

(No Model.)

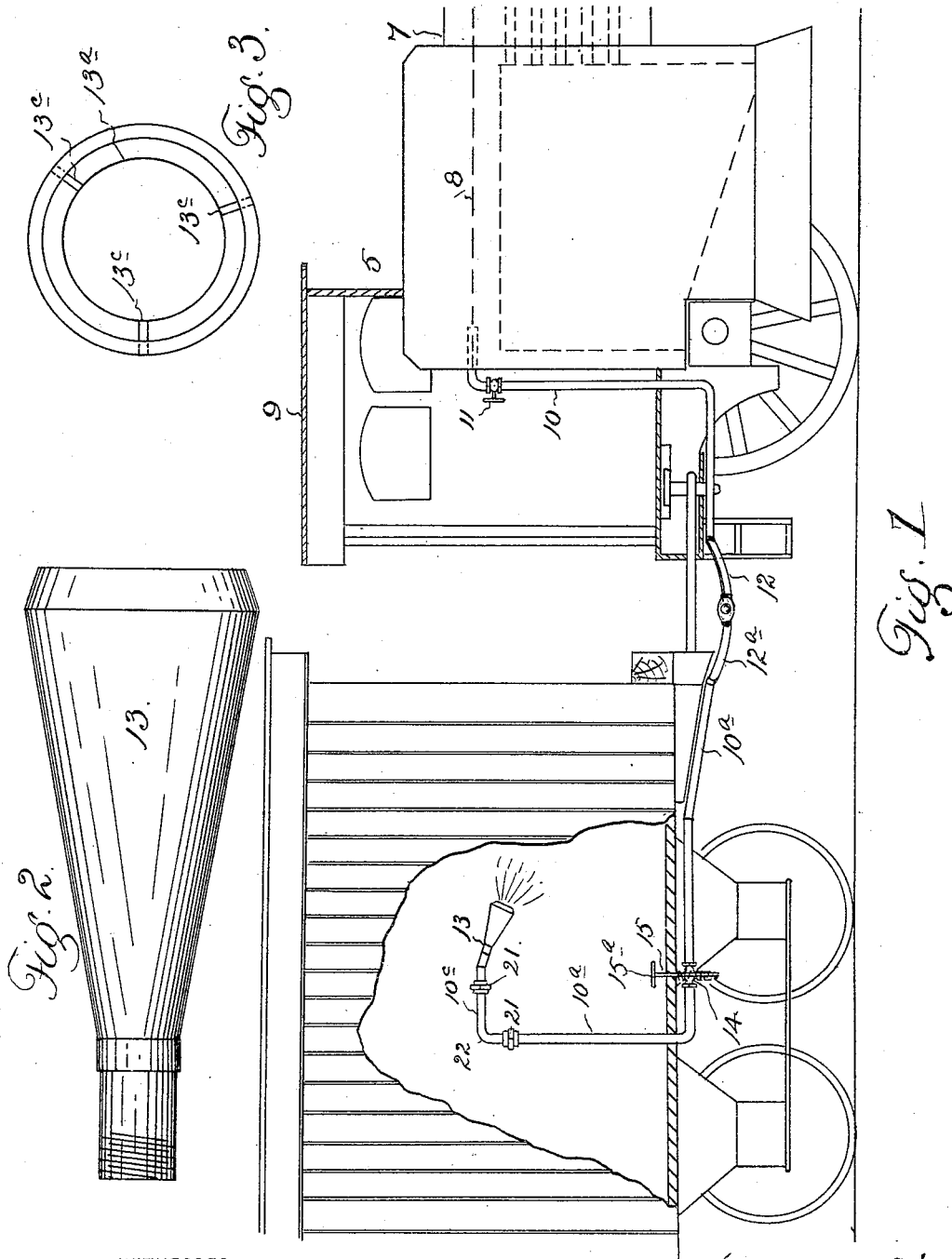
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T. SCHMID & W. KINKEL.

MEANS FOR PREVENTING RAILWAY EXPRESS ROBBERIES.

No. 493,600.

Patented Mar. 14, 1893.



WITNESSES:

G. J. Pelland
Wm. McConnell

INVENTORS:

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ATTORNEY.

(No Model.)

