

(No Model.)

2 Sheets—Sheet 1.

J. N. CONWAY.
PATTERN FOR CAR WHEELS.

No. 363,598.

Patented May 24, 1887.

Fig. 1.

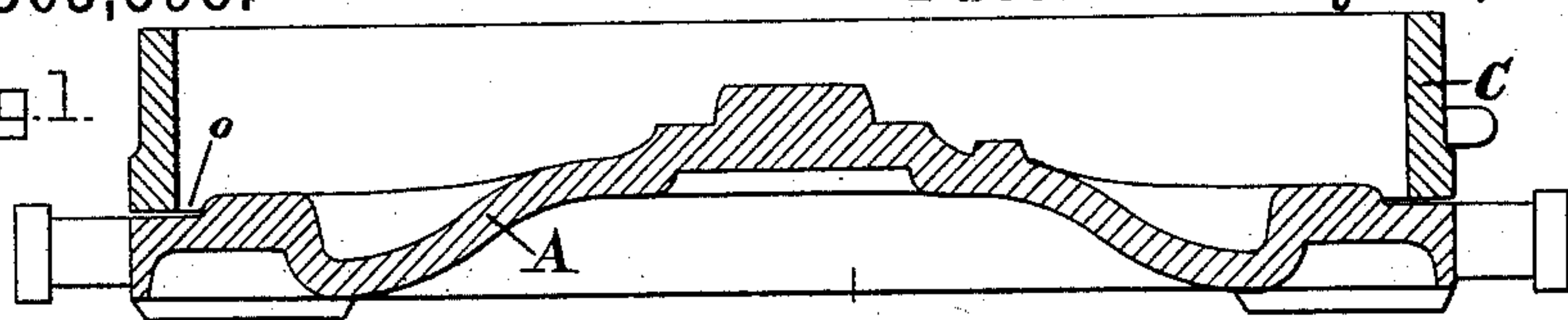


Fig. 2.

