

(No Model.)

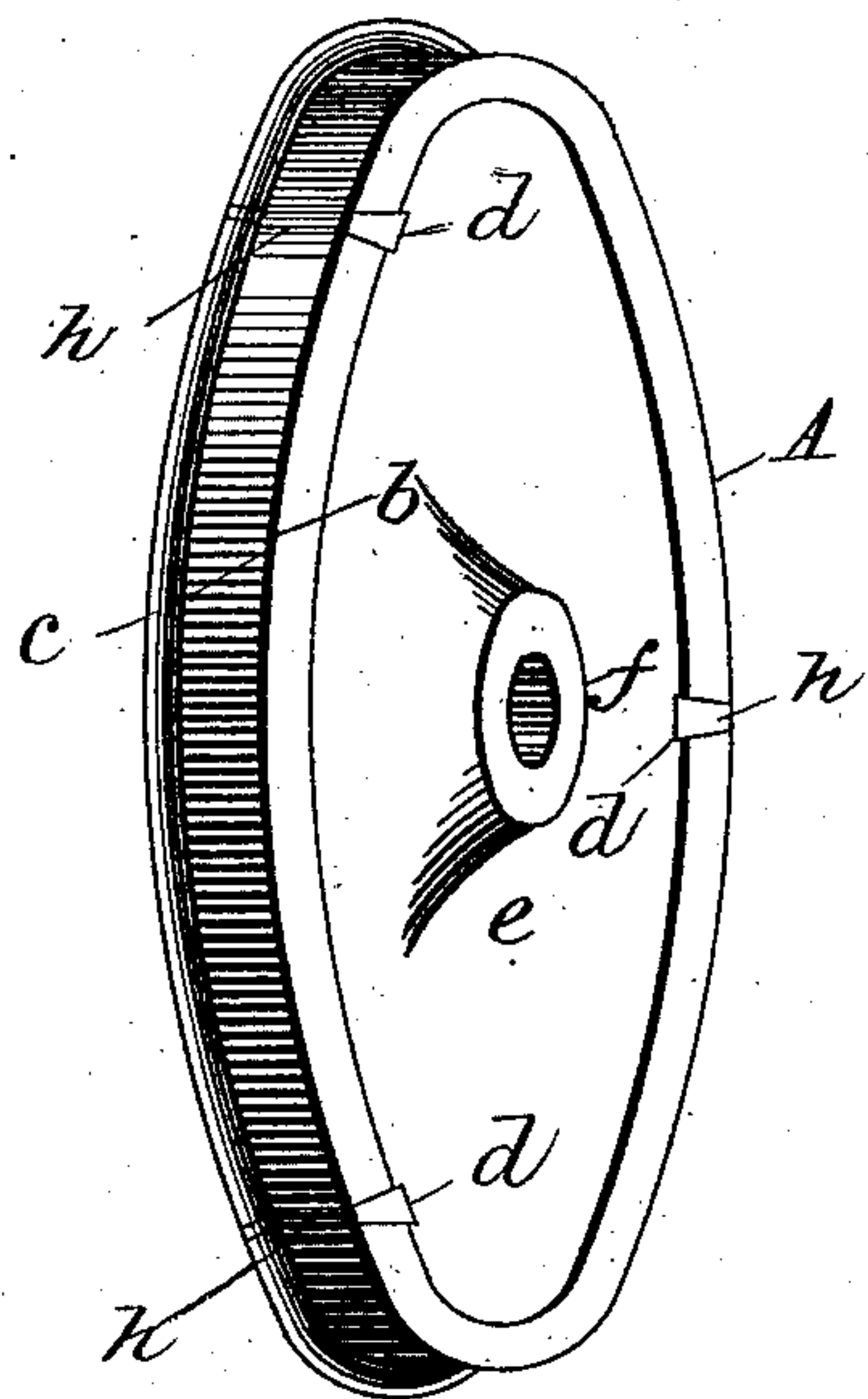
S. L. SINCLAIR.

CAR WHEEL.

