

thereon, mechanism for reciprocating said support beneath, and thereby subjecting the object to the action of said cutter, and mechanism for moving said support in a direction at an angle to the direction of reciprocation, substantially as described. 6th. The combination, in a machine for cross-cutting wood, of the base A, bed C, support (as standards B) for said bed, jointed standard D and arms E, the said base bed, support for said bed, and standard below the joint being formed in one piece, and the arms and standard above the joint also in one piece, substantially as described. 7th. The combination of the bed C, frame b, a means for securing the object to be cross-cut upon said frame, a rotary cutter support above said frame, and means for reciprocating said frame beneath said cutter, substantially as described. 8th. The combination of the bed C, frame b, a means (such as a work-table and clamps) for securing the object to be cross-cut upon said frame, a rotary cutter support above said frame, rock bar c, pinion d, shaft e and means for rotating said shaft in alternate opposite directions, substantially as described. 9th. In combination with a rotary cutter, having a horizontal axis or shaft and a horizontal support reciprocating beneath said cutter, at right angles to said axis, a work-table resting upon said support and adjustable thereon, at various angles with reference to said cutter axis, substantially as described. 10th. In combination with a rotary cutter, having a horizontal axis or shaft and a horizontal support reciprocating beneath said cutter, at right angles to said axis, a detachable work-table pivoted upon said support and adjustable thereon, at various angles with reference to said cutter axis, substantially as described. 11th. In combination with a rotary cutter, having a horizontal axis or shaft and a horizontal support reciprocating beneath said cutter, at right angles to said axis, a work-table resting upon said support, and means (such as described) for moving said table on said support, in a direction parallel to said cutter axis, substantially as described. 12th. In combination with the reciprocating frame b, the work-table A and means (such as described) for moving said table upon said frame, in a direction transversely said frame, gauge bar N and latch O, substantially as described. 13th. The combination of a reciprocating support frame I, pivoted thereon, work table 3, means for moving said table 3 upon said frame I, and a clamping device for securing said frame to said support, and thereby preventing the turning of said frame on its pivot. 14th. The combination of vertically-sliding plates H and supports for the same, means (such as screws J) for vertically adjusting said plates, supports Q carried by said plates and carrying the vertical sleeve K, rollers U, V, having their bearings supported on rods S, collars T on said rods, and weighted levers X, bearing in said rods and pivoted to said supports Q, substantially as described. 15th. The combination of two vertically adjustable supports, a rotary shaft carried by said supports, a cutter on said shaft between said supports, and two yielding pressor rollers also carried by, and between said supports, and disposed parallel and respectively on each side of said cutter shaft, substantially as described. 16th. The combination of the arms E, plates H moving on slides C on said arms, means for vertically adjusting said plates, supports K carried by said plates, bearings L, shaft M, cutter-head N, having grooves O and carrying cutting tools, and a means for rotating said shaft M, substantially as described. 17th. The combination of the vertically sliding plates H and supports for the same, means for vertically adjusting said plates, supports K, bearings L, cutter-shaft M carrying a cutting mechanism, supports Q, sleeves R, rods S, weighted levers X, rollers U, V and shoes W, substantially as described.

### No. 24,658. Jet Condenser.

(*Injecteur-Condensateur.*)

Louis Schutte, Philadelphia, Penn., U. S., 5th August, 1886; 5 years.

*Claim.*—1st. In a jet condenser of the type herein described, the usual water nozzle, condensing tube and discharge tube, in combination with a movable ram or spindle, constructed substantially as described, to change the areas of the water nozzle, and the discharge nozzle to maintain a constant ratio between them. 2nd. In a jet condenser of the type herein described, the combination with the water inlet nozzle, the condensing tube and the discharge tube, of the tapered movable spindle extending through the nozzle and discharge tube, substantially as described. 3rd. In a condenser of the type herein described, the live steam nozzle, in combination with the movable ram or spindle having its end guided by the steam nozzle, substantially as described. 4th. In combination, with the ram and its adjusting screw, the indicator spin le extended through the screw to the exterior of the apparatus, substantially as described. 5th. In a condenser to be operated by exhaust or low pressure steam, the combination of a combining tube with inlet openings, as described, its enclosing chamber, the water admission nozzle, the passage leading from an intermediate point in the water nozzle to the atmosphere, and a valve for closing said passage. 6th. In a condenser of the type herein described, a pipe sealed at one end by immersion in water, and communicating at the opposite end with the water nozzle B, through an opening or passage at an intermediate point in the length of the latter. 7th. In combination with a jet condenser of the type herein described, the outwardly opening exhaust valve to permit the free escape of incoming steam when the condensing action ceases. 8th. In a jet condensing apparatus, as a means of automatically supplying live steam to maintain its action during the cessation of exhaust steam, the combination of a steam jet condenser and a live steam supply valve connected by operating appliances with the vacuum chamber of the condenser, and controlled by variations in the vacuum or pressure therein. 9th. In combination with a condenser of the type herein described, to be operated by exhaust or low pressure steam, a valve to admit live steam to continue the action of the apparatus during the temporary failure of exhaust steam, and devices to open and close said live steam valve, connected with and controlled by the vacuum in the condenser, whereby the live steam is automatically shut off during the maintenance of the vacuum by the exhaust steam. 10th. In combination with the combining tube, its enclosing chamber and the water nozzle, the live steam nozzle, the automatic valve S controlled by fluid pressure through an auxiliary piston and valve, and a pipe connecting the same with the interior of the condenser. 11th. In combination with the valve body and a check valve a<sub>2</sub> located therein, a fluid pressure chamber located at