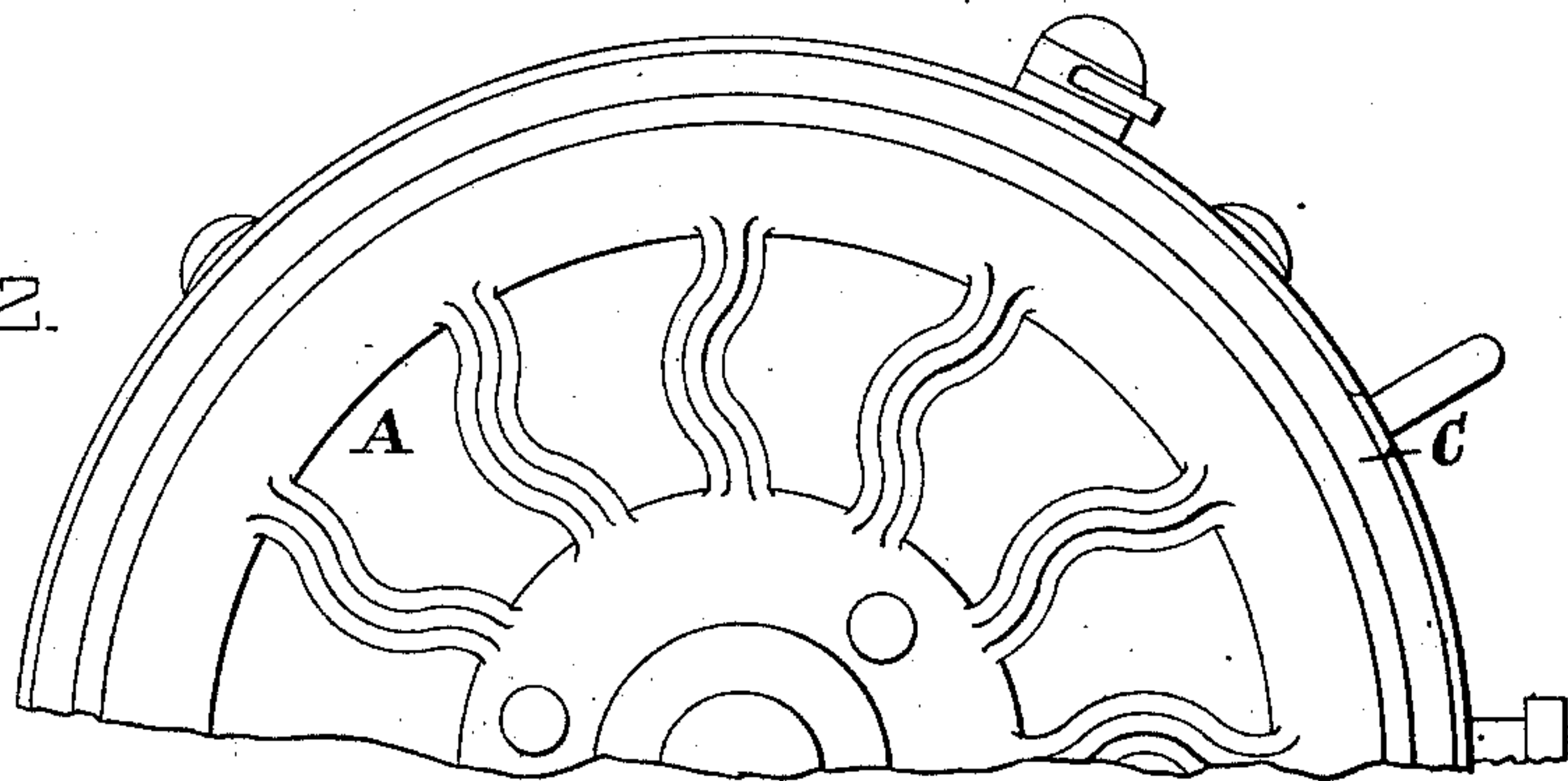


Fig. 3.

