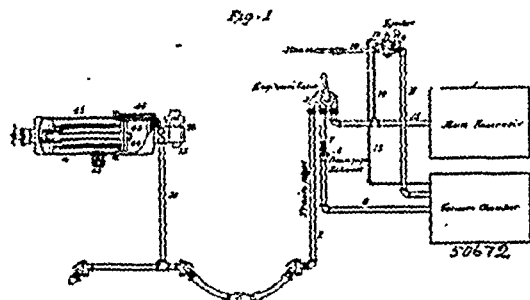


**Claim.**—1st. In combination with the throttle lever of a locomotive or the mechanism whereby the valve supplying the cylinders is operated, fluid-pressure apparatus connected with said lever and adapted to operate the same, and mechanism controlling said fluid-pressure apparatus and operating by the force of an explosion to set the same in action. 2nd. In combination with the throttle valve of a locomotive, mechanism located near a wheel of the locomotive and adapted to be brought into action by an explosion effected thereby, and throttle valve mechanism controlled by said explosion mechanism whereby the former is operated by the latter. 3rd. In combination with the throttle valve actuating mechanism of a locomotive, a fluid-pressure apparatus operatively connected thereto, and a torpedo apparatus located adjacent one of the wheels of the locomotive and adapted under the force of an explosion to bring said fluid-pressure apparatus into action. 4th. In combination with the throttle lever or valve of a locomotive, a cylinder and piston for operating the same which is connected with a fluid-brake system, a torpedo apparatus also connected with said brake system and adapted under the force of an explosion to bring the same into operation. 5th. In combination, in a mechanism for operating the throttle valve of a locomotive, a lever connected to and for actuating said valve, a fluid-pressure cylinder and piston connected to said lever and for operating said valve through said lever, and connections between the said piston, and the said lever permitting the independent opening and closing of the lever and the throttle valve, but adapted to engage said lever and close the valve by a movement of the said piston.

**No. 50,672. Method of and Mechanism for Operating Air Brakes.** (*Méthode et mécanisme pour actionner les freins à air.*)

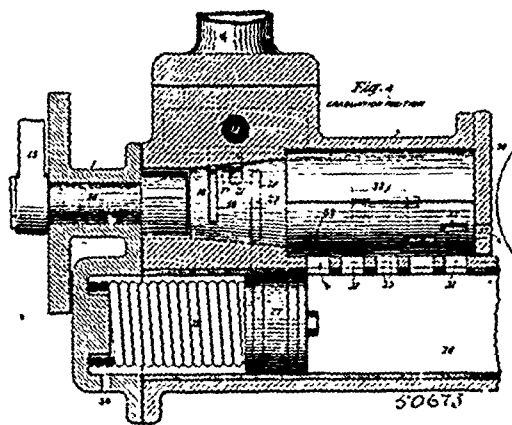


Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, and Joseph Elie Normand, Watertown, all in the State of New York, U.S.A., 26th November, 1895; 6 years.

**Claim.**—1st. In combination in a fluid brake mechanism and with a brake piston or other brake actuating device thereof, a reservoir normally containing air stored under greater than atmospheric pressure, a chamber normally exhausted of air to below atmospheric pressure, and mechanism acting to operatively apply the reservoir air pressure to said brake actuating device and to operatively connect said chamber to said brake actuating device to effect a brake application action thereof. 2nd. In combination in a fluid brake mechanism and with a brake piston or other brake actuating device, a reservoir normally containing air stored under greater than atmospheric pressure, mechanism for applying said reservoir air upon said piston to produce a brake application action thereof, a chamber normally exhaust of air to below atmospheric pressure, and mechanism acting to operatively connect said chamber to said brake actuating device, whereby to increase the brake application action of the reservoir air. 3rd. In combination in a fluid-brake mechanism, separate chambers are adapted to contain a fluid at greater than atmospheric pressure, a brake-actuating piston or similar partition arranged between and separating said chambers, and a vacuum chamber operating to effect the reduction of fluid pressure in one of said chambers to below atmospheric pressure. 4th. In combination in an air brake mechanism, a piston and cylinder or other brake-actuating mechanism, a reservoir connected to said cylinder at one side of said piston and adapted to contain and exert a stored fluid pressure on one face of the piston, and a vacuum chamber adapted to be put to communication with said cylinder at the other side of the piston and operating to exhaust the pressure fluid from that end of the cylinder to below atmospheric pressure. 5th. In combination in an air brake mechanism, a piston and cylinder or similar brake-actuating mechanism, a reservoir connected to said cylinder at one side of said piston and adapted to contain and exert a stored fluid pressure on one face of the piston, and vacuum producing and maintaining mechanism connected with the train pipe and operating to exhaust the fluid pressure from the brake cylinder to below atmospheric pressure. 6th. In combination in a fluid brake mechanism, separate chambers adapted to contain a fluid at greater than atmospheric pressure and provided with means for charging the same, a brake-actuating piston or partition arranged between and separating said chambers, and a vacuum chamber adapted to be operatively connected with one of said vacuum piston chambers and operating to effect the reduction

