

No. 620,479.

Patented Feb. 28, 1899.

G. E. MITTINGER, JR.  
SHEET METAL TROLLEY WHEEL.

(Application filed Dec. 6, 1898.)

(No Model.)

Fig. 3.

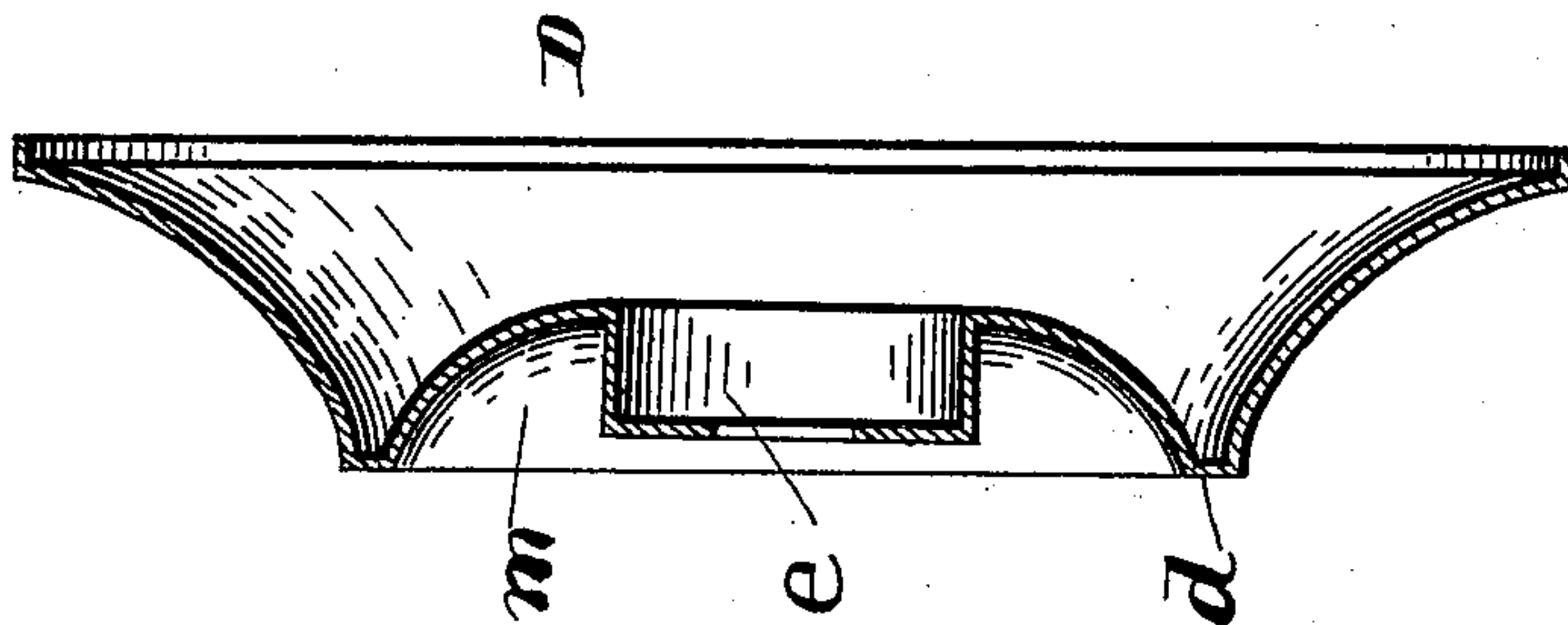


Fig. 2.

