

(No Model.)

T. J. THOMAS.  
SANDING DEVICE.

No. 528,998.

Patented Nov. 13, 1894.

Fig. 1

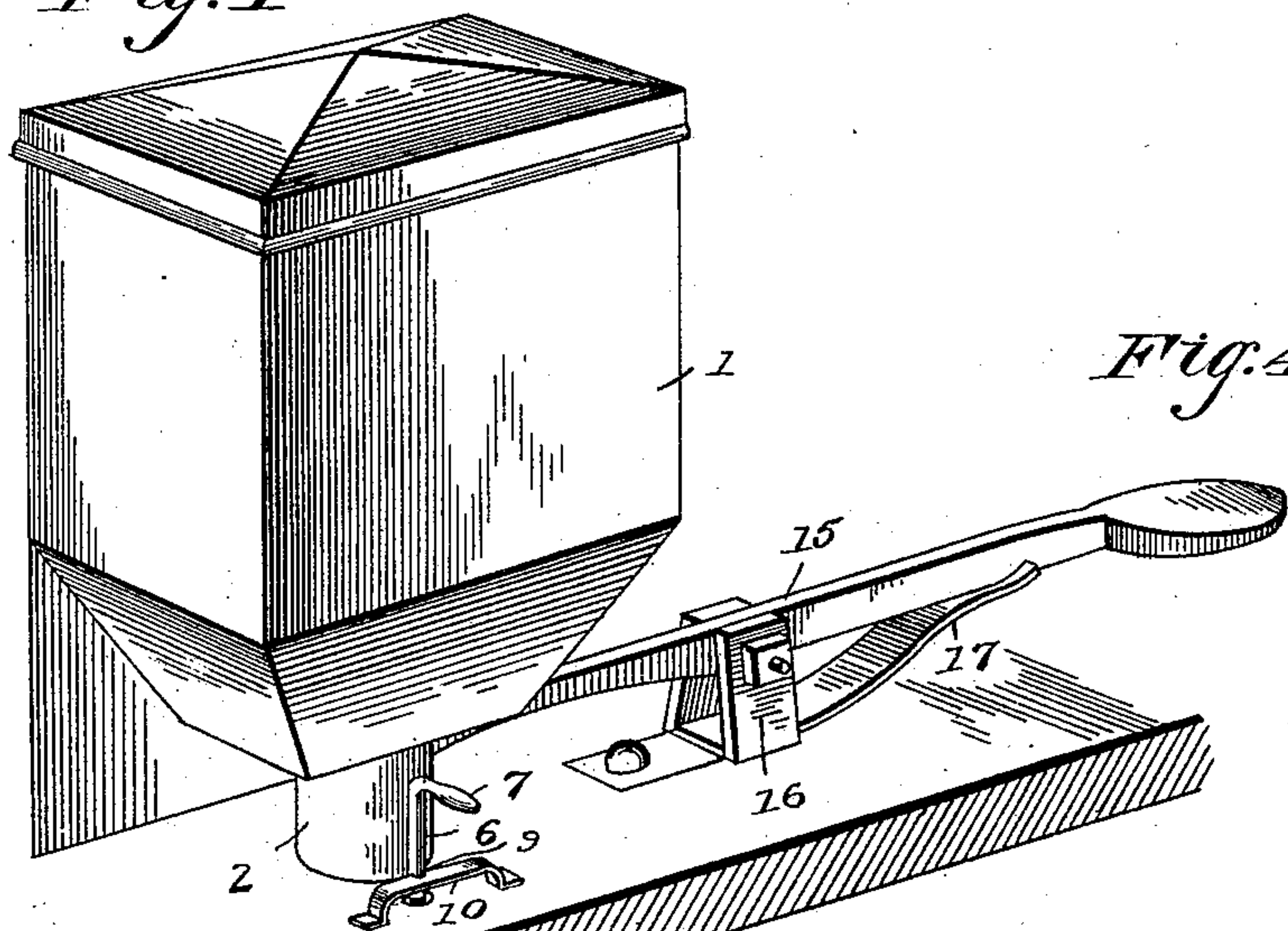


Fig. 4.