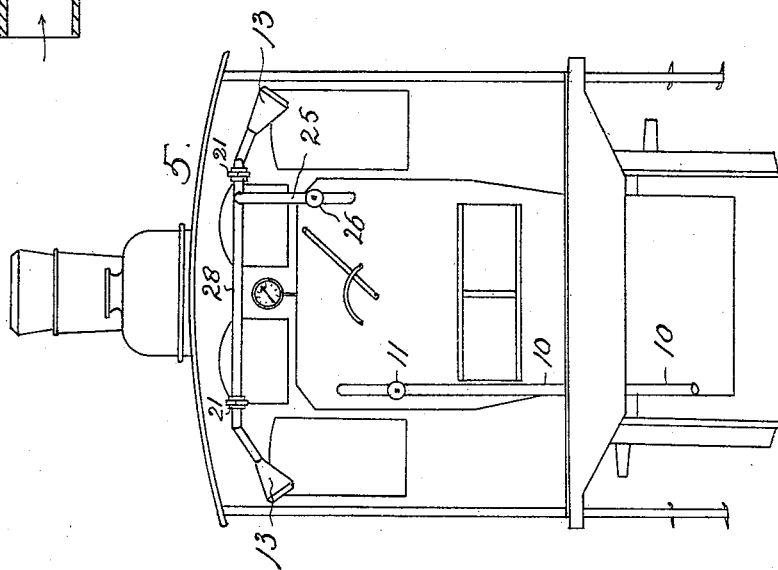
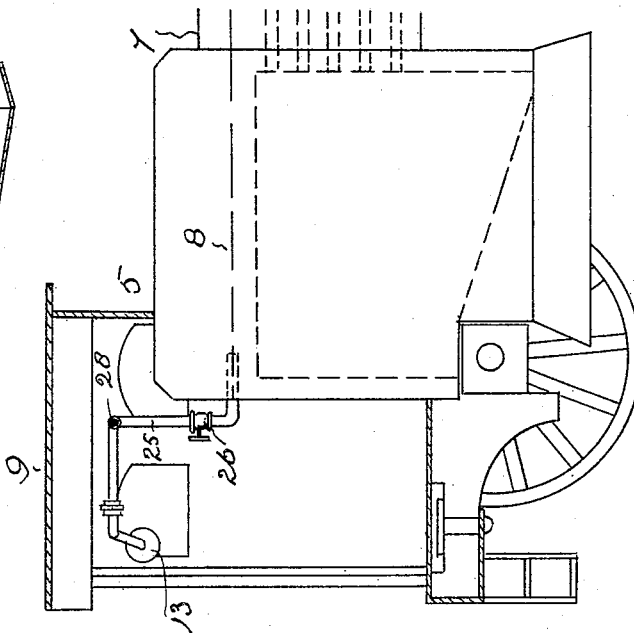
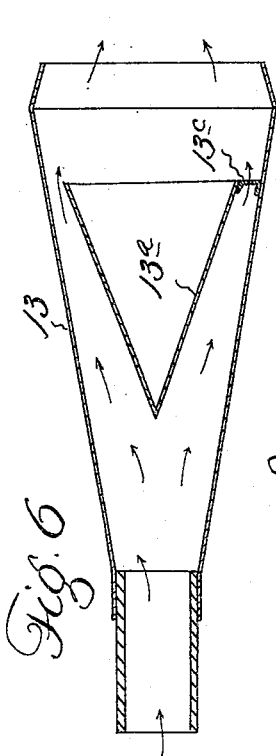
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No. 493,600.

Patented Mar. 14, 1893.



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(No Model.)

