

C. D. BROWN.
 APPARATUS FOR BLOWING SAND FROM RAILWAY TRACKS.

1,021,655.

APPLICATION FILED DEC. 13, 1911.

Patented Mar. 26, 1912.

3 SHEETS-SHEET 1

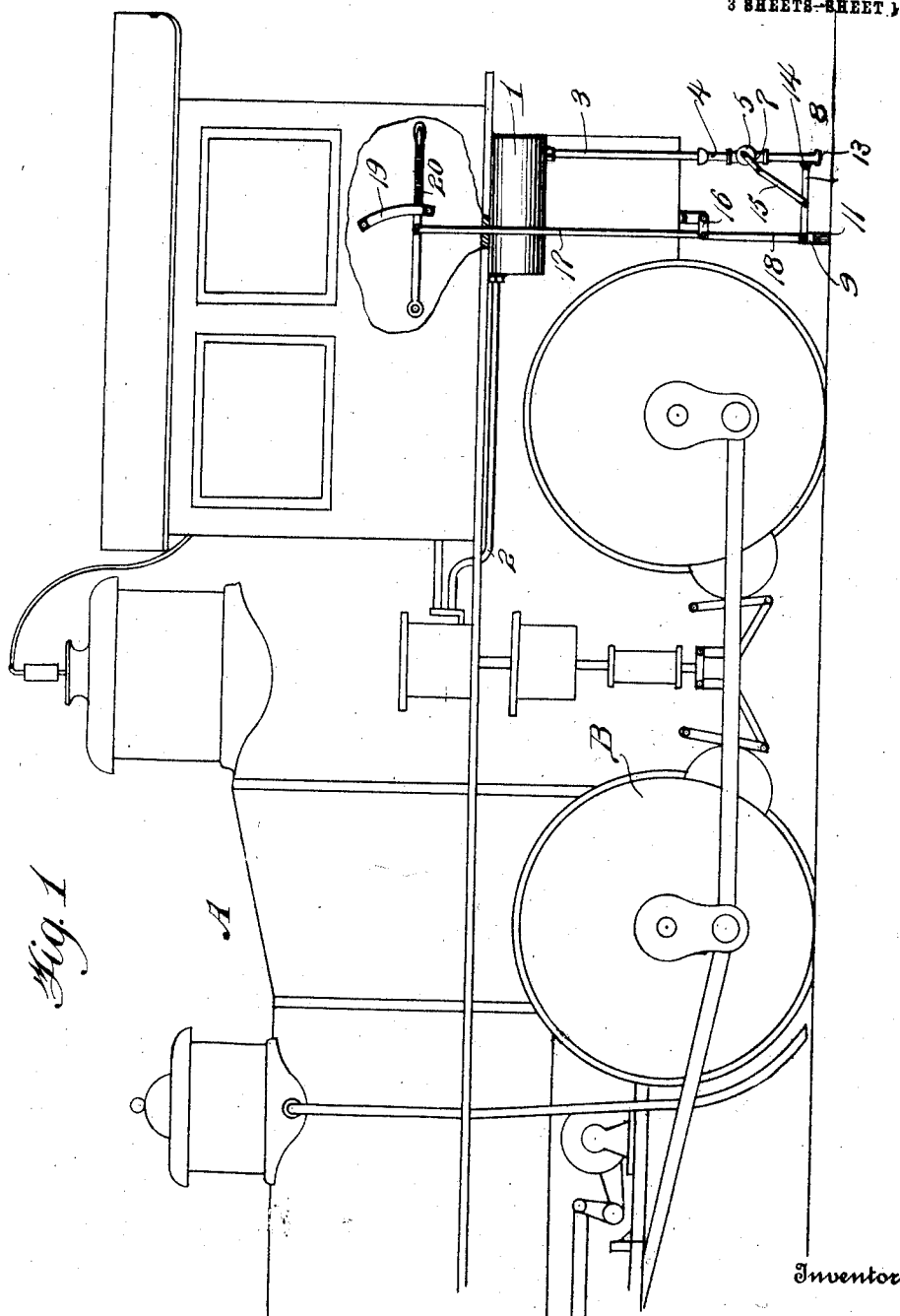


Fig. 1

Witnesses
 W. S. Hollowell,
 James K. Kell

Inventor
 Charles D. Brown
 by Victor J. Evans
