

(No Model.)

2-Sheets—Sheet 1.

C. SEYMOUR.

CAR WHEEL.

No. 250,684.

Patented Dec. 13, 1881.

Fig. 1

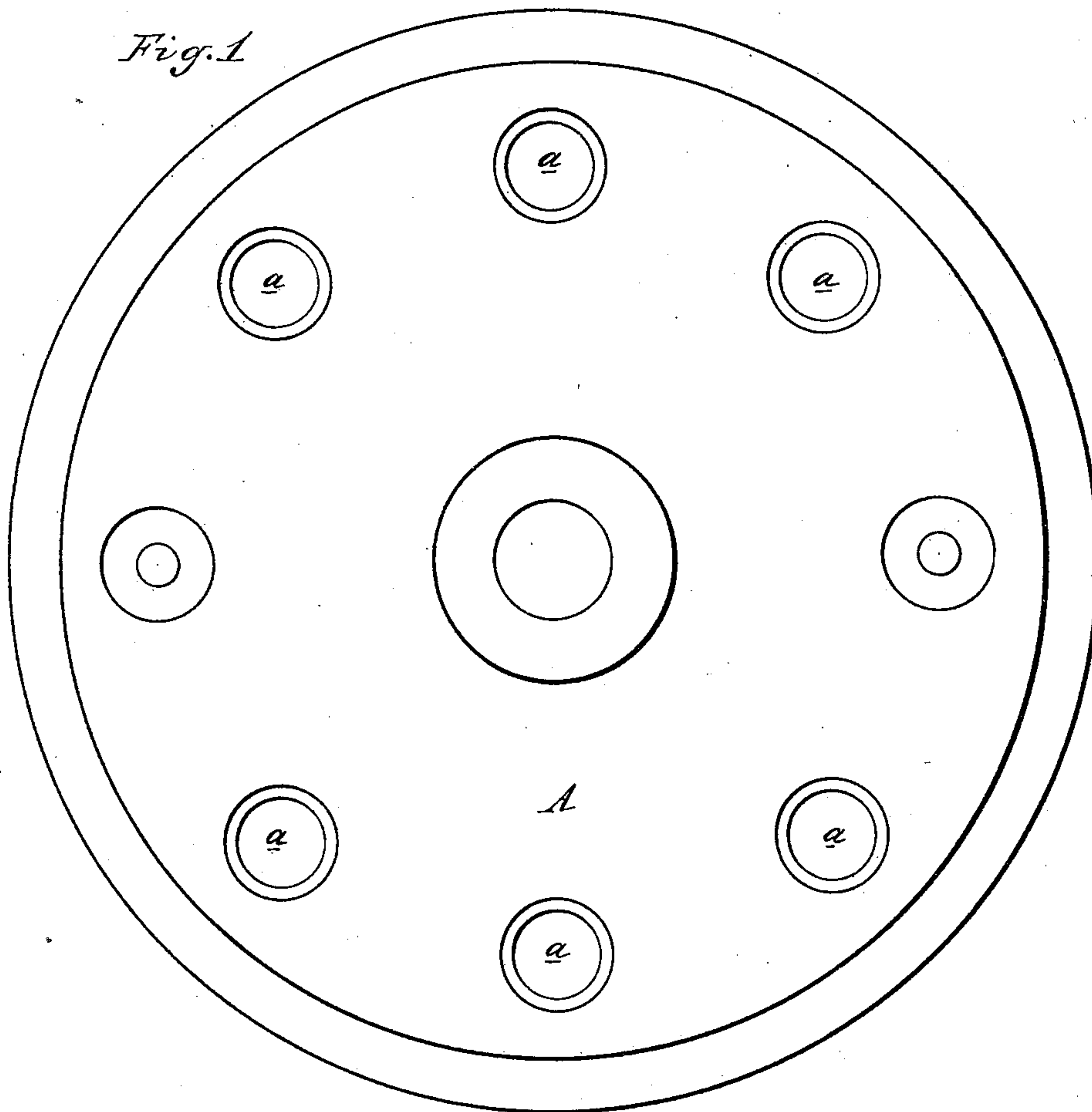
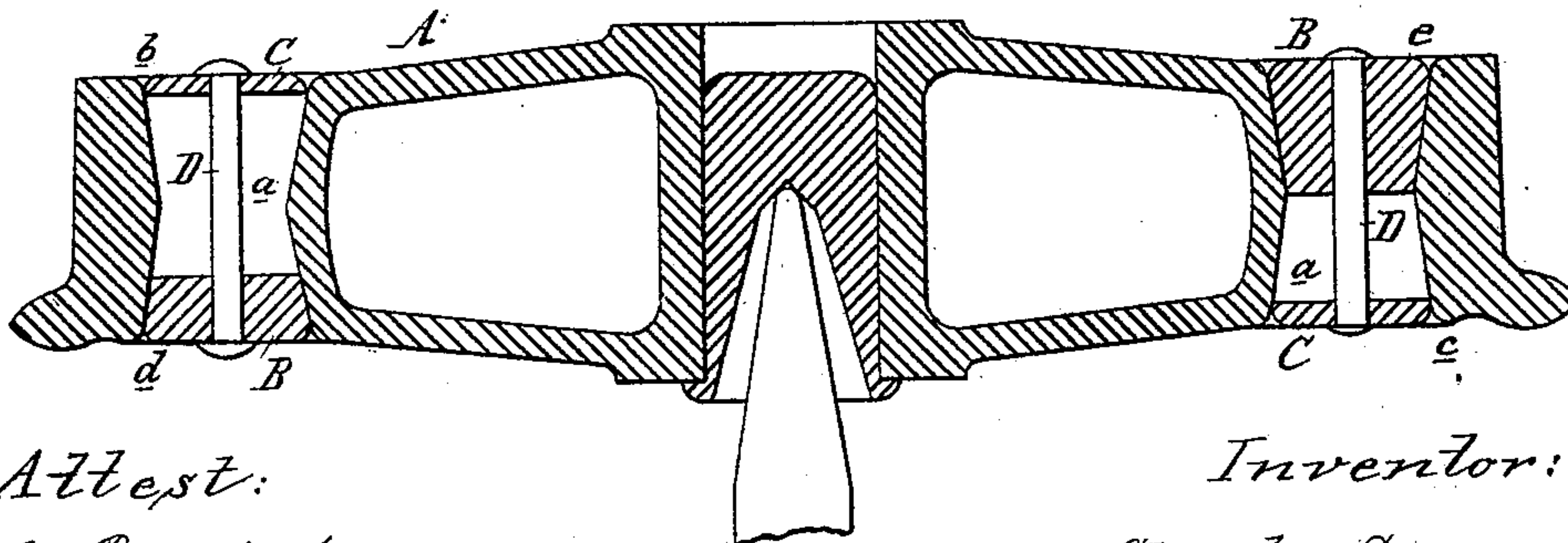


