

(No Model.)

2 Sheets—Sheet 1.

J. ALLEN & W. R. MUSSER.

LOCOMOTIVE HEAD LIGHT.

No. 273,428.

Patented Mar. 6, 1883.

Fig. 1.

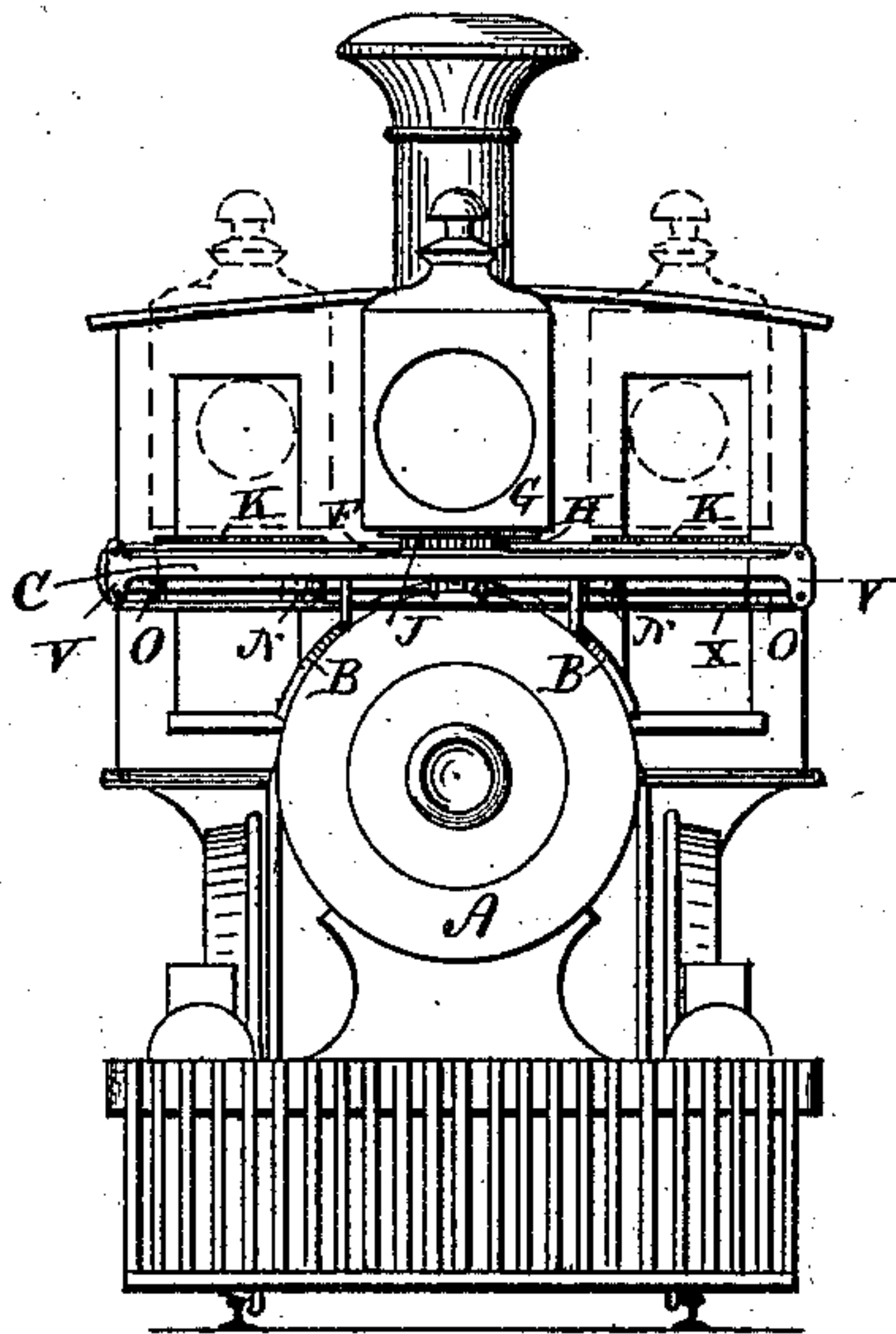


Fig. 2.