of fluid pressure in such chamber to below atmospheric pressure. 7th. In combination in a fluid brake mechanism, separate chambers adapted to contain a fluid at greater than atmospheric pressure, a brake-actuating piston or partition arranged between and separating said chambers, mechanism for charging said chambers by causing the pressure fluid to pass from one to the other, and a vacuum-maintaining exhaust mechanism operating to effect the reduction of fluid pressure in one of said chambers to below atmospheric pressure. 8th. In combination with an equilibrium brake-piston air brake system, a vacuum-producing mechanism having a vacuum chamber normally exhaust of air to below atmospheric pressure, and means for putting said chamber to communication with the train pipe for the purpose of exhausting the same to below atmospheric pressure. 9th. In combination with an equilibrium brake-piston air brake system, an automatic vacuum-producing mechanism having a vacuum chamber normally exhaust of air to below atmospheric pressure, and means for putting said chamber to communication with the train pipe for the purpose of exhausting the same to below atmospheric pressure. 10th. In combination in a fluid brake mechanism and with an engineer's valve, the train pipe and a brake piston and cylinder, of a local reservoir adapted to apply a stored pressure upon the face of said piston opposite the train pipe space, valve mechanism for locally exhausting train pipe air from said cylinder, a vacuum chamber adapted to be put to communication with the train pipe space, and a valve for closing the local exhaust against atmospheric air. 11th. In combination in an air brake mechanism, a balance brake piston and its cylinder, a local reservoir communicating with one end of said cylinder and a train pipe connected to the other end thereof, an engineer's valve controlling said train pipe, and a vacuum-maintaining and exhausting mechanism adapted to be put to communication with the train-pipe exhaust port of said valve and for exhausting the fluid pressure from the train pipe and the end of the brake cylinder connected thereto. 12th. In combination in a brake mechanism, and with a balance brake piston and cylinder provided with a local reservoir connected to one side thereof and a train pipe and main reservoir connected to the other side thereof, an engineer's valve controlling the train pipe and its connection to the main reservoir, and a vacuum chamber adapted to be put to communication with and for exhausting the train pipe. 13th. In combination with the vacuum chamber, a steam-actuated air-ejector and a valve controlling the admission of steam thereto, a piston balanced or held inoperative between vacuum-chamber pressure and an exterior pressure and adapted upon variations of the vacuum pressure to open said steam valve. 14th. In combination with a vacuum chamber, a steam air-ejector and a valve controlling the admission of steam thereto, and a piston controlled by vacuum-chamber pressure and adapted upon variation of such pressure to act to open the steam valve.

**No. 50,673. Air-Brake Graduating Mechanism.** (*Mécanisme gradué pour freins à air.*)



Charles Goodwin Emery, New York, assignee of Edward G. Shortt, Carthage, both in the State of New York, U.S.A., 26th November, 1895; 6 years.

**Claim.**—1st. In combination with a train pipe, and an exhaust passage therefrom, mechanism adjustable to put said passage at different points along the same to communication with an exhaust port, and an elastically supported abutment movable under train pipe pressure to open said passage to the said port, for the purpose set forth. 2nd. In combination with a train pipe, an exhaust passage therefrom having an outer exhaust port, an elastically supported abutment located in said passage and moving under train pipe pressure to put said passage and port into open communication, and a valve acting independently of said abutment to control said port, for the purpose set forth. 3rd. In combination with a train pipe, an abutment adapted to receive train pipe pressure, a plurality of