No. 35,221. Machine for Forming Bodies from Pulp. (*Machine à former les corps de la pate à papier.*)

Henry Fairbanks and Howard Parker, both of St. Johnsbury, Vermont, U.S.A., 15th October, 1890; 5 years.

Claim.—1st. In a machine for making pulp into sheets or cylinders, the combination of a pulp-vat, a mold-roll arranged with a portion of its surface dipped into the vat of pulp, a couch-roll, the surface of which runs in contact with said mold-roll, the couch-roll presenting a porous surface, in contact with the mold-roll, an exhaust applied to the interior of the couch-roll through one or both the ends, and a press-roll, the said press-roll and couch-roll held in yielding contact, whereby, the said rolls are permitted to separate, but still held under pressure toward each other, substantially as and for the purpose described. 2nd. The combination of a pulp-vat, the mold-roll A, having a porous surface adapted to dip into said vat, a hollow couch roll B, presenting a porous surface, and so as to run in contact with said mold-roll A, a tubular axle extending through the hollow gudgeons of the couch-roll, and bent down within the couch-roll, so as to stand stationary at the lowest point in the couch-roll, the said tubular axle within the couch-roll perforated and provided with a suitable exhaust, whereby an inward current may be produced through the porous surface of the couch-roll, and a press-roll G, arranged to run in substantial contact with the surface of the couch-roll, substantially as described. 3rd. The combination of the pulp-vat, the mold roll A, the hollow porous surface couch-roll B, arranged to run in contact with the surface of the mold-roll A, the gudgeons of the said couch-roll hollow, and provided with an exhaust from the inside of the roll, the press-roll G, and the pressure-roll N, substantially as and for the purpose described. 4th. In a machine for forming layers of paper-pulp, the combination of a perforated hollow roll adapted to receive a layer of pulp upon its surface, a hollow axle running through one of the gudgeons of the roll bent down upon the inside of the roll so as to lie close upon the lowest point of the interior of the roll, the said hollow axle open near the said lower surface of the roll, and in connection with an exhaust, substantially as and for the purpose described. 5th. In a machine for forming layers of pulp, the combination of a hollow roll presenting a perforated surface, adapted to receive a layer of pulp upon its said surface, a hollow axle extending into said roll, and bent down within the roll to substantially the lowest point therein, and open at such point into the roll, with means, substantially such as described to produce exhaust through said hollow axle, and a press-roll presenting a hard surface arranged to work in contact with the said perforated roll, and adapted to receive a layer of pulp from the said perforated roll, substantially as described. 6th. The combination of a hollow perforated couch-roll partially exhausted of air, and the ordinary mold-roll when arranged for joint action, with their surfaces in immediate rolling contact, adapted to transfer the layer of soft pulp directly to the couch-roll, substantially as set forth.

No. 35,222. Handle for Brakemen's Lamps.

(*Anse pour lampes de serre-frein.*)

William Henry Brady, Belleville, Ontario, Canada, 16th October, 1890; 5 years.

Claim.—An armlet, designed to be a snug fit to the arm, and having two fingers rigidly connected to it at one end, and provided with means to connect them with the lamp D, substantially as and for the purpose specified.

No. 35,223. Dump Cart. (*Tombereau à bascule.*)

Moses Seymour McCraney, Toronto, Ontario, Canada, 16th October, 1890; 5 years.

Claim.—A crank axle rigidly secured to the body of a cart, and journalled on the cart wheels, in combination, with a pair of shafts pivoted to the cart body at a point above or below the axle journal, substantially as and for the purpose specified.

No. 35,224. Automatic Condenser.

(*Condenseur automatique.*)

Louis Schutte, Philadelphia, Pennsylvania, U. S. A., 16th October, 1890; 5 years.

Claim.—1st. In combination, a condenser and a thermostat subject to the influence of the condensing water, and acting to vary the capacity of the condenser, through suitable connecting devices, substantially as described and shown. 2nd. In combination, with a condenser, a thermostat subject to the influence of the outflowing water, and means, substantially as set forth, operated by the thermostat to control the water delivery to the condenser, whereby the temperature of the out-flowing water is caused to vary the water supply in due relation to variations in the steam supply. 3rd. In combination, with a condenser and means, substantially as described, for changing the rate of water delivery thereto, two thermostats, one subject to the inflowing water, and the other subject to the outflowing water, arranged to act jointly on the water-controlling devices, substantially as described and shown. 4th. In combination, with an induction condenser, having the combined tube and the adjustable spindle or equivalent adjustable devices to vary the steam and water passages as usual, and a thermostatic device subject to the water flowing through the apparatus, said elements combined for joint operation, substantially as described and shown. 5th. The induction condenser, having the adjustable sleeve and spindle, in combination with the cylinder, and pistons for moving them, the piston-controlling valve and thermostatic devices subject to the influence of the condensing water for operating the controlling valve. 6th. In a condenser provided with means of water-supply, and with means, substantially as described, for changing the rate of supply, two thermostats subject respectively to the inflowing and outflowing water, a lever connected at opposite ends to the respective thermostats, and connections for communicating motion from said lever to the water-controlling devices. 7th. In combination, with a cylinder and piston, a valve controlling the delivery of an actuating fluid thereto, a lever to control the valve, and two independent thermostats acting to move the lever in opposite directions when subjected respectively to an increasing temperature. 8th. In an induction condenser, having the mixing tube with forwardly-inclined openings for steam admission, the central longitudinally-adjustable spindle, having the pointed exposed end. 9th. In an induction condenser, having a mixing tube, with the steam inlet slits therethrough the central spindle, the sleeve surrounding the tube, and the sleeve-controlling rod attached directly to the head of the spindle, as shown.

