No. 622,214. Patented Apr. 4, 1899.

S. W. FLETCHER.

TROLLEY WHEEL.

(Application filed July 25, 1898.)

(No Model.)

Fig. 1.

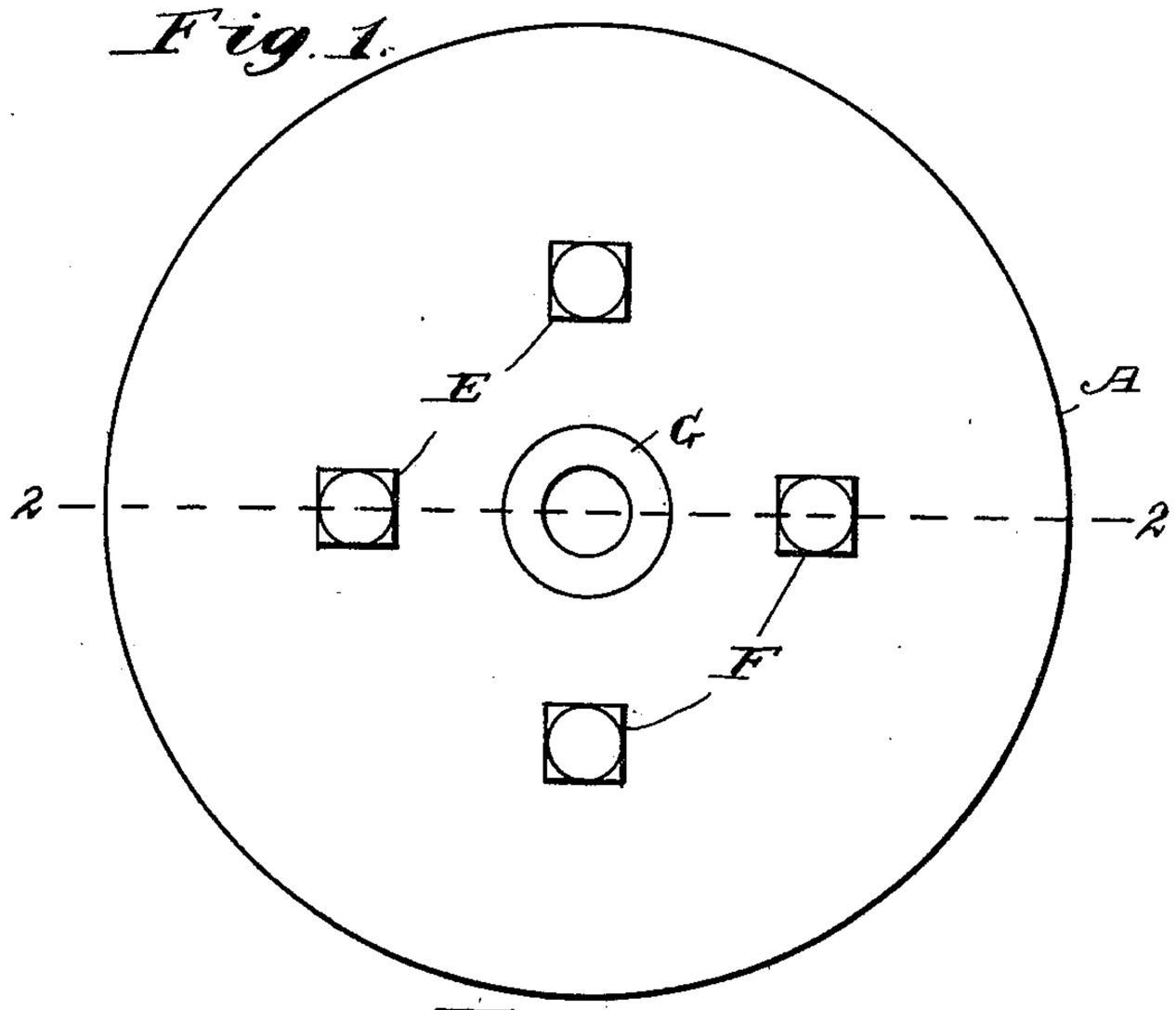
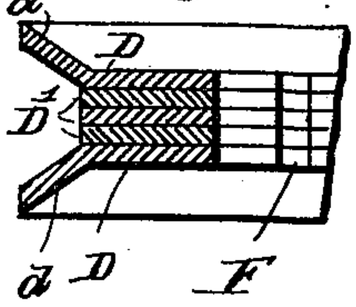


Fig. 2.

