

C. E. KLEINSCHMIDT.

Car Wheel.

No. 71,021.

Patented Nov. 19, 1867.

Fig. 1.

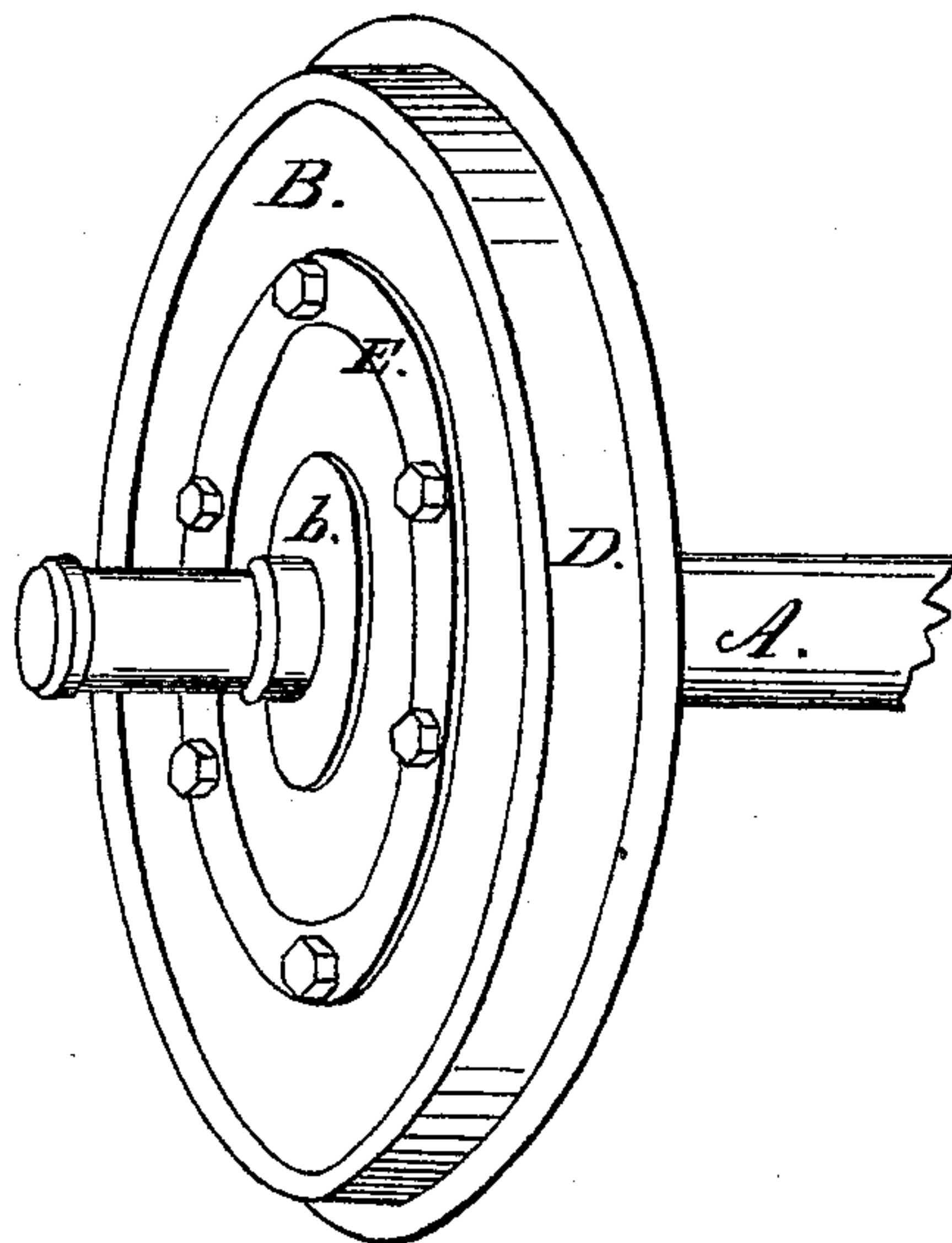


Fig. 2.

