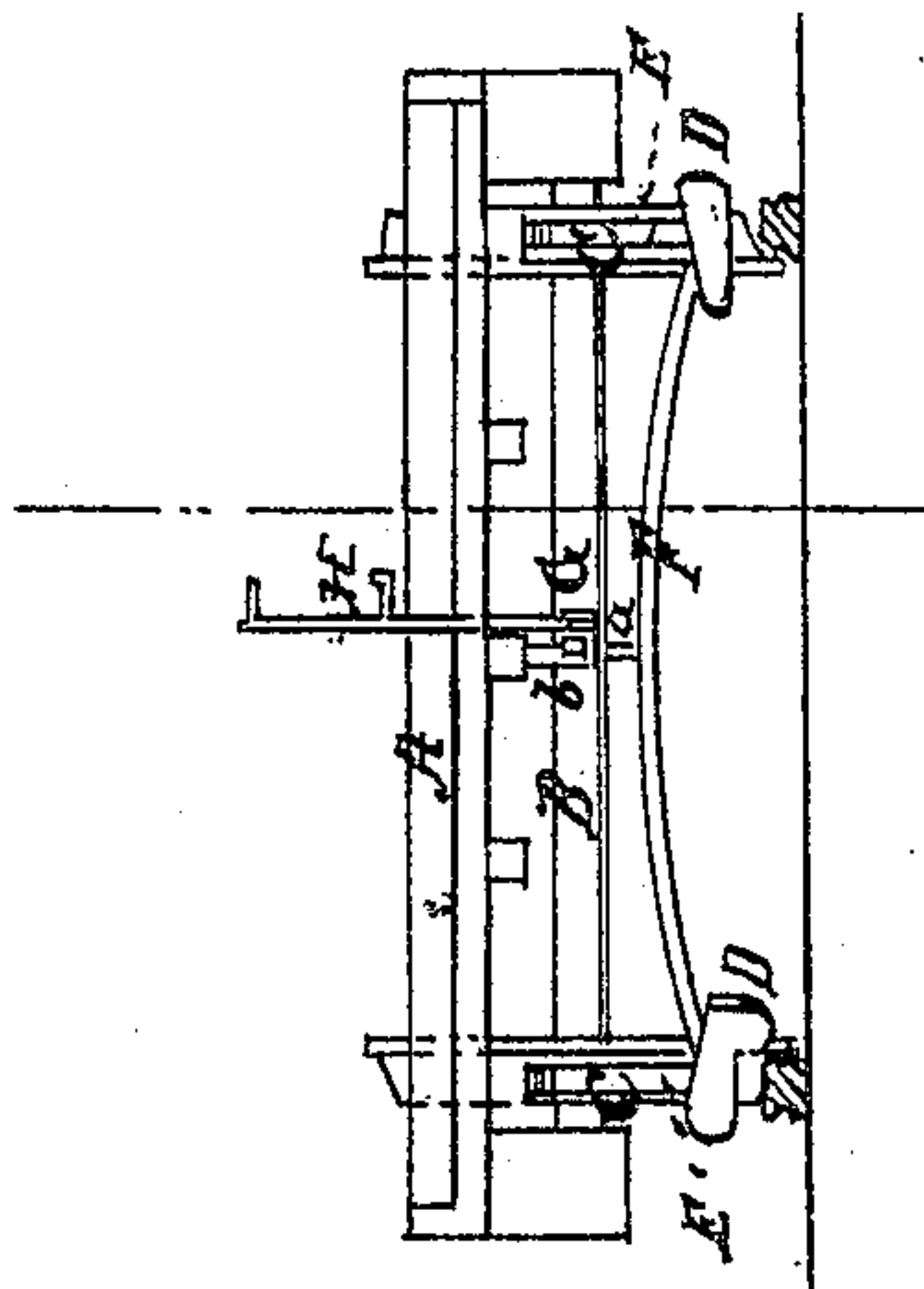
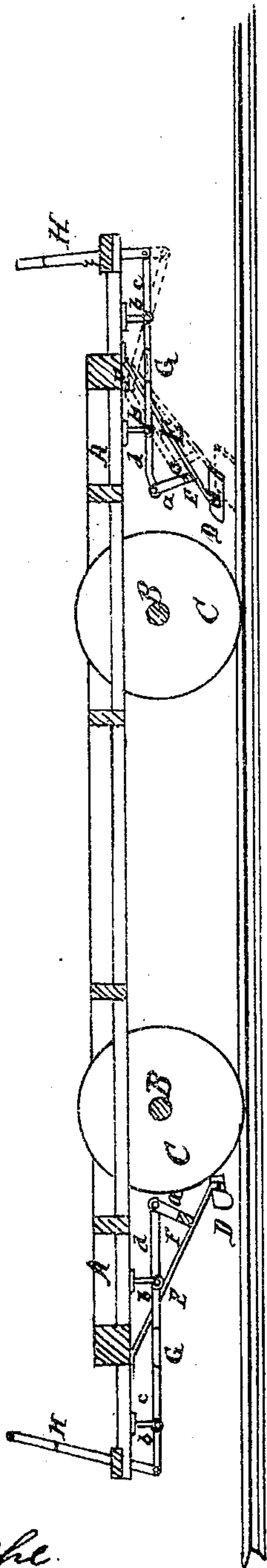


E. B. Wells.

Imp^d Scraper Attachment to Cars.