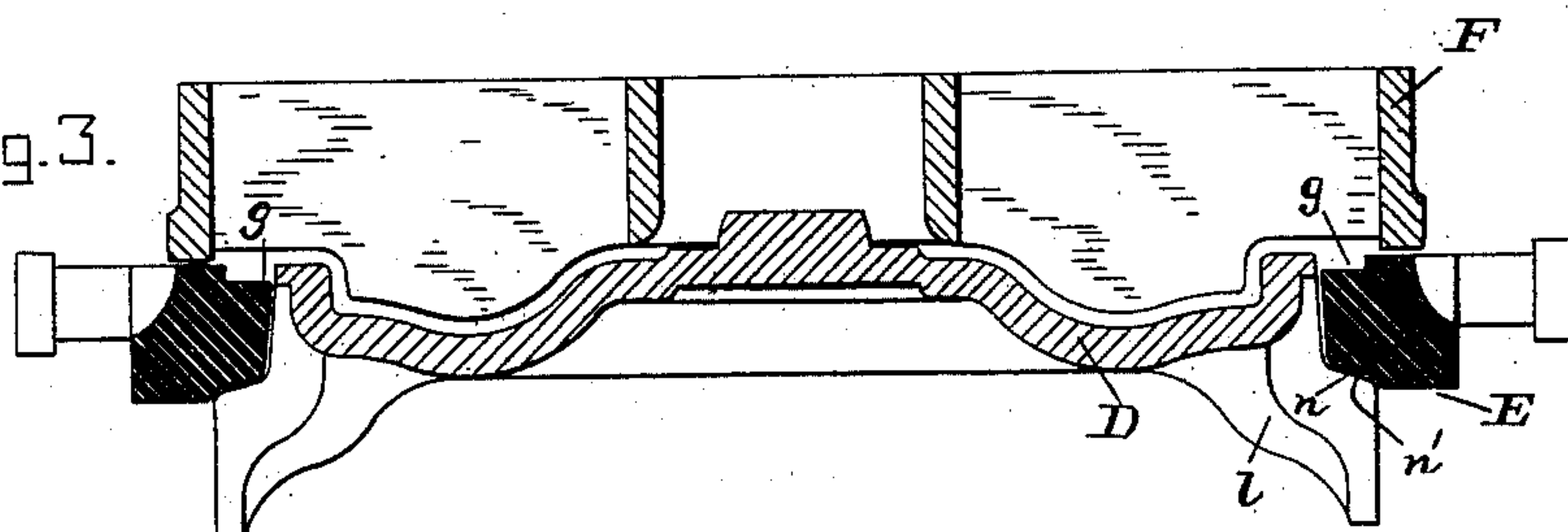
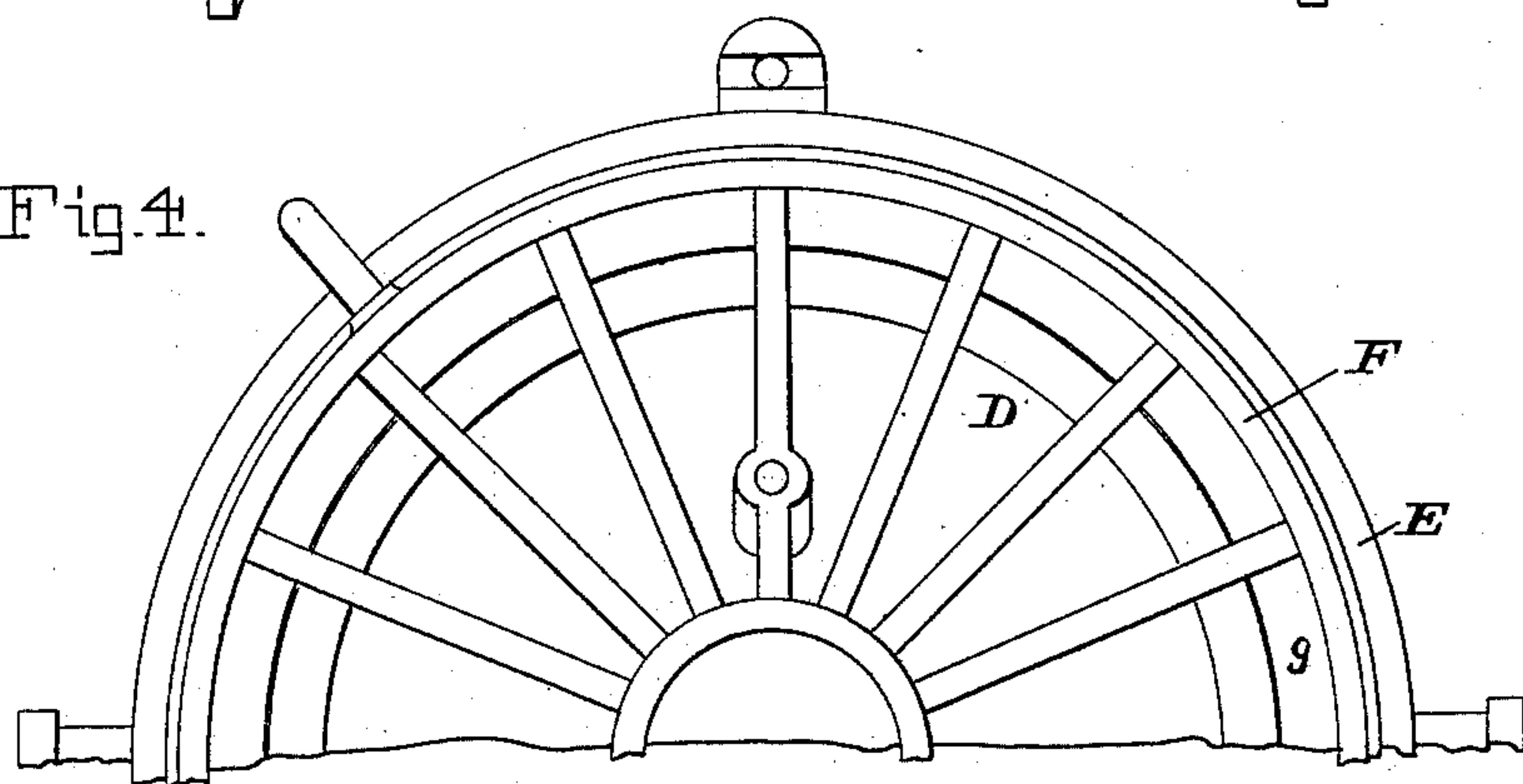


