

stantially as described. 4th. The combination, with the roller and its slat, of the centrally-arranged vertical rod attached to the sash, the bracket attached to the slat and adjustable on the rod, and a latch on the bracket to engage the rod to hold the bracket in its adjusted position, substantially as described. 5th. The combination, with the roller and its slat, of the centrally-arranged vertical rod, fulcrumed on the slat and adjustable on the rod, the latch on the bracket acting on the rod, and a rod operating the latch, substantially as shown and described. 6th. The combination, with the roller and its slat, of the upper sash, the lower sash, the end adjustably connected with the lower sash, and the bracket attached to the slat and adjustable on the rod, substantially as described. 7th. The combination, with the upper sash, the vertical rod attached at its upper end to the said sash, and its lower end adjustably connected with the lower sash, and the roller and its slat, of the bracket attached to the slat and adjustable on the rod, and a latch on the bracket to engage the rod, substantially as described.

No. 34,207. Sash Lock. (*Arrête-croisée.*)

The Ross Sash Lock Company (assignee of Thomas B. Ross), Evansville, Ind., U.S., 1st May, 1890; 5 years.

Claim.—The combination, with the pawl F located in the box D, D', and the shield H, having an opening H' and a notch A, of the detachable key pointed at one end and provided with a lip σ^1 near the other, the said key being rectangular in cross-section for a portion of its length to fit the rectangular opening in the pawl, and round in cross section adjacent to the lip σ^1 , to permit it to turn readily in the shield, substantially as and for the purposes set forth.

No. 34,208. Coffin. (*Cercueil.*)

The Niagara Casket and Coffin Company (assignee of John D. Ripson), Thorold, Ont., 1st May, 1890; 5 years.

Claim.—1st. A coffin lid, composed of the plates A and B, having a recess a , made between them to receive the head-glass C, and sliding head panel D, substantially as specified. 2nd. The plates A and B, having a recess a formed between them to receive the head-glass C, and head-panel D, in combination with the plate F and catch G, substantially as specified. 3rd. The plates A and B, having a recess a formed between them to receive the head-glass C and head panel D, which are separated by the cleats b , in combination with the hook e , formed on the end of the head-panel D to engage with the end of the head-glass C and the plate F fixed to the opposite end of the head-panel D and designed to engage with the catch G, substantially as specified. 4th. A coffin, having a finger I fixed on each side of it near its foot and designed to engage with corresponding fingers J fixed to the bottom of the coffin lid, in combination with the hooked catch L, provided with a spring O and designed to engage with the plate K fixed to the head end of the coffin, substantially as specified.

No. 34,209. Signal Operating Device for Trains. (*Appareil pour actionner les signaux des trains.*)

William Glasgow and Wilmer P. Ralph, Chicago, Ill., U.S., 1st May, 1890; 5 years.

Claim.—1st. A train signal operating mechanism, comprising a local permanent cord section in each car, a coupling for uniting such sections together between the cars, around which the cord section loops or winds and is fixedly attached, in manner substantially as herein described. 2nd. A train signal operating mechanism, comprising a local permanent cord section in each car, an automatic pull-cord section together essentially as herein described for uniting such sections together around which the cord section loops or winds and is fixedly attached, in manner substantially as herein described. 3rd. The mechanism, with the sectional pull-cord of a train signal operating grooves formed by flanges a , a^1 , a^2 the cord section B fitted in said grooves and passing from one groove to another through orifice a^3 , sheave, essentially as herein described. 4th. The combination, with a sectional pull cord of a train signal-operating mechanism, of a flanges a , a^1 , a^2 , the cross cord B fitted in said grooves formed by the sheave a at each end of the car, having grooves and secured E, having orifice a^3 and pin F adapted to pass through the said frame lock said sheave at a series of orifices a^3 in the rim of the sheave to be described. 5th. A train signal operating mechanism, comprising a local permanent cord section in each car, consisting of a central connecting section b and end metallic sections B, the outer ends of which are car, having receiving grooves in its periphery, cord section B fitted in the cord section B at its middle to the sheave, essentially as herein described. 6th. A train signal operating mechanism, comprising a local independent cord section permanently arranged in each car and an automatic pull-apart coupling for the adjacent ends of each pair of the same, consisting of a head D, having a recess a for attachment latch bar G pivoted at d^1 to one of the forks, and the spring dog or catch H, having a notched engaging face to engage and hold in a yielding manner the longer arm s of the latch bar, essentially as herein described.

No. 34,210. Saw Mill Dog. (*Clameau de scierie.*)

DeWitt C. Prescott, Marinette, Wis., U.S., 1st May, 1890; 5 years.

