tributers to the drum and forming the crown of the fire-box, substantially as herein described. 4th. The combination, with the steam and water drum D, the downward pipes G and distributers, of the upright coils E, connecting the distributers and drum and forming the crown of the fire-box, the feed-water heating coils G and the superheating coils H, the ledge of angle-iron F¹ surrounding the lower portion of the generator, and the case or cover enclosing the generator and fitting on said ledge, substantially as herein described. 5th. The combination, with a steam and water drum, the water columns or stand-pipes C, which communicate at their upper ends with the drum, and water distributers C_2 connecting the stand-pipes near but above their lower ends, thereby forming sediment pockets in the lower ends of the stand-pipes, of the return coils E to the drum, and blow-off connections leading from the sediment pockets in the stand-pipe below their connection with the water distributers C_2, substantially as herein described.

No. 30,057. Cattle Stanchion.

(*Stalle à bétail.*)

Abiather T. Fairbrother, Janesville, Iowa, U.S.; 29th October, 1888; 5 years.

Claim.—1st. In a cattle stanchion, the movable bar D, in combination with the vertical latch F mounted in a suitable frame, and having the shoulders f_2, f_2, the operating lever connected to the latch and the spring coiled on the latch and provided with a curved extension or arm adapted to bear at its end against the free end of the movable bar, whereby the latter is automatically opened, substantially as and for the purpose specified. 2nd. In a cattle stanchion, the rack A and the movable bar D pivoted at its lower end in the rack, and having a bevelled upper end, the vertical latch F mounted in openings in a suitable frame affixed to the rack, the operating lever mounted on a standard on the said frame, and pivoted at one end to the upper end of the latch, and the spring C coiled on the latch and provided with the curved arm or extension *g* integral with the lower end of the spring, and bearing against the free end of the bar D, when the latter is in its closed position, substantially as specified.

No. 30,058. Sled Brake. (*Frein de Traineau.*)

Russell M. Woodard, Norton, Vermont, U. S., 29th October, 1888; 5 years.

Claim.—1st. The combination of the rock-shaft a_1, the boxes a_2, a_2, the links or straps a_4, a_4, and the brakes or dogs a, a, substantially as described and for the purpose set forth. 2nd. The combination, with the rock-shaft a_1, boxes a_2, a_2, links a_4, a_4 and dogs a, a, of the lever *b*, substantially as described and for the purpose set forth. 3rd. The combination, with the rock-shaft a_1, boxes a_2, a_2, links a_4, a_4 and dogs a, a, of the arm *c*, substantially as described and for the purpose set forth.

No. 30,059. Registering Gauge for Railway Car Brakes. (*Indicateur pour freins de chars*)

Robert Potts, St. Thomas, Ont., 30th October, 1888; 5 years.

Claim.—1st. The combination of the figured bar C and the movable indicator A, substantially as and for the purpose hereinbefore set forth. 2nd. The combination, with the bar C and the movable indicator A and the cross-head, of any power brake, substantially as and for the purpose hereinbefore set forth.

No. 30,060. Axle Box. (*Boîte à graisse*)

James Des Brisay, Vancouver, British Columbia, 30th October, 1888; 5 years

Claim.—1st. In an axle box, the combination, with vertical guide-ways, of a box provided with rollers travelling on the same guide-ways, substantially as shown and described. 2nd. The combination, with vertical guide-ways, of a box made in two parts and fitting on the said guide-ways, and rollers mounted to rotate in the vertical sides of said box and travel on the said guide-ways, substantially as shown and described. 3rd. The combination, with the frame arms, of a steel plate held on one of the said arms, a wedge held adjustably on the other arm, a box mounted to slide on the said arms, and rollers mounted to turn in the said box and held against the said plate and wedge, substantially as shown and described. 4th. The combination, with the box D made in two parts, and provided with a recess in its bottom, of a plate held on the bottom of the said box and closing the said recess, bolts for fastening the said two parts together, and rollers mounted to revolve in the vertical sides of the said box and adapted to travel on the vertical guide-ways of the box, substantially as shown and described. 5th. The combination, with the box made in two or more parts, and provided with flanges on its ends, of rollers mounted to revolve in the said flanges, and adapted to travel on the guide-ways of the box, substantially as shown and described. 6th. The combination, with the box, provided with flanges at its ends, of rollers mounted to revolve in the said flanges, a steel plate on which travel the rollers, on one end of the said box, and an adjustable wedge on which travel the rollers on the other end of the said box, substantially as shown and described. 7th. The combination, with the box D, provided on its lower part with a recess, of an oil casing held in the said recess and provided with an outwardly extending filling pipe, a perforated plate held in the said casing and supporting hair waste or other material, and a spring for pressing the said perforated plate upward, substantially as shown and described. 8th. The combination, with the box D, provided in its lower part with a recess, of an oil casing held in the said recess and provided with an outwardly-extending filling pipe, a perforated *plate held in the said casing and supporting hair waste or other material*, a spring for pressing the said perforated plate upward, and a bottom plate secured to the box D and supporting the said oil casing, substantially as shown and described.

No. 30,061. Letter and Document File.

(*Serre-papier.*)

Edward Phillips, Mount Forest, Ontario, 30th October, 1888; 5 years.

