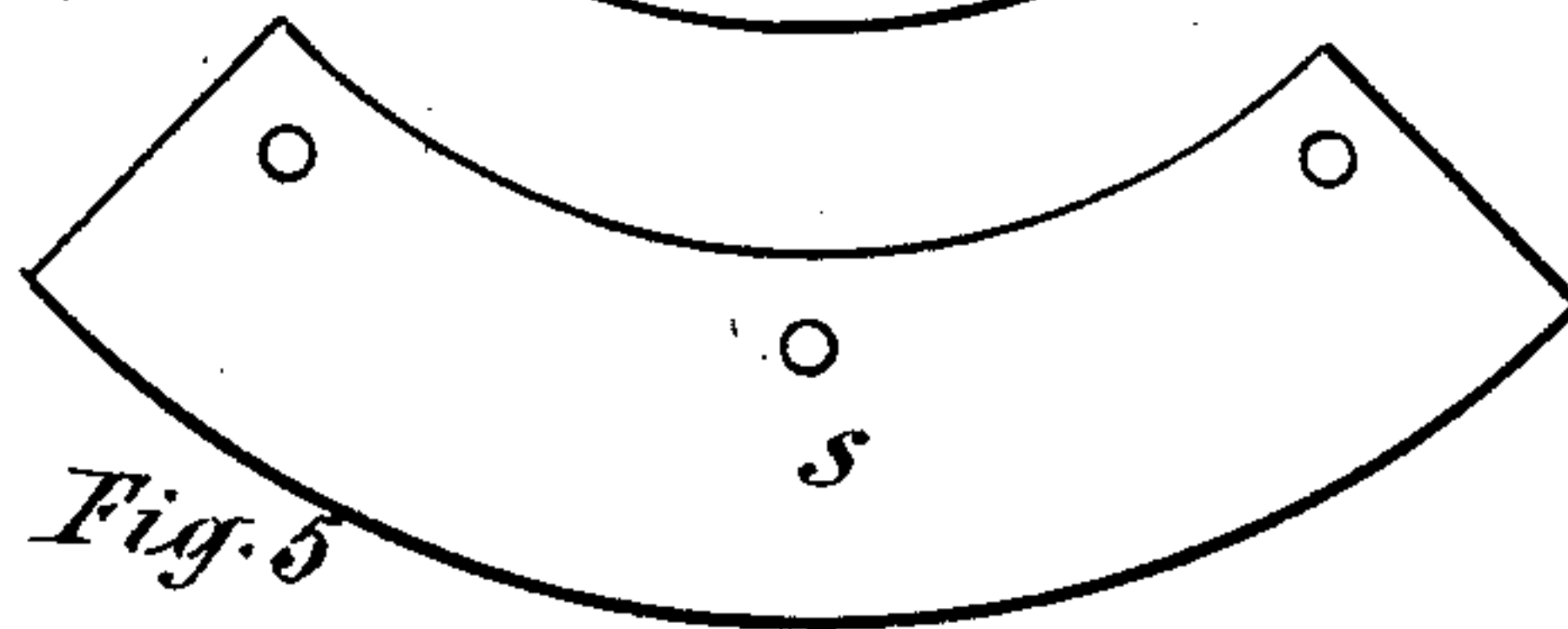


Fig. 5

WITNESSES.

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# UNITED STATES PATENT OFFICE.

EDWIN M. CROSS, OF SYRACUSE, NEW YORK.

## EMERY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 235,214, dated December 7, 1880.

Application filed October 28, 1880. (No model.)

*To all whom it may concern:*

Be it known that I, EDWIN M. CROSS, of Syracuse, in the county of Onondaga, in the State of New York, have invented new and useful Improvements in Emery-Wheels, of which the following, taken in connection with the accompanying drawings, is a full, clear, and exact description.

This invention relates to improved means of securing to the periphery of an abrading or polishing wheel a facing of emery or other analogous substance, whereby said facing is rendered more durable and effective; and it consists in the combination, with the usual wooden body of the wheel, of side plates projecting at the periphery of said wheel, and segmental sections of leather secured between the projecting side plates by bolts or rivets passing through the same, all as hereinafter more fully described.

In the accompanying drawings, Figure 1 is a side view of my improved abrading or polishing wheel; Fig. 2, a vertical transverse section of same; and Figs. 3, 4, and 5 are detail views of the constituent parts of my invention.

Similar letters of reference indicate corresponding parts.

W represents the wheel, usually made of wood and mounted on a suitable shaft, *c*, by which it is rotated. To the two sides of the said wheel are secured annular plates *b*, which project at the periphery of the wheel and form two circumferential flanges around the same. Between the said flanges are inserted edge-wise rings *r*, of leather or other material of the requisite elasticity, and secured in position by bolts or rivets passing through the side flanges of the wheel and through the aforesaid elastic rings. The rings *r* are of sufficient

width to project past the side flanges and form a cushion for the facing of emery, *e*, or other abrading or polishing material applied to the external periphery thereof.

In order to economize in material and reduce the cost of manufacture of my improved wheel, I form the rings *r* of segments *s*, cut out of the leather or sheet material.

The advantages of my improved abrading or polishing wheel are as follows, viz: The leather strips or rings *r*, being applied edge-wise and firmly secured between the side flanges in the manner described, effectually prevents the stretching of said rings and the resultant inequality in the abrading or polishing face of the wheel, thereby rendering the same more durable and effective. The elasticity of the cushioned backing of the abrading or polishing face can be regulated to suit the work to be accomplished by allowing a greater or less projection of said cushion at the periphery of the side flanges.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The combination, with the wheel *W*, of the annular side plates, *b*, projecting at the periphery of the wheel, and the segmental sections *s s*, secured between the projecting side plates by bolts or rivets passing through the same, substantially as described and shown.

In testimony whereof I have hereunto signed my name and affixed my seal, in the presence of two attesting witnesses, at Syracuse, in the county of Onondaga, in the State of New York, this 22d day of October, 1880.

EDWIN M. CROSS. [L. S.]

Witnesses:

E. LAASS,

WM. C. RAYMOND.