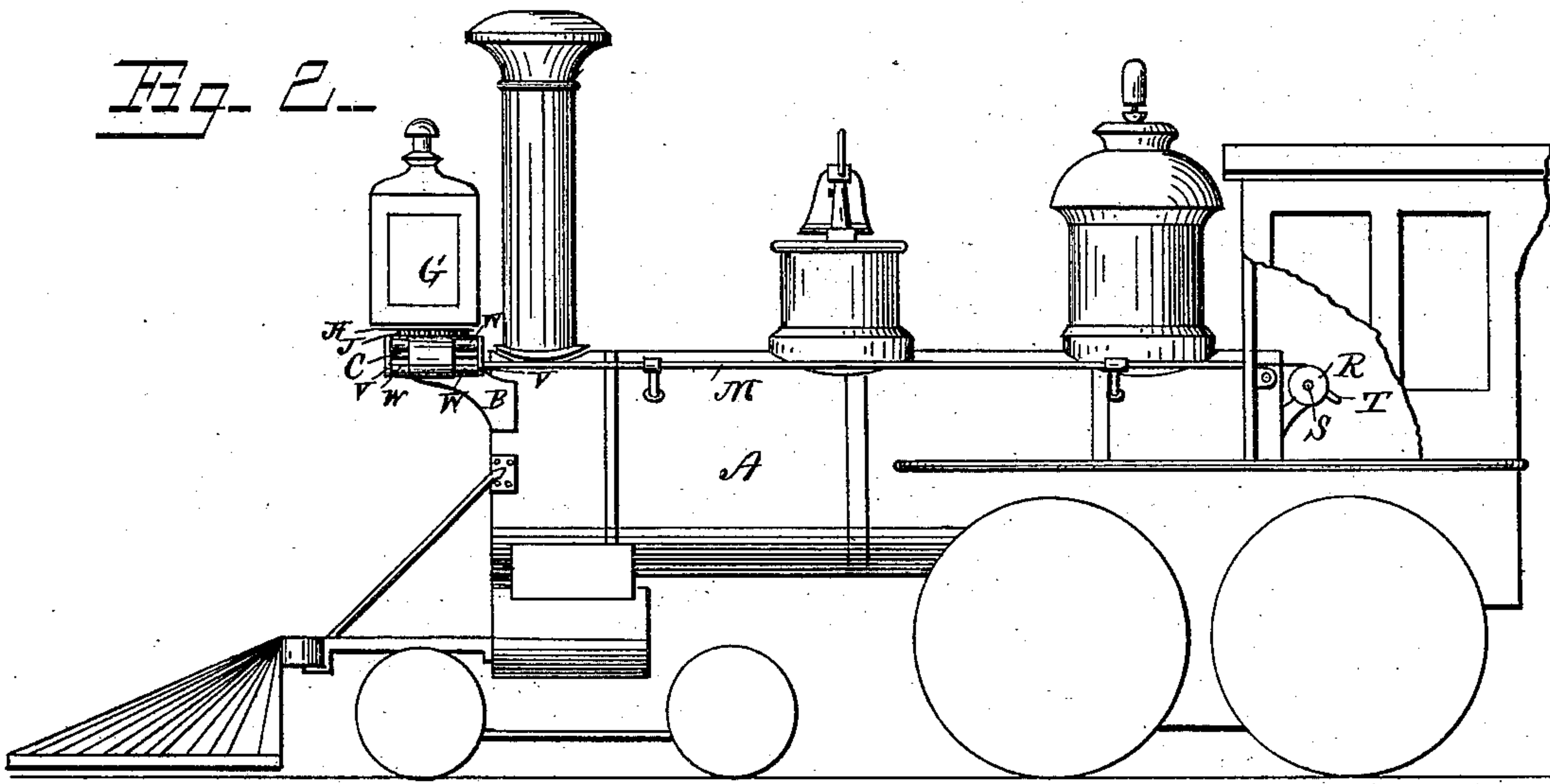