Fig. 4.



WITNESSES:

John E. Morris.
A. E. Eader

INVENTOR:

John N. Conway

BY

Chas B. Mann

ATTORNEY.

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Fig. 5.

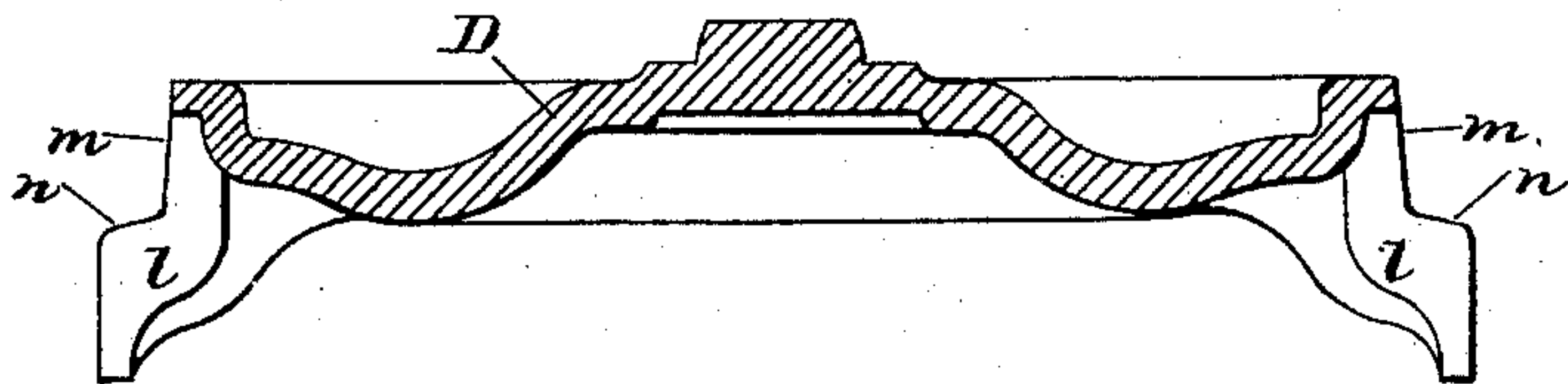


Fig. 6.