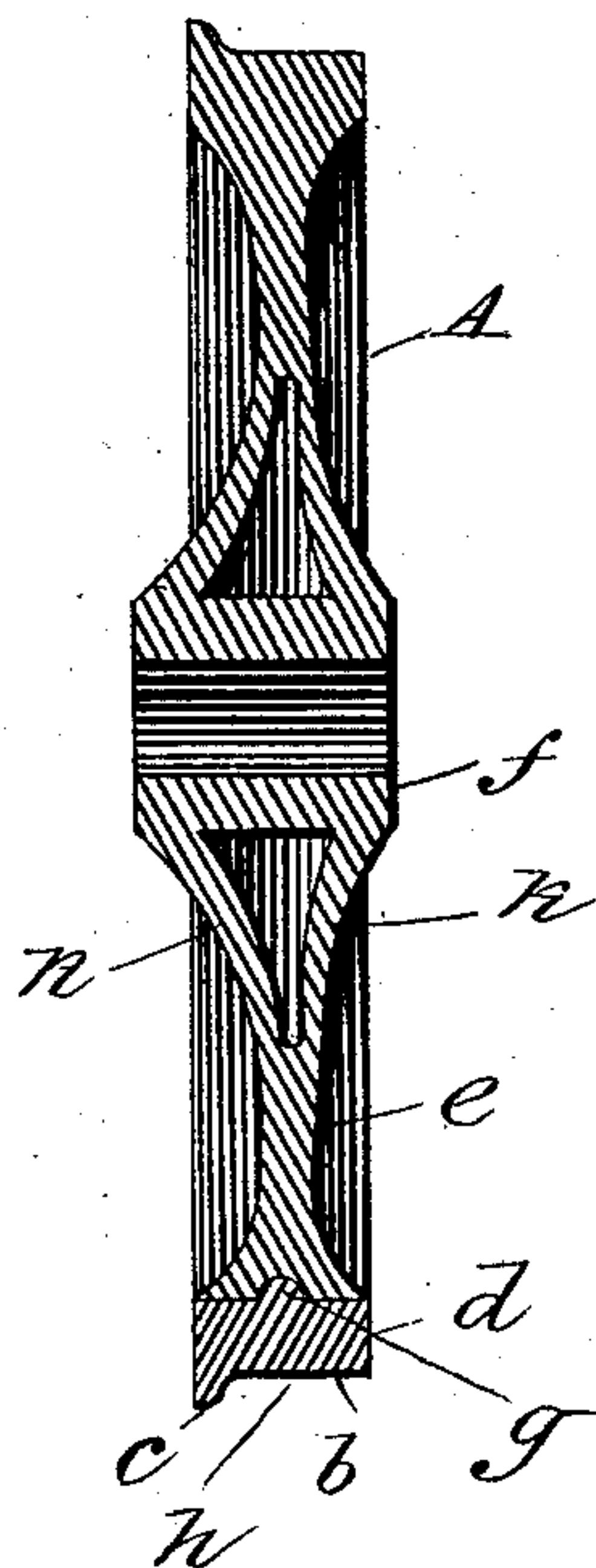
No. 365,546.

Patented June 28, 1887.

