A. RYAN.

SNOW PLOW.

APPLICATION FILED JUNE 26, 1915.

1,155,099.

Patented Sept. 28, 1915.

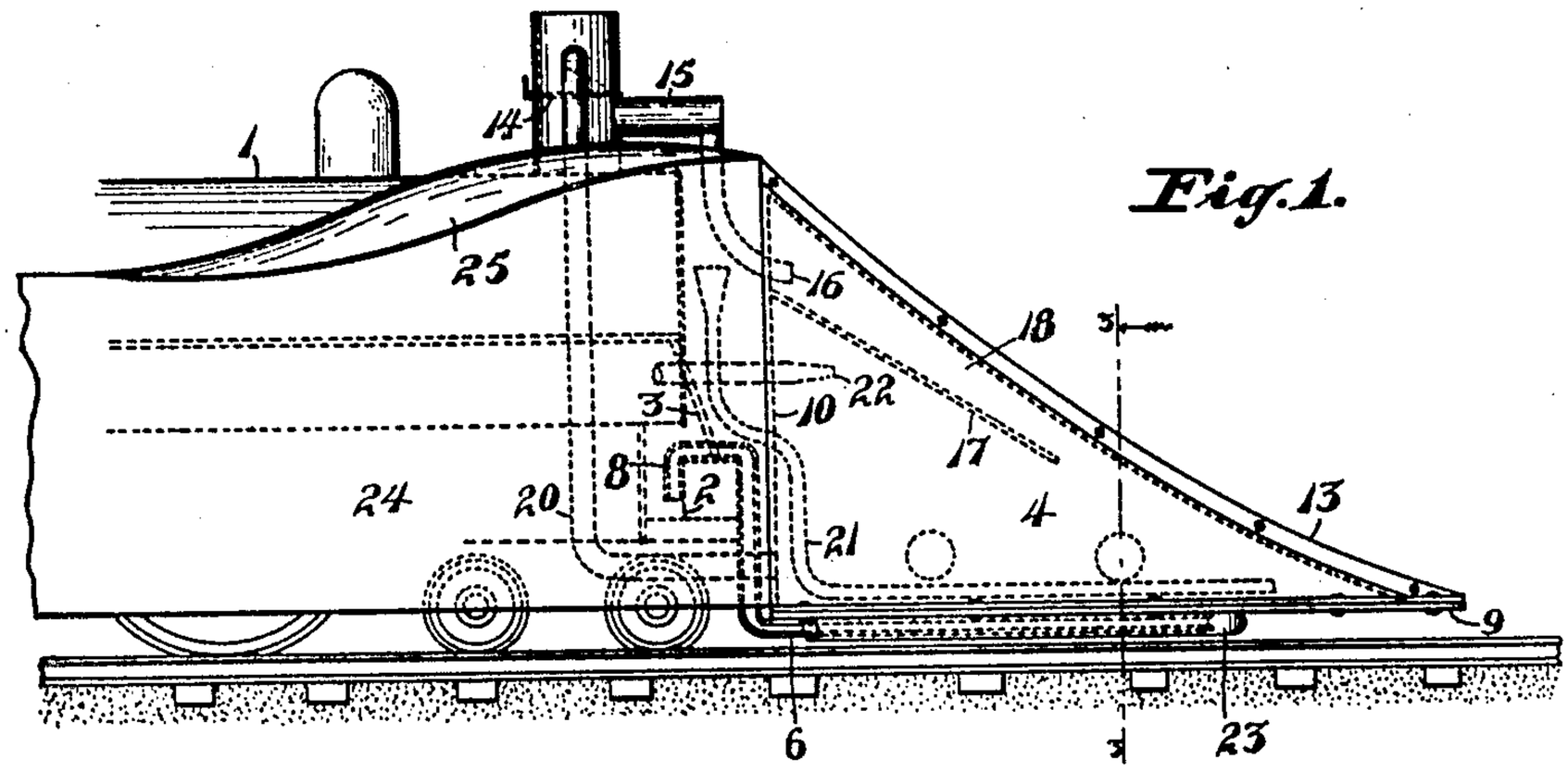

Fig. 1.