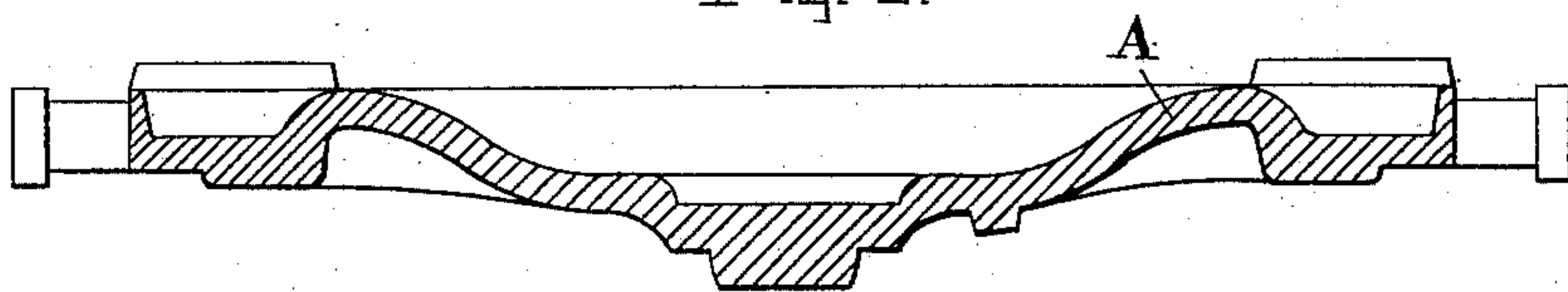


Fig. 7.

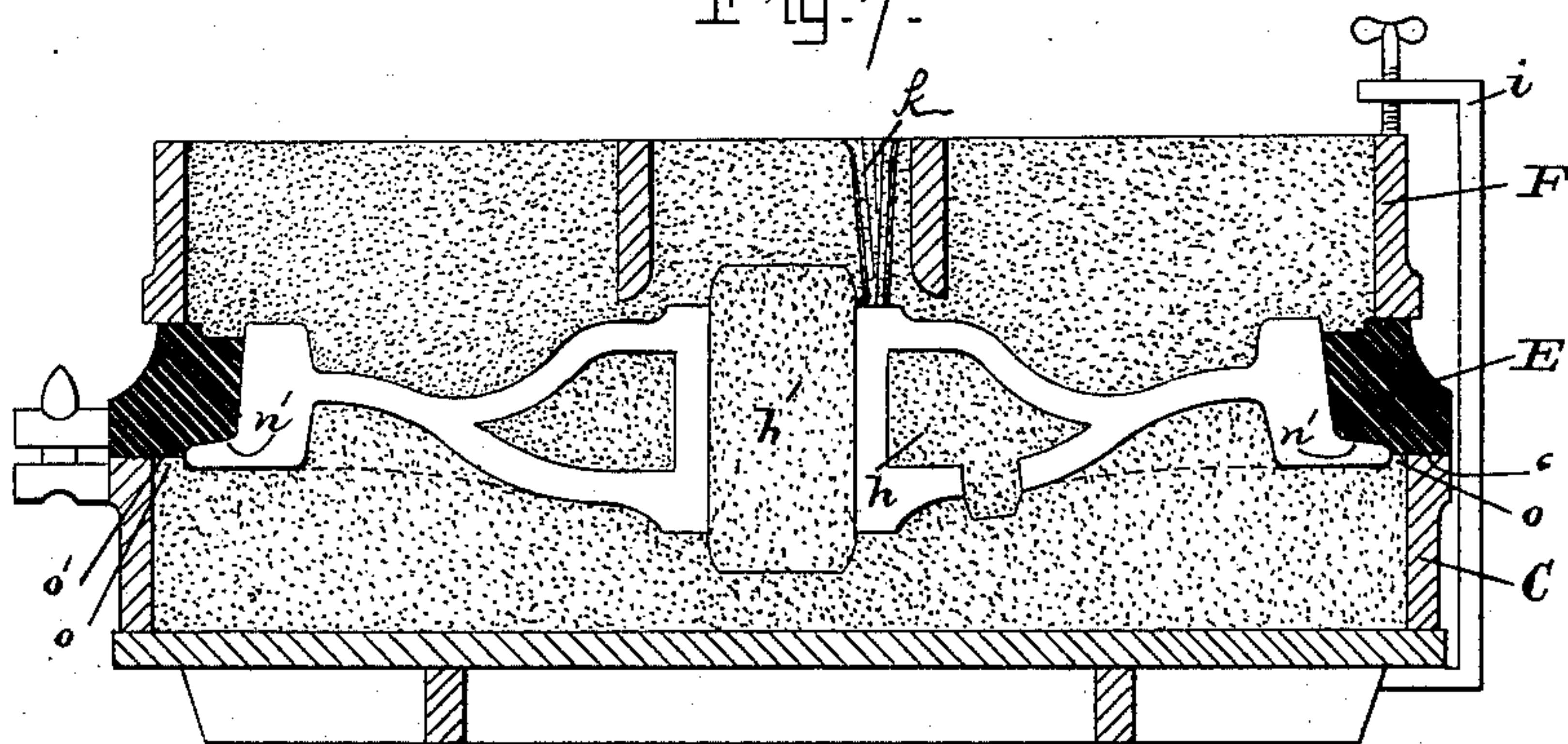
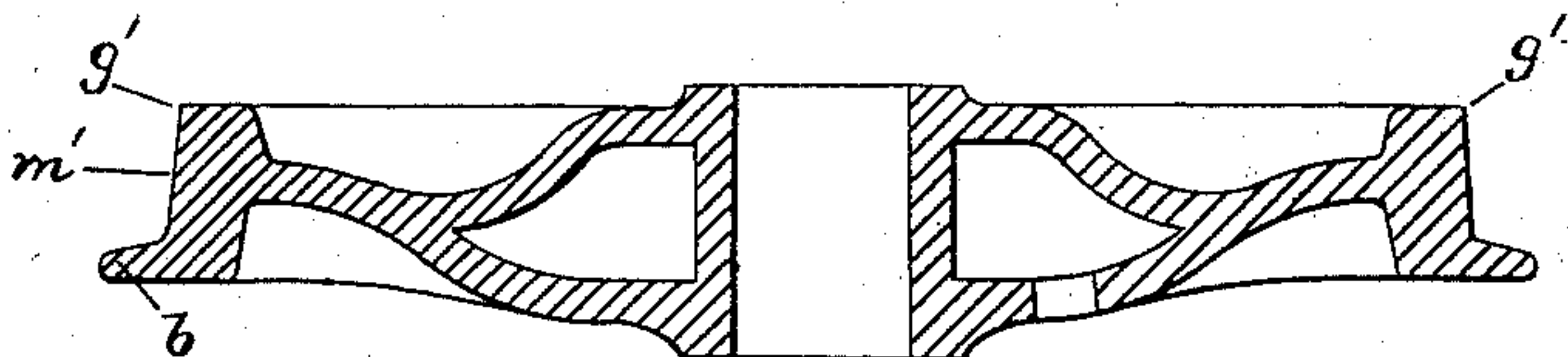