Claim.—1st. A cabinet, having letter or document drawers supported on slanting shelves arranged in the cabinet, substantially as and for the purpose specified. 2nd. A cabinet, having letter or document drawers supported on slanting shelves arranged in the cabinet, in combination with a hinged clamp arranged inside the cabinet to engage with a notch or notches made in the side or sides of the drawers, substantially as and for the purpose specified. 3rd. A cabinet, having letter or document drawers supported on slanting shelves arranged in the cabinet, in combination with a hinged clamp arranged inside the cabinet to engage with a notch or notches made in the side or sides of the drawer, and a cord attached to the hinged clamp, and arranged substantially as and for the purpose specified. 4th. A cabinet, having letter or document drawers supported on *slanting shelves arranged in the cabinet, in combination with the* hook F and cord or strap G, substantially as and for the purpose specified. 5th. A cabinet, having letter or document drawers supported on slanting shelves arranged in the cabinet, in combination with a hinged clamp, arranged inside the cabinet to engage with a notch or notches made in the side or sides of the drawer, a spring arranged to act against the clamp to hold it in the notch, and a cord attached to the hinged clamp to raise the said clamp, substantially as and for the purpose specified.

No. 30,062. Lifting Machine for Railways, etc. (*Machine à soulerer pour chemin de fer, etc.*)

Francis Golightly, John K. Golightly and Francis Golightly, Jr., Hooley Hill, Eng., 30th October, 1888; 15 years.

Claim.—The combination, substantially as shown and described, consisting of the bed plate, provided with the bearings *b*, *c*, *d*, caps b_1, c_1, the screw spindle *e* having a right and left hand screw-thread cut thereon, the screw-threaded nuts *f* and *g*, bearings f_1, f_2, g_1, g_2, rollers f_3, f_4, g_3 and g_4, the arms or links *h*, h_1, *i* and i_1, the shoe *l*, worm-wheel *m*, adapted to engage with the worm *n*, the bracket *o*, the square nut of the worm *n*, the whole forming a complete device.

No. 30,063. Car Coupling. (*Attelaye de char*)

George W. Toler, Neodesha, Kansas, U. S., 30th October, 1888; 5 years.

Claim—1st. In a car coupler, the combination, with the draw-head, the pin and the pivoted guide bar D, having the guide face d_1, provided with the retaining flanges d_2, of the double crank shaft journalled under the car, the pulley situated over the draw-head, the chain or cord running thereover and connecting the one crank of the shaft and pin, the pitman journalled on the other crank, the slotted link connecting the pitman and guide bar, and the coiled spring extending normally the pitman and the link, substantially as specified. 2nd. In a car coupler, the combination, with the draw-head, the pin, the crank shaft journalled under the car, the pulley and the chain or cord connecting the crank-shaft and pin over the pulley, of the double angled lever journalled in bearings on the roof of the car, and the link connecting the depending arm of said lever and the upstanding handle of the crank-shaft, substantially as specified.

No. 30,064. Window. (*Fenêtre.*)

John B. Zettler, Canton, Ohio, U S., 30th October, 1888; 5 years.

Claim.—1st. In a window, the combination, with a sash provided with laterally-projecting arms, of depending rods projecting below the sill of the window, and having their terminals connected by a cross-bar, provided with a depending rack-bar, and of a gear provided with an operating handle and meshing with said rack-bar, substantially as specified. 2nd. The window-casing A, having the slotted recesses A_3 and the perforated sill A_4, in combination with the sash B, having the T-arms B5, depending rods B6, cross-bar B7 having rack B8 and the scroll-gears B9 mounted in the brackets B10, and *having the operating handle* B_{11}, substantially as specified.

No. 30,065. Saw Mill Dog. (*Clameau de scierie.*)

James H. Miner, Baton Rouge, Louisiana, U.S., 30th October, 1888; 5 years.

Claim.—1st. In combination, the frame, the dog fitted to guides in said frame, said guides being deeper at the rear than the depth of the shank of the dog, whereby the said dog is permitted an adjustment to throw the point in or out, a spring pin engaging with notches in the upper side of the dog, and an independent fitting and holding device arranged beneath the dog, substantially as described. 2nd. In combination, a frame arranged to slide on the guide standard having guides made to allow sliding movement of the dog, and also tipping movement to draw the point toward the standard, a spring pin fitting notches in the upper edge of the shank of the dog, and an eccentric and lever independent of the dog for raising and holding the shank thereof, substantially as described. 3rd. In combination, the guide standard, having a row of holes, the frame sliding thereon, the lever slotted to receive a pin set in the frame, a pin, as H1, passing through the end of said lever, and through one of the holes in the standard, guides in the frame arranged to allow sliding and tipping movement of the dog, a spring pin fitting notches in the upper edge of the shank of the dog, and a device for lifting and holding the shank, substantially as described.

No. 30,066. Car Axle Lubricating Apparatus. (*Boîte à graisse.*)

Samuel Vessot, Joliette, Que., 30th October, 1888; 5 years.

Claim.—1st. In an axle lubricating apparatus, the combination, with the axle box C and axle A, of disc M, loose springs D, D, block