W. H. HATCHER.

SPARK CONDUCTOR.

APPLICATION FILED APR. 5, 1922.

1,425,473.

Patented Aug. 8, 1922.

Fig. 1.

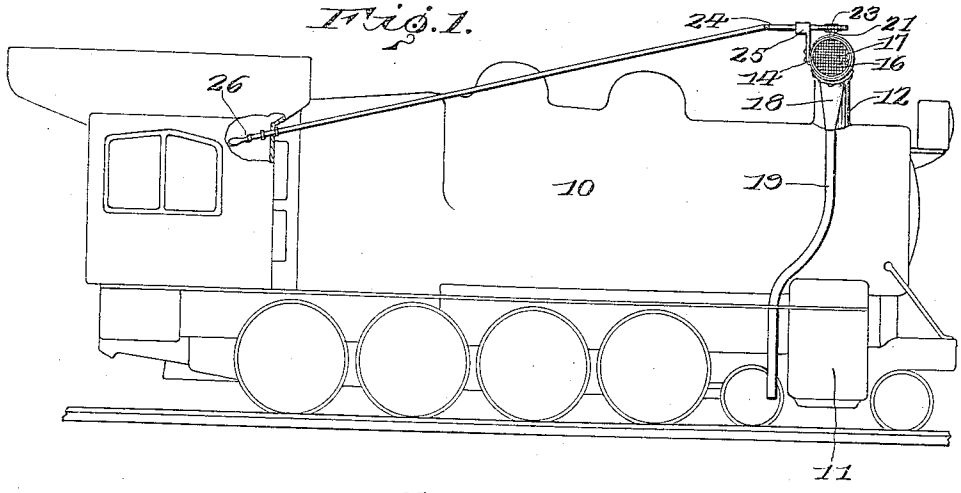
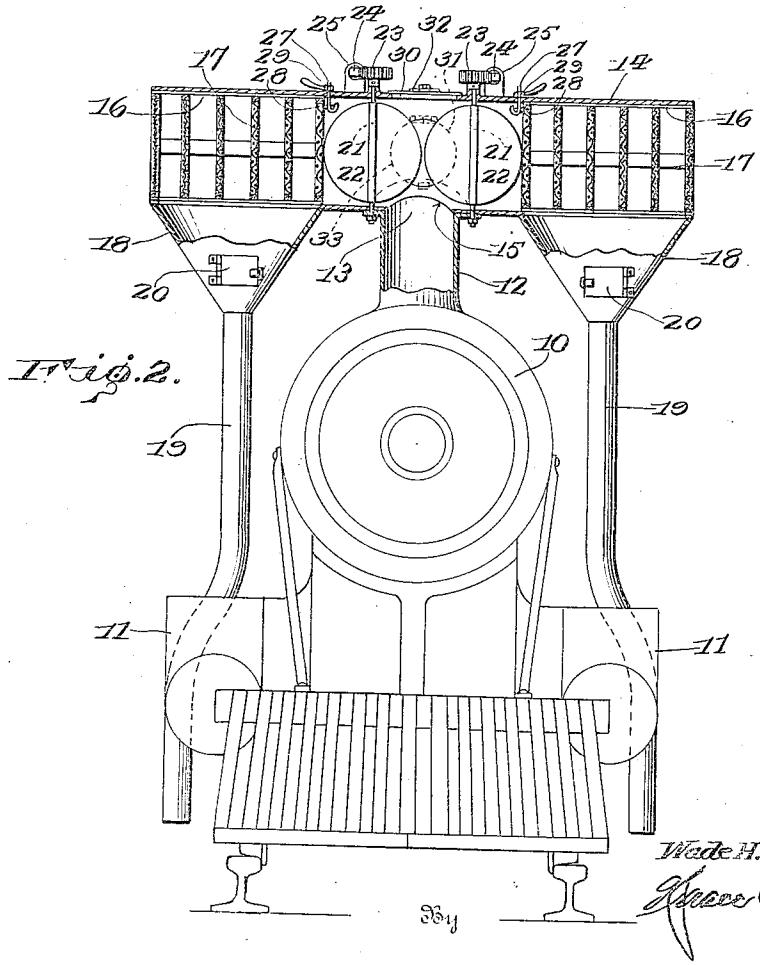


Fig. 2.



Inventor

Wade H. Hatcher

By Grace & Hyde

Attorney

UNITED STATES PATENT OFFICE.

WADE H. HATCHER, OF STUART, VIRGINIA.

SPARK CONDUCTOR.

1,425,473. Specification of Letters Patent. Patented Aug. 8, 1922.