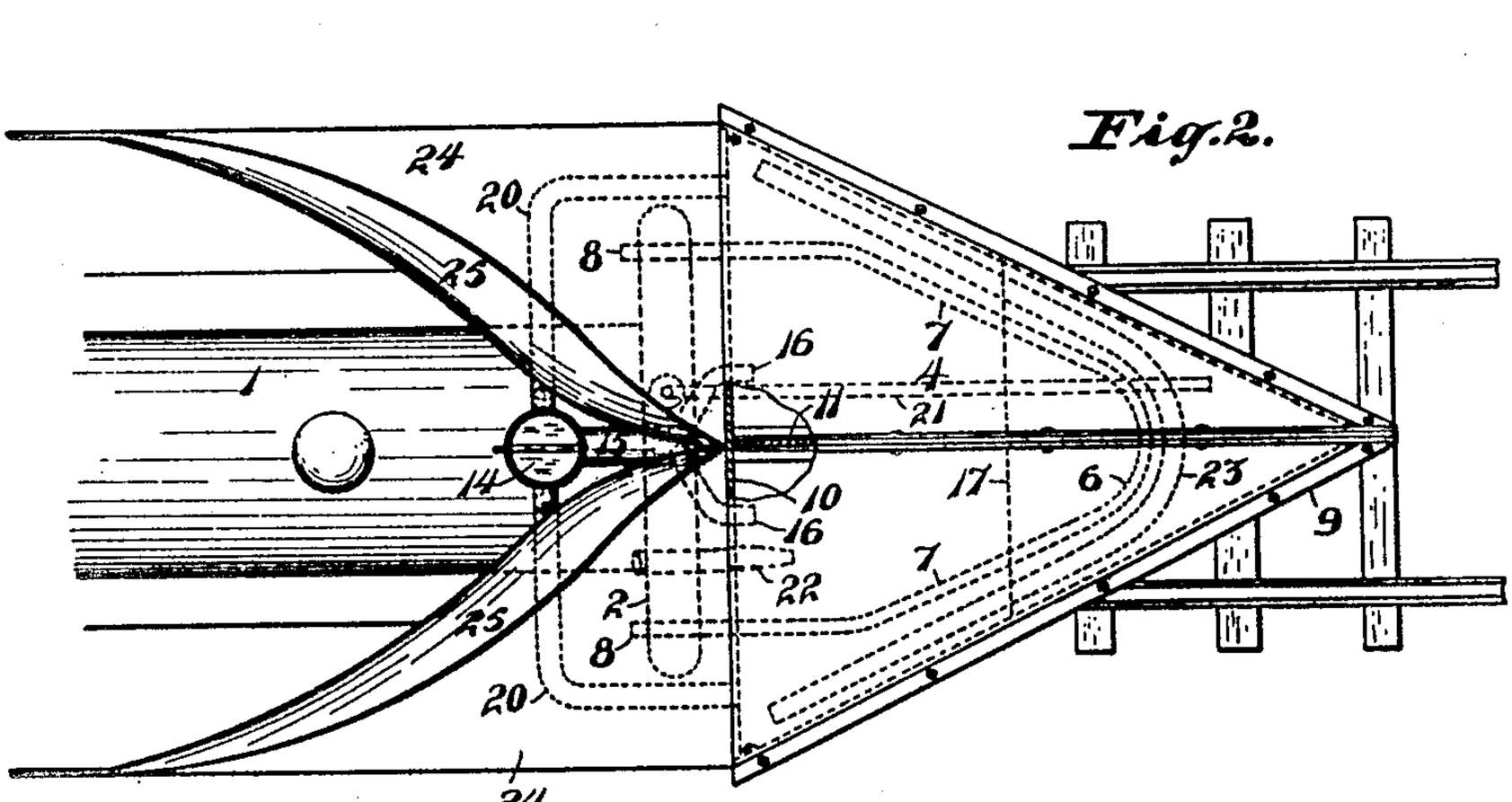

Fig. 2.