 Attorney

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Fig. 2

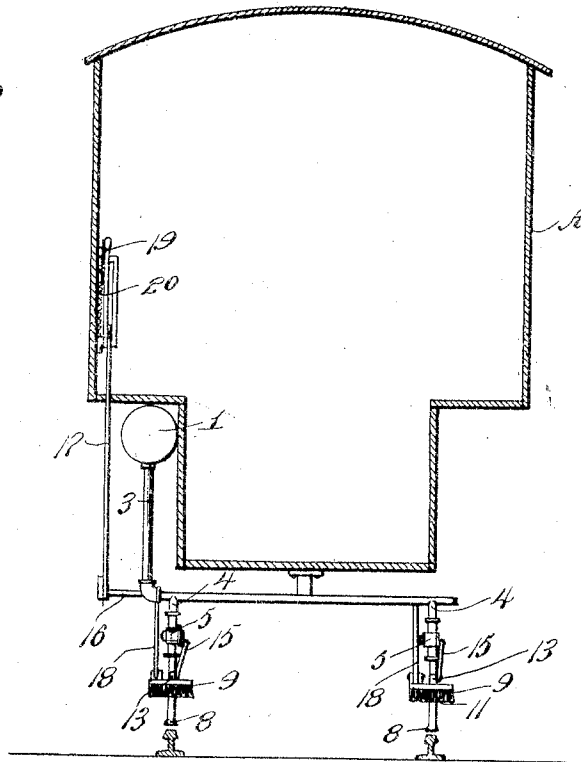
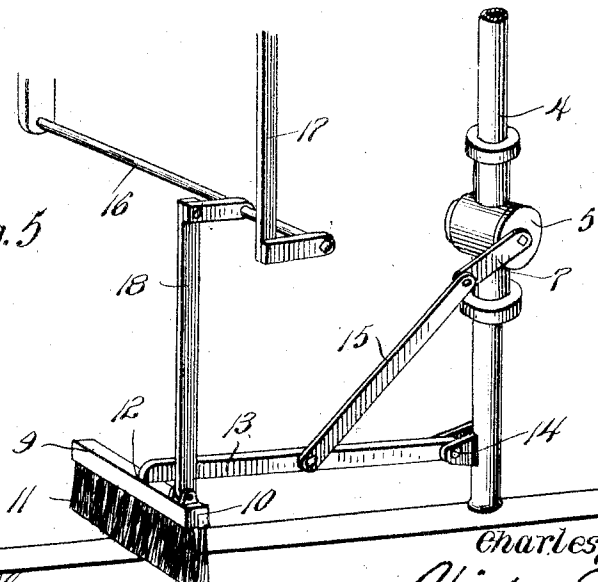


Fig. 5



Witnesses

W. S. McLowell
 James Koch

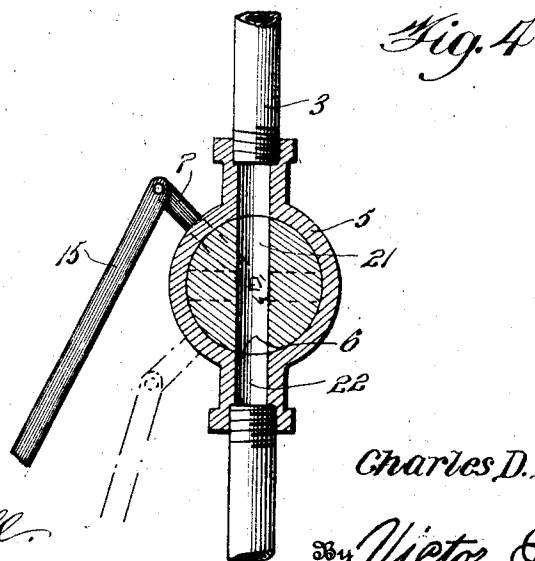
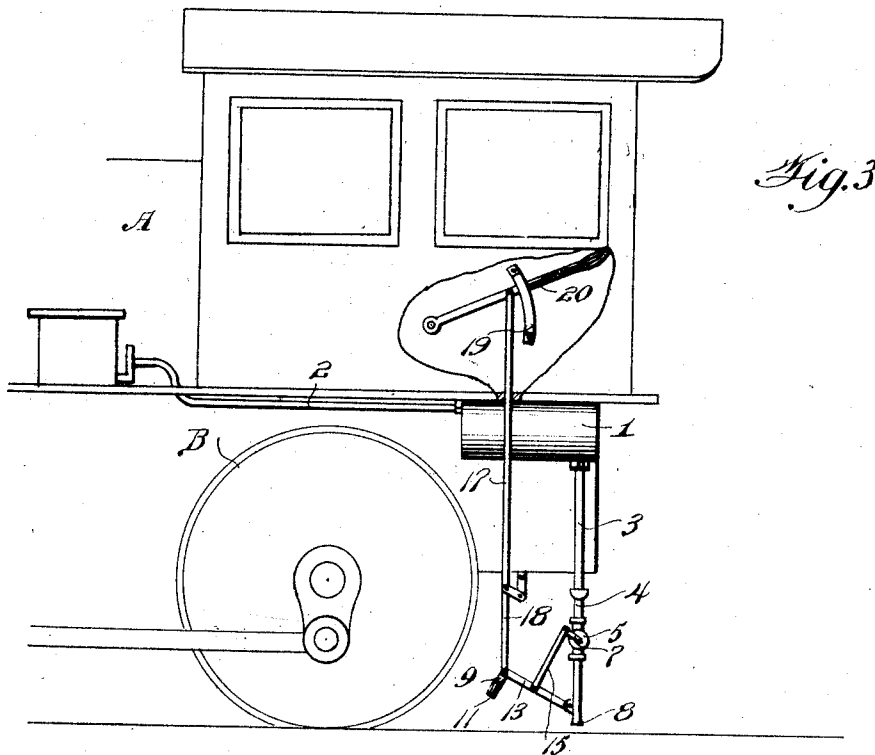
Inventor