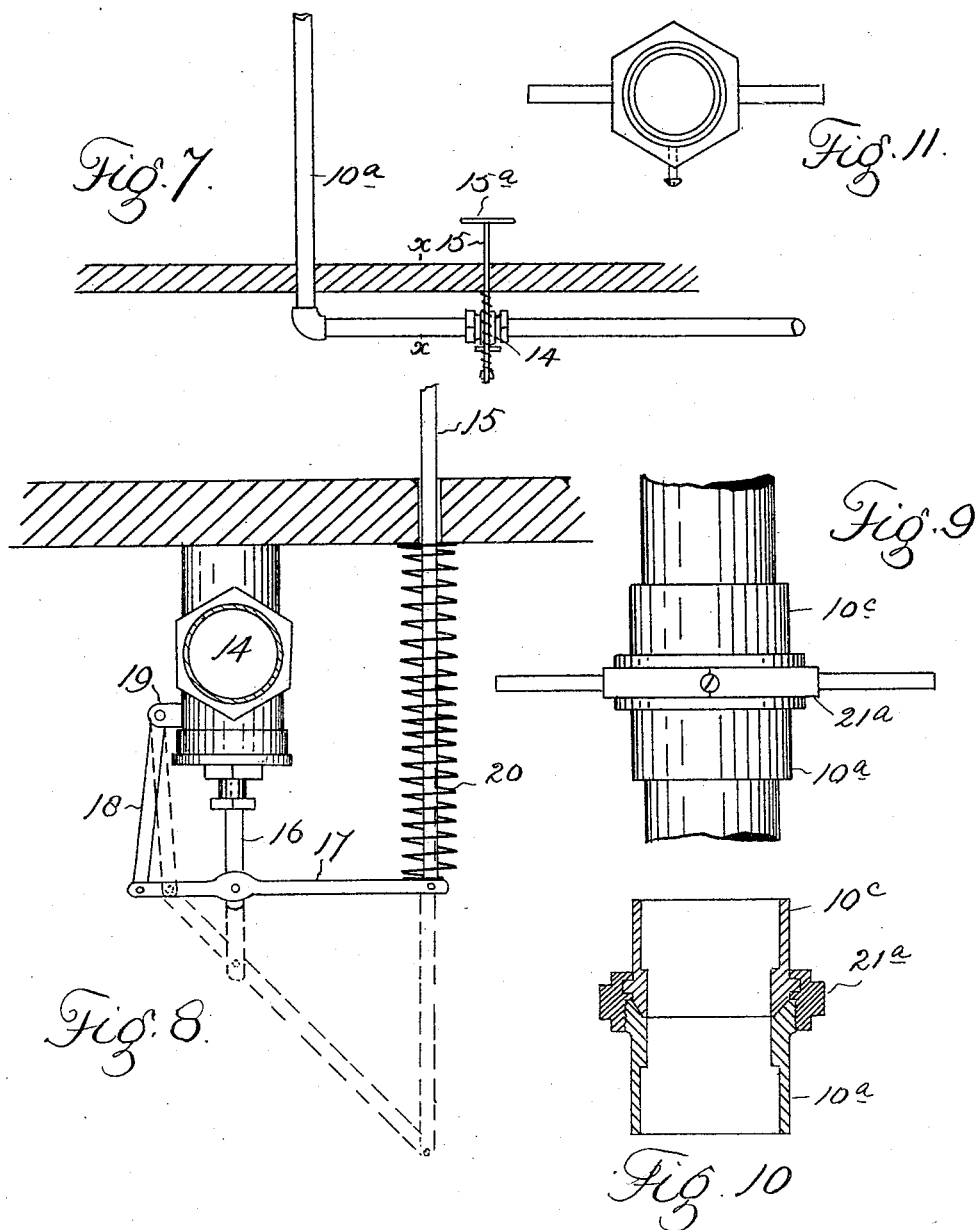
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T. SCHMID & W. KINKEL.

MEANS FOR PREVENTING RAILWAY EXPRESS ROBBERIES.

No. 493,600.

Patented Mar. 14, 1893.



WITNESSES:

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INVENTORS:

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UNITED STATES PATENT OFFICE.

THEODOR SCHMID AND WILLIAM KINKEL, OF DENVER, COLORADO.

MEANS FOR PREVENTING RAILWAY-EXPRESS ROBBERIES.

SPECIFICATION forming part of Letters Patent No. 493,600, dated March 14, 1893.

Application filed January 6, 1892. Serial No. 417,219. (No model.)

To all whom it may concern:

Be it known that we, THEODOR SCHMID and WILLIAM KINKEL, citizens of the United States of America, residing at Denver, in the county of Arapahoe and State of Colorado, have invented certain new and useful Improvements in Means for Preventing Railway-Express Robberies; and we do 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, reference being had to the accompanying drawings, and to the figures of reference marked thereon, which form a part of this specification.

Our invention relates to means for preventing the robbing of railroad trains and consists in an arrangement of pipes carrying hot water and steam from the boiler of the engine, said pipes leading to the express car and cab of the locomotive or any other desired part of the train, and provided with valves and adjustable nozzles so arranged that the steam and hot water may be readily turned upon the would-be robbers at the pleasure of the engineer and expressman. Hence the object of our invention is to frustrate the designs of this class of high-waymen by a means practicable under circumstances when fire arms or other weapons of defense would not be of use.

The invention will be fully understood by reference to the accompanying drawings, in which is illustrated an embodiment of the invention.

In the drawings, Figure 1 is a fragmentary side elevation partially in cross section of the locomotive and express car coupled together and provided with our improvement. Fig. 2 is a side elevation of one of the nozzles attached to the pipes. Fig. 3 is a front elevation of the same. Fig. 4 is a side view partially in cross section of the rear end of the locomotive provided with the attachments. Fig. 5 is a rear elevation of the same. Fig. 6 is a longitudinal section taken through one of the nozzles. Fig. 7 is a detail view in side elevation of the valve connected with the express car. Fig. 8 is an enlarged elevation showing the pipe in section taken on the line $x-x$, Fig. 7. Fig. 9 is a view of the coupling employed connecting the pipe sections near

the nozzles, whereby the nozzle may be turned in any desired direction. Fig. 10 is a longitudinal section of this joint, and Fig. 11 is an end view of the swiveled nut.