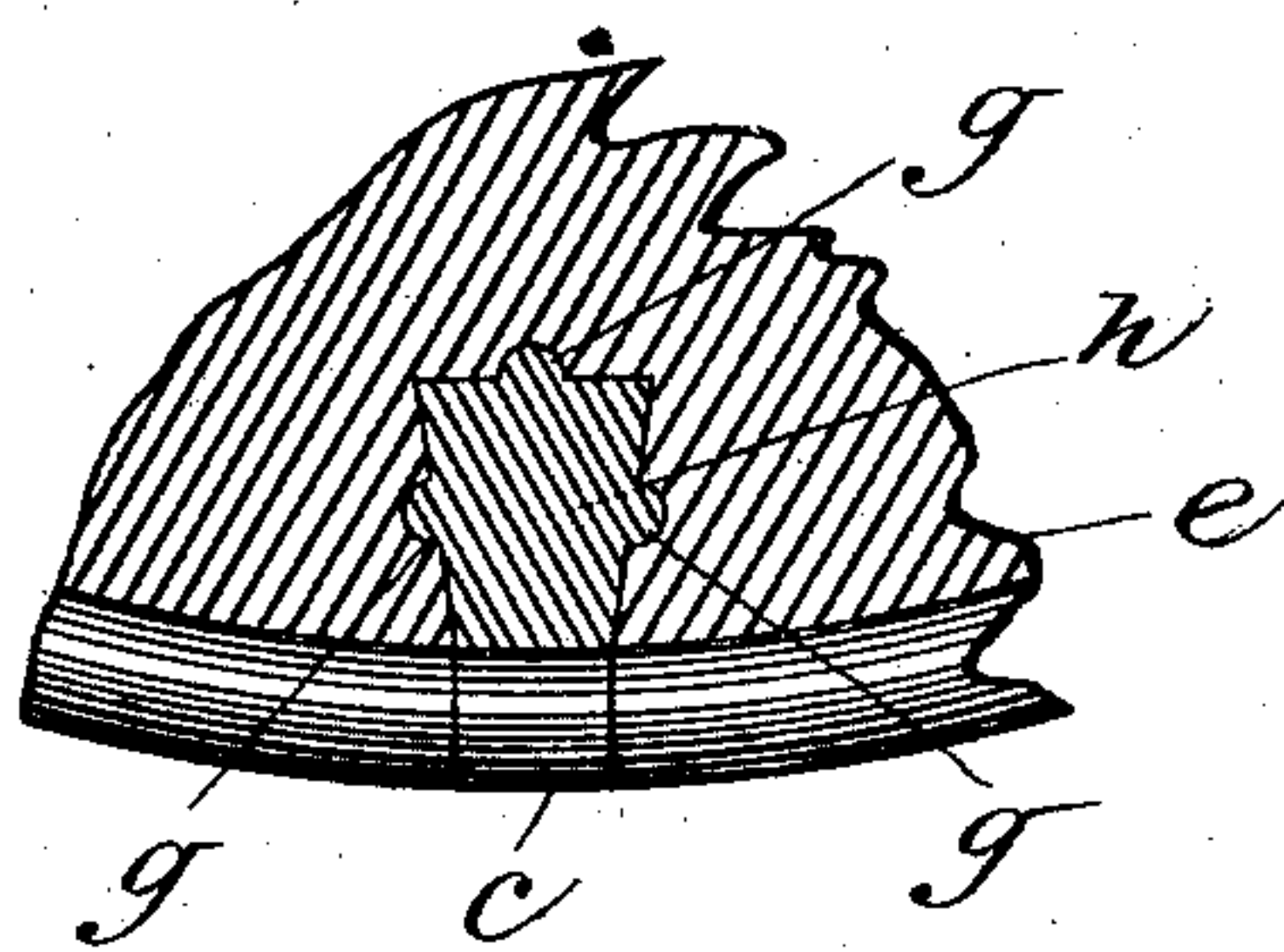
*Fig. 1.*



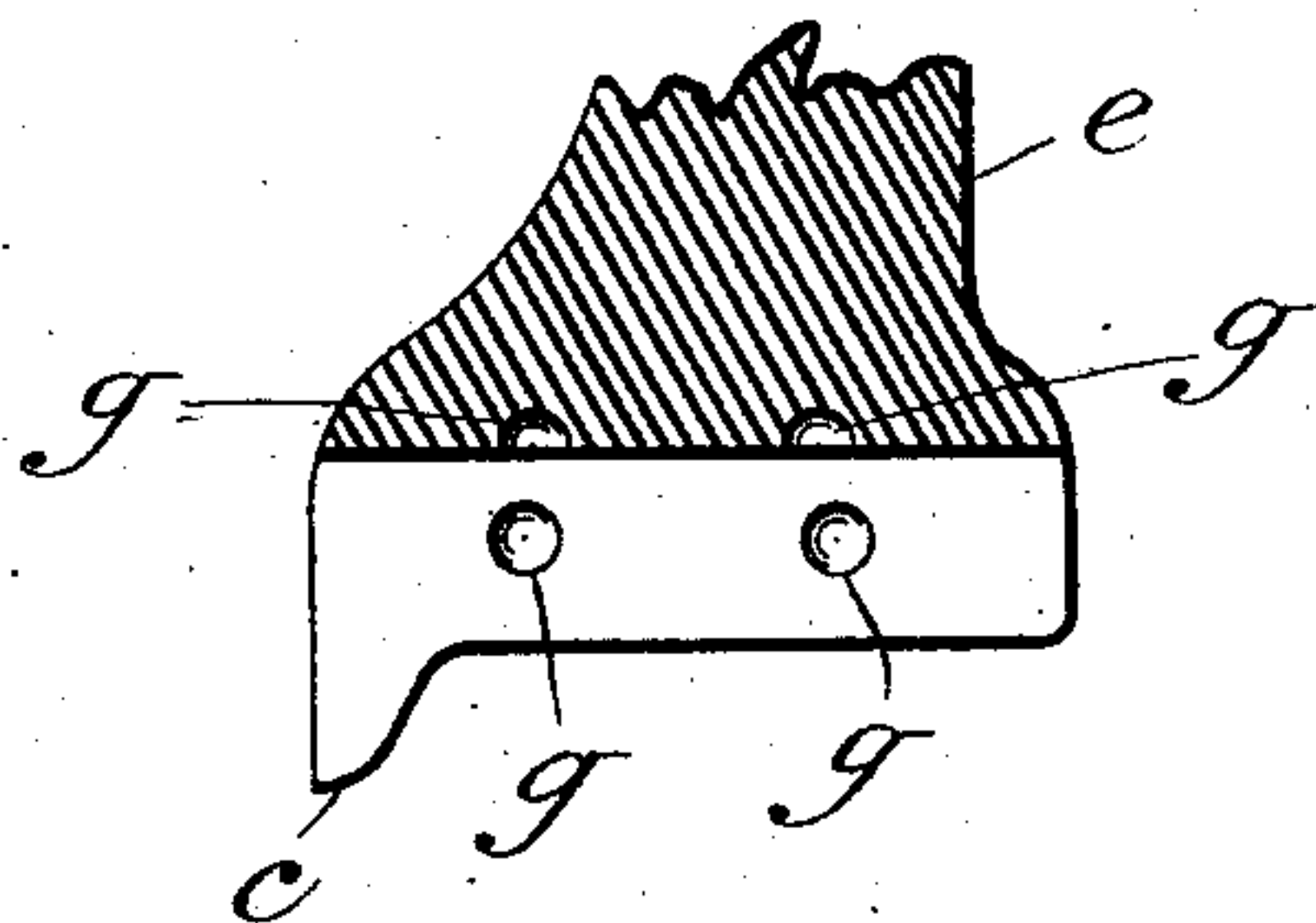
*Fig. 2.*



*Fig. 3.*



*Fig. 4.*



Witnesses:  
James L Orr  
Letitia Orr

Inventor:  
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# UNITED STATES PATENT OFFICE.

SUSAN L. SINCLAIR, OF ALLEGHENY, PENNSYLVANIA.

## CAR-WHEEL.

SPECIFICATION forming part of Letters Patent No. 365,546, dated June 28, 1887.

Application filed April 5, 1887. Serial No. 233,814. (No model.)

*To all whom it may concern:*

Be it known that I, SUSAN L. SINCLAIR, a citizen of the United States, residing at Allegheny, in the county of Allegheny and State of Pennsylvania, have invented a new and Improved Car-Wheel, which will be readily understood from the following description, taken in connection with the accompanying drawings, wherein—

10 Figure 1 represents a perspective view of my car-wheel; Fig. 2, a transverse vertical section; Fig. 3, an enlarged sectional view of a portion of the rim or tread of the wheel, having therein a recess filled with cast steel or  
15 cast-iron; Fig. 4, an enlarged section of the wheel-rim with the cast-metal filling removed.

Among the various appendages of a railroad-car there are probably no parts of so much importance as its wheels. The multiplicity  
20 of forms and manner of making them indicate that the manufacture is attended with much uncertainty. In order to secure a degree of hardness enabling them to withstand rough usage and wear incident to prolonged  
25 travel on railroads, the periphery or tread of the wheels have been chilled, and to do this without producing in other portions of the wheel an unequal shrinkage and consequent strain is a difficulty not entirely overcome.

30 The means employed by my father, and set forth in Letters Patent of the United States No. 72,405, December 17, 1867, describes a method of producing car-wheels whereby the shrinkage and strain were in a great measure  
35 avoided. His invention consisted in the production of a car-wheel provided with a number of radial "recesses" in its periphery or tread, whereby a shrinkage or contraction thereof could take place without seriously  
40 affecting other parts of the wheel, and these recesses he proposed to fill with pieces of steel or other hard metal.

