

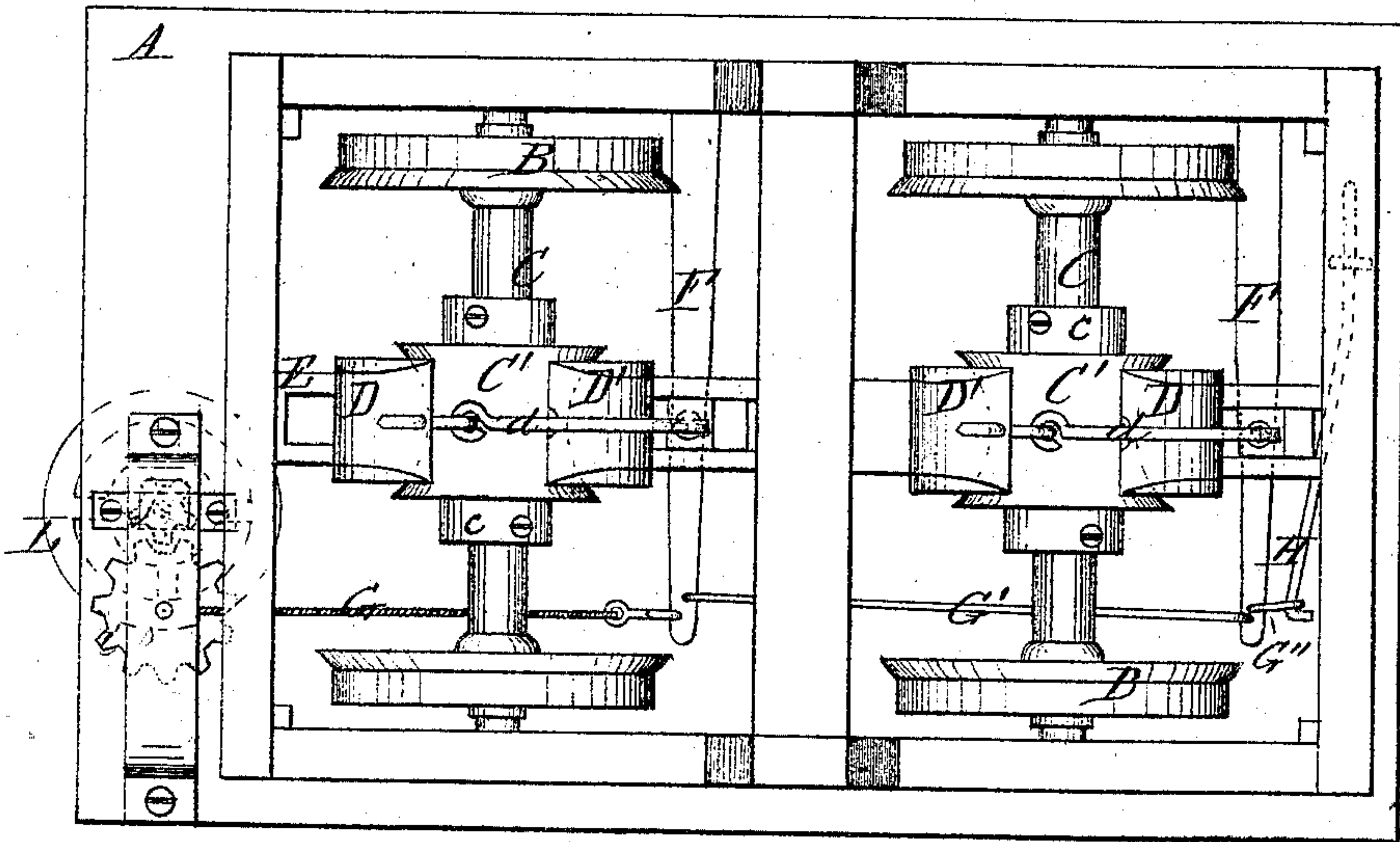
S. NUNAMAKER.

