

J. R. READER.

Railway Car.

No. 59,652.

Patented Nov. 13, 1866.

Fig. 1.

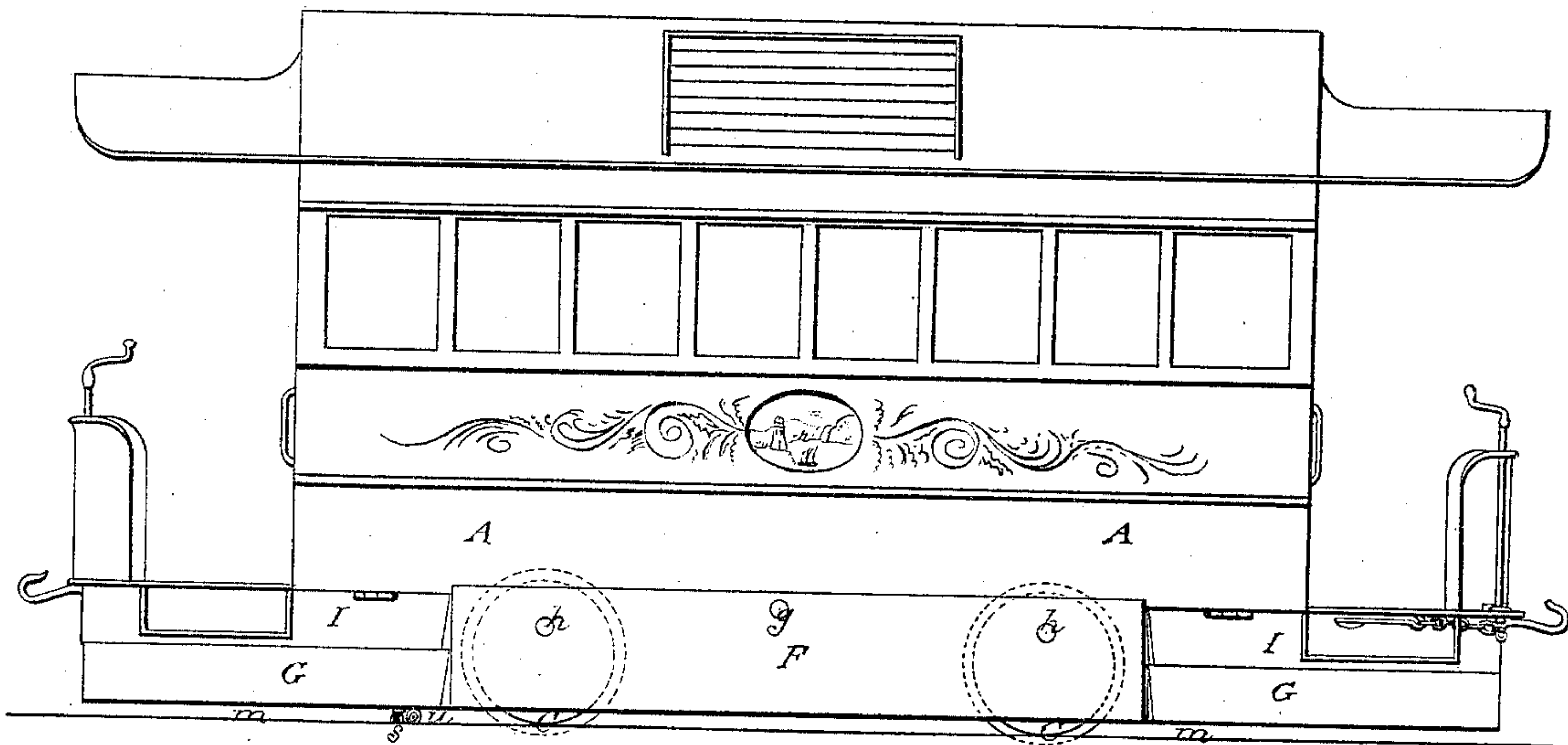
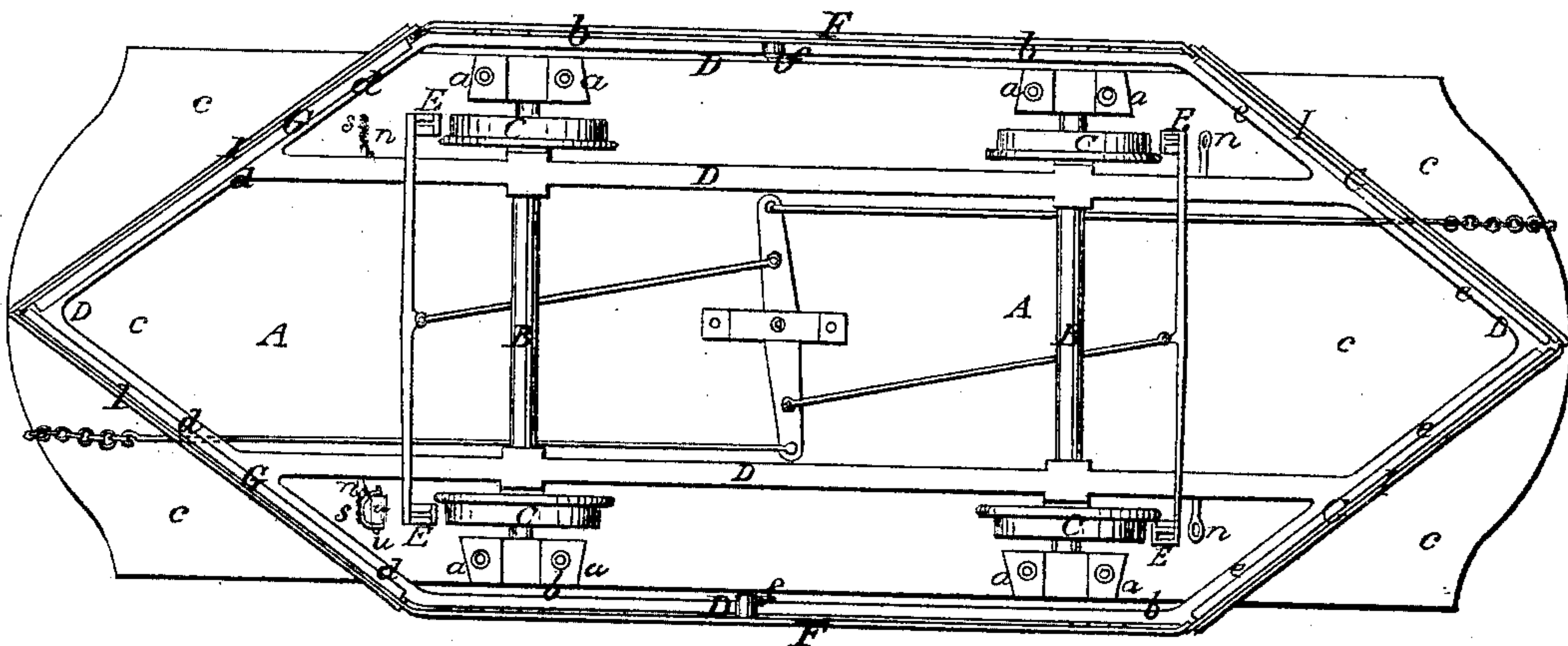