Charles D. Brown
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Witnesses
W. L. McIlwain
James Koch

Inventor
Charles D. Brown

By *Victor J. Evans*
 Attorney

UNITED STATES PATENT OFFICE.

CHARLES D. BROWN, OF WASHINGTON, ILLINOIS.

APPARATUS FOR BLOWING SAND FROM RAILWAY-TRACKS.

1,021,655.

Specification of Letters Patent. Patented Mar. 26, 1912.

Application filed December 13, 1911. Serial No. 665,413.

To all whom it may concern:

Be it known that I, CHARLES D. BROWN, a citizen of the United States, residing at Washington, in the county of Tazewell and State of Illinois, have invented new and useful Improvements in Apparatus for Blowing Sand from Railway-Tracks, of which the following is a specification.

This invention relates to apparatus for blowing sand from railway tracks.

It is customary to employ sand or a like abrasive agent upon rail tracks in order that the driving wheels of the rolling stock can obtain the required purchase upon the track to permit the rolling stock to be propelled. Unless the sand is immediately removed from the track after the passage of the driving wheels thereover it acts to offer such resistance to the wheels traveling behind the drivers that will cause such wheels to drag upon the track and the load of the rolling stock is thereby greatly increased and even though the driving wheels of the rolling stock have succeeded in obtaining the proper purchase upon the track the resistance offered, due to the above stated cause, holds the rolling stock from making the proper advance.

It is an object of my invention to provide apparatus which will positively remove the sand from the track after the driving wheels have passed thereover.

It is another object of the invention to provide means whereby the sand can be removed through fluid pressure and by an auxiliary removing device such as a brush or scraper which is designed to engage against the track at a point in advance of the fluid discharge.

Another object of the invention is to provide a valve for controlling the discharge of the fluid.

A still further object of the invention is to provide means on the fluid discharging device for supporting the scraping device.

It is a still further object of the invention to provide means on the scraping device whereby it can be adjusted to set and released positions and to automatically control the valve in the fluid device so as to regulate the discharge of the fluid therefrom.

In the drawings, forming a portion of this specification and in which like numerals of reference indicate similar parts in the several views:—Figure 1 is a side view of a locomotive showing my sand moving appa-

ratus applied thereto. Fig. 2 is a conventional sectional view through the locomotive showing the apparatus applied thereto and illustrating the scraping device in an inoperative position. Fig. 3 is a view similar to Fig. 1 showing the scraping device in an inoperative position. Fig. 4 is a section on an enlarged scale through the fluid regulating valve showing the dotted positions of the portway in the valve when the latter is in open and closed positions respectively. Fig. 5 is a perspective view of the brush-adjusting mechanism.