Fig. 4



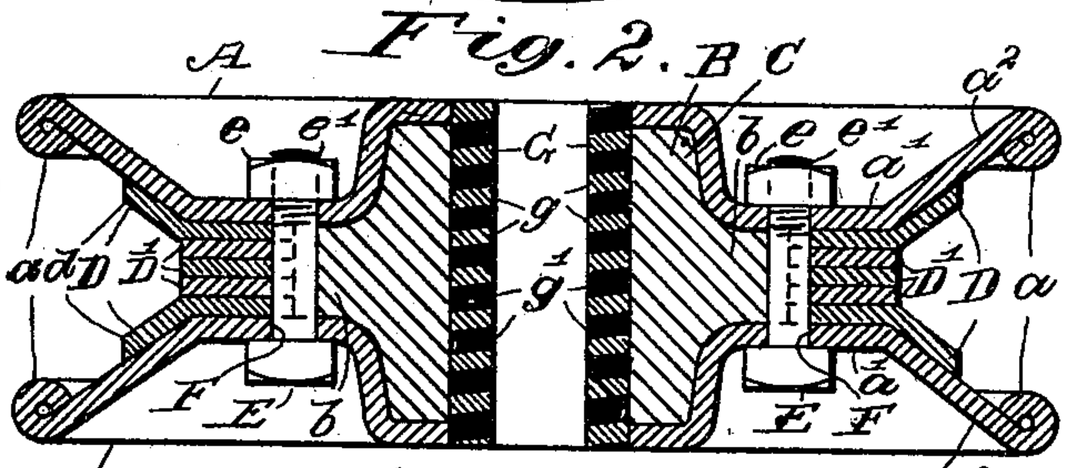
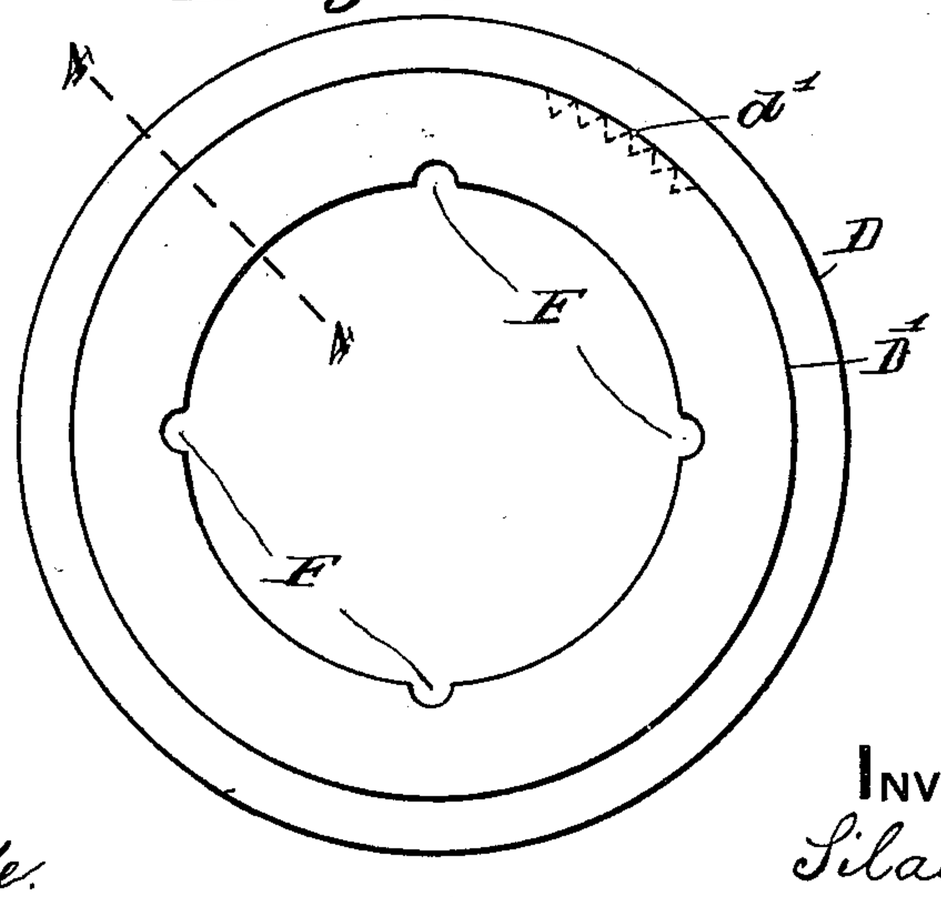


Fig. 3.