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

JOHN R. READER, OF NEW YORK, N. Y.

IMPROVEMENT IN RAILROAD-CARS.

Specification forming part of Letters Patent No. 59,652, dated November 13, 1866.

To all whom it may concern:

Be it known that I, JOHN R. READER, of the city, county, and State of New York, have invented certain new and useful Improvements in Railroad-Cars; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side elevation of a horse-car constructed according to my invention. Fig. 2 is an inverted plan view of the same.

Similar letters of reference indicate corresponding parts in both figures.

This invention relates more especially to that class of railroad-cars known as "horse or street cars;" and it consists in a guard or fender, so combined, in relation with the wheels and body of the car, that persons who may have fallen upon the track in front of the car, or any obstruction placed upon the said track, will be removed by the said guard or fender, thus preventing such persons from being run over and killed or injured by the car, and also preventing the car from being thrown off the track by any such obstruction.

The invention further consists in certain novel means, whereby any interference by the aforesaid guard or fender with the proper action of the springs which support the body of the car is effectually avoided, whereby easy and convenient access is afforded to the parts situated underneath the said body, and whereby dirt and other small obstructions are effectually removed from the track in advance of the car-wheels.

To enable others to understand the construction and operation of my invention, I will proceed to describe it with reference to the drawings.

A represents the body of the car, which rests upon india-rubber or other suitable springs *a*, which are fixed in any proper manner upon the ends of the axles B. The wheels of the car are shown at C, and placed upon the axles B just within the springs *a*. Secured upon the said axles, underneath and in a position parallel with the bottom of the body A, is a frame, D, which may be made of wrought-iron, and which sustains the guard or fender presently to be described.