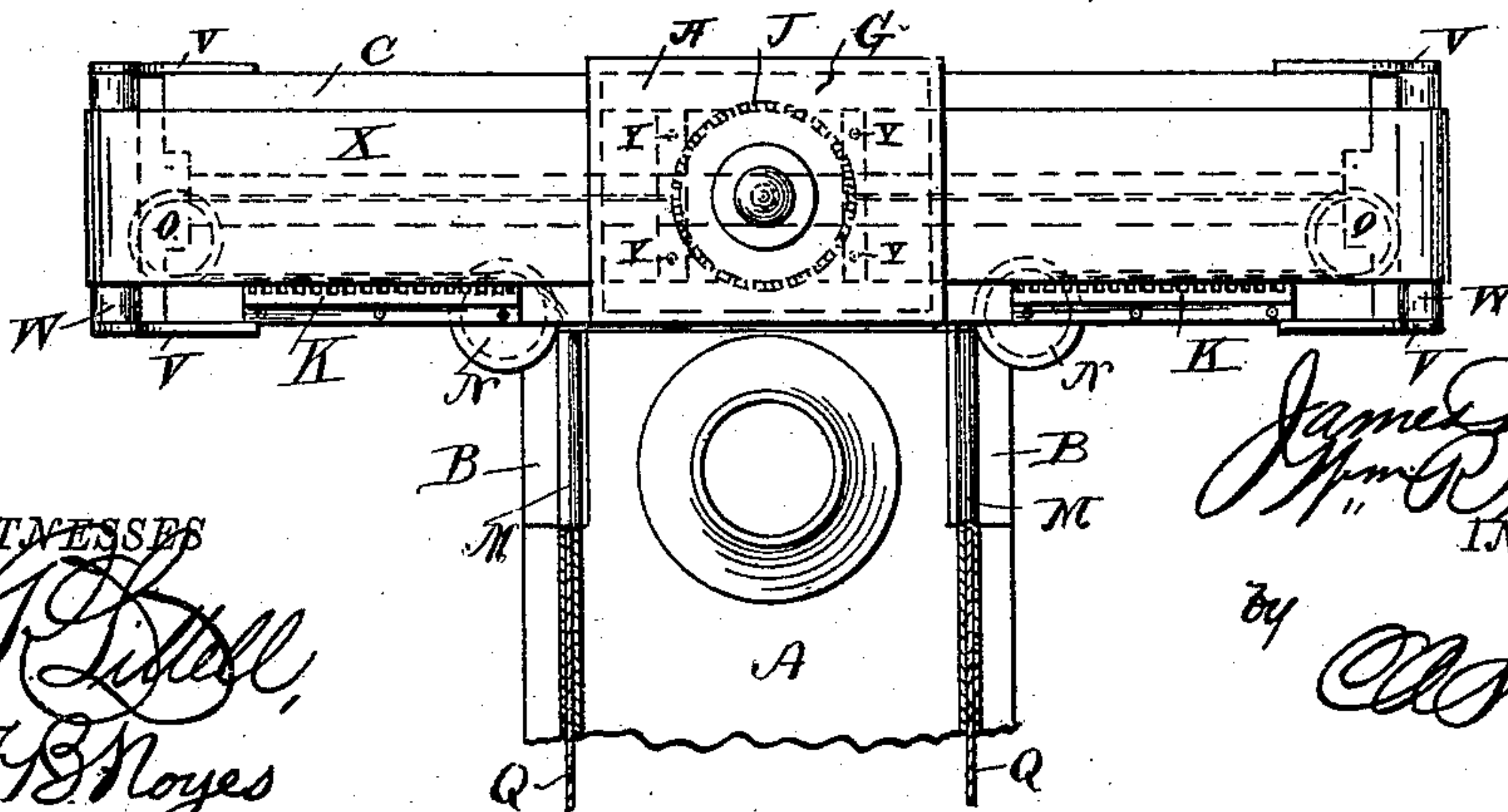