Claim.—1st. In a saw mill dog, the tooth plate B mounted on guides inclined downwards, in combination, with the tooth plate C

mounted on guides inclined upward, an actuating lever F, equalizing bar G pivoted to the inner end of said lever, and the link bars H and I connected respectively to the teeth plates, and the opposite ends of the equalizing bar, substantially as and for the purposes specified. 2nd. In a saw mill dog, an independent case A provided with inclined guides, in combination, with the teeth plates B and C, enclosed within the case, and mounted on said guides, the actuating lever F, the equalizing bar G, and the link bars H and I, substantially as and for the purposes specified. 3rd. In a saw mill dog, the independent case A, composed of two substantially equal parts a , a^1 , provided with the inclined splines a^2 , and a^3 , and the inclined grooves a^4 and a^5 , in combination with the tooth plate B, provided with the inclined groove b and spline b^1 , the plate C provided with the inclined spline c and groove c^1 , the actuating lever F pivoted to the case, the equalizing bar G pivoted to said lever outside of the case, and the link bars H and I connecting the respective ends of the equalizing bar to the teeth plates respectively, substantially as and for the purposes specified.

No. 34,211. Hot Water Furnace.

(*Calorifere à eau.*)

William R. Whitelaw, Cobourg, Ont., 1st May, 1890; 5 years.

Claim.—1st. The combination, with the hollow sides A, of the horizontal chamber C, having drop pipes F connected to it and jointed to the said hollow sides A, so that the interior of each side shall communicate with the interior of the horizontal chamber C, substantially as and for the purpose specified. 2nd. The combination, with the hollow sides A, and with the horizontal chamber D, connecting the interior of two of the said sides, of a horizontal chamber C, having drop pipes F connected to it, and jointed to the said hollow sides A, so that the interior of each side shall communicate with the interior of the horizontal chamber C, substantially as and for the purpose specified. 3rd. The hollow sides A, the horizontal chamber C, having drop pipes F connected to it and jointed to the said hollow sides A, so that the interior of each side shall communicate with the interior of the horizontal chamber C, in combination with the pipe H, connected by suitable branches to three of the said sides near their base, and with the pipes J connected to and extending from the horizontal chamber C, substantially as and for the purpose specified. 4th. The hollow sides A, the horizontal chamber C, having drop pipes F connected to it and jointed to the said hollow sides A, so that the interior of each side shall communicate with the interior of the horizontal chamber C, in combination with the jacket K, damper L and flues M and N, substantially as and for the purpose specified. 5th. The hollow sides A, the horizontal chamber C, having drop pipes F connected to it and jointed to the said hollow sides A, so that the interior of each side shall communicate with the interior of the horizontal chamber C, in combination with the jacket K, damper L and flues M and N and hinged partitions O, substantially as and for the purpose specified. 6th. The hollow sides A, the horizontal chamber C, having drop pipes F connected to it and jointed to the said hollow sides A, so that the interior of each side shall communicate with the interior of the horizontal chamber C, in combination with the jacket K, damper L, flues M and N and hinged partitions O, provided with regulating damper o , substantially as and for the purpose specified. 7th. The combination, with the ash-pit B, of a dust flue R, suitably connected to the smoke flues of the furnace, substantially as and for the purpose specified.

No. 34,212. Steam Boiler. (*Chaudière à vapeur.*)

John Baird, New York, N.Y., U.S., 1st May, 1890; 15 years.

Claim.—1st. In combination with a fire box, composed of arched tubes, substantially as described, a heating surface composed of vertical tubes near the rear end of the fire box, said combination being substantially such as specified. 2nd. A fire box, composed of arched tubes, as specified, in combination with a boiler proper, composed of two horizontal connected shells, the combination being substantially as hereinbefore set forth. 3rd. A fire box, composed of arched tubes connected at their lower ends with horizontal tubes, substantially as described, in combination with a boiler iron front, as described. 4th. A fire box, composed of arched tubes connected at their lower ends with horizontal tubes, in combination with a tube sheet and a water leg to the boiler, as described. 5th. A fire box, composed of arched tubes connected at their lower ends with horizontal tubes, in combination with the water leg and tube sheet of a boiler, and a boiler iron front, provided with a water space, all substantially as described.

No. 34,213. Car Lock. (*Serrure de char.*)

Eugene C. Merrill, Oakland, Cal., U.S., 1st May, 1890; 5 years.

Claim.—1st. A locking device for car doors, consisting of a haap connecting the door with the door frame, and having a transverse groove or channel, a vertically sliding bolt or bar engaging said groove, and a lock with a bolt, which engages and retains the sliding bar, substantially as herein described. 2nd. The sliding bolt or bar G, with openings I, H, and the projection G', above the line of the openings, in combination with the lock, and the lock bolt which enters said openings, the upper side of said lock extending beneath the projection, substantially as herein described.

No. 34,214. Safety Switch or Cut Out for Electric Circuits. (*Commutateur de sûreté pour les circuits électriques.*)

Thomas Patterson, Boston, Mass., U.S., 1st May, 1890; 5 years.

Claim.—The block a , having one or more grooves or passages lined with asbestos paper, combined with a fuse wire placed in said groove or passage, and a spring for holding it taut, and a lined cover for the block which conceals the fuse wire and spring within the groove or passage a^1 , substantially as described.