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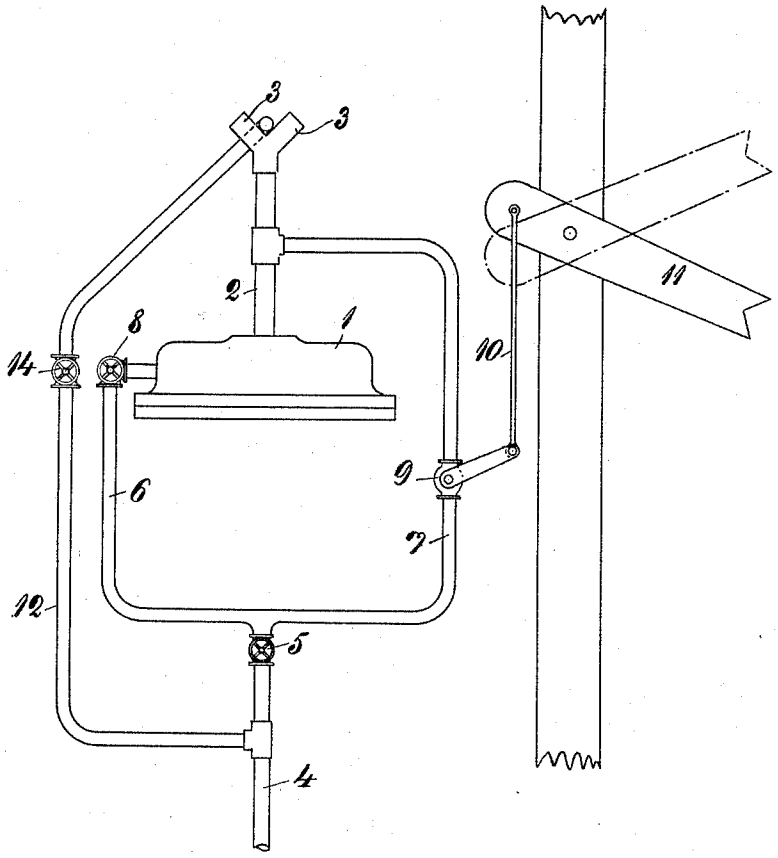
RAILWAY SIGNALING APPARATUS.

APPLICATION FILED OCT. 6, 1913.

1,099,118. Patented June 2, 1914.



WITNESSES

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RAILWAY SIGNALING APPARATUS.

1,099,118. Specification of Letters Patent. Patented June 2, 1914.

Application filed October 6, 1913. Serial No. 793,656.

To all whom it may concern:

Be it known that I, GUSTAF DALÉN, a subject of the King of Sweden, and residing at Stadsgården 18, Stockholm, Sweden, have invented a certain new and useful Improved Railway Signaling Apparatus, of which the following is a specification.

The present invention refers to improvements in railway signaling apparatus, in which in a certain position of a movable signaling device such as a semaphore arm, by means of an automatically working gas flash light apparatus, flash light signals are established, said apparatus being provided with a valve which at certain intervals of time automatically supplies gas through a gas conduit to a burner.

The invention has for its object to establish a steady light in said burner in one position of the movable signaling device, while in another position of said movable signaling device a flash light is established. For this purpose a by-pass conduit is arranged around the flash light apparatus, and in the said by-pass conduit a cutting off device is inserted, actuated by the movable signaling device in such a manner as to be opened in one position of said signaling device, supplying gas to the burner of the flash light apparatus directly from the main gas conduit so as to establish a steady light, whereas the cutting off device is closed in another position of the movable signaling device, so that the gas must pass through the flash light apparatus to the burner, whereby flash light is obtained.

The accompanying drawing illustrates a constructional form of the invention schematically.

1 indicates the automatically working flash light apparatus, which may be of any suitable or known construction, 2 the burner conduit of the same and 3 the burner.

4 indicates the gas supply conduit, which is provided with a throttling device 5 and is divided into two branches 6 and 7, of which 6 conducts gas to the flash light apparatus 1 after having passed a throttling device 8, whereas the conduit 7 constitutes a by-pass conduit, connected with the burner conduit 2 and provided with a shutting off device 9, which in any suitable manner is actuated by the semaphore arm 11, say by means of the rod 10, so that the shutting off device 9 is opened in one position of the semaphore arm, but is closed at another position of the same.

12 indicates a pilot flame conduit, extending from the main gas conduit 4 and provided with a throttling organ 14 and opening in the proximity of the burner in the usual manner.

In the closed position of the cutting off device 9 the gas passes in the usual manner from the main conduit 4 through the conduit 6 to the flash light apparatus 1, in which an automatically working valve in a known manner at certain intervals of time supplies gas to the burner conduit 2, so that flashes are established. The throttling device 5 is adjusted in such a manner, that it allows just as much gas to pass, as is necessary to get a full flame burning with steady light in the burner 3, whereas the throttling device 8 is adjusted in such a manner as to throttle the gas flowing through the conduit 6, but admitting the necessary amount of gas to pass to the flash light apparatus. When by shifting the position of the semaphore arm 11 the shutting off device 9 is opened, the pressure falls in the conduits 6 and 12, and gas flows to the burner 3 directly through the conduit 7, whereby the flash light apparatus is put out of function on account of the counter pressure prevailing in the burner conduit. When the semaphore arm 11 again is shifted, the cutting off device 9 is closed, whereby the pressure in the conduit 6 again is raised and the flash light apparatus is again put in function.

Having now described my invention, what I claim as new and desire to secure by Letters Patent is:—

1. In a railway signaling apparatus, a gas burner, a movable signaling device, and means for causing a steady light to burn in the burner in one position of said signaling device, and flash light to burn in said burner in another position of the same.

2. In railway signaling apparatus, a movable signaling device, an automatically operating gas flash light apparatus, a gas supply conduit to the same, a burner conduit connected with said gas flash light apparatus, a by-pass conduit, connecting said supply conduit with said burner conduit, and a shutting off device in said by-pass conduit operatively connected with said movable signaling device.

3. In railway signaling apparatus, a mov-

able signaling device, an automatically operating gas flash light apparatus, a gas supply conduit to the same, a throttling device inserted in said gas supply conduit, a burner conduit connected with said gas flash light apparatus, a by-pass conduit, connecting said supply conduit with said burner conduit, and a shutting off device in said by-pass conduit, operatively connected with said movable signaling device.

4. In railway signaling apparatus, a movable signaling device, an automatically operating gas flash light apparatus, a gas supply conduit to the same, two throttling devices in succession in said gas supply conduit, a burner conduit connected with the gas flash light apparatus, a by-pass conduit connecting the burner conduit with the gas supply conduit at a point between the throttling devices, and a cutting off device in said by-pass conduit, operatively connected with said movable signaling device.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

GUSTAF DALÉN.

Witnesses:
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