

(No Model.)

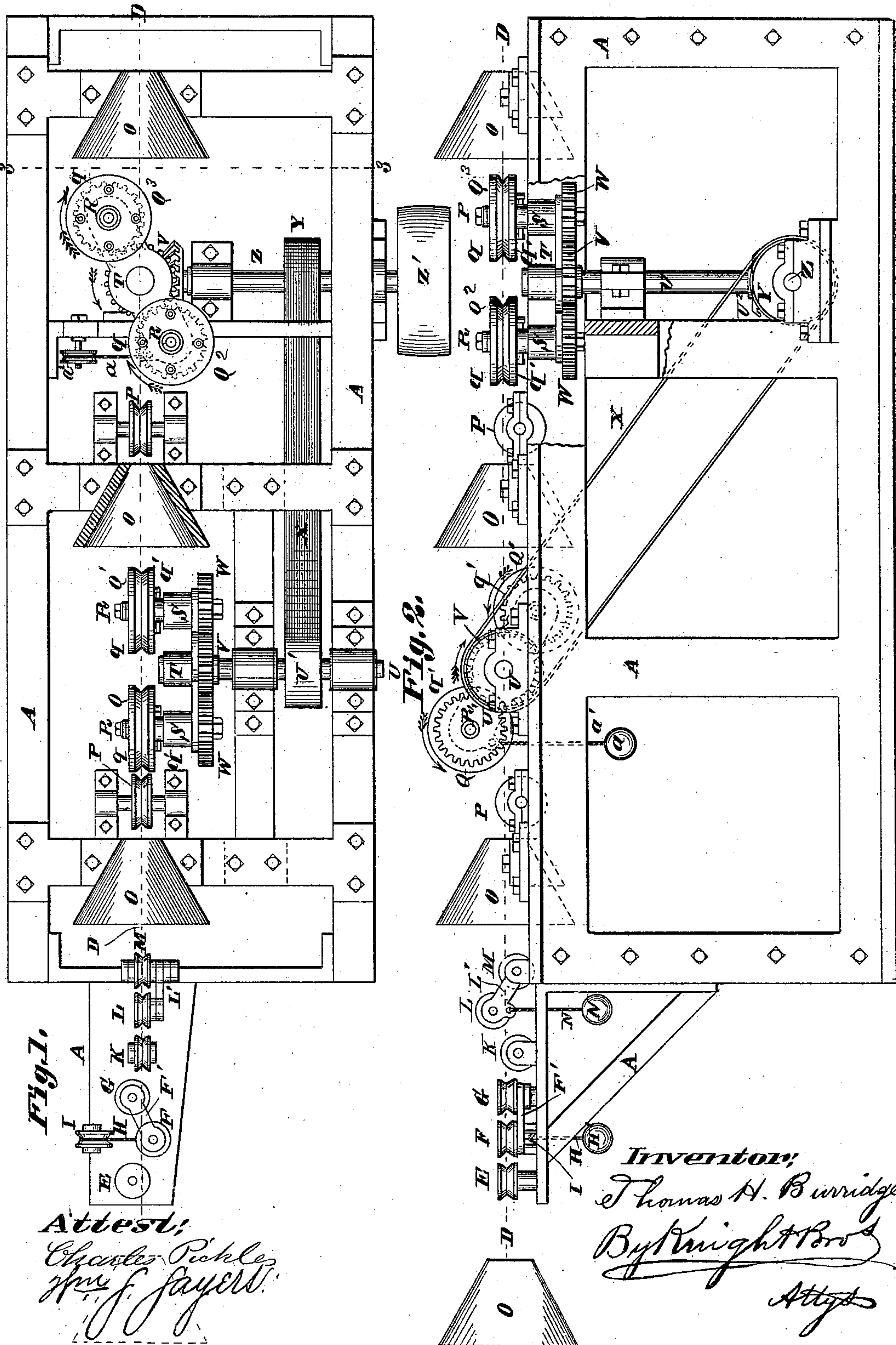
2 Sheets—Sheet 1.

T. H. BURRIDGE.

MACHINE FOR CLEANING WIRE.

No. 294,847.

Patented Mar. 11, 1884.



UNITED STATES PATENT OFFICE.

MORRIS BOOKMAN AND CHARLES F. BINGHAM, OF EAST NEW YORK, N. Y.

STREET-CAR SAND-BOX.