Letters Patent of the United States No. 315,080, April 7, 1885, were also granted to me  
45 for a method of filling recesses formed in the tread of car-wheels.

My present invention consists of a car-wheel as a new article of manufacture. The wheel  
50 A may be of any desirable size, shape, and weight, molded and cast in any suitable man-

ner within a "chill" to give requisite hardness to its periphery, including its tread *b* and flange *c*, which in this case are divided into two or more segments by means of transverse recesses *d*, but connected together by  
35 the web *e* of the wheel that joins the central hub or nave *f*. The several recesses *d* are dovetailed or made wider at their deepest part, and in the sides and bottom of each recess *d* are small pockets or cavities *g*, that may be  
60 of any desirable shape. The several recesses and cavities therein are filled by pouring molten steel or cast-iron therein after any manner known to the trade or art, whereby  
65 the segments of the periphery or tread *b* and flange *c* are united and given a complete unbroken contour by a filling, *h*, made even and smooth by any suitable process to fit the wheel for use.

The wheel A may be of that sort having its  
70 web formed of a single plate extending outward from its central hub to its rim; but I prefer to form the wheel A with a web consisting of double walls *k k*, which may either  
75 be plain or corrugated or sinuous, as a means of bracing the rim of the wheel in connection with its central hub.

I claim—

1. As a new article of manufacture, a car-wheel provided with a chilled or hardened  
80 periphery or tread having one or more transverse grooves or recesses filled and closed with metal cast therein.

2. A car-wheel provided with a chilled or hardened periphery or tread having one or  
85 more transverse grooves or recesses therein filled and closed with metal cast in the same and made to conform to the contour of the tread.

3. A car-wheel provided with one or more  
90 transverse grooves or recesses in its rim or tread and pockets or cavities in said recesses.

4. A car-wheel provided with a double-walled web and one or more transverse grooves or recesses in its periphery or tread filled with  
95 metal cast in the same.

SUSAN L. SINCLAIR.

Witnesses:

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