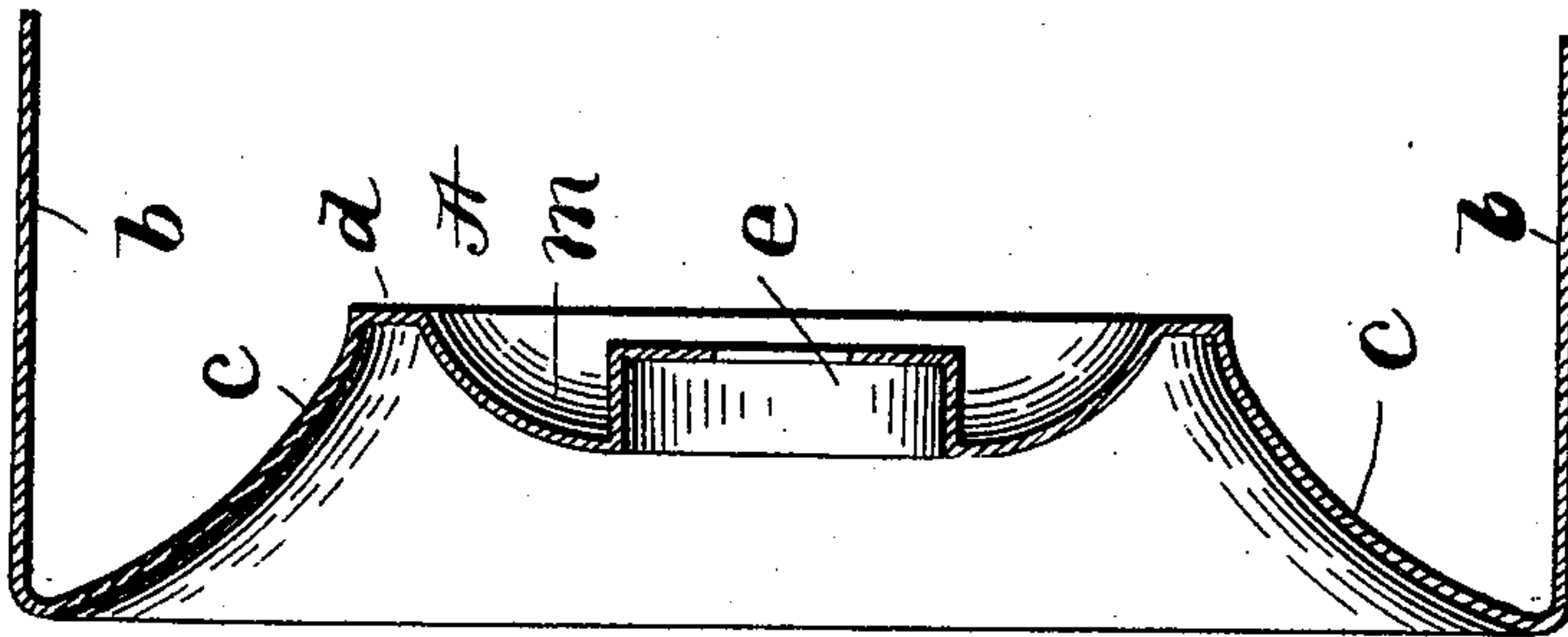
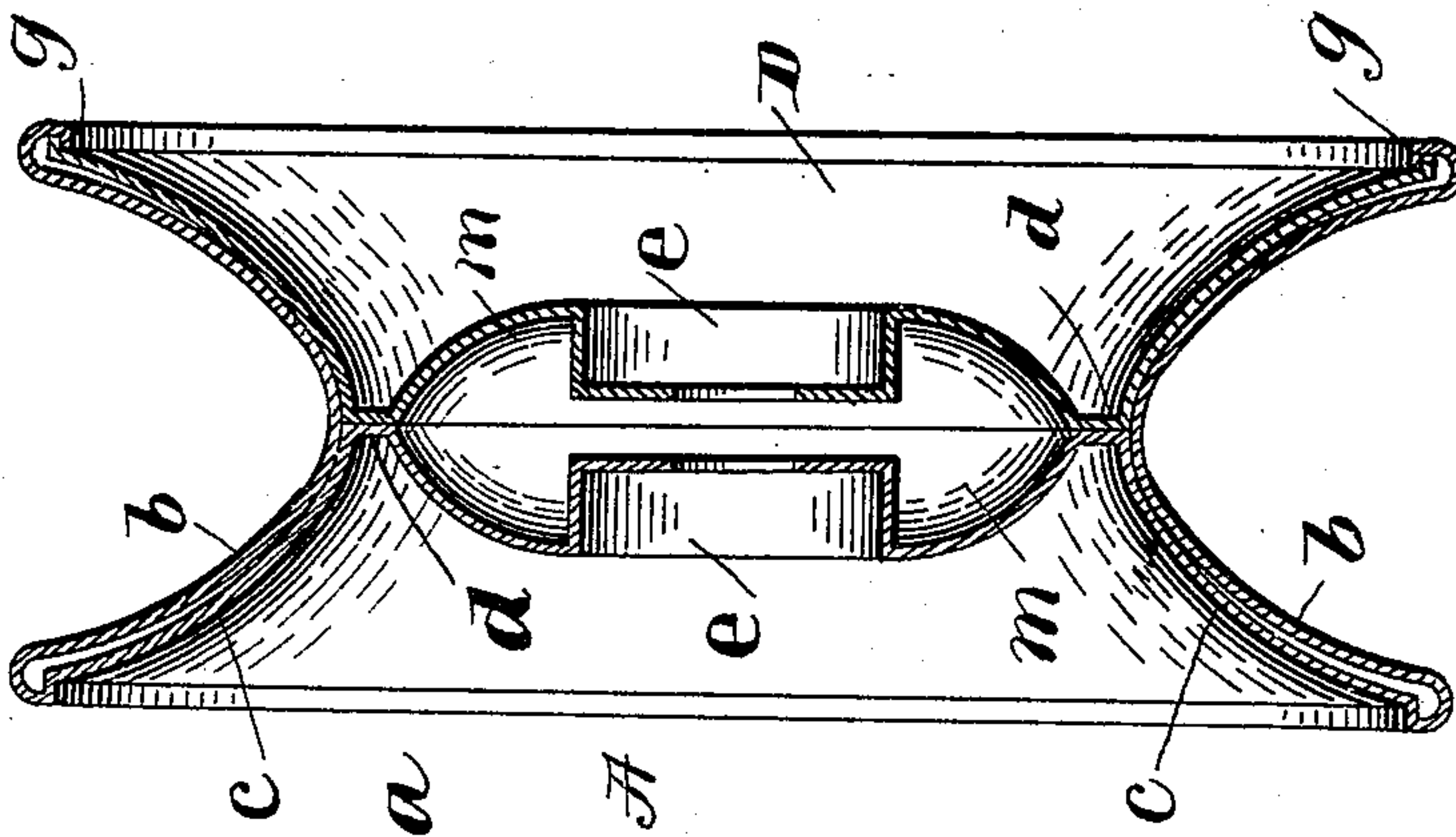


Fig. 1.