The brakes E of the car are suspended from

the bottom of the car in such manner as not to come in contact with any part of the frame D, and may be operated in any ordinary or suitable manner. The sides of the central portion of the frame D are made parallel with each other, as shown at *b*, while the sides of each end of the said frame underneath the platforms *c* are inclined toward each other, as shown at *d* and *e*.

Projecting upward from each of the parallel sides of the frame D are two or more short arms, to the upper ends of which, one upon each side of the frame D, are hinged the upper edges of longitudinal plates F, which are thus suspended edgewise or vertically, with their upper edges just outside of the sides of the lower part of the body A. Secured upon the inner side of each suspended plate F, near the lower edge thereof, is a small button or catch, *f*, which may be turned so as to catch over the lower edge of the side of the frame D, to hold the plate firmly and securely in its place, or may be operated to release the said plate in order to allow it to be turned upward when access is desired to the parts or mechanism situated underneath the body A, the said buttons *f* being turned by passing the hand through a hand-hole, *g*, formed in each of the plates. Similar hand-holes *h* may also be formed in the said plates to allow the wheels to be lubricated without turning up the plates, as just described.

G represents plates which are suspended in a vertical position, one from each of the inclined sides of the ends of the frame D. The upper edges of the said plates G are hinged directly to the upper edge of the said inclined sides of the frame, so that their said upper edges are at about the same height as the longitudinal centers of the plates F, the plates G being capable of being turned outward to allow access to the parts underneath the body of the car in the same manner as the aforesaid plates F, and are retained in their vertical position by the same means.

I indicates supplemental hanging plates, which are suspended above the plates G by having their upper edges hinged to the bottom of the body A. The lowermost edges of these supplemental plates lap over the upper portions of the plates G.

The wheels of the car are thus surrounded

by the several suspended or vertical plates F G I, which constitute a guard or fender which extends downward nearly to the upper surface of the track or rails *m*, in such manner that when the car is drawn forward with either end foremost, as required with horse-cars, an obstruction of any considerable size will be pushed aside by one or the other of the inclined sides of the foremost end of the aforesaid guard, and thus removed from the track, so that not only is all liability of the car being thrown from the track by such obstruction entirely avoided, but at the same time there is no possibility of running over and crushing a person who may have fallen upon the track, while, inasmuch as the upper edges of the plates F are situated outside of the body of the car and the lower edges of the suspended supplemental plates I overlap the upper parts of the plates G, as hereinbefore explained, the vertical movement of the body A upon the springs *a* is not interfered with.

Secured to each of the inner longitudinal bars of the frame D is a vertical socket, *n*, in which is placed a vertical rod or staff, to the lower end of which is secured a stiff brush, *s*, in such position that as the car is drawn along the foremost brushes extend into the grooves of the rails and sweep out therefrom any pebbles, dirt, or other small obstructions that may have fallen therein. Situated behind, or, in other words, at the inner side of each brush *s*, is a roller, *u*, which works in suitable bearings attached to the aforesaid staff of the brush in such a way that the roller *u*, passing upon the upper surface of the rail, prevents the brush from dragging in the groove of the rail or from being jammed down into the same by any inequality in the surface of the rail, the staff which carries the brush and roller either having a slight longitudinal movement in its socket, or being made somewhat elastic, so that the roller *u* may pass easily over any such in-

equality in the surface of the rail. By this means the rail is swept clean in advance of the wheels C without any liability of injuring the brushes or of any undue wearing of the same, which would be likely to occur if no precautions were employed to prevent them from dragging in the grooves of the tracks, when from inequalities in the surface thereof the said brushes are depressed.

My invention, by thus completely clearing the track in advance of the wheels of the car, entirely prevents all liability to accident, either from the crushing of individuals under the wheels or from the throwing of the car from the track; and, furthermore, inasmuch as the guard or fender hereinbefore described completely incloses the wheels, the dust thrown up by the said wheels is effectually prevented from spreading, to the annoyance of travelers.

What I claim as new, and desire to secure by Letters Patent, is—

1. The guard or fender constructed with a frame, D, supported on the axles of the wheels C, substantially as and for the purposes set forth.

2. The combination, with such guard or fender, of the suspended supplemental plates I, hinged to the bottom of the body A, substantially as herein set forth, for the purpose specified.

3. So arranging the opposite parallel sides of the guard or fender that the upper edges thereof will be situated outside of the body A, substantially as herein set forth, for the purpose specified.

4. The rollers *u*, combined with the brushes *s* and with the frame D, wheels, and body of the car, substantially as herein set forth, for the purpose specified.

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Witnesses:

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