## Improvement in Railway-Car Brakes.

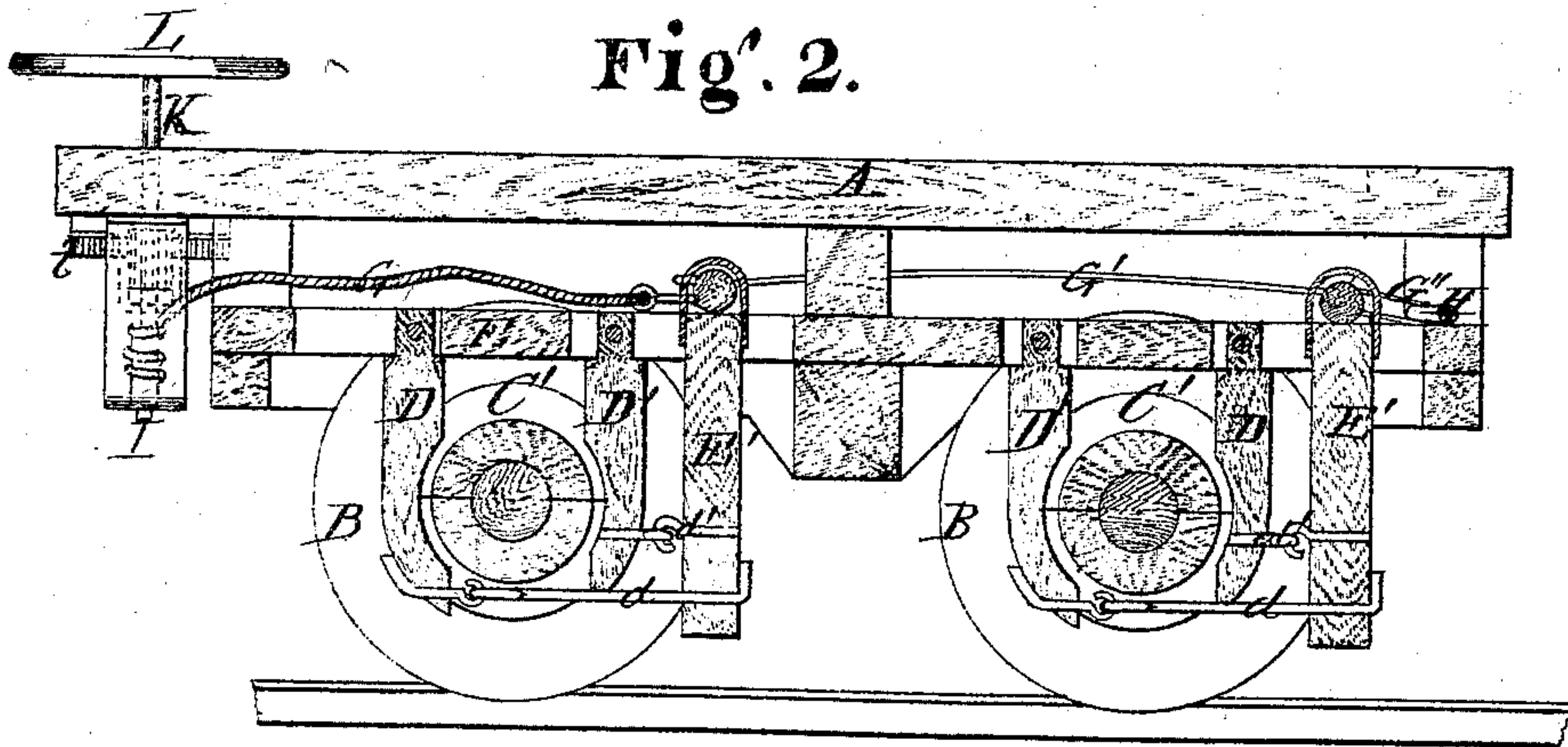
No. 130,526.

Patented Aug. 13, 1872.

Fig. 1.



**Fig'. 2.**



Witnesses.  
E. H. Bates.  
F. B. Curtis

Inventor:  
S. Nunnemaker,  
Chapman & Son, & Co  
Attys.

# UNITED STATES PATENT OFFICE.

SOLOMON NUNAMAKER, OF OSCEOLA MILLS, PENNSYLVANIA.

## IMPROVEMENT IN RAILWAY CAR-BRAKES.

Specification forming part of Letters Patent No. 130,526, dated August 13, 1872.

*To all whom it may concern:*

Be it known that I, SOLOMON NUNAMAKER, of Osceola Mills, in the county of Clearfield, and State of Pennsylvania, have invented a new and valuable Improvement in Railroad Car-Brakes; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawing making a part of this specification, and to the letters and figures of reference marked thereon.

Figure 1 of the drawing is a representation of a plan view of my invention. Fig. 2 is a vertical section of the same.

This invention has relation to an improved car-brake; and it consists in the novel construction and arrangement of the parts hereinafter more fully set forth.

In the accompanying drawing, A represents a car-body; B, the wheels; C, the axles thereof; C', grooved drums, rigidly secured to the axles about midway between the wheels. Each of these drums is composed of two semicircular halves, having hubs *c*, by means of which they are bolted to the axle. By this means room is given to the drums for expansion and contraction. D D' represent friction-shoes, curved to fit the peripheries of the drums C, and rounded on their contact faces to correspond with the grooves. These shoes are hinged on opposite sides of the drums to a longitudinal bar, E, attached to the under part of the car. D' marks the inner, and D the outer, shoe. F indicates transverse bars, which are pivoted to one side of the car, and thence extending across the bar E, hold levers E', which pass downward through slots cut in said bar, and are linked to the shoes D D' by

the rods *d d'*, as shown clearly in the drawing. G indicates a cord or chain, which is attached to the end of one of the bars F, the latter being connected to the other by a coupling-rod or device, G', and the same in turn connected by a link, G'', to a spring, H, secured to one end of the car. The cord G is wound round a vertical shaft, I, holding a spur-wheel, *i*, which engages with a pinion, *j*, on the lower end of a shaft *k*. The latter is provided with a hand-wheel, L, or crank, by turning which this cord is wound to tighten the brake. By winding this cord, both shoes D D' are simultaneously brought in contact with the drum C', and the turning of the wheels B arrested. When the cord is unwound, the shoes are relieved from pressure against the rollers by the spring H. It will be noticed that by the grooving of these rollers and the corresponding formation of the shoes, a larger friction surface is obtained.

Having fully described my invention, what I claim as new, and desire to secure by Let-Patent, is—

The car-brake, herein described, consisting of the sectional grooved rollers C', beveled shoes D D', jointed links *d d'*, upright arms E', transverse levers F, longitudinal bar E, cords G G' G'', spring H, and crank-standards K I, all constructed and arranged substantially as specified.

In testimony that I claim the above I have hereunto subscribed my name in the presence of two witnesses.

SOLOMON NUNAMAKER.

Witnesses:

H. H. ZEPHART,  
D. PERSING.