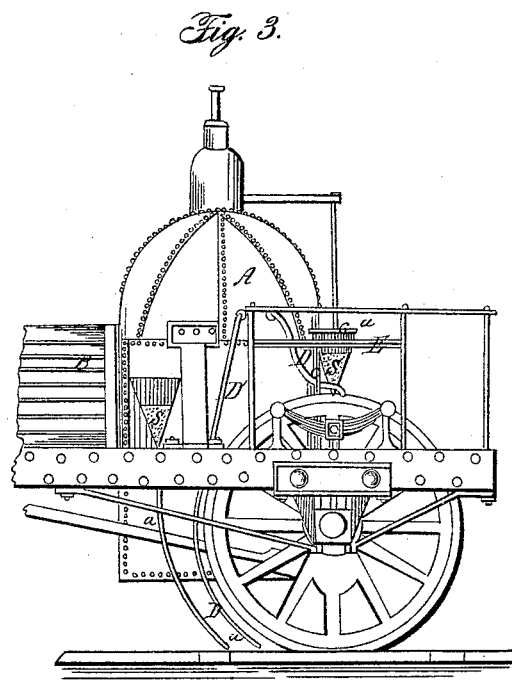
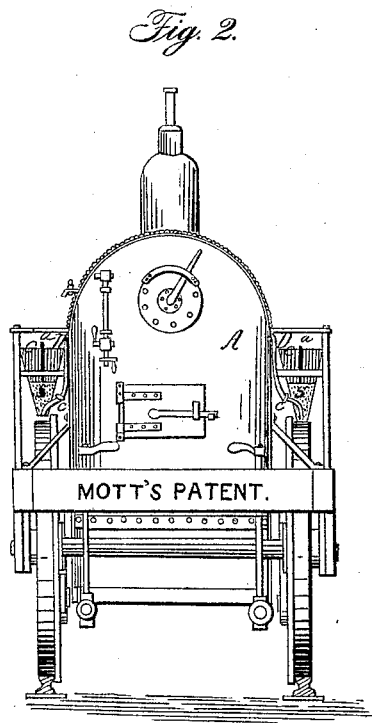
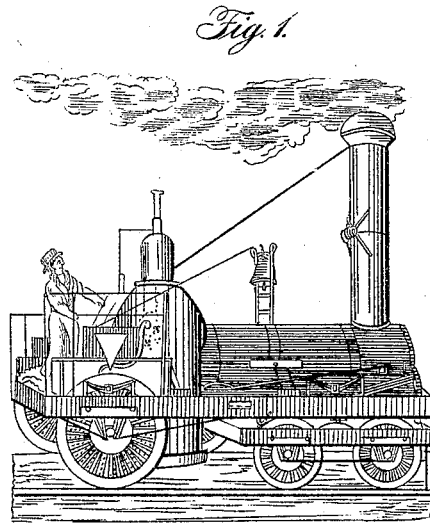


J. L. MOTT.  
Dummy Engine.

No. 2,228.

Patented Aug. 28, 1841.



# UNITED STATES PATENT OFFICE.

JORDAN L. MOTT, OF NEW YORK, N. Y.

## MODE OF INCREASING ADHESION OF DRIVING-WHEELS OF LOCOMOTIVES.

Specification of Letters Patent No. 2,228, dated August 28, 1841.

*To all whom it may concern:*

Be it known that I, JORDAN L. MOTT, of the city of New York, in the State of New York, have invented a new and useful method or apparatus for the purpose of producing adhesion between the wheels of locomotive steam-engines and the rails of railway-tracks, by which device such engines will be enabled to overcome the slipping of the wheels, consequent upon oil, ice, &c., upon ascending grades without its being necessary to throw any additional weight upon the wheels for that purpose; and I do hereby declare that the following is a full and exact description thereof.

My improvement consists in the combined application of moisture and of sand or other grit, to the wheels, by means of which the sand may be distributed over the surface of the tire, or tread, of the wheel, and will be made to adhere with sufficient force and in sufficient quantity to produce the required adhesion.

In the accompanying drawings, Figure 1, is a perspective representation of a locomotive steam engine and carriage, having two driving, and four truck, wheels, to the former of which my apparatus is applied; its application, however, is not limited to locomotives of any particular construction, but is equally adapted to those with four, six, or eight, driving wheels. Fig. 2, is an end view, and Fig. 3, a side view of such part of a locomotive as is requisite to show the manner of applying my apparatus.

A, is the steam chamber, and B, the body of the boiler, which may be constructed in any of the ordinary forms.

C, C, are hoppers, or boxes, for containing sand; the lower portions S, of which boxes are to be charged with this material in a dry state. These hoppers may be varied in situation, but I, in general, place them directly over the centers of the driving wheels; the sand is to be discharged from them through a tube, or opening, at their lower ends, which opening is governed by a valve, or sliding shutter, by which it can be properly regulated.

a, represents the handle of such a valve, or sliding shutter, which may be constructed and managed in any of the known ways of constructing and managing devices of this kind.

D, D, are steam, or water, pipes which are

to convey the moisture to the wheel from the steam chamber, boiler, or other source; these pipes are to be governed by a stop cock, as shown at c, c; and they discharge the water, or steam, on the periphery of the wheel, and moisten it, directly in advance of the aperture for the discharge of sand; if steam is used, it will be condensed upon the wheel, but it will, probably, be found to economize heat by using water; the quantity expended in either case will not, however, be important in amount. Instead of using the water, or steam, from the boiler, water may be conducted through the pipes from a cistern, or reservoir, of cold water, placed in any convenient situation for that purpose. Although I prefer to discharge the sand and moisture upon the wheels, it will be manifest that they may be directed with like effect on to the rails in advance of the driving wheels, and that the combined operation of the moisture and sand will be the same; but the apparatus will, in this case, have to be extended, without producing a corresponding advantage. Such an arrangement is shown with a hopper at S', with steam or water pipes at D', and a', a', tubes for the discharge of sand.

Having thus, fully described the nature of my invention, and shown how the same may be carried into operation, what I claim as new, and desire to secure by Letters Patent is—

1. The applying of sand to the peripheries of the driving wheels of locomotive engines, in combination with the application of water, or steam, to moisten the wheels for the purpose of causing the sand to adhere thereto, substantially in the manner set forth, and so as to enable such locomotives to ascend inclined planes, or elevations, on a railroad, in consequence of the friction produced by such application.

2. I claim, also, the applying of moisture and sand simultaneously to the tops of the rails in advance of the driving wheels, by means of the apparatus herein described, considering this mode of applying the moisture and sand as a mere modification of the general principle upon which the utility of my invention is dependent.

JORDAN L. MOTT.

Witnesses:

AUGUSTUS F. WEEKES,  
LAWRENCE S. MOTT.