WITNESSES.

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SILAS W. FLETCHER, OF LOWELL, MASSACHUSETTS.

TROLLEY-WHEEL.

SPECIFICATION forming part of Letters Patent No. 622,214, dated April 4, 1899.

Application filed July 25, 1898. Serial No. 686,804. (No model.)

To all whom it may concern:

Be it known that I, SILAS W. FLETCHER, of Lowell, in the county of Middlesex and Commonwealth of Massachusetts, have invented a certain new and useful Improvement in Trolley-Wheels, of which the following is a specification.

My invention relates to trolley-wheels, its object being to provide and improve means for enabling the whole or a part of a new tread or bearing-surface to be applied to the wheel-body when the old tread is worn; and said invention consists in the devices and combinations hereinafter described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a wheel embodying said invention; Fig. 2, a central cross-section of the same on the line 2 2 in Fig. 1; Fig. 3, a side elevation of a side washer or guide-washer and an intermediate washer or tread-washer; Fig. 4, a section of a part of all the washers, detached, on the line 4 4 in Fig. 3.

The body of the wheel comprises two like side plates A A, which may be of cast metal, but are preferably of sheet-metal stamped by suitable dies in a well-known manner. The side plates A A are preferably shaped to fit a core B, of any suitable material, said core being circular in cross-section and with the side plate forming the hub C of the wheel. The outer edges of the side plates are turned in or hemmed at a to strengthen and stiffen said side plates and to prevent them from being bent by the trolley-wire and cross connections and supports and to prevent said edges from marring the trolley-wire. Between the hub C and the outer edges of the side plates said plates are provided with annular depressions a', from the bottoms of which said plates at a^2 incline outwardly to the hems a'. The space between the side plates at the depressions a' is filled with washers or annular plates D D', the larger washers D acting as guide-plates to direct the wheels onto the trolley-wire and being flared at d to fit the inner faces of the side plates and the smaller flat washers D' serving as the tread or bearing surface of the wheel. The above-described parts of the wheel are held together by bolts E, driven through said side plates and retained therein by nuts e, turning on the threaded ends e' of said bolts, said bolts lying in holes F, formed partly in the inner edges of the washers D D' and partly in the curved outer surface of the web b of the core B, thus preventing the side plates, guide-washers, tread-washers, and core from turning with respect to each other.

Of course the side plates and the washers D D' are made of suitable electrical conducting material, as copper or brass, and the core B may also be of similar conducting material.

A suitable journal-sleeve, of conducting material and of any usual construction, is retained in the side plates and core in any usual manner, the journal-sleeve G being represented in Fig. 2 as an open metallic helix g, having its interspiral spaces filled with graphite g' in the customary manner.

The tread-washers D' may be externally notched or serrated in a well-known manner to cut or break ice from the trolley-wire, such notches or serrations being indicated by dotted lines at d' in Fig. 3.

Where several tread-washers are used on the same wheel, the wear will be greater on the middle washers than on those at the side, and the least-worn tread-washers may continue to be used after replacing those that are worn.

By removing the nuts e all the parts may be separated and the worn washers may be replaced by new ones.

The above-described device has the merit of great cheapness, as the side plates are duplicates of each other and the tread-washers are all alike, thus requiring but three sets of dies for the manufacture of these parts. The side plates will last indefinitely, the guide-washers will wear for a very long time, and the tread-washers when worn may be quickly replaced at a very slight expense.

I claim as my invention—

1. The combination of the side plates, guide-washers, arranged between said side plates, a series of concentric tread-washers, arranged between said guide-washers, and bolts, to clamp all said washers between said side plates.

2. The combination of a core, side plates,

arranged on opposite sides of said core, a series of concentric tread-washers, surrounding said core between said side plates, and bolts, passing through said side plates and through holes, formed partly in said core and partly in said washers.

In witness whereof I have signed this specification, in the presence of two attesting witnesses, this 20th day of July, 1898.

SILAS W. FLETCHIER.

Witnesses:
ALBERT M. MOORE,
LEWIS F. LONGMORE.