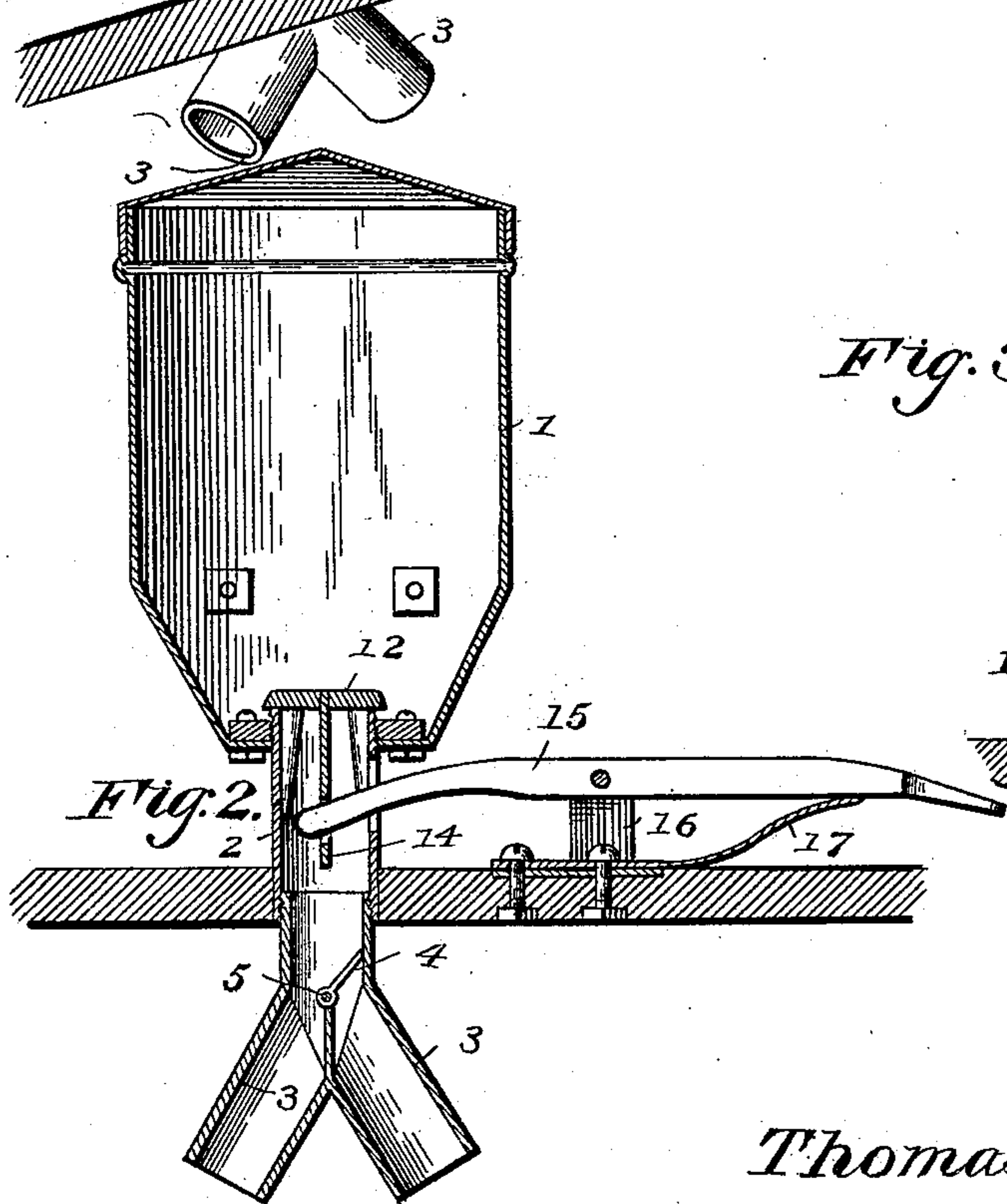
