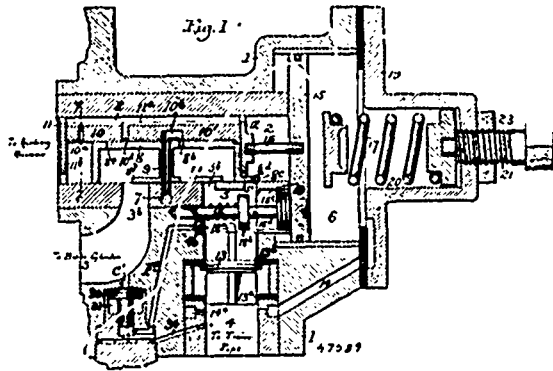


holding the brake-cylinder constantly open, substantially as described. 3rd. In a triple valve for fluid pressure brakes, the combination with the valve-chamber having connections with the auxiliary reservoir, brake-cylinder and train-pipe, of a two-part valve 10, 10', adapted to control the admission of pressure from the auxiliary reservoir to the brake-cylinder and the exhaust from the brake-cylinder and one

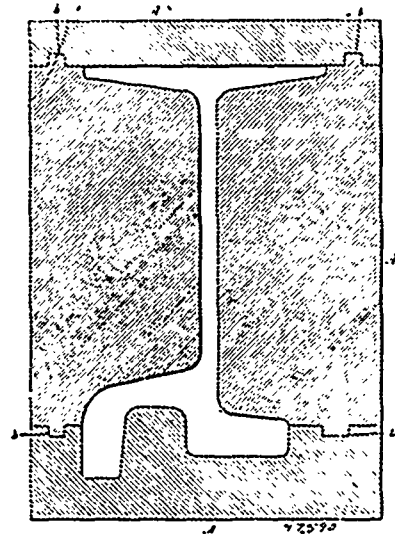


part movable independent of and at another period in unison with the other, and another valve for controlling the direct connection between the train-pipe and brake-cylinder, and holding the brake-cylinder constantly open, substantially as described. 4th. In a triple valve for fluid pressure brakes, the combination with the valve-chamber having connections with the auxiliary reservoir, brake-cylinder and train-pipe of two valves for controlling the admission of pressure from the auxiliary reservoir to the brake-cylinder and the exhaust from the brake-cylinder, another valve controlling the direct connection between the train-pipe and the brake-cylinder, and a single piston and connections with the three valves for moving them, substantially as described. 5th. The combination with the underlying valve 8 of the overlying two-part valve 10, 10', a yoke connected to one part of said two-part valve, and an operating piston connected to the yoke, substantially as described. 6th. The combination with the valve-chamber of a triple valve having openings leading to the train-pipe, auxiliary reservoir and brake-cylinder, of a valve 8, adapted to place the train-pipe and brake-cylinder openings in direct connection and having a flange restricting the train-pipe opening leading to the valve-chamber, substantially as described. 7th. The combination with the valve-chamber of a triple valve having openings leading to the train-pipe, auxiliary reservoir and brake-cylinder, of a valve controlling the direct communication between the train-pipe and brake cylinder, an operating piston for said valve, a check-valve in the train-pipe and a finger movable independent of the operating piston for holding the check-valve from one of its seats, substantially as described. 8th. The combination with the valve-chamber of a triple valve having openings leading to the train-pipe, auxiliary reservoir and brake-cylinder, of valves controlling said openings, an operating piston for moving said valves, a valve in the train-pipe, and an automatically operative finger independent of the operating piston for holding the check-valve from one of its seats, substantially as described. 9th. The combination with the necessary valves controlling the train-pipe, auxiliary reservoir, and brake cylinder openings of a triple valve, of a valve in the train-pipe opening, and a piston independent of the triple valve exposed to the train-pipe pressure and auxiliary reservoir pressure having a finger for holding the valve from its seat, substantially as described. 10th. The combination with the necessary valves controlling the train-pipe, auxiliary reservoir and brake-cylinder openings of a triple valve, of a double seated check-valve controlling the train-pipe opening, a supplemental valve, also controlling said opening and a movable stop or finger for holding said supplemental valve from its seat at the desired time, substantially as described. 11th. The combination with the necessary valves controlling the direct communication between the train-pipe and brake-cylinder openings of a triple valve, of a double seated check-valve in the train-pipe opening, a supplemental valve and its seat carried by the double check-valve from its seat, substantially as described. 12th. In a triple valve for fluid pressure brakes, the combination of a valve controlling communication between the train-pipe and the auxiliary reservoir and the train pipe and the brake-cylinder, a double seated check-valve in said train-pipe, a finger movable independent of the triple valve for holding the check-valve from one of its seats and a piston connected with the finger one side of which piston is constantly exposed to the auxiliary reservoir pressure, substantially as described. 13th. In a triple valve for fluid pressure brakes, the combination with the triple valve controlling the communication between the train pipe and the brake-cylinder, of another and independently movable valve or piston opening a communication between the auxiliary reservoir and the brake-cylinder, substantially as described. 14th. The combination with the necessary valves controlling direct communication between the train-pipe and the brake cylinder openings of a triple valve, of a check-valve in the train-pipe opening, an independently movable piston and finger for holding the check-valve from its seat, and a