Fig. 8.



WITNESSES:

John E. Morris.
A. E. Eader

INVENTOR:

John N. Conway

BY

Chas B. Mann

ATTORNEY.

UNITED STATES PATENT OFFICE.

JOHN N. CONWAY, OF BALTIMORE, MARYLAND, ASSIGNOR OF TWO-THIRDS
TO JESSE CONWAY AND GEORGE R. OTT, BOTH OF SAME PLACE.

PATTERN FOR CAR-WHEELS.

SPECIFICATION forming part of Letters Patent No. 363,598, dated May 24, 1887.

Application filed February 18, 1887. Serial No. 228,043. (No model.)

To all whom it may concern:

Be it known that I, JOHN N. CONWAY, a citizen of the United States, residing at Baltimore, in the State of Maryland, have invented certain new and useful Improvements in Patterns for Car-Wheels, of which the following is a specification.

My invention relates to improvements in patterns for car-wheels which are cast in a chill, and is illustrated in the accompanying drawings, in which—

Figure 1 is a sectional view of the drag and one of the two parts composing my pattern, being that part which forms the side of the wheel having the flange, and which is cast in the drag portion of the flask, and showing it in the position it has while the drag is being filled with sand and rammed. Fig. 2 is an inverted plan of one-half of the pattern and the flask part shown in Fig. 1. Fig. 3 is a sectional view of the cope and chill and one of the two parts of the pattern, being that part which forms the outer side of the wheel, and which is cast in the cope portion of the flask. Fig. 4 is a top view of the cope and pattern shown in Fig. 3. Fig. 5 is a diametrical section of the cope part of the pattern, and Fig. 6 is a diametrical section of the drag part of the pattern, both parts in these two figures being in proper relative position to represent the two surfaces of the car-wheel. Fig. 7 shows a section of the flask, sand mold, and core complete, ready for the metal to be poured. Fig. 8 shows a section of the car-wheel.