No. 35,225. Sled Propeller.

(*Propulseur de traîneau.*)

John Stanford, Chester, Nova Scotia, Canada, 16th October, 1890; 5 years.

Claim.—1st. The combination, with two spaced runners, and a revoluble propelling wheel between, of a device which may be adjusted to alter the speed of the propelling wheel, substantially as set forth. 2nd. A sled propeller, having a spring-supported propelling wheel, and an adjustable seat, substantially as set forth. 3rd. A sled propeller having two runners spaced apart, a propelling wheel between, an adjustable seat above the propelling wheel, a differentially-speeded actuating device for the propelling wheel, a steering device, and a brake rigging, substantially as set forth. 4th. In a sled propeller, the combination, with a pair of runners, parallel yoke frames thereon, and side bars on the yoke frames, of a propelling wheel between the runners, which is pivoted on spring bars that are attached to the side bars of the frame, and an adjustable device to elevate the propeller wheel by flexure of the spring bars, substantially as set forth. 5th. In a sled propeller, the combination, with a pair of runners, a spring-supported propelling wheel between, an adjustable seat, and a device to elevate the propelling wheel, of a changeable gearing to alter the speed of the propelling wheel, and a steering device, substantially as set forth. 6th. In a sled propeller, the combination, with two spaced runners, yoke frames, and side bars which are erected on these runners, curved spring-bars, which are secured by one end to the side bars of the frame, and adapted to support revolubly a propelling wheel, and a propelling wheel on a journaled shaft which engages the boxes on the spring bars, of an adjustable seat supported on the side bars, sprocket wheels on the journal shaft of different diameters, mating sprocket wheels on a forward revoluble treadle shaft, a clutch device which is adapted to interlock with either sprocket wheel on the treadle shaft, chains to connect the sprocket wheels on the treadle shaft with those on the propelling wheel shaft, a steering device, and a brake rigging, substantially as set forth.

No. 35,226. Automatic Coupling for Steam Pipes. (*Joint automatique pour tuyaux à vapeur.*)

Joseph Walker, Clark's Green, Pennsylvania, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. In a pipe-coupling, the combination, with the head and the guide-eye, of the flexible bar passing through the eye and mounted on a rigid base, substantially as described. 2nd. In a pipe coupling, the combination, with the head connected to the main pipe with the passage through the same, and the spring-pressed valve in said passage for automatically cutting off the supply from the main pipe, of the downwardly extending trap on the head with the discharge-opening in the lower end, and the screw opening in the wall opposite said trap, and the expansion-bar passing through the screw opening across the passage through the head and fitting within the trap for closing the discharge opening therein, substantially as and for the purpose set forth. 3rd. In a pipe-coupling, the combination, with the head and the valve, and valve-seat, having the extension K^4 thereon, of the elastic packing surrounding the said extension, and the removable plate or ring L, overlying the outer edge of said packing, and secured to the head, substantially as described.

No. 35,227. Waggon Brake. (*Frein de wagon.*)

William H. Grant, Waltham, Maine, U.S.A., 16th October, 1890; 5 years.

Claim.—1st. The combination, with the front axle and the hounds of the tongue moving longitudinally between the hounds, and provided at its rear end with the bar 10, the cross bar 13, secured to the hounds, and arranged at the back of the wheels, the brake levers pivoted to the ends of the cross bar 13, and provided with shoes arranged to engage the back of the wheels, and having their inner adjacent ends pivoted to the rear end of the bar 10, the brake bar secured to the tongue and provided with brake shoes arranged to engage the front of the wheels, and the stay chains connecting the brake bar and the axle, substantially as described. 2nd. The combination of the front axle, the hounds provided near their rear ends with the cross bar 13, the plate 6, secured to the lower faces of the front ends of the hounds, the plate 5, secured to the upper faces of the hounds, and provided with a perforation 19, the longitudinally sliding tongue provided with perforations 17 and 18, arranged to register with the perforation 19, the bolt 20, adapted to hold the tongue stationary, the bar 10, secured to the rear end of the tongue, and having its rear end provided with a transverse slot, the brake levers fulcrumed at the ends of the cross bar 13, and having their inner adjacent ends pivoted in the transverse slot of the bar, and their outer ends provided with brake shoes arranged to engage the back of the wheels, and the brake bar secured to the tongue at the front of the hounds, and provided with shoes arranged to engage the front of the wheels, substantially as described. 3rd The combination of the longitudinally sliding tongue 1, provided with the pivoted brake