(No Model.) 2 Sheets—Sheet 1.

J. J. NEWBAKER.

SPRAG FOR MINING CARS.

No. 352,882. Patented Nov. 16, 1886.

Fig. 1.

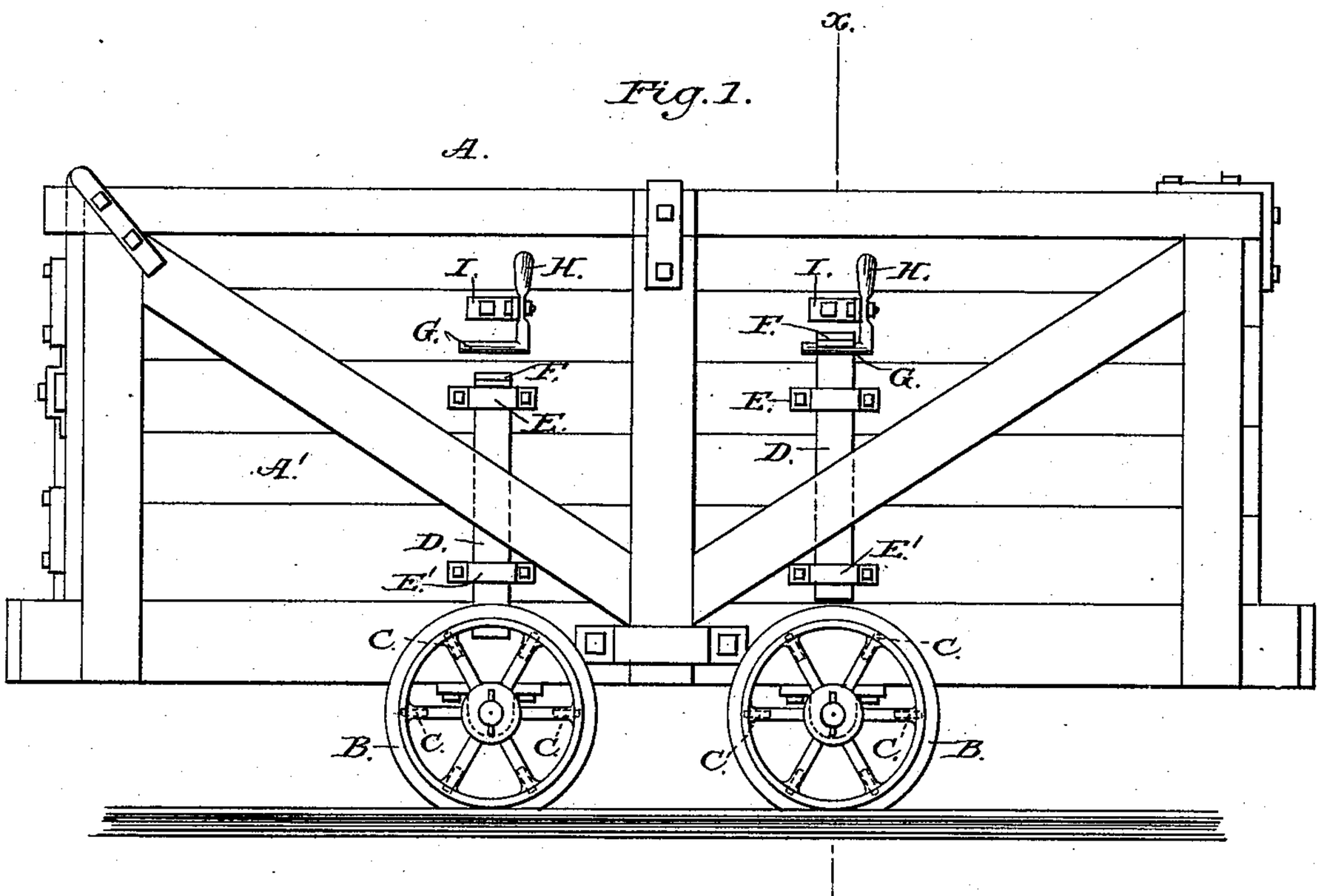
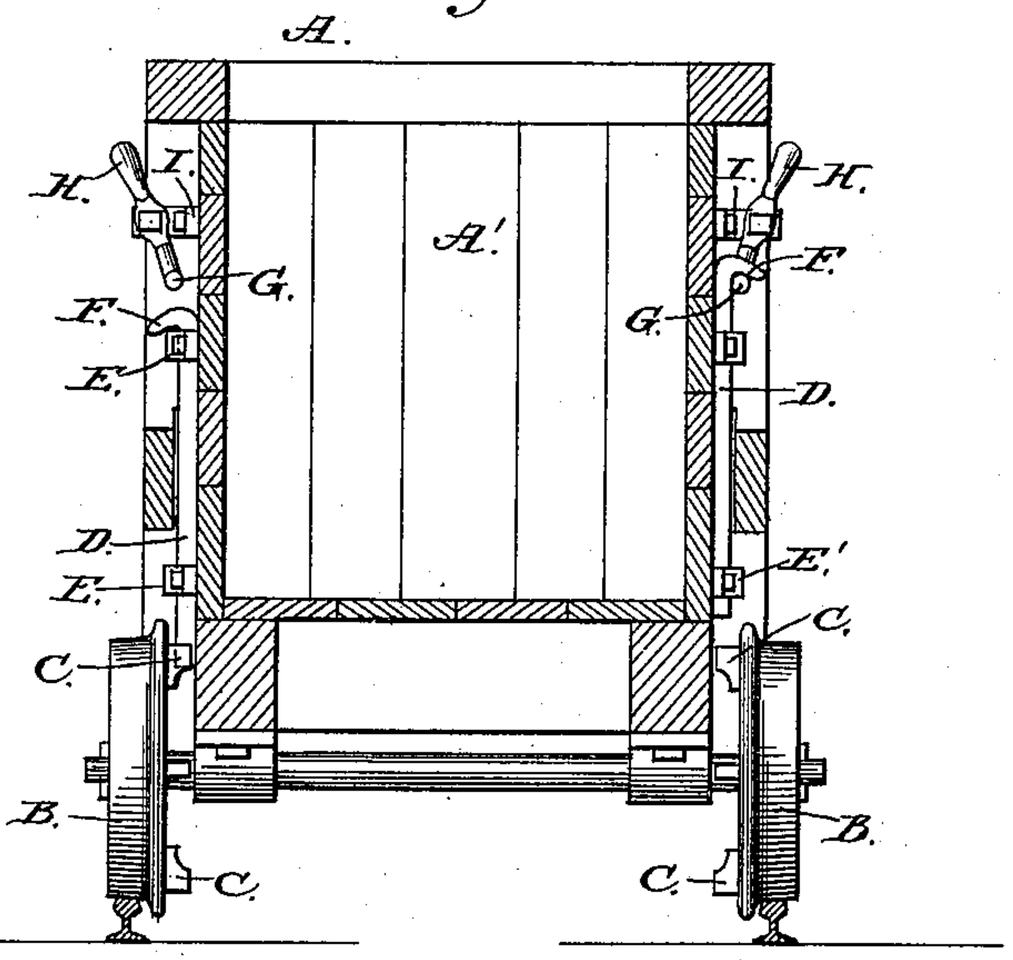


