

D. Prew.
Car Wheel.

Nº 11,056.

Patented Jun. 13, 1854.

Fig. 1.

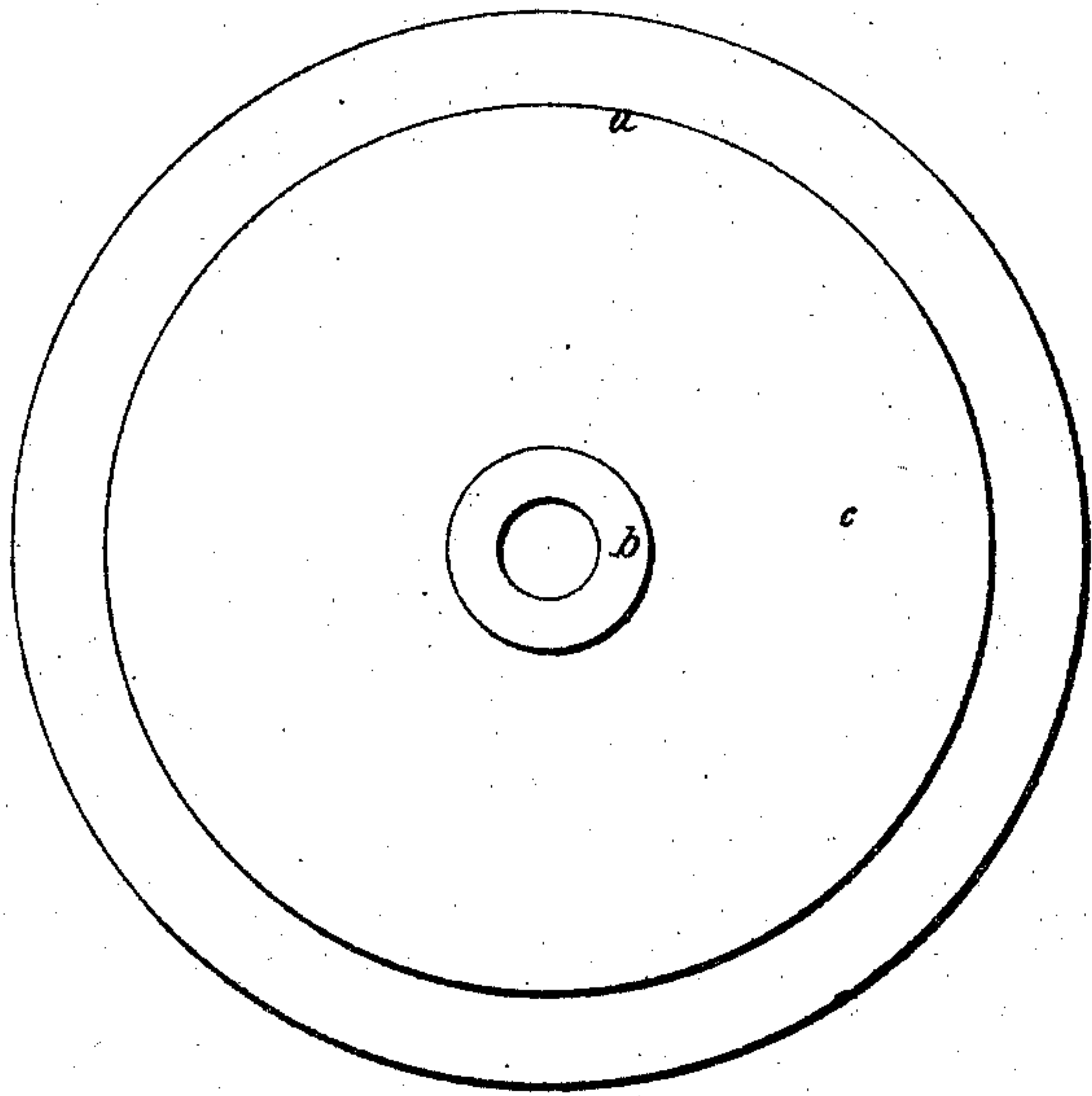


Fig. 4.

