I. AVERY.

Pneumatic Railroad.

No. 5,308. Patented Sept. 25, 1847.

Fig. 2

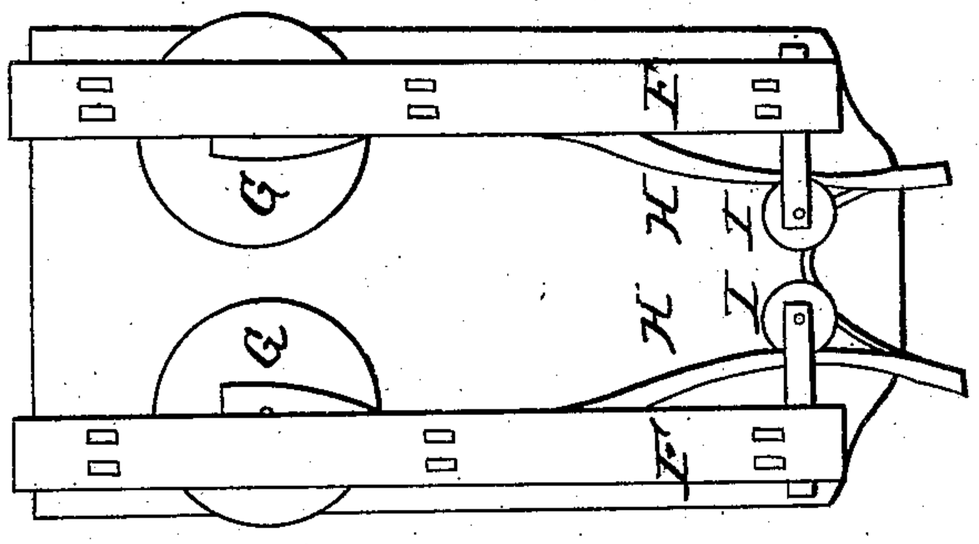


Fig. 3

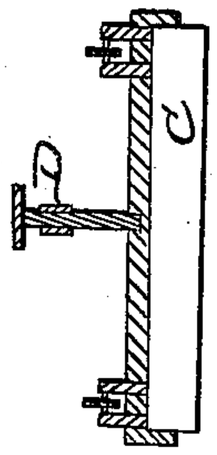
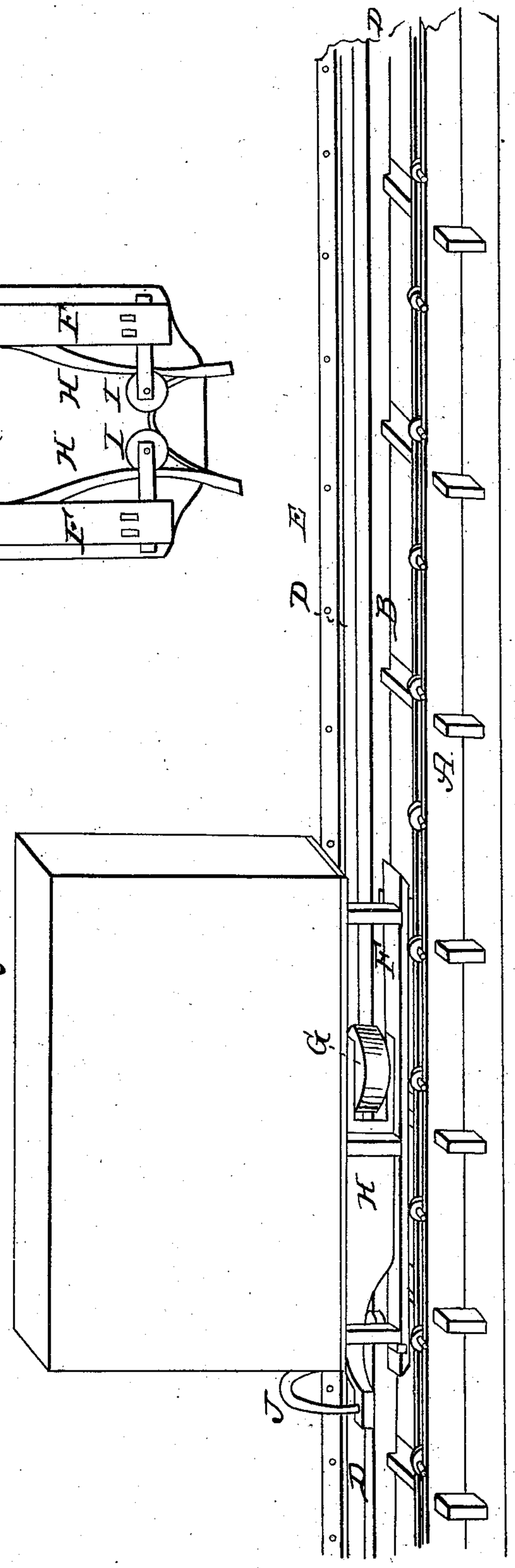


