

UNITED STATES PATENT OFFICE.

PAUL RUDOLPH BOCKSCH, OF YORK, PENNSYLVANIA.

STEAM PROPULSION DEVICE.

SPECIFICATION forming part of Letters Patent No. 674,897, dated May 28, 1901.

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To all whom it may concern:

Be it known that I, PAUL RUDOLPH BOCKSCH, a citizen of the United States, residing at York, in the county of York and State of Pennsylvania, have invented a new and useful Steam Propulsion Device, of which the following is a specification.

This invention relates to improvements in steam propulsion, and has special reference to driving mechanisms to be used in connection with locomotives; and the object is to provide a driving mechanism by means of which the speed of the locomotive will be greatly accelerated with the expenditure of the same amount of steam as consumed in the present construction of locomotives.

With the above object in view the invention consists in the novel features of construction hereinafter fully described, particularly pointed out in the claims, and clearly illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a locomotive provided with my improved driving mechanism, and Fig. 2 a horizontal longitudinal sectional view showing said mechanism in top plan view.

Referring now more particularly to the accompanying drawings, A A designate the cylinders of a locomotive, B B the piston-rods, and C C the cross-heads to which the pistons are connected, all of the usual construction.

D designates the driving-wheels, of which there are six here illustrated, three on each side of the locomotive, and E the shafts or axles thereof. Positioned on each side of the locomotive and extending longitudinally thereof and disposed on the outer sides of the driving-wheels are bars F, which are connected by transversely-extending rods G. The axles or shafts E of the driving-wheels project through these bars or "frame," as they may be aptly termed, and carry on their projecting ends gears H. Mounted upon the bars, on the outer sides thereof and in close proximity to the driving-wheels, are gears I,

which mesh with gears H, above referred to. The relative sizes of gears H and I are such that the latter revolve three times while the former are revolving once.

Operatively connecting each of the forward gears I with the respective cross-heads C is a pitman J. The three gears I on each side of the locomotive are connected by connecting-rods K, which are pivotally and eccentrically connected therewith.

From the above description it will be seen that I have provided a very simple construction of driving mechanism for locomotives by means of which the speed of the latter may be greatly increased.

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

1. In a driving mechanism, the combination with the cylinder, the piston and piston-rod, the cross-head, and a plurality of driving-wheels, of a gear carried by each axle of said driving-wheels, a driving-gear mounted adjacent to each driving-wheel and meshing with the gear carried by the axle thereof, connecting-rods eccentrically connecting all of the driving-gears, and a pitman connecting one of said driving-gears of the cross-head, substantially as described.

2. The combination with a locomotive, of a frame arranged on each side of the same and through which the axles of the driving-wheels project, gears carried by the projecting ends of the axles of the driving-wheels, driving a series of gears mounted on the frame and meshing with the gears carried by the axles of the driving-wheels, a driving-gear meshing with each axle-gear, a pitman connecting each cross-head with one of the driving-gears of each series, and a connecting-rod eccentrically connecting all of the gears of each series, substantially as described.

PAUL RUDOLPH BOCKSCH.

Witnesses:

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