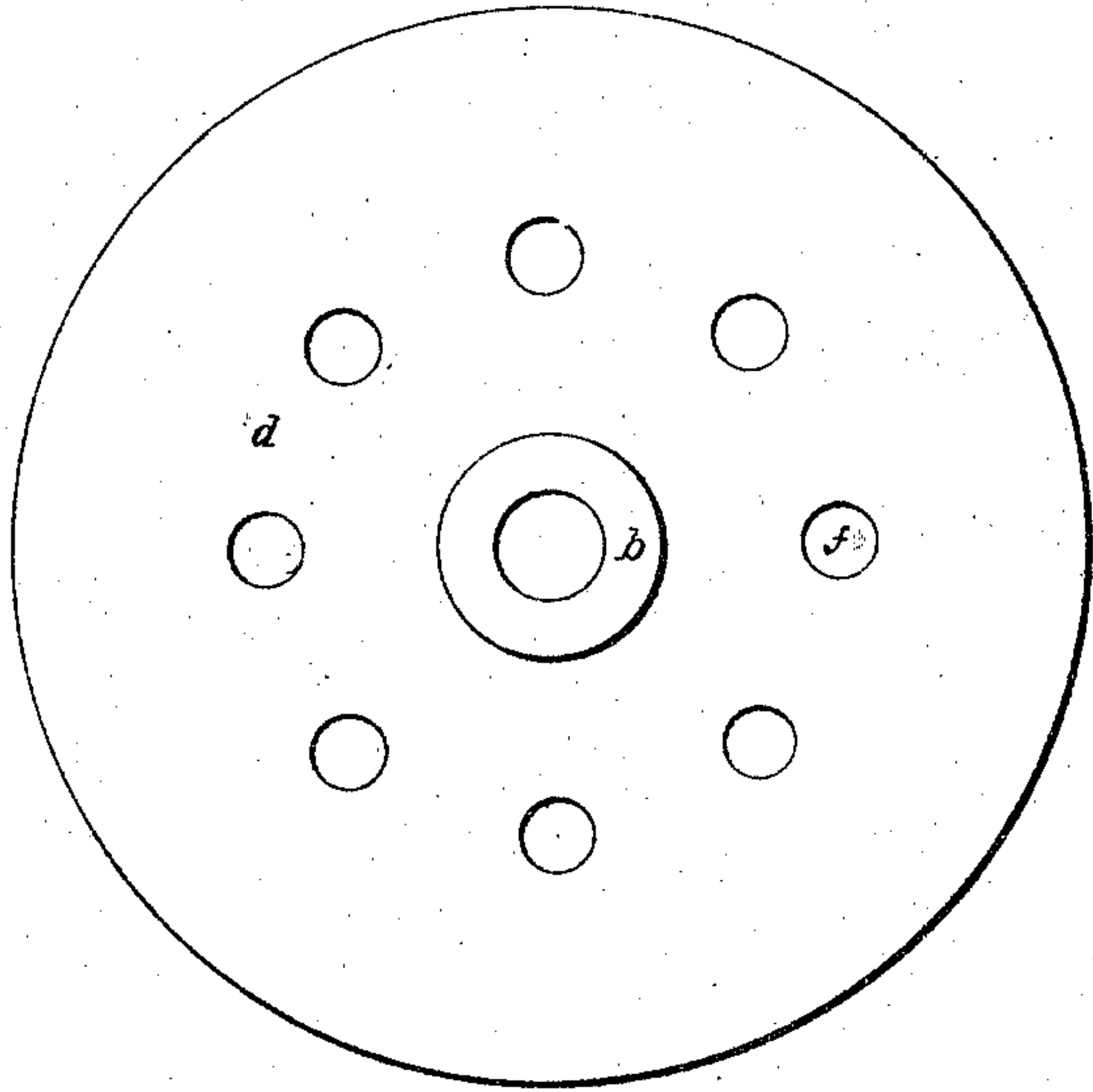


Fig. 2.