Application filed April 5, 1922. Serial No. 549,890.

To all whom it may concern:

Be it known that I, WADE H. HATCHER, a citizen of the United States, residing at Stuart, in the county of Patrick, State of Virginia, have invented certain new and useful Improvements in Spark Conductors; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to new and useful improvements in attachments for railway locomotives, and particularly to spark and cinder conductors.

One object of the invention is to provide an attachment for the stack of a locomotive by means of which the cinders will be deflected and discharged along the sides of the railway.

Another object is to provide a device of this character wherein the engineer can control the flow of the smoke and cinders, so as to direct the same toward either or both sides of the locomotive, according to the direction in which the wind is blowing.

Another object is to provide a novel and improved arrangement of screens by means of which the cinders are separated from the smoke and deflected into conduits which carry them to a point close to the road-bed, at the sides of the railway, where they are discharged.

Other objects and advantages will be apparent from the following description when taken in connection with the accompanying drawing.

In the drawing:

Figure 1 is a front elevation of the invention shown in connection with a locomotive, the locomotive being shown in outline.

Figure 2 is a side elevation of the same.

Referring particularly to the accompanying drawing, 10 represents the boiler of a locomotive, 11 the cylinders, and 12 the stack.

Disposed transversely on the upper end of the stack 12, and having a central opening 13, registering with the opening in said upper end of the stack, is a pipe 14, the said pipe being properly secured to the stack, in any suitable manner, as by the rivets 15. Both ends of the pipe 14 are open, as clearly seen in the sectional view, and disposed in each end of the pipe is a frame 16. Secured in this frame, and standing in vertical position, are the series of screens 17, it being noted that the innermost of the screens is the coarsest and the outermost one the finest, the screens therebetween being graduated accordingly. Secured to the lower side of each end of the pipe 14, and communicating with the interior of the pipe, is the upper wider end of a hopper 18. Connected to the lower end of each hopper 18 is a cinder conducting pipe 19, which extends downwardly at each of the sides of the locomotive, and to a point close to the road-bed, at the side of the railway, said pipe discharging its cinders at such point.

In one side of each hopper there is mounted a clean-out door 20.

Disposed vertically in the pipe 14, at each side of the upper end of the stack, is a shaft 21, and mounted on the shaft, within the said pipe, is a disk or plate 22, which forms a damper or cut-off valve. The upper end of each shaft 21, which extends through and above the upper side of the pipe 14, is provided with a toothed wheel 23, and meshing with each of these wheels is the toothed end of a rod 24, said rod being properly supported on the pipe 14, in the brackets 25, and along the locomotive, into the cab, where it is provided with a hand-grip 26. When the engineer grasps the hand-grip 26, and pulls the rod, the shaft of a cut-off valve 22 will be rotated in one direction, and upon pushing the rod, the valve will be rotated in the opposite direction. Thus the engineer can open or close either or both of the valves 22, as desired. Sometimes the wind will be blowing across the railway, with the result that it will blow into one end of the pipe 14, resulting in driving back the smoke and cinders, and in such an event, the engineer closes the valve 22 at that side of the locomotive.

Disposed vertically through the pipe 14, are two hook bolts 27, their hook ends being engaged with loops 28 carried by the frames of the screens, hand nuts 29 being engaged on the upper outer ends of the bolts, for the purpose of firmly clamping the said frames in position within the pipe. By removing the bolts, the frames may be readily slipped from the pipe. In the intermediate portion of the pipe 14 are access openings 30 and 31 having the doors 32 and 33.

What is claimed is:

1. A spark arrester and conductor for a locomotive comprising a transverse conduit mounted on the upper end of the stack of a locomotive and communicating therewith, means in the ends of the conduit for grading the cinders, means below and connected with the conduit for receiving the cinders, and means for controlling the flow of smoke and cinders to the opposite ends of the conduit.

2. A spark arrester and cinder conductor for a locomotive comprising a transverse pipe mounted on and communicating with the upper end of a locomotive stack, screens of graduated mesh mounted on the ends of the transverse pipe, means for securing the screens in the pipe, cinder conducting pipes leading from the ends of the transverse pipe, and valves in the transverse pipe at opposite sides of the upper end of the stack.

3. A spark arrester and conductor for a locomotive comprising a conduit mounted on the upper end of the stack of a locomotive and communicating therewith, means in the ends of the conduit for grading the cinders, means connected with the conduit for receiving the cinders, and means for controlling the flow of smoke and cinders to the ends of the conduit.

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

WADE H. HATCHER.

Witnesses:
ROBT. N. CLARK,
J. C. SHOCKLEY.