WITNESSES

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# UNITED STATES PATENT OFFICE.

GEORGE E. MITTINGER, JR., OF CLEVELAND, OHIO, ASSIGNOR OF THREE-FOURTHS TO FREDERICK J. SCHWEITZER, OF SAME PLACE.

## SHEET-METAL TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 620,479, dated February 28, 1899.

Original application filed August 30, 1898, Serial No. 689,828. Divided and this application filed December 6, 1898. Serial No. 698,425. (No model.)

*To all whom it may concern:*

Be it known that I, GEORGE E. MITTINGER, Jr., a citizen of the United States, residing at Cleveland, in the county of Cuyahoga and State of Ohio, have invented new and useful Improvements in Sheet-Metal Trolley-Wheels, of which the following is a specification, and which is a division of my application filed August 30, 1898, Serial No. 689,828.

My invention relates to improvements in sheet-metal trolley-wheels, all of which will be fully described hereinafter and particularly pointed out in the claims.

The object of my present invention is to construct a sheet-metal trolley-wheel consisting of two pieces, constructed as hereinafter shown and described, whereby it is cheaper, more evenly balanced, and a better conductor of electricity than the usual cast wheel.

In the accompanying drawings, Figure 1 is a cross-sectional view of a wheel embodying my invention. Fig. 2 is a similar view of one part of which my wheel is composed and which forms one side and the outer grooved periphery thereof. Fig. 3 is a similar view of the other side.

The sheet-metal wheel comprising my present invention is composed of two pieces of sheet metal, the one, A, being doubled, as illustrated in Fig. 2, to form the center of one side *a*, the external grooved periphery *b*, and one side *c* of the under thickness of the grooved periphery. The opposite side of the wheel is composed of a sheet-metal piece D, which is constructed of a corresponding shape to the other piece, excepting the extension thereof, which forms the outer grooved periphery of the wheel. This side D of the wheel fits under and has the center *e* corresponding to the center of the other part of the wheel and is curved parallel with and under the grooved periphery formed by the other piece, the edge of the piece D being clamped in position by the turning over of the edge of the piece A, as shown at *g*, thus clamping the two parts firmly and rigidly together. It will be noted that the wheel thus constructed has a double-thickness grooved periphery, one fitting within the other, and the outer wall of the periph-

ery formed of a single piece without any seam, while the under wall or thickness of the grooved periphery is formed of the two pieces combined.

In order to strengthen the center of the wheel, both pieces A and D are brought together at the points *d* into a vertical ring, which strengthens the wheel against radial compression, and the centers of these pieces are arched outward, as shown at *m*, and then turned inward to form the bearing-block cavities. These bearing-block cavities preferably have inner walls, as shown.

By means of this construction a sheet-metal wheel is produced which is simple in construction, cheap to make, and strong and durable. It also produces a wheel which is more evenly balanced in comparison with the usual cast wheel and one which is a better conductor of the electric current.

While I have particularly described the sheet-metal wheel as adapted for use as a trolley-wheel, it will be readily understood that the construction herein shown, described, and claimed may be used for other purposes without departing from the spirit of my invention.

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

1. As a new article of manufacture, a grooved pulley composed of a pair of sheet-metal disks provided with flanges bent upwardly and outwardly in opposite directions, the flange of one of said disks being extended so as to form the outer grooved face of the pulley and embrace and interlock with the flange of the other disk, substantially as described.

2. As a new article of manufacture, a grooved pulley composed of a pair of sheet-metal disks provided with flanges bent upwardly and outwardly in opposite directions, the flange of one of said disks being extended over and curved down to form a grooved seamless periphery, the edge of the flange turned over and around the edge of the flange of the other disk, substantially as described.

3. As a new article of manufacture, a grooved pulley composed of a pair of disks,

the flanges of the disks extending upwardly and outwardly in opposite directions, the flange of one of the disks extending over and curved downward to form a seamless grooved 5 periphery and embracing the edge of the flange of the other disk, the two disks brought together under the periphery and extending inward to form an annular ring  $d$ , arched outward and then depressed inward to form the 10 bearing-block cavities, substantially as described.

4. As an improved article of manufacture a sheet-metal wheel having a double-thickness periphery portion, one thickness fitting

within the other, the under thickness formed 15 contiguous with the central portion, the central portion meeting under the periphery and bulged outward substantially as shown, and then depressed inward forming oppositely inwardly projecting bearing-block cavities, 20 substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

GEORGE E. MITTINGER, JR.

Witnesses:

J. H. SALTSMAN,

J. A. FOGLE.