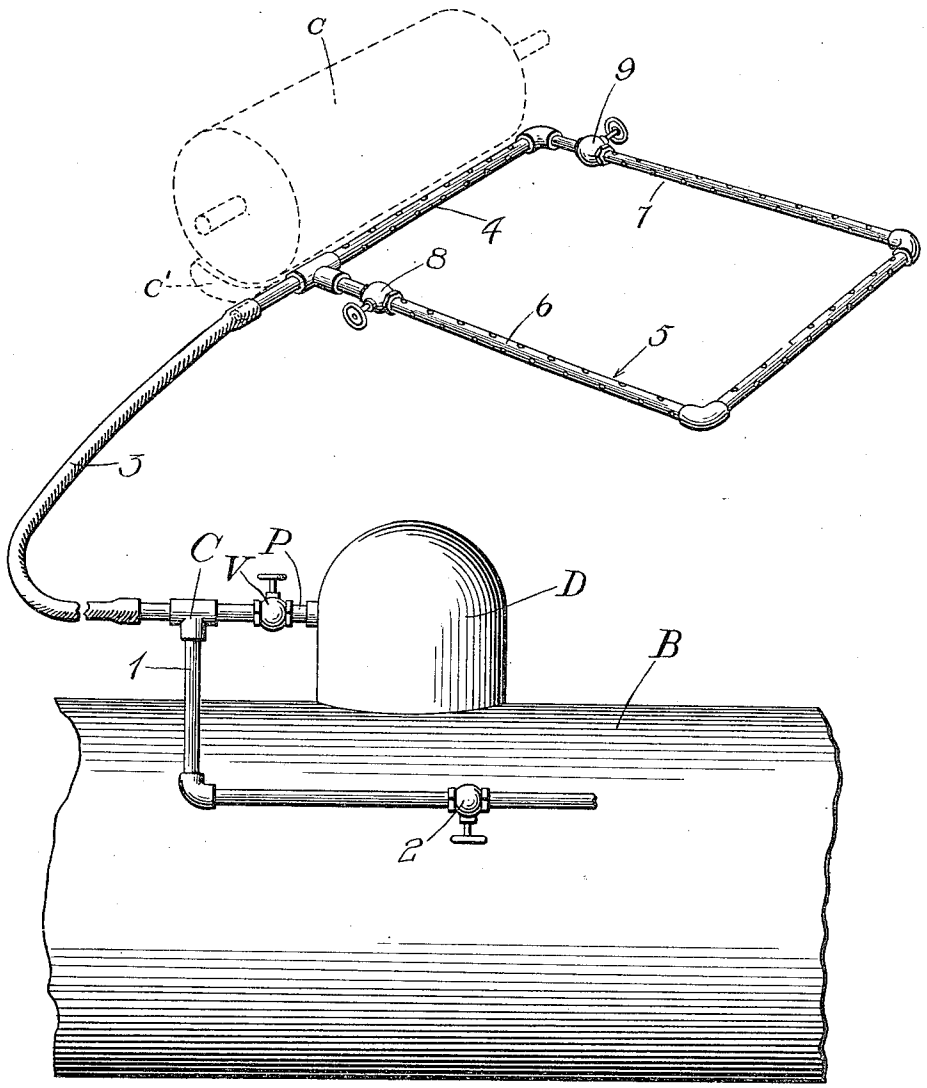
G. H. LAWRENCE.

FIRE EXTINGUISHING SYSTEM.

APPLICATION FILED SEPT. 21, 1914.

1,143,053. Patented June 15, 1915.



Inventor

G. H. Lawrence

Witnesses

Chas. L. Grieshaber.

Roland T. Booth.

By H. B. Williamson & Co.

Attorneys

UNITED STATES PATENT OFFICE.

GEORGE HARRISON LAWRENCE, OF COLFAX, WASHINGTON.

FIRE-EXTINGUISHING SYSTEM.

1,143,053. Specification of Letters Patent. Patented June 15, 1915.

Application filed September 21, 1914. Serial No. 862,755.