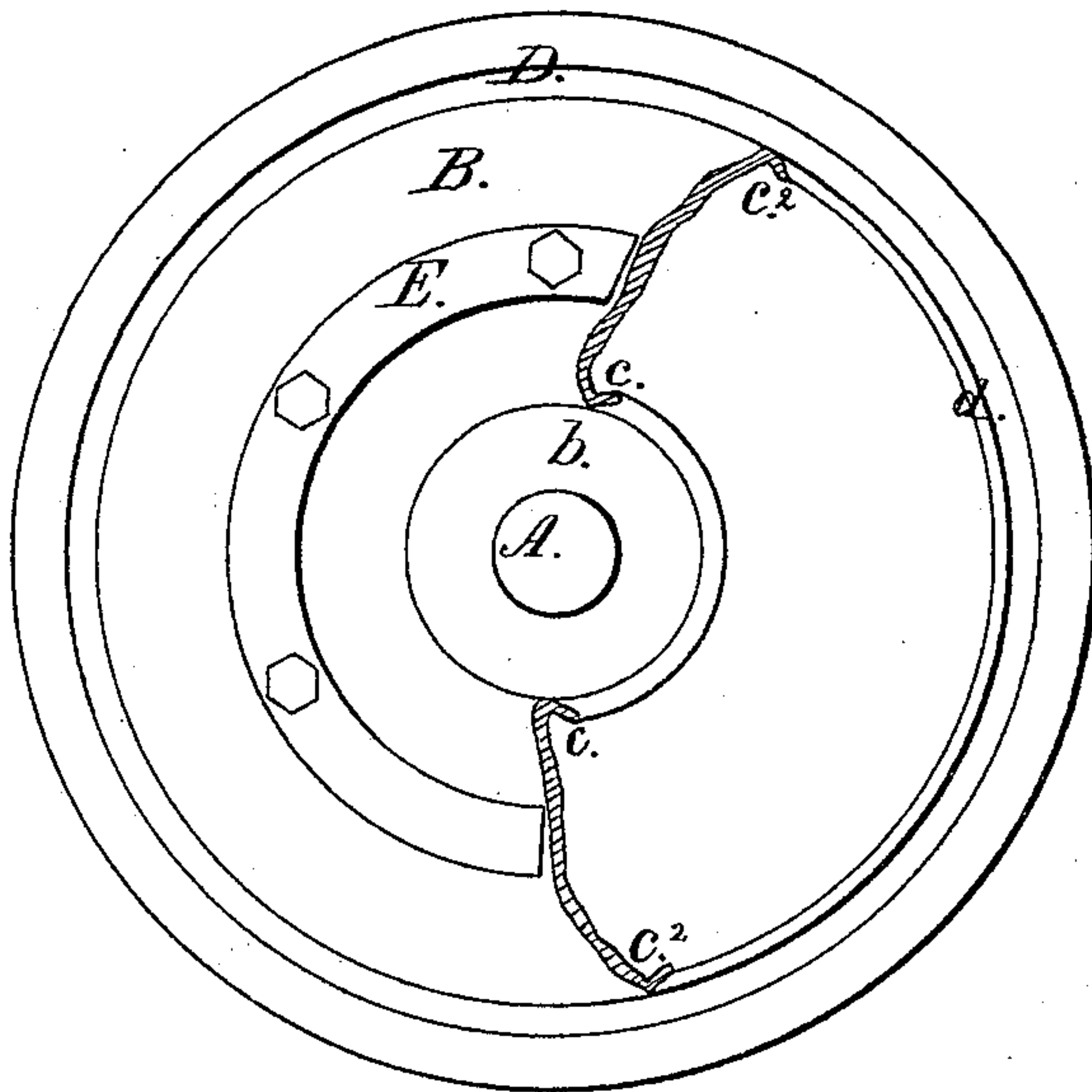