the receiving side of the valve and communicating by a port or passage with the inlet side of the body, whereby the inflowing fluid is applied to open the valve. 12th. The body and the recessed check valve a<sub>2</sub> in combination with the fixed piston within the valve, and the port or passage of restricted area forming a communication between the valve chamber and the inlet port. 13th. A recessed check valve, protected on its receiving side by a piston or diaphragm from the direct action of the inflowing current, but communicating with said current by a passage of relatively small area, whereby the force of the inflowing fluid is applied to effect the gradual opening of the valve. 14th. In combination with the body, the valve a<sub>2</sub>, the diaphragm B, the inlet port d and adjustable spindle e<sub>2</sub>. 15th. The main valve a<sub>3</sub>, its piston and the cylinder for the latter, in combination with the auxiliary valve controlling the action of a fluid on the piston to move the main valve, and a diaphragm or its equivalent controlled by fluid pressure to operate the auxiliary valve. 16th. The valve body having the main inlet and outlet openings, the main valve a<sub>3</sub>, its piston b<sub>3</sub>, the cylinder containing said piston, the fluid passage from the inlet side of the body to the cylinder, the auxiliary valve g<sub>3</sub> to control said passage, the chamber having the yielding wall h<sub>3</sub> connected with the auxiliary valve, and the spring tending to open the auxiliary valve, said elements combined substantially as described.

### No. 24,659 Central Draft Lamp Burner.

(*Bec de Lampe à Courant d'Air Intérieur*)

Alvin M. Craig and Charles P. Hobart, Southington, Conn., U. S., 5th August, 1886; 5 years.

*Claim.*—1st. As a new article of manufacture, a central draft lamp burner provided with air inlet openings above the lamp body, said inlet openings communicating with the interior of the wick tube. 2nd. As a new article of manufacture, a central draft lamp burner, provided with air inlet openings situated opposite each other, and communicating with the wick tube. 3rd. As a new article of manufacture, a central draft lamp burner, provided with air inlet openings situated opposite each other and of the same size, and communicating with the interior of the wick tube. 4th. In a wick raiser, the combination, with the tube A provided with openings near its bottom, of the wick tube situated within the tube A and provided with openings in the sides thereof, and suitable tubes for connecting the openings in the tube A and wick, substantially as described. 5th. The combination, with the lamp burner having the wick space, of the wick raiser, consisting of the cylinder provided with the projecting teeth, substantially as described. 6th. The combination, in the burner, comprising the tube A, and wick tube having openings connected by tubes passing through the wick space of the wick made in parts, and the wick raiser consisting of the cylinder having the projecting teeth. 7th. The combination, with the tube A, of the tapering wick tube secured therein, substantially as and for the purpose set forth. 8th. The combination with the tube A, provided with openings for the admission of air, of the bell-shaped ring covering said opening, substantially as described. 9th. The combination, in a lamp burner, of the tube A provided with openings, the wick tube also provided with openings, and the tubes for connecting the same, the wick made in sections, the wick raiser and the bell-shaped ring for protecting their openings.

### No. 24,660. Drawer Check and Support.

(*Arrêt et Coulisseau de tiroir.*)

James A. Fraser (assignee of Simon J. Fraser), Lowell, Mass., U. S., 5th August, 1886; 5 years.

*Claim.*—1st. The combination, with a drawer and its case, of a T-shaped strip C, a slide D provided with blocks E, E, that are formed to engage with the flanges of the strip C, and a T-shaped lug F secured to the bottom of the drawer and arranged to ride in a longitudinal groove formed in the slide D, substantially as described. 2nd. The combination, with a drawer and its case, of a T-shaped strip C secured to the case by plates c, c, a slide D provided with blocks E, E, and lugs F, F, secured to the bottom of the drawer and arranged to ride in a longitudinal groove formed in the top of the slide D, substantially as described. 3rd. The combination, with a drawer and its case, of a T-shaped strip C, a slide D held to, and arranged to slide upon the strip C, a lug F fixed to the under side of the drawer and arranged to ride in a longitudinal groove formed in the slide D, and a stop J, all substantially as described. 4th. The combination, with a drawer and its case, of the following elements: strip C, slide D formed with groove d, blocks E, lugs F and H, and plate I carrying stop J, all arranged and combined substantially as described. 5th. The combination, with a drawer and its case, of the following elements: strip C, slide D formed with groove d, blocks E, E, lugs F and H rounded off at  $\frac{1}{2}$ , plate I, spring (and lug J, substantially as described. 6th. The combination, with a drawer and its casing, of the slide connected to the drawer and having blocks and springs, one arranged at the forward end of the drawer-casing and the other arranged at the rear end of the said casing, substantially as and for the purpose set forth.

### No. 24,661. Governor Tip for Oil Cans.

(*Bec-Régulateur pour Bidons à Huile.*)

James Pearson, Preston, Eng., 5th August, 1886; 5 years.

*Claim.*—1st. In an oil can, the employment of a ball or sphere contained within the spout of the can, and operating in such a manner as to regulate the supply of oil coming from the can, as hereinbefore described. 2nd. In a spout for oil cans, the combination of a conically shaped tube having stops in its interior, with a ball operating within the said tube and between the said stops, substantially as and for the purpose hereinbefore described and represented in the accompanying drawing.

### No. 24,662. Pressure Indicator and Recorder. (*Indicateur-Compteur de la Pression*)

Alfred Shedlock, Jersey City, N.J., U.S., 5th August, 