The locomotive A herein shown is equipped with the usual driving wheels B; any suitable well known sanding device can be employed for the purpose of conveying the sand to the track in front of the drivers in order that the necessary purchase of the drivers against the track can be obtained when the locomotive is traveling up grade or the like.

The apparatus for removing the sand from the track rails after the driving wheels have passed thereover comprises a tank 1 which may be connected in any suitable well known manner by the pipe 2 to any fluid source. As an example, the tank 1 can be very readily connected in some obvious manner to one of the air pumps in the brake system of the locomotive so that a sufficient quantity of air can be maintained in the tank to operate the apparatus when desired. A main conveying pipe 3 extends downwardly from the tank 1, and as shown, it is connected with the downwardly and forwardly extending branches 4. A rotary valve 5 is mounted in each branch 4, and as shown, the valve is provided with a portway 6 and a suitable operating lever 7. The levers 7 can be operated in a manner to be hereinafter described, whereby the air can be conveyed through the branches 4 to be discharged from the points 8 upon the branches to the rails of the track. The fluid blast discharging from the branches 4 will be sufficient to cause the effective removal of the loose sand from the rails, as shown. The tank 1 can be arranged in the cab of a locomotive or positioned on any suitable point thereon wherein the branches 4 can be conveniently disposed behind the rear drivers.

In dusty countries it frequently happens that such quantity of dust accumulates upon the rails as to necessitate its removal before

the locomotive can be propelled. Now, at times when dust or sand accumulates upon the rails to the extent that it cannot be removed readily by air pressure, I provide the companion scraping devices 9. Each of these devices comprises a head 10 and the bristles or other suitable equivalent scraping surfaces 11. These devices are fixedly mounted, at 12, upon the supporting arms 13. The arms 13 are connected pivotally, at 14, to the branches 4 hereinbefore described so that the devices can be adjusted vertically with respect to the rails, whereby they can be readily brought into contact therewith or removed therefrom as the occasion may demand. The arms 13 are provided with actuating members 15 which are operatively connected with the levers 7 of the fluid controlling valves 5 so that when the arms are moved the valves will be automatically controlled.

The adjusting mechanism 16 comprises a controlling lever 17 which supports a rod 18 to which the heads 10 of the scraping devices are connected. Any suitable well known means may be used for the purpose of holding the lever 17 in its locked position, the rack 19 and the cooperating pawl 20 being preferably employed for this purpose.

The valve 5 is provided with a portway 21 which may be brought into registration with the portway 22 in the valve casing when the brush or scraping device is adjusted to its released or inoperative position. At this time the fluid from the reservoir 1 will be permitted to flow through the branches 4 to be effectively discharged upon the rails. On another adjustment of the brush or scraping device to cause the same to engage against the rail the portway 21 will be closed, as shown in the dotted lines in Fig. 4. From this construction it will be seen that in cases where the sand or dust becomes adhered to the rails to the extent that it is impossible to remove the same therefrom by air or like fluid pressure the apparatus can be conveniently regulated to cause the scraping devices to positively engage against the rails to scrape the sand or dust therefrom.

I claim:

1. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connecting said scraping device to said stationary fluid source, means pivot-

ally connected with the latter mentioned means, and the operating lever of the valve, and means for vertically adjusting the scraping device with respect to the rails.

2. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connected to the lower end of the said stationary fluid source, means pivotally connected with the latter mentioned means and the operating lever of the valve, and means for vertically adjusting the scraping device with respect to the rails.

3. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connecting said scraping device to the lower end of said stationary fluid source, said means being disposed in parallel relation with the tread surface of the rails, means pivotally connected with the latter mentioned means and the operating lever of the valve, and means for vertically adjusting the scraping device with respect to the rails.

4. The combination with a track traveling wheeled vehicle, of a fluid conveying member adapted to be disposed above the rails of the track and located behind the wheels of the vehicle, a stationary fluid source connected with said member, a valve in the stationary fluid source having an operating lever, an adjustable scraping device, means pivotally connecting said scraping device to the lower end of said stationary fluid source, said means being disposed in parallel relation with the tread surface of the rails and positioning the scraping device forwardly of the said stationary fluid source, means pivotally connected with the latter mentioned means and the operating lever of the valve, and means connected with the top of the scraping device for vertically adjusting the latter with respect to the rails.

In testimony whereof I affix my signature in presence of two witnesses.

CHARLES D. BROWN.

Witnesses:

PAUL W. BUSSE,
CHAS. T. NORRIS.