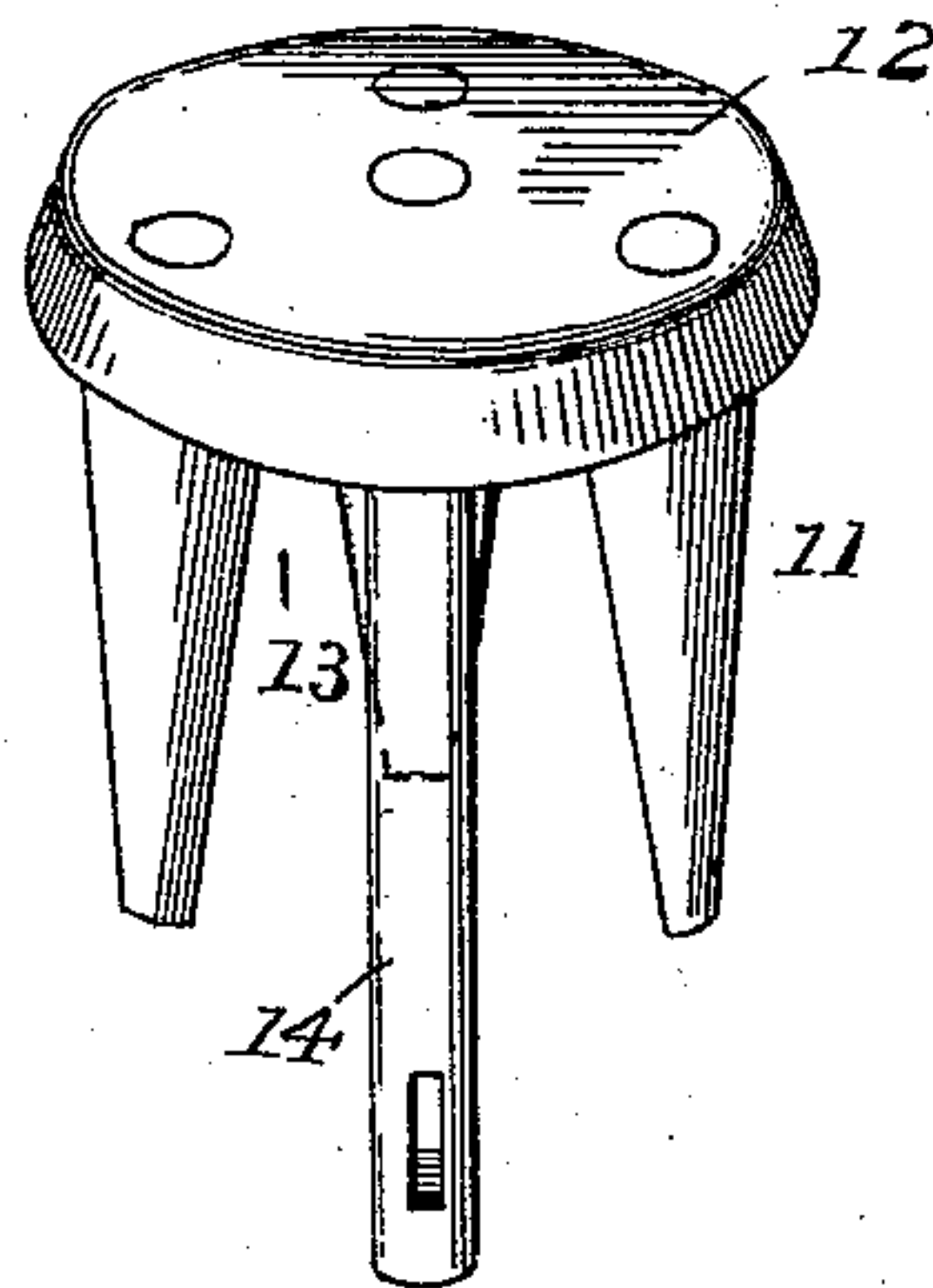