Fig. 1



UNITED STATES PATENT OFFICE.

IRA AVERY, OF TUNKHANNOCK, PENNSYLVANIA.

PROPELLING CARS.

Specification of Letters Patent No. 5,308, dated September 25, 1847.

To all whom it may concern:

Be it known that I, IRA AVERY, of the borough of Tunkhannock, in the county of Wyoming and State of Pennsylvania, have invented a new and Improved Mode of Propelling Railroad-Cars, &c.; and I do hereby declare that the following is a full and exact description.

The nature of my invention consists in providing air pipes or tubes made of a strong, flexible and air-tight material such as leather &c. placed lengthwise of the road; attaching to the car, (or other body to be moved) power, or driving wheels, in such a manner as to run upon, or against the pipes or tubes, and placed so near as to stop or prevent the passage of the air at the point of contact. This arrangement being completed, the air is to be forced into the pipes at the starting point by means of steam or other power, in any of the known ways of generating a current of air. The pipes being thus inflated behind the power or driving wheel, causes it to move forward as long as the current of air is kept up.

To enable others skilled in the art, to make and use my invention, I will proceed to describe its construction and operation, reference being had to the annexed drawings, making a part of this specification in which—

Figure 1 is a perspective view—Fig. 2 a view of the bottom or underside of the car and of the power or driving wheels—Fig. 3 a longitudinal view of the roadway.

The road A, as in Fig. 1 is formed by securing, on each side, two lines of timber or iron to the cross rails, the two to be placed sufficiently far apart to admit of friction rollers working between them and to rest upon them; which rollers are to be placed at equal distances apart (say from 3 to 6 feet) along the whole length of the road in two rows forming the tracks of the width of the common railroad. In the center of the road or way is a partition B let in and secured to the cross rails C of two to six inches in thickness and from fifteen to thirty inches high above the cross rails and finished with a smooth, even surface on each side. And upon each side of this partition is attached the air pipes or tubes D. At the top of the partition is placed the shelf or roof E projecting each way far enough to cover the pipes.

F, is a runner which is to pass over the friction rollers (one on each side) and upon which the car is supported by means of posts framed into the runners and the bottom of the car, of sufficient length to clear the bottom of the car from the roof of the partition.

In the spaces between the runners and bottom of the car is placed the power or driving wheels G, hung in lever gauges H, so hung that the power or driving wheels may be pressed against the pipes or thrown from them at pleasure.

Guide wheels I, are placed near the forward part of the car so as to run along the partition above or below the pipes.

J, is a spring attached to the forward ends of the lever gauge and pressing them outward thus pressing the moving wheels against the pipes to prevent the passage of the air past them.

The road or way may be made in the common form with iron rails, wheels being attached to the car as in common use; placing the air pipes on the partition as above described and horizontal wheels attached to the car in a similar manner to that shown in Fig. 1 or, the pipes may be placed upon a plane between the tracks and vertical power or moving wheels running upon them; in either case the effect will be much the same, yet the plan as represented in Fig. 1 is believed to be the more safe and durable.

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

The application to railroads and railroad cars &c. the air pipe and driving wheel, so adjusting them that when the air is forced into the pipe it will impart to the wheel bearing upon it, a rolling motion, producing a forward movement of the body to which the driving wheel is attached.

IRA AVERY.

Witnesses:

EDWARD ELWELL,

R. R. LITTLE.