Fig. 2.



WITNESSES:

John A. Ellis.

C. Sedgwick

INVENTOR:

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(No Model.) 2 Sheets—Sheet 2.

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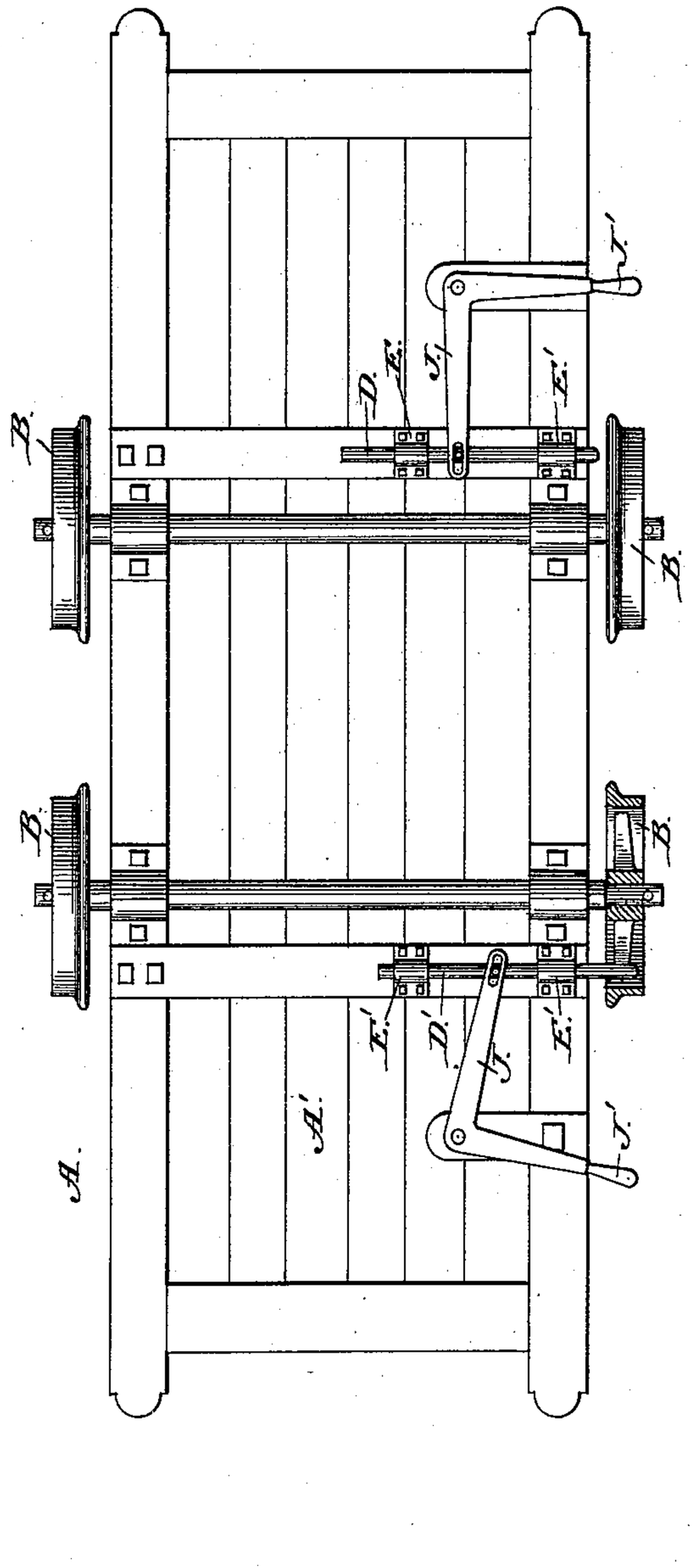
Fig. 3.



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UNITED STATES PATENT OFFICE.

JOHN J. NEWBAKER, OF STEELTON, PENNSYLVANIA.

SPRAG FOR MINING-CARS.

SPECIFICATION forming part of Letters Patent No. 352,882, dated November 16, 1886.

Application filed August 24, 1886. Serial No. 211,741. (No model.)

To all whom it may concern:

Be it known that I, JOHN J. NEWBAKER, of Steelton, in the county of Dauphin and State of Pennsylvania, have invented a new and Improved Sprag for Mining-Cars, of which the following is a full, clear, and exact description.