Similar reference characters indicating corresponding parts or elements in the several views let the numeral 5 designate the locomotive generally, 7 the boiler, 8 the water level therein, 9 the cab and 6 the express car to the rear of the locomotive. Connected with the boiler and communicating with the water and steam therein is a pipe 10 provided with a valve 11 located just outside of the boiler and within easy reach of the engineer from his position in the cab. Pipe 10 enters the boiler at about the water level in order to permit both steam and hot water to enter the same, whereby the water is forced through the pipe under the pressure of the steam in the boiler. From its entrance to the boiler pipe 10 passes downward and outward to the rear where it is provided with a section 12 of hose adapted to be connected by the use of any suitable coupling with a similar section 12^a attached to the pipe 10^a located on the express car and passing upward through a suitable opening in the bottom of the same into the car where it terminates in a nozzle 13. In pipe 10^a underneath the car is located a sliding valve 14, the stem 16 of which projects downward, its lower extremity being pivoted to a lever 17. The lever is fulcrumed on the stem of the valve, one of its arms, the shorter, as shown in the drawings, being pivoted upon a depending arm 18, the upper extremity of which is pivoted to a suitable support 19. The other or longer arm of lever 17 is pivoted at its outer extremity to a vertical bar 15 which extends up through a suitable opening in the floor of the car into the same where it terminates in a suitable top 15^a adapted to be pressed easily by the foot when it is desired to open the valve 14. Surrounding bar 15 beneath the floor of the car and attached thereto at its upper extremity is a coil spring 20, the lower extremity of which is attached to the bar near lever 17. The object of this spring is to automatically close valve 14 after the downward pressure upon bar 15, necessary in opening the valve, ceases.

The vertical portion of pipe 10^a in the car is provided with a swivel joint 21 uniting the

horizontal section 10° of the pipe with the vertical section. Joint 21 is constructed as shown in Fig. 10, the nut 21^a being swiveled upon one section of the coupling, while the other section is screwed into the nut. Section 10° of the pipe, as shown in the drawings, is also provided with a swivel joint 21 into the outer section of which is screwed the nozzle 13. This nozzle is conical in shape and provided interiorly with a similar shaped device 13^a having its apex directed inward and is also suitably secured to the inner surface of the nozzle proper by the use of the double flanged connections 13°. The interior construction of the nozzle is adapted to spread the steam and water issuing therefrom and offer resistance thereto whereby the velocity is increased and results more satisfactory.

A pipe 25 communicating with the steam and water of the boiler leads upward to the cab of the locomotive. This pipe is provided with a valve 26 near its connection with the boiler. Pipe 25 is connected at its upper extremity with a horizontal section 28 occupying a position cross wise of the cab and terminating at each extremity in a nozzle 13 of the same construction as that heretofore described as connected with the pipe leading to the express car. These nozzles 13 are directed outward and command the approaches to the cab. Pipe 28 is provided near each extremity with a swivel joint 21.

From the foregoing description the use of our improved attachment will be readily understood. As the persons wishing to rob the train approach the locomotive and attempt to enter the cab, the engineer turns the valve 26, permitting the steam and hot water from the boiler to pass through the pipes 25 and 28 and causing it to rush out of nozzles 13 into the faces of the approaching highwaymen.

Valve 11 is also opened by the engineer at the same time that he opens valve 26. Hence the water and steam rushes through pipe 10 to valve 14 beneath the express car. The express messenger having been notified of the danger by the sudden stopping of the train, turns the nozzle 13 toward the door of the car and as soon as the robber attempts to enter said door, he steps on the top of bar 15 and opens valve 14 when the hot water is turned upon the person attempting to enter the door.

It may be observed that the valves 11, 26 and 14 may be opened by the engineer and express messenger without exciting the suspicion of the persons bent on mischief, when the trainmen would have no opportunity to use fire-arms; also that when the valves are opened the steam and water rush through the nozzles, affording the robbers no opportunity to control the same.

Having thus described our invention, what we claim is—

The combination with the locomotive boiler, or other hot water receptacle of a pipe connected therewith and communicating with the steam and hot water therein, leading to the cab and express car or other suitable part of the train, said main pipe terminating in the adjustable nozzles and provided with a valve and operating mechanism therefor, consisting of a lever connected with the valve stem and a spring actuated arm projecting into the car and accessible to the trainmen, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

THEODOR SCHMID.
WILLIAM KINKEL.

Witnesses:

WM. MCCONNELL,
LOUIS E. P. WILKES.