To all whom it may concern:

Be it known that I, GEORGE HARRISON LAWRENCE, a citizen of the United States, residing at Colfax, in the county of Whitman and State of Washington, have invented certain new and useful Improvements in Fire-Extinguishing Systems; and I 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.

This invention relates to a fire extinguishing system especially designed for use in connection with grain separators.

The object of the invention is to provide a simple and efficient fire extinguishing system adapted to protect a grain separator from explosions and fires due to various causes and which is so constructed that it may be employed to inject a vapor into a separator to change the condition of the atmosphere therein, thereby rendering combustion less liable and to discharge streams of water in all directions in said separator for extinguishing a fire, should one occur.

With this and other objects in view, the invention consists of certain novel features of construction, combination and arrangement of parts as will be more fully described and claimed.

A diagrammatical view of the system is shown in the drawing with a grain separator roller and concave, shown in dotted lines in connection therewith.

In the embodiment illustrated, a steam boiler B is shown provided with the usual steam dome D having a discharge pipe P leading therefrom, provided with a valve V. A three-way coupling C is mounted on the pipe P, and is designed to connect a water supply pipe 1 with said pipe P in advance of the valve V. This pipe 1 is also provided with a valve 2 and is designed to be connected with a water supply main or with a pump (not shown).

A hose pipe 3 connects the pipe P in advance of the valve V and pipe 1 with a perforated discharge pipe 4 which is designed to be arranged in a grain separator (not shown) adjacent one of the cylinders *c* and concave *c'* shown in dotted lines in the drawings, said pipe 4 extending parallel with said cylinder *c* and being designed to discharge vapor on to the grain which passes through the cylinder and concaves of the separator for the purpose of changing the condition of the atmosphere inside the separator to render it less liable to combustion.

A U-shaped perforated pipe 5 has the free ends of the legs 6 and 7 thereof connected with the opposite ends of the pipe 4 by suitable couplings and which are designed to communicate with said pipe 4 for a purpose to be described. Each of these legs 6 and 7 is provided near its free ends, or rather the ends, connected with the pipe 4 with cut off valves 8 and 9, which are designed to cut off the pipe 5 from its communication with pipe 4 when desired. This U-shaped pipe 5 is designed to be arranged around the inside of a separator so that when the valves 8 and 9 are opened, extinguishing fluid may pass into the pipe 5 and be discharged in all directions into all the parts of the separator with sufficient force to be effective in extinguishing a fire, should one occur.

In the use of this apparatus when it is desired to discharge vapor only into contact with the grain fed from the cylinder and concaves, the valve 2 in pipe 1 is closed and valve V in pipe P opened, and the valves 8 and 9 are also closed. Steam from the dome D will then pass through pipe P and hose 3 into pipe 4 and be ejected therefrom into the grain which passes over said pipe 4, and this steam will so change the atmospheric conditions in the separator that danger of fire will be obviated. However, should a fire occur, the valve V will be closed, and valves 2, 8 and 9 opened, which will bring the apparatus in communication with the water supply and when the pump connected therewith is set in motion, water under pressure will be forced into the perforated pipes 4 and 5 and discharged in all directions into the separator, thereby extinguishing the fire.

I claim as my invention:

1. A protecting system for grain separators and the like comprising a perforated combined vapor and water discharge pipe, perforated water discharge pipes connected with said first mentioned pipe and having valves for controlling the supply of water thereto, a main supply pipe, vapor and water supply pipes connected with said main supply pipe and having valves for the control of the fluid passing therethrough whereby either the vapor or the water may be cut off when desired and a hose connecting said main supply pipe with said first mentioned discharge pipe.

2. A protecting system for grain separators and the like comprising a perforated combined vapor and water discharge pipe, and a substantially U-shaped pipe perforated on all sides and having the free ends of its legs connected with said first mentioned pipe, cut off valves in the legs of said U-shaped pipe adjacent said main pipe, a valved vapor supply pipe, a three way coupling mounted on said pipe in advance of the valve thereof, a water supply pipe connected with said coupling, and a hose connecting said coupling carrying pipe in advance of the coupling with the main supply pipe.

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

GEORGE HARRISON LAWRENCE.

Witnesses:
HORACE HOWARD,
J. E. KINCAID.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."