The object of my invention is to provide a new and improved sprag for mining-cars, by which the speed of the cars can be checked or the cars can be entirely stopped while descending steep grades.

The invention consists of a sprag sliding in suitable bearings on the car and engaging with the wheels of the car, and of a device for holding the sprag thus engaged.

The invention also consists of various parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in both the figures.

Figure 1 is a side elevation of a mining-car provided with my improvement. Fig. 2 is a vertical cross-section of the same on the line *x x* of Fig. 1, and Fig. 3 shows a modified arrangement of the sprag.

Heretofore the speed of mining-cars passing down steep grades was checked by inserting a short piece of wood, pointed at both ends, between the spokes of the wheels, and engaging at one end with the bottom of the car, thus locking the car-wheels. The operation had to be performed by an expert, and was always more or less dangerous, and the wooden blocks had to be frequently renewed on account of being worn out or being lost.

My improved sprag can be operated by any unskilled person without the least danger, and is at the same time very effective in operation, durable and simple in construction, and is a stationary fixture on the car.

The mining-car A, of any approved construction, is provided with the car-body A′, and with the car-wheels B, each provided on its inner side with a number of lugs or projections, C, arranged in a circle. The sprag D is placed radially above the car-wheel B, either vertically or inclined, and mounted to slide in guides E and E′, secured to the car-body A′. At the upper end of the sprag D is formed a downwardly-projecting arm or catch, F, adapted to engage with the horizontal arm G, extending from the handle H, pivoted to the bracket I, secured to the car-body A′.

The operation is as follows: When the car A is about to pass down a steep grade, the sprag D is placed in its lowest position, as shown at the left in Fig. 1, so that the arm F rests on the upper guide, E, and the lower end of the sprag engages one of the lugs C on the car-wheel B, thereby preventing the car-wheel from turning, and thus braking the car. When the car reaches a normal grade, the operator takes hold of the arm F and lifts the sprag D out of contact with the respective lug C on the wheel B, and engages the arm G of the handle H with the arm F of the sprag D, as shown to the right in Figs. 1 and 2, thus holding the sprag D out of contact with the car-wheel B. When the speed of the car A increases, the operator presses on the handle H and releases its arm G from the arm F of the sprag D, and the latter drops downward until its arm F rests on the guide E, and its lower end engages with one of the lugs C of the wheel, thereby checking the speed of the car. If all the sprags on the car are engaged with their respective wheels, the car will be entirely stopped.

Instead of placing the sprag on the side of the car, I may also mount the same on the car-bottom, as shown in Fig. 3, in which the sprag D′ slides in the bearings E′, parallel with the axles of the car, and is operated by a bell-crank lever, J, having the handle J′, which projects a short distance beyond the side of the car-body A′. This sprag D′ can be thrown in and out of contact with the spokes of the car-wheels B by moving the handle J′ of the lever J forward and backward, thus locking or freeing the car-wheels with the same result as described above in relation to the sprag D.

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

1. In a mining-car, a sprag adapted to slide on the car-body, and engaging with the car-wheels, substantially as shown and described.

2. The combination, with a car-body and car-wheels having lugs, of a sprag adapted to slide on the car-body, and engaging with the said lugs on the wheels, substantially as shown and described.

3. The combination, with a car-body provided with guides E and E′, and the car-wheels B, having the projections or lugs C, of the sprag D, sliding in the said guides E and E′, and having the arm F, substantially as shown and described.

4. The combination of the sprag D, sliding in the guides E and E′, and having the arm F, with the pivoted handle H, having the arm G, substantially as shown and described.

5. The car-body A′ and the car-wheels B, having the lugs C, in combination with the sprags D, sliding in suitable bearings secured to the car-body A′, and provided with the arm F, the handle H, pivoted on the bracket I, secured to the car-body A′, and provided with the arm G, substantially as shown and described.

JOHN J. NEWBAKER.

Witnesses:
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C. L. BRINSER.