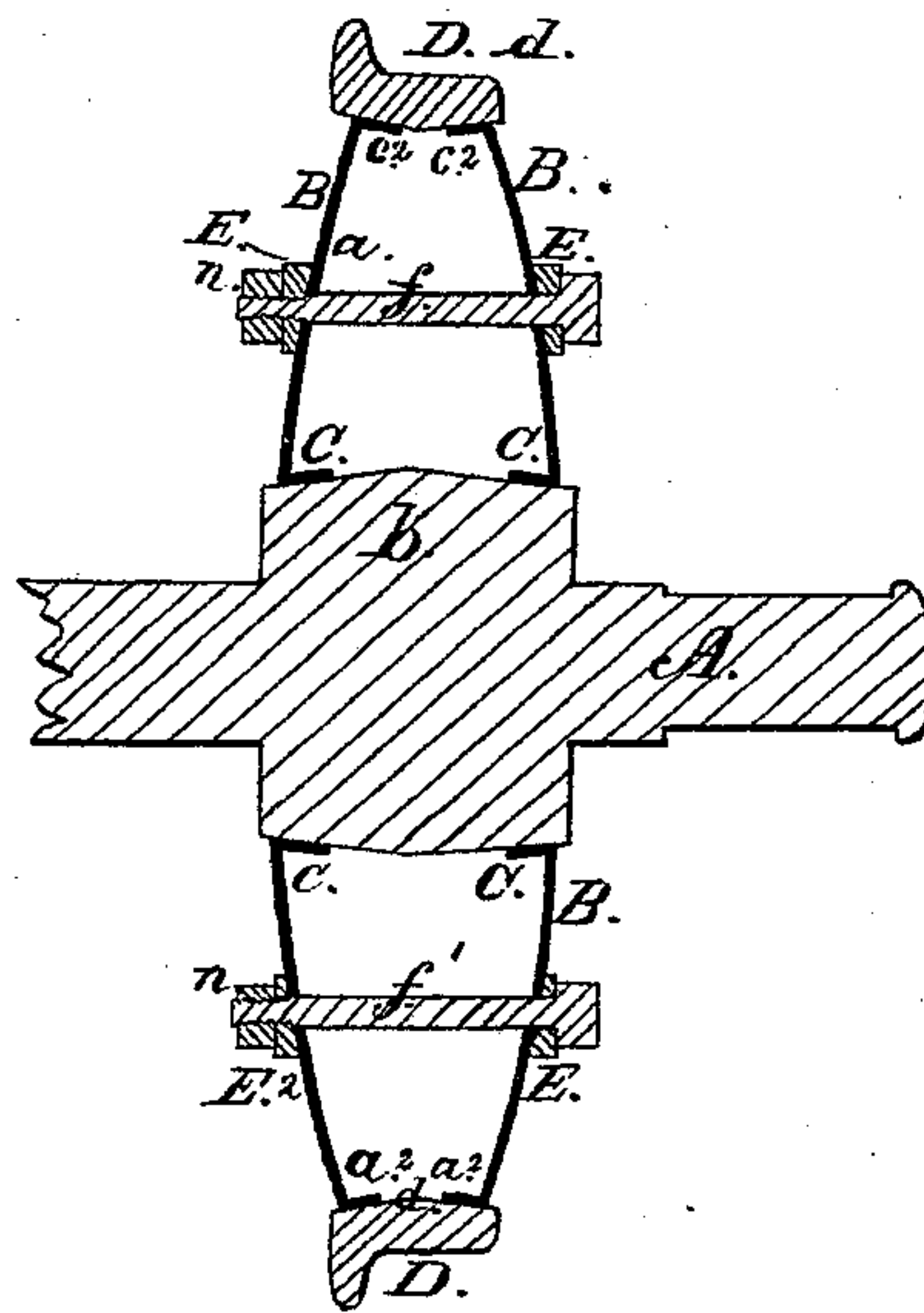