This invention consists in making the pattern of a wheel which is to be cast in a chill in two parts, which together represent all the surface of the wheel that is molded in sand, and providing the cope part of the pattern with shoulders to support the chill-ring when molding.

The letter A designates one of the parts of the pattern being that part which includes the wheel-flange *b*, and embraces one side of the wheel. This part of the pattern forms the mold in the drag C of the flask. In molding, the pattern A is placed upon the floor face side up. The drag C is placed over it, as seen in Fig. 1, filled with sand, rammed, and then the pattern and drag are turned over and placed in the position the drag is designed to have when poured. The pattern A is then removed.

The letter D designates the other part of the pattern and embraces the outer side of the wheel. This pattern has four brackets, *l*, each of which has a vertical part, *m*, and a sloping shoulder, *n*. The said vertical part represents the tread-rim *m'* of the car-wheel, and the said shoulders receive the part *n'* of the chill when molding and support the chill and cope. By employing the four brackets *l* instead of a full rim, the pattern is much lighter. Over the part D of the pattern is placed the chill-ring E and cope part of the flask, F, both secured together. This part of the flask includes the sand edge *g*, which forms the outer edge, *g'*, of the tread of the wheel, which edge it is desirable shall not be chilled. The cope is filled with sand, rammed, and the pattern D removed, and then the cope and chill are placed in position on the drag-mold, the cores *h* and *h'* (see Fig. 7) having been inserted and secured by clamps *i*. The mold is then ready for pouring, the metal entering at the pour-hole *k*. The flat sand face *o* at the rim of the drag-mold receives the flat face *o'* of the iron chill when the parts of the mold are put together ready for pouring.

It will be seen that my car-wheel pattern of two pieces forms all the outer surface of a car-wheel and renders unnecessary the expensive patterns that have heretofore been used, and which, when made in one piece composed of wood and metal representing the entire wheel, are difficult to handle in molding and soon become so battered and indented as to be incapable of producing a perfect mold. My pattern being in two parts, and each part representing one surface of the wheel only, may be made of metal and still be light and durable.

Every molder in a car-wheel foundry has an assistant or helper, whose duty, among other things, is to fill sand in, ram, &c. Where the wheel-pattern is in one piece, it follows that either the molder or his helper are unavoidably idle much of the time, the one being delayed while the other is doing his work. It will be seen, therefore, that an important advantage resulting from my improvement in patterns is that the molder and his assistant can both work at the same time, because the wheel-pattern is composed of two separate pieces. The cost of the molding operation, therefore, is very materially lessened. In first

cost these patterns are cheap, and will wear much longer than the usual wood patterns.

Patterns of this kind may be used for molding chilled wheels known as "single plate,"
5 "double plate," arm, "solid" or "hollow" arm. These patterns may be used with the flask in general use or with any flask.

Having described my invention, I claim and
10 desire to secure by Letters Patent of the United States—

A pattern for molding chilled-tread car-wheels, consisting of two separate parts, the drag part A, representing the side of the wheel

which includes the wheel-flange, and the cope
part D, representing the side of the wheel 15
which includes the outer edge of the wheel-tread, and said cope part provided with brackets l, each of which has a sloping shoulder, n,
to support the chill-ring when molding, as set forth. 20

In testimony whereof I affix my signature in presence of two witnesses.

JOHN N. CONWAY.

Witnesses:

JOHN E. MORRIS,
JNO. T. MADDOX.