Fig. 3.



WITNESSES

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2 Sheets—Sheet 2.

LOCOMOTIVE HEAD LIGHT.

Patented Mar. 6, 1883.



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UNITED STATES PATENT OFFICE.

JAMES ALLEN AND WILLIAM R. MUSSER, OF LYNCHBURG, VIRGINIA.

LOCOMOTIVE HEAD-LIGHT.

SPECIFICATION forming part of Letters Patent No. 273,428, dated March 6, 1883.

Application filed January 13, 1883. (No model.)

To all whom it may concern:

Be it known that we, JAMES ALLEN and WM. ROSS MUSSER, citizens of the United States, residing at Lynchburg, in the county of Campbell and State of Virginia, have invented a new and useful Locomotive Head-Light, of which the following is a specification, reference being had to the accompanying drawings.

10 This invention relates to head-lights for locomotives; and it consists in certain improvements in the construction and arrangement of the same, the object of which is to enable the head-light to be simultaneously moved to either
15 side of the stack and reversed, so as to throw the light in a rearward direction, as will be hereinafter more fully described, and particularly pointed out in the claims.

20 In the drawings hereto annexed, Figure 1 is a front view of a locomotive to which our invention has been applied. Fig. 2 is a side view of as much of the same as is necessary to show our invention. Fig. 3 is a plan view. Fig. 4 is a bottom plan view. Fig. 5 is a longitudinal vertical sectional view, and Fig. 6 is a vertical transverse sectional view on the line xx
25 in Fig. 5.

The same letters refer to the same parts in all the figures.

30 In the drawings, A designates the locomotive, the front end of which has brackets B B, bolted or otherwise secured to the boiler.

35 C is a frame or table mounted upon the brackets B B, and having a dovetailed slot, D, in which slides a block, E, upon the upper side of which is bolted a plate, F, carrying the lamp or head-light. The latter, which is denoted by letter G, is mounted upon a plate, H, having a stem, I, swiveled in the plate F and block E.
40 The stem I has a pinion or spur-wheel, J, capable of engaging racks K K near the ends of the frame C, at the rear edge of the latter, so that when the head-light is moved to either end of the frame from the center it will be
45 given a half-turn. At the rear edge of frame C is also a central flange, L, which, when the light is at the center of the frame, bears against the plate J, thus preventing the light from turning.

50 M M are tubes running alongside the boiler from the frame C to the engineer's cab, and

serving as hand-rails. The underside of frame C is provided with horizontal sheaves or pulleys N, located at the front ends of said tubes, and with additional sheaves O, located near
55 the ends of said frame. The under side of the block E is provided with lugs P P, to which are attached ropes or chains Q, passing over the sheaves O N and through the tubes M to the cab, where they are wound in opposite di-
60 rections upon drums R R, fixed upon a transverse shaft, S, which may be conveniently operated by means of a crank, T.

The head-light or lamp may be of any suitable construction; but we prefer to provide it in
65 the rear side of the casing with a red glass, U, serving as a danger-signal when the lantern is reversed.

The ends of the frame C have brackets V V, in which are mounted rollers W, over which
70 passes a belt, X, which extends under the said frame, and the ends of which are attached to the plate or carrier F by means of studs or spurs Y, formed upon the latter. This belt serves to protect the operating parts and pre-
75 vent them from being clogged.

The operation of our invention will be readily understood. By turning the shaft S the head-light may be moved to either side, and at the same time reversed, so as to throw the light
80 in a rearward direction, and at the same time present a danger-signal in front. When the head-light is moved to the center, the smoke-stack conceals the danger-signal.

We would have it understood that other mechanism than that herein described may be used
85 for moving the head-light to either end of the frame without departing from the spirit of our invention.

We claim and desire to secure by Letters Patent of the United States—

1. The combination, with a locomotive having at its front end a transverse frame or table, of a head-light arranged to slide upon said table and to be at the same time revolved, substantially as set forth.

2. The combination, with a locomotive having at its front end a transverse frame or table, of a head-light arranged to slide upon the said table and to be at the same time revolved
100 by means of mechanism substantially as described, said head-light being provided with

a red glass or danger-signal in the rear side of its casing, as set forth.

3. The combination, with a locomotive having at its front end a transverse frame or table, of a head-light mounted upon the said frame or table, and mechanism whereby the said head-light may be moved to either end of said frame, and at the same time be caused to make a one-half revolution, so as to present its light in a rearward direction, substantially as set forth.

4. The combination, with a locomotive having at its front end a transverse frame or table, of a head-light mounted upon the latter, said head-light being arranged to revolve, by means substantially as described, in a horizontal plane when moved toward either end of the frame, and a flange arranged at the center of said frame, so as to prevent the said head-light from revolving while at the center of the frame, substantially as set forth.

5. The combination of the locomotive, the transverse slotted frame having racks at either end and a centrally-located flange, the block or slide having a plate or carrier on its upper side, the swiveled head-light having a stem

provided with a pinion engaging the racks, and mechanism for moving the block or slide toward either end of the frame, as set forth.

6. The combination of the transversely-sliding block carrying the head-light, the guide sheaves or pulleys, the tubular hand-rails, the transverse shaft having winding-drums, and the operating cords or chains, all arranged substantially as described.

7. The combination of the slotted frame or table provided at the ends with brackets, rollers mounted in the same, the sliding block carrying the head-light, and a belt or band extending around the frame or table, and having its ends attached to studs formed upon the upper side of the carrier-plate, substantially as set forth.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in presence of two witnesses.

JAMES ALLEN.
WM. ROSS MUSSER.

Witnesses:

JAMES E. NOWLIN,
S. T. WOOD.