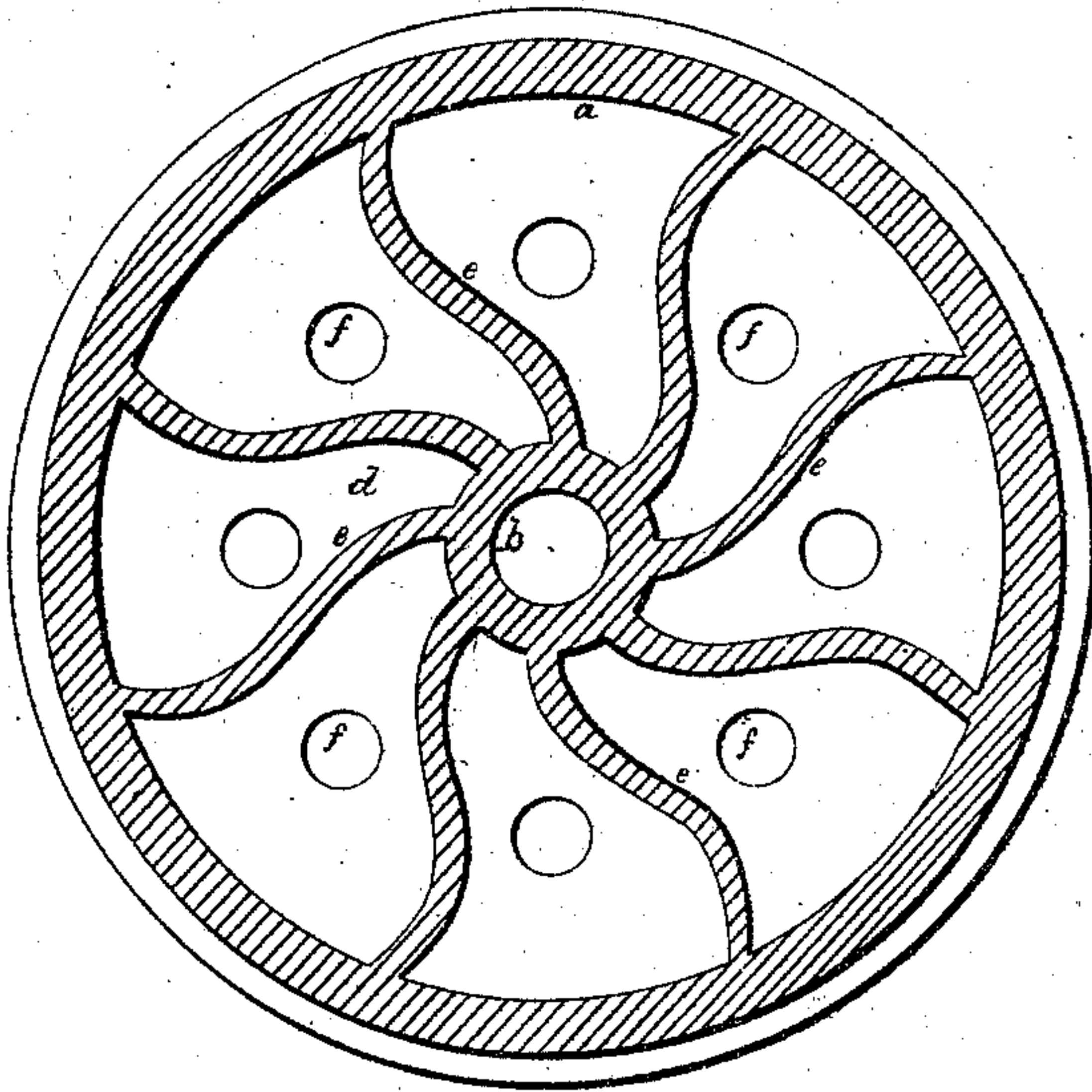
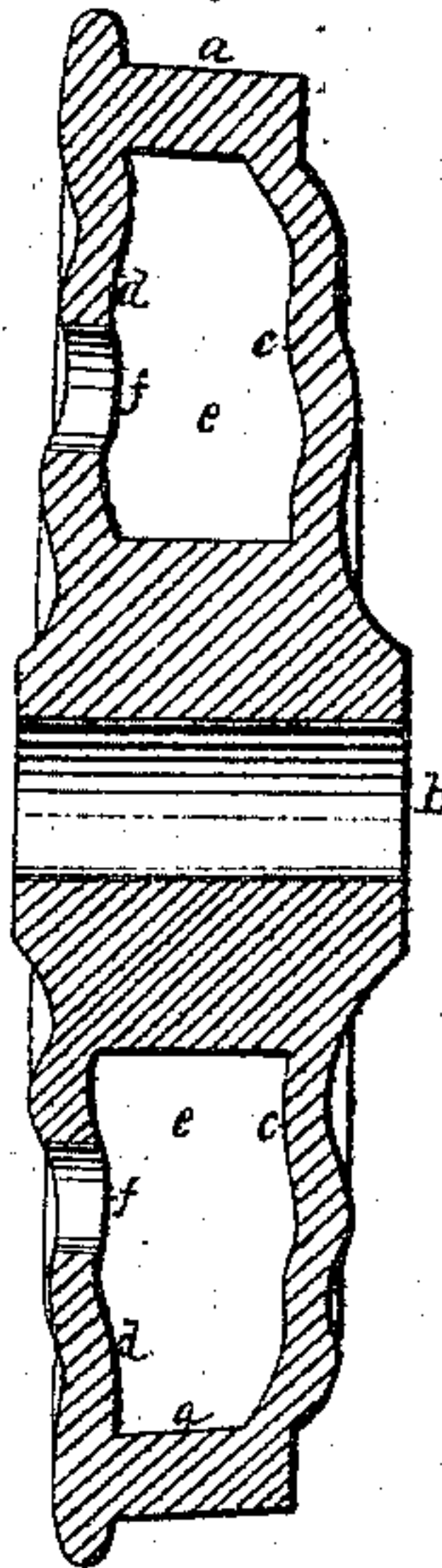