passage between the auxiliary reservoir and the brake-cylinder controlled by said piston, substantially as described. 15th. In a triple valve for fluid pressure brakes, the combination of a valve seat in the train-pipe passage, a two-part valve adapted to said seat, and normally providing a minimum sized opening past such seat, and said two parts of the valve being separable to expose a maximum sized opening, substantially as described. 16th. In a triple valve for fluid pressure brakes, the combination of a valve seat in the train-pipe passage, a two-part valve adapted to said seat, and normally providing a minimum sized opening past such seat, and a movable finger for meeting one part of the valve and arresting its movement, while the other part of the valve moves onward, substantially as described. 17th. In a triple valve for fluid pressure brakes, the combination of a valve seat in the train-pipe passage, a two-part check valve adapted to said seat, a piston and its finger mounted independent of the triple valve and moved to obstruct one part of check-valve while the other part moves onward, substantially as described. 18th. In a triple valve for fluid pressure brakes, the combination of a valve seat in the train-pipe passage, a two-part valve, each of the two parts of which has one face of the other for its seat, and one of the parts being adapted to said valve seat, and the other part adapted to another valve seat, and means for arresting one part to permit separation of the other, substantially as described. 19th. In a triple valve for fluid pressure brakes, the combination of a recess in the train-pipe passage, having at each of its ends a valve seat, a two-part valve arranged within said recess, one part of which valve nearly fills the recess, and is provided with an opening through it, and the other part of which two-part valve normally closes such opening and means for arresting one part to permit separation of the other to expose such opening, substantially as described.

No. 47,500. Art of Dry Sand Moulding.

(Art de mouler en sable sec.)



William Clark Wood, Brooklyn, New York, U.S.A., 4th December, 1894; 6 years.

Claim. 1st. The improvement in the art of dry-sand moulding hereinbefore specified which consists in forming a mould for a cast-steel railroad frog or the like, without pattern or flask, by the preliminary shaping and baking separate from each other all those parts of the mould which form its matrical cavity, and mitering together the baked mould parts and completing the matrical cavity at each intersection by cutting operations. 2nd. The method of moulding railroad frogs and like track-castings which consists in preliminarily shaping and baking separate from each other mould-parts capable of use in common to form mould sections of a given rail pattern, and mitering together the dry sand mould parts so produced and completing the connection of their matrical recesses by cutting operations, substantially as hereinbefore specified. 3rd. The process of moulding a railroad frog or the like without pattern or flask which consists in preliminarily shaping all those parts of the mould which form the walls of the matrical cavity in separate and distinct sand-moulding boxes, each appropriate to mould parts in common of a given shape and dimensions in cross-section, baking the mould parts so preliminarily shaped, and mitering together the baked mould parts and connecting with each other the matrical cavities of the respective mould sections by cutting operations, substantially as hereinbefore specified. 4th. The method of forming dry sand moulds without patterns or flasks which consists in preliminarily shaping and baking separate mould parts each of uniform cross-section from end to end, assembling and cutting such parts to form the mould excepting its ends, and closing the ends of the mould with stoppers of suitable material, substantially as hereinbefore specified. 5th. The method