SPECIFICATION forming part of Letters Patent No. 294,846, dated March 11, 1884.

Application filed March 5, 1883. (No model.)

To all whom it may concern:

Be it known that we, MORRIS BOOKMAN and CHARLES F. BINGHAM, citizens of the United States of North America, and residents of East New York, county of Kings, State of New York, have invented a new and useful Improvement in Combined Sand-Box and Car, of which the following is a specification.

Sand-boxes have long been in common use on locomotives for discharging sand upon the rails in front of the wheels, to prevent the slipping of the latter.

This invention relates to the combination of a sand box or boxes with a car, whereby the friction of the car-wheels on the rails may be increased by the discharge thereon of the contents of the box or boxes; and the device is especially adapted for use on street-railways, where accidents frequently occur from the slipping of the car-wheels when the brakes are applied.

The invention consists of the combination, with a car, of one or more sand-boxes fixed beneath the seats thereof, and designed and arranged for the reception and discharge of sand, said boxes having suitable discharge-pipes furnished with valves that are controlled from the car-platform.

Reference is to be had to the accompanying drawings, forming part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a sectional side elevation of a street-car, showing our improved device applied in position. Fig. 2 is a plan of the reverse of the same. Fig. 3 is an enlarged, partly sectional elevation of a sand-box in position. Fig. 4 is a plan of a sand-box with cover removed.

The car A is designed to represent an ordinary street-car, having axles and wheels B C, respectively, and platforms D D, to which are secured guards E E.

A sand-box, F, is constructed of metal or other suitable material, and is preferably cylindrical, and provided with a cover, F'. In the bottom of a box, F, is an aperture, *a*, about which is secured or formed a downward-projecting nipple or spout, *b*, that is preferably externally screw-threaded. A hole, *c*, corresponding with the external diameter of the

sand-box nipple *b*, is made in the bottom of the car, and the nipple *b* screwed or otherwise secured therein, so as to project slightly below the car-bottom, and a flanged discharge-pipe, G, is secured on the bottom of the car, over the nipple *b*, so that the contents of the sand-box F may be discharged therein. One or more of these boxes F may be placed in each car. In this instance, four are shown in one car—two on each side thereof—placed beneath the seats H, and with their discharge-pipes G inclined toward the peripheries of the wheels C in such a position as to discharge sand in front of the forward wheels in which- ever direction the car is moving.

In each box F is a valve, I, covering the aperture *a*, and from each valve a rod, *f*, projects downward through the bottom of the car. At each end of the car the valve-rods *f* are connected, by links *m*, with a beam or bar, K, that runs transversely beneath the car, and to each beam or bar K is secured a rod, L, supported in bearings *g*, whose other end is extended out a little beyond the edge of the car-platform D, and there connected with an upright staff, M, which is pivoted on a pin, *h*, projecting from a guard, E, within easy reach of the car-driver. By moving the staff M in one direction laterally, the connected valves I are closed to prevent the discharge of the sand-box contents, while the said valves I are opened for the discharge of the sand-box contents by moving said staff in the opposite direction.

The valves and valve mechanisms herein shown are effective and convenient, but may be otherwise constructed and arranged to produce the desired effects without departing from our invention.

In many of our cities this combination of sand-boxes with street-cars will be most desirable and advantageous, as it will enable the driver on downgrades in wet or frosty weather to sand the rails at the instant desired, and thus in many cases avoid serious accident. The combination may also be applied to good advantage on steam-railroads.

We are aware that sand-boxes have before been attached to cars for similar purposes, and hence do not broadly claim the combination of sand-boxes with cars; but,

Having thus described our invention, we

claim as new and desire to secure by Letters Patent—

In combination with a street-car having a hole, *c*, in the floor, a device for discharging
5 sand in front of the wheels, constructed as herein shown and described, and consisting of the sand-box *F*, having cover *F'*, bottom aperture, *a*, and nipple *b*, the flanged discharge-pipe *G*, valve *I*, rod *f*, bar *K*, rod *L*,
10 hand-staff *M*, and pin *h*, all arranged and adapted to operate as set forth.

In testimony that we claim the foregoing as our invention we have signed our names, in presence of two witnesses, this 3d day of November, 1882.

MORRIS BOOKMAN.

CHAS. F. BINGHAM.

Witnesses:

JULIUS FAUBEL,

J. C. HAPERBACH.