Fig. 3.



Witnesses:

Geo. W. Tibbitts.
Geo. A. Peter.

Inventor:

Charles E. Kleinschmidt.

United States Patent Office.

CHARLES E. KLEINSCHMIDT, OF CLEVELAND, OHIO.

Letters Patent No. 71,021, dated November 19, 1867.

IMPROVED CAR-WHEEL.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, CHARLES E. KLEINSCHMIDT, of Cleveland, county of Cuyahoga, in the State of Ohio, have invented a new and improved Mode of Constructing Railroad-Car Wheels; and I do hereby declare that the following is a full and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon.

Figure 1 is a perspective view.

Figure 2 is a side view, with a portion of plate broken out.

Figure 3 is a vertical section.

The nature of this improvement relates to the construction of railroad-car wheels in separate parts, said parts being so constructed and arranged as to constitute a compact, durable wheel, of lighter weight and possessing greater strength than the ordinary cast-iron wheel, and one also that may be easily and readily repaired without incurring the loss of the entire wheel.

The construction and arrangement of my improved wheel is as follows: A represents a car-axle, which may be wrought in the usual manner, and may have a hub, *b*, formed upon it, and comprising a part of it, or the hub may be made separate and shrunk upon it, or it may be keyed upon the axle in the usual way for securing the same. The periphery of said hub, I make bevelled from the middle to the ends, the purpose of which will be hereafter seen. B B are wrought-iron or steel plates, cut round, and are bent or curved, as seen in fig. 3, and have a hole in the centre, which fits the hub *b*, and has a flange, *c*, bent or turned inward at an angle to correspond with the bevel of the hub. Said flange, instead of being bent on said plates, may have an angle-iron ring bolted on to them, and fitting the hub. The outer edge of said plates B B has also a flange, *c*², bent upon them at an angle similar to the inside one. D represents a tire, which may be rolled, of steel, or it may be of wrought or chilled cast iron, and also has its inside surface *d* bevelled in like manner to the hub. E E are rings, which are made thinner gradually from their outside to their inside edge, to correspond with the slant or curve of the plates B B, and are intended to serve as washers for the bolts and nuts. The rings and plates are provided with holes, through which the bolts *f f* pass, and to prevent the bolts from becoming loosened, by jarring or otherwise, the ring E² has a screw-thread cut in its holes, and the bolts are screwed through them, and the nuts *v* are screwed down tight upon them, thus acting as jam-nuts.

It will be seen, by reference to figs. 2 and 3, that the flanges *c* and *c*² of the curved plates B B bear against the bevelled surfaces of the hub *b* and of the tire D, and that, by the drawing of the bolts *f f*, the whole structure is held firmly together. The plates B B can be cut and formed of wrought iron or steel, which enables my wheel to be made much lighter in weight than the ordinary cast-iron wheels, at the same time possessing equal or greater strength, and not liable to be broken. The tire being made separate, and which may be of wrought iron, or steel, or chilled cast iron, enables them to be made more durable, and to be readily replaced, whenever they become worn, by others, without the necessity of throwing aside the entire wheel. The other parts seldom become worn out or broken.

The practical advantages of this method of constructing car-wheels are the simplicity and cheapness of manufacture, great durability, and less liability to get out of order, and the readiness with which the tires may be replaced, and also their being of less weight than those now in use.

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

The plates B B, having flanges *c* *c*² on their outer and inner edges, the hub *b*, having a bevelled periphery, the tire D, having its inner surface also bevelled, and the rings E E² and the bolts *f f*, all constructed, arranged, and combined in the manner described and for the purpose set forth.

CHARLES E. KLEINSCHMIDT.

Witnesses:

GEO. W. TIBBITTS,

GEO. HESTER.