Fig. 2



Attest:
A. Barthel
E. Scully

Inventor:
Charles Seymour
per Thos. S. Sprague
Atty

(No Model.)

2 Sheets—Sheet 2.

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Fig. 3

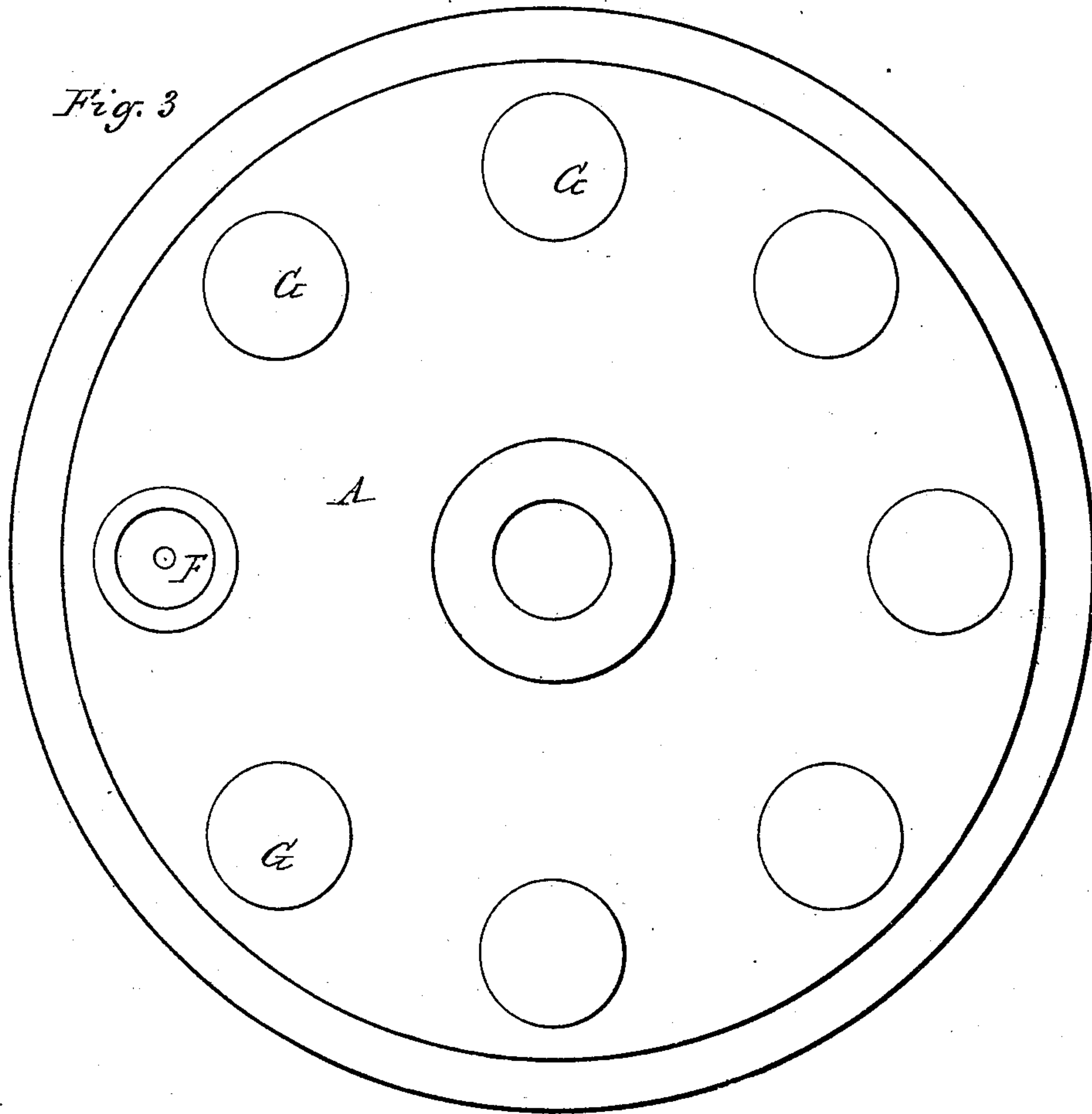
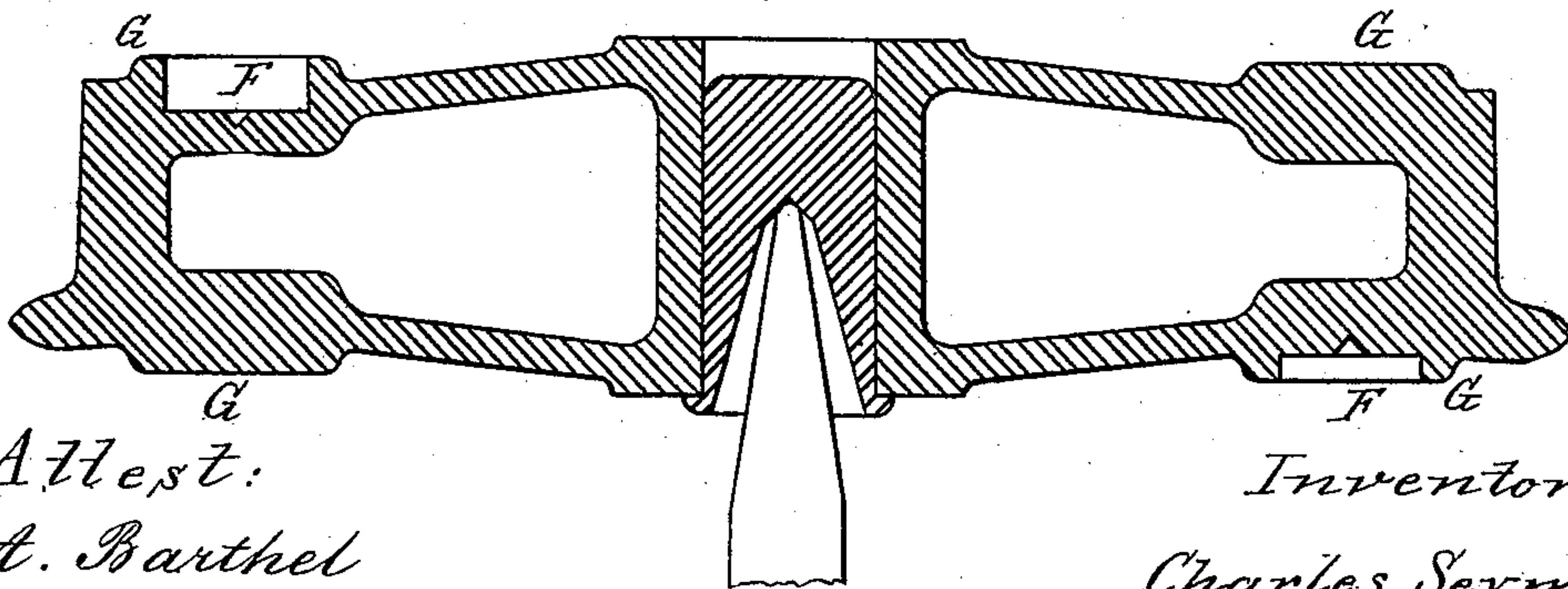