Fig. 3.



UNITED STATES PATENT OFFICE.

DAVID PREW, OF TAUNTON, MASSACHUSETTS.

CAST-IRON CAR-WHEEL.

Specification of Letters Patent No. 11,056, dated June 13, 1854.

To all whom it may concern:

Be it known that I, DAVID PREW, of Taunton, in the county of Bristol and State of Massachusetts, have invented a new and useful Improvement in Cast-Iron Chilled-Rim Wheels of Railway-Carriages; and I do hereby declare that the same is fully described and represented in the following specification and the accompanying drawings, letters, figures, and references thereof.

Of the said drawings, Figure 1, denotes an outer side view of one of my improved wheels; Fig. 2, a longitudinal and vertical section of it. Fig. 3 is a transverse, vertical and central section of it. Fig. 4 is an elevation of the inner or flanch side of it.

My wheel as seen in the said figures is composed of a rim, *a*, (cast against a chill ring laid in the mold so that the tread shall bear against it) a solid or undivided hub, *b*, two undulating or waved plates, *c*, *d*, (connecting the hub and rim), a series of ogee or curved arms, *e*, *e*, *e*, &c., arranged between the plates, *c*, *d*, and extending from the hub to the rim and joined or cast to both plates (the hub and rim) and a series of openings *f*, *f*, *f*, &c., made through one plate so that there shall be an opening between each two arms, such openings being formed by the supports of the cores that form the spaces between the arms, during the process of casting or founding the wheel. A wheel so constructed, I find can be founded to great advantage without danger

of rupture during the operation of cooling in the mold. Besides it is a remarkably strong wheel, probably far more so than any other kind of cast metal car wheel of the same weight in use.

By forming the wheel in the manner set forth the undulations of the plates being concentric with the rim, the necessary strength may be obtained with a considerable saving of metal comparatively speaking. The saving of metal is a saving of weight, an important matter in railway machinery.

What I claim as my invention is—

My improved cast metal chilled rim wheel as made of the combination of a solid or tubular hub, a chilled rim, two undulating plates uniting the hub and rim, a series of ogee or curved arms, (placed between the hub rim and two plates and made to connect the hub and rim and be joined throughout their entire length to the two plates,) and a series of openings in one of the plates and respectively between the arms, all casted or founded in one piece of metal substantially as specified.

In testimony whereof, I have hereto set my signature this eighteenth day of April A. D. 1853.

DAVID PREW.

Witnesses:

GEO. M. WOODWARD,
JOSEPH E. WILBAR.