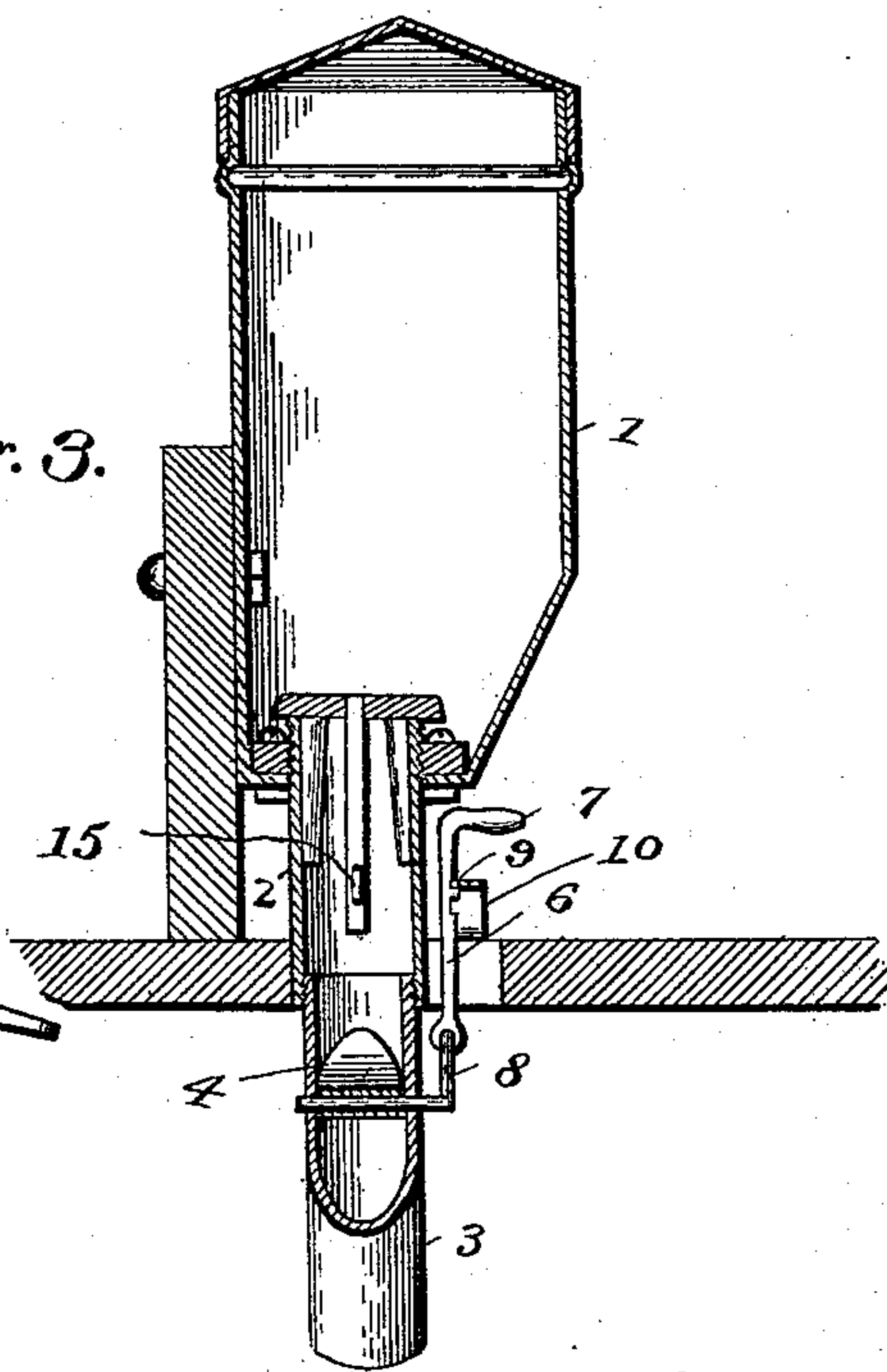


Fig. 3.



Inventor

Thomas J. Thomas,

Witnesses

Julius Ulke, Jr.  
J. H. Riley

By his Attorneys.

C. A. Snow & Co.



# UNITED STATES PATENT OFFICE.

THOMAS J. THOMAS, OF KNOXVILLE, TENNESSEE.

## SANDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 528,998, dated November 13, 1894.

Application filed March 15, 1894. Serial No. 503,770. (No model.)

*To all whom it may concern:*

Be it known that I, THOMAS J. THOMAS, a citizen of the United States, residing at Knoxville, in the county of Knox and State of Tennessee, have invented a new and useful Apparatus for Sanding Railways, of which the following is a specification.

The invention relates to improvements in apparatus for sanding railways.

10 The object of the present invention is to provide for cable, motor, and similar cars simple and effective means for sanding the rails to prevent the wheels from slipping, and to enable either one or both rails to be sanded, 15 and the supply or discharge of the sand to be readily regulated.

The invention consists in the construction and novel arrangement of parts hereinafter fully described, illustrated in the accompanying drawings, and pointed out in the claims hereto appended.

In the drawings: Figure 1 is a perspective view of a sanding apparatus constructed in accordance with this invention. Fig. 2 is a 25 vertical sectional view of the same, taken longitudinally of the foot-lever. Fig. 3 is a transverse sectional view of the same. Fig. 4 is a detail perspective view of the sand-valve.

Like numerals of reference indicate like 30 parts in all the figures of the drawings.

1 designates a rectangular sand box or hopper, having a tapering lower end, and designed to be mounted on the platform of the car, under a seat, or at any other desired or convenient point. The sand box or hopper is provided at its bottom with an opening from which depends a discharge-tube 2, having two branches 3, designed to extend to each 35 side of a car and to terminate above the rails in order to sand the same; and at the lower end of the main portion of the discharge-tube is located a hinged cut-off 4.

The hinged cut-off 4 is mounted on a crank shaft or pintle 5, and is adapted to swing from 45 one side of the discharge-tube to the other to close either of the branches to permit sand to pass through the other branch, whereby either one of the rails may be sanded without sanding the other; and the hinged cut-off is adapted to 50 be arranged vertically in order that sand may be discharged from both of the branches si-

multaneously for sanding both the rails. The cut-off is composed of a vertically-movable rack-bar 6, terminating at its upper end in a handle 7, and having its lower end connected 55 with the crank 8 of the pintle or shaft 5. The teeth 9 of the rack-bar are shouldered and are arranged to engage a ratchet-plate or stop 10, to hold the cut-off at any desired position. By raising and lowering the rack-bar the cut- 60 off may be swung from one side of the discharge-tube to the other, as will readily be apparent.

The upper end of the discharge-tube 2 is closed by a vertically-movable sand-valve 11, 65 which is approximately cylindrical or tubular, whereby it is guided at all times by the discharge tube. It is provided with a closed top or head 12, and it has, at the sides, tapering openings or spaces 13, which are formed 70 by depending tapering guide arms and which gradually decrease in width upward, whereby, by raising the sand-valve to a greater or less extent, the size of the discharge-opening may be varied to regulate the discharge of the 75 sand, and the valve is positively guided. The valve has depending from it a centrally-arranged stem 14, connected at the lower end to the inner end of a foot-lever 15. The foot-lever is fulcrumed on a support 16, and its 80 outer portion is normally held elevated to close the valve 11, by a spring 17, having its free end bearing against the lower face or edge of the foot-lever. The outer end of the foot-lever is enlarged in order that it may be 85 conveniently engaged by the foot of the motorman or other operator.

By raising and lowering the valve, the sand is agitated for the purpose of keeping it stirred up in cold weather, to prevent freezing or clog- 90 ging, thereby rendering the device positive and reliable in its operation at a time when it is most needed.

It will be seen that the apparatus for sanding rails is simple and comparatively inex- 95 pensive in construction, that it is positive and reliable in operation, that it enables the flow or discharge of sand to be regulated, and that either one or both rails may be sanded as desired.

Changes in the form, proportion, and the minor details of construction may be resorted



to without departing from the principle or sacrificing any of the advantages of this invention.

What I claim is—

5 1. In an apparatus for sanding rails, the combination of a sand box having an opening at its bottom, a discharge tube projecting above the bottom of the sand box, a valve comprising a circular head or disk 12 arranged  
10 to fit on the upper edge of the discharge tube, and the annular series of vertically disposed depending tapering arms fixed at their upper ends to the disk or head and arranged within the vertical tube, and fitting against the inner  
15 face of the same and guiding the head or disk in its vertical movement and forming tapering spaces, and means for raising and lowering the valve, whereby the sand may be  
20 agitated, substantially as and for the purpose described.

2. In an apparatus for sanding rails, the combination of a sand-box, a discharge-tube

depending therefrom and provided with diverging branches, a cut-off hinged at the upper terminals of the branches and arranged to  
25 close the same, a rock-shaft carrying the cut-off and provided with a crank, a rack-bar connected with the crank; a stop arranged to be engaged by the rack-bar, a sand-valve arranged at the upper end of the discharge-  
30 tube and closing the same and provided with depending sides having tapering openings, a foot-lever fulcrumed on a suitable support and connected with the sand-valve, and a spring engaging the foot-lever for holding  
35 the sand-valve normally closed, substantially as described.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

THOMAS J. THOMAS.

Witnesses:

JNO. G. MCCLANAHAN,  
CHAS. H. THOMAS.