Fig. 4



Attest:

A. Barthel

E. Sulby.

Inventor:

Charles Seymour
per *Thos. S. Sprague*
Att'y

UNITED STATES PATENT OFFICE.

CHARLES SEYMOUR, OF DEFIANCE, OHIO.

CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 250,684, dated December 13, 1881.

Application filed September 28, 1881. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SEYMOUR, of Defiance, in the county of Defiance and State of Ohio, have invented an Improvement in Car-Wheels, of which the following is a specification.

The nature of this invention relates to certain new and useful improvements in the construction of car-wheels, and has for its object the producing of a true-running balance to the wheel in addition to the standing or horizontal balance, and thereby prevent the wobbling of the wheel while running, and the consequent strain upon the axle and flange of the wheel in its impingement against the rail.

The invention consists in the peculiar construction and means employed for producing the desired result, all as more fully hereinafter set forth, and then pointed out in the claims. Figure 1, Sheet 1, is a plan view, and Fig. 2 is a central cross-section, of a car-wheel, showing means employed for securing the standing and running balance of the wheel. Figs. 3 and 4, Sheet 2, are similar views, showing a modification.

In the accompanying drawings, which form a part of this specification, A represents a car-wheel, which is provided with a series of holes, *a*, which are conical in shape from their longitudinal center outward, and being so constructed that weights may be added to it near the periphery in lines transverse to the plane of rotation. We will suppose that there is an excess of weight at *b c*, Fig. 2. It is obvious, therefore, that weights should be secured at *d e* in order to prevent the violent lateral play to which wheels running at a high rate of speed are liable. The positions which these weights should occupy can only be ascertained by rotating the wheel to be balanced upon a pivot at a sufficiently high speed to cause the wheel to rotate in a plane parallel to its greatest sectional weight. While so running the wheel can be marked by chalking or otherwise, and the prominences or marked portions will indicate the points of greatest deficiency of weight, and it is at these points weight should be added in order to produce the true-running balance of the wheel, and they should be of the proper size to cause the wheel to rest, when not running,

in a horizontal plane, and they must also be in such position as to cause the wheel to rotate in a horizontal plane. The wheel so balanced will, when put upon its axle, run at any rate of speed without jar or disturbance to any of its surroundings; hence, by destroying the tendency of the wheel to wobble the strain upon the axle and violent impingement of the flange of the wheel against the rail are entirely avoided, thereby greatly lessening the liability of breaking the axle by disintegration caused by an unbalanced wheel.

The means employed for securing these weights in place are various, and in Figs. 1, 2, I show weights B C as inserted in the proper conical holes *a* of the wheel and secured to place by a bolt, D, passing through the weights and riveted; or, if preferred, the weights may consist merely of rivets disposed at proper points in the wheel to produce the desired balance.

In Figs. 3 and 4 I show a wheel on which are cast projections or bosses G upon each face or side of the wheel, which may be bored away or otherwise reduced, as at F, so as to produce the balance desired.

I am aware that it is not new to balance car-wheels by adjustably attaching weights to the same, and I am also aware that it is not new to provide car-wheels with projecting portions which may be broken or cut off to balance the wheels, and therefore I do not broadly claim balancing car-wheels by adding weights to or cutting off surplus metal from the same.

What I claim as my invention is—

1. A car-wheel provided with conical recesses, in combination with weights of different sizes corresponding with said conical recesses and adapted to be secured therein, substantially as and for the purpose specified.

2. The wheel A, provided with a series of recesses, *a*, as described, in combination with the weights B C, of different sizes, and the bolt D, said weights being adapted to be secured in the recesses *a* on both sides of the wheel, as and for the purpose specified.

CHARLES SEYMOUR.

Witnesses:

F. G. BROWN,
GEO. A. HEATLEY.