N^o 73212

Patented Jan. 7, 1868.



Witnesses.
Theo. Fische.
J. A. Service.

Inventor.
E. B. Wells
Per *Munroe*
Attorneys

United States Patent Office.

E. B. WELLS, OF NORTHAMPTON, MASSACHUSETTS.

Letters Patent No. 73,212, dated January 7, 1868.

IMPROVED SCRAPER-ATTACHMENT TO CARS.

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, E. B. WELLS, of Northampton, Hampshire county, Massachusetts, have invented a new and improved Scraper-Attachment to Cars; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable others skilled in the art to make and use the same, reference being had to the accompanying drawings, forming a part of this specification, in which—

Figure 1 represents a longitudinal central section of a car, which is provided with my improved scraper-attachment.

Figure 2 is an end view of the same.

Similar letters of reference indicate corresponding parts.

The object of this invention is to provide railroad-cars with a device for keeping the track clear of snow, mud, and other obstructions. The device is chiefly applicable to street or horse-cars, and consists in the use of scrapers or ploughs, one in front of each wheel, which are suspended from powerful springs, that are attached to the under side of the car-platform, and which are operated by levers attached at each end of the car.

A represents the platform of a railroad-car. B B are the axles, on which the wheels C C are fixed in the ordinary way. D D are the scrapers or ploughs, of which one pair is arranged at either end of the car, one plough in front of each wheel. Each of these ploughs is secured to the lower end of a spring, E, the upper end of which is secured to the under side of the platform. The two springs, at each end of the car, are connected, near to their lower ends, by a cross-bar, F. The mechanism for working the ploughs must be such that it is capable of elevating or depressing the cross-bar, thereby throwing the ploughs either off or upon the track.

To the centre of the bar F is secured a stud, *a*, which projects upwards, as is clearly shown in the drawings. To the upper end of the stud *a* is pivoted the end of a horizontal bar, G, which is arranged longitudinally below the platform of the car, being suspended from and pivoted to two ears *b b*, which project from the under side of the platform, said bar G extending towards the end of the car under which the pair of ploughs is arranged. The bar G is jointed between the two ears *b b*, or rather it consists of two separate pieces, *c* and *d*, of which each is pivoted, in its centre, to one of the ears *b*, and their ends are pivoted together. The rear end of the piece *d* is pivoted to the stud *a*, while the front end of the piece *c* is pivoted to the lower end of an upright lever, H, which is arranged at the ends of the platform, in such a manner that it can be moved up and down at pleasure. Teeth are formed on the lever H, or some other device is applied, whereby the same can be held in any position.

When the lever H is raised, the bars *c* and *d* are in line, and the scrapers are held up. By depressing the lever H, the bars *c* and *d* are inclined so that the point where they are connected is raised above the pivoting-points on the ears *b*, as shown by red lines in fig. 1. The connection of the bar *d* and stud *a* is then depressed, and thereby also the cross-bar F and the scrapers D, the latter being forced upon the rails, with the shape of which their lower edge conforms, so that, when the scrapers are thus lowered, and the car drawn ahead, the track will be cleared of all obstructions.

The connection of the bars *c* and *d* must be such that, although the bars are pivoted to the stationary ears *b*, they will be permitted to swing on the pins by which they are held to the said ears. For this purpose the forward end of the rod *d*, or the rear end of the bar *c*, is slotted, and a pin, which is secured to the rear end of the bar *c*, or the front end of *d*, fits through the said slot in the opposite bar, and is on the front end of the said slot when the bars are in line. The said pin by which the bars *c* and *d* are connected has thus full play in the said slot, and enables the bars *c* and *d* to be inclined, as shown by red lines in fig. 1. It is evident that only that pair of scrapers is depressed which is in front of the car, the rear pair being held up.

By arranging the scrapers on both ends, the car can be drawn in either direction, and clear the track, while in all the track-scrapers now in use the car can only be moved in one direction. Being suspended from the springs E, the scrapers will accommodate themselves to any slight variations or inequality in the upper surface of the rails. The lever H can be made to project but little above the surface of the platform, and may therefore be so arranged that it can be easily operated by the driver's foot, (if on a horse-car,) leaving both his hands entirely free, which is of great importance. Generally at least double teams are used for these scraper-cars, requiring to be controlled by at least the two hands of one driver.

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

1. The adjustable scrapers D, held down upon the track by means of pressure upon the bar H, the spring E permitting said scrapers to yield to the inequalities of the track, as herein set forth, for the purpose specified.

2. The construction and arrangement of the scrapers D, attached to the end of the inclined springs E, curved bar F, stud *a*, slotted and jointed rod G, its sections *c d* pivoted to the ears *b b*, the section *c* connected to the operating-bar H, as herein set forth, for the purpose specified.

E. B. WELLS.

Witnesses:

H. K. STARKWEATHER,

E. B. LOVERING.