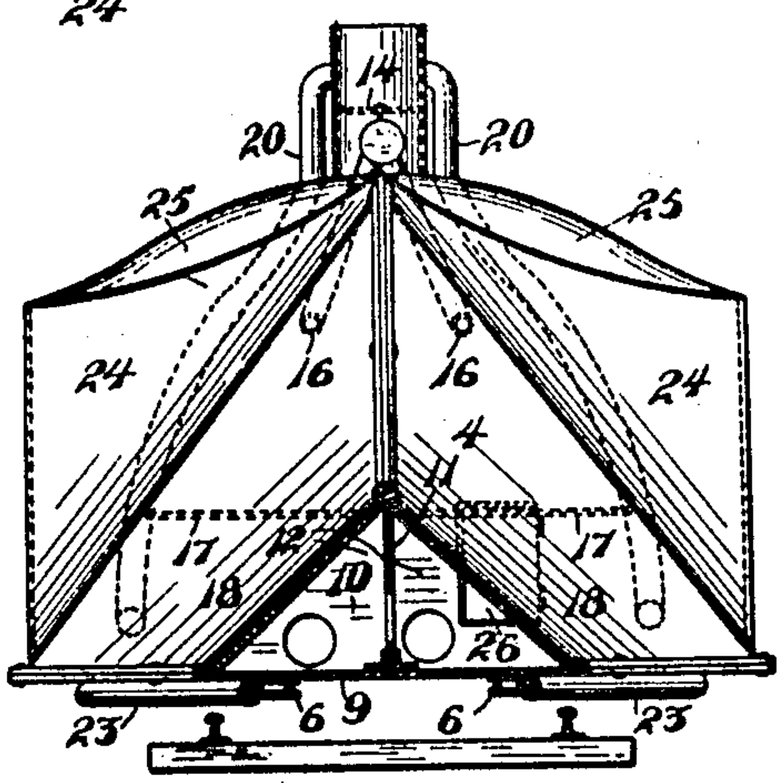

Fig. 3.

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UNITED STATES PATENT OFFICE.

ANDREW RYAN, OF KNOB, CALIFORNIA, ASSIGNOR OF ONE-HALF TO ARTHUR M. DEAN, OF REDDING, CALIFORNIA.

SNOW-PLOW.

1,155,099. Specification of Letters Patent. Patented Sept. 28, 1915.

Application filed June 26, 1915. Serial No. 36,566.

To all whom it may concern:

Be it known that I, ANDREW RYAN, a citizen of the United States, residing at Knob, in the county of Shasta and State of California, have invented new and useful Improvements in Snow-Plows, of which the following is a specification.

The object of the present invention is to provide an improved snow plow to be operated in front of a locomotive engine to clear railroads of snow.

In the accompanying drawing, Figure 1 is a side view, showing my improved snow plow attached to a locomotive engine, the front portion only of said engine being shown; Fig. 2 is a plan view of the same; Fig. 3 is a transverse vertical section on the line 3—3 of Fig. 1.

Referring to the drawing, 1 indicates a locomotive engine of any improved type. In applying my improved snow plow thereto I first remove the cow catcher, which is ordinarily secured to a transverse beam 2, secured by hangers 3 from the front end of said locomotive engine. I then replace it by a snow plow 4, which is supported by an angle iron 6, of which the front portion is horizontal and V-shaped, while the rear portion consists of two members extending from said V-shaped portion first in a rearward direction or parallel with the rails, as shown at 7, and then upward to form hooks 8 to engage said beam. The plow proper is formed with a forwardly pointed base 9, an upwardly pointed rear wall 10 a central longitudinally extending partition 11 dividing the plow into two chambers 12 and forming a central downwardly and forwardly sloping slightly concave ridge 13 uniting the apexes of the base and wall.

A damper 14 is placed in the smoke stack of the locomotive engine, and, when the snow plow is attached to said engine, the damper is closed. A pipe 15 leads forwardly from a point below the damper and then branches into two pipes 16, each connected with one of the chambers 12 of the plow above downwardly and forwardly sloping partitions 17. By this means the hot and waste gases from the smoke-stack of the locomotive engine are discharged into said chambers, adjacent to the upper walls 18 thereof, thus conveying heat to said walls, so that they are maintained continually hot. The snow in contact therewith is quickly melted so that the snow encountered by the snow plow of the locomotive is easily penetrated and thrown to the sides of the track. Part of the waste gases pass out through pipes 20 which lead to the upper portion of the smoke stack above the damper.

Air is admitted into the plow by a pipe 21 having a funnel-shaped inlet end in front of the locomotive, the partition 11 having holes in the lower portion to permit the waste gases to pass from one chamber to the other.

22 indicates an oil burner which may be used instead of, or in addition to, the waste gases of the locomotive for heating the plow.

Should the weight of the snow bearing down upon the snow plow be very considerable, said weight will cause a V-shaped rod 23 secured to the base 7 to contact with the rails and slide thereon as the snow plow is propelled by the engine.

Side shields 24 are connected to the rear end of the plow and extend over the sides of the locomotive and have their upper portions 25 curled over or outwardly downward to protect the sides of the locomotive.

26 is a man hole for entering the interior of the snow plow.

I claim:—

1. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive, a rod to which said base is secured and having a hooked portion adapted to engage a transverse beam in front of the locomotive to which the cow catcher is normally attached, a pipe leading from said smoke stack below said damper into the interior of said plow, a pipe leading from the lower portion of said interior and discharging into the smoke-stack above said damper.

2. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive, a curved rod to which said base is secured and having hooked portions adapted to engage a transverse beam in front of the locomotive to which the cow catcher is normally attached, a pipe leading into the interior of said plow from said smoke-stack below said damper, a pipe leading from the lower portion of said interior and discharging into the smoke-stack above

said damper, and a rod connected to the lower portion of the snow plow and adapted to slide upon the rails if the plow is depressed.

3. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive comprising a forwardly pointed base, an upwardly pointed rear wall, a central downwardly and forwardly extending ridge uniting the points of said base and rear wall, means for securing the plow to the locomotive, a forwardly and downwardly extending partition from said rear wall, a pipe leading from said smoke stack below said damper, branch pipes leading from said pipe and discharging into the interior of said plow above said partition, pipes leading from the lower portion of said interior and discharging into the smoke-stack above said damper, and a pipe leading from the interior of the plow and dischaging upwardly in front of the locomotive.

4. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive comprising a forwardly pointed base, an upwardly pointed rear wall, a central downwardly and forwardly extending ridge uniting the points of said base and rear wall, means for securing the plow to the locomotive, a forwardly and downwardly extending partition from said rear wall, a pipe leading from said smoke stack below said damper, branch pipes leading from said pipe and dischaging into the interior of said plow above said partition, pipes leading from the lower portion of said interior and discharging into the smoke-stack above said damper, and an oil burner for heating the interior of said plow.

5. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive comprising a forwardly pointed base, an upwardly pointed rear wall, a central downwardly and forwardly extending ridge uniting the points of said base and rear wall, means for securing the plow to the locomotive, a forwardly and downwardly extending partition from said rear wall, a pipe leading from said smoke stack below said damper, branch pipes leading from said pipe and discharging into the interior of said plow above said partition, pipes leading from the lower portion of said interior and discharging into the smoke-stack above said damper, and a longitudinal partition centrally dividing the interior of the locomotive into chambers and having holes therethrough through which the chambers communicate with each other.

6. In combination with a steam locomotive having a damper in its smoke-stack, a snow plow adapted to be attached to said locomotive comprising a forwardly pointed base, an upwardly pointed rear wall, a central downwardly and forwardly extending ridge uniting the points of said base and rear wall, means for securing the plow to the locomotive, a forwardly and downwardly extending partition from said rear wall, a pipe leading from said smoke stack below said damper, branch pipes leading from said pipe and discharging into the interior of said plow above said partition, pipes leading from the lower portion of said interior and discharging into the smoke-stack above said damper, an oil burner for heating the interior of said plow, a pipe leading from the interior of the plow and discharging upwardly in front of the locomotive, a rod connected to the lower portion of said base and adapted to slide upon the rails if the the plow is depressed, a longitudinal partition centrally dividing the interior of the locomotive into chambers having holes therethrough through which the chambers communicate with each other.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

ANDREW RYAN.

Witnesses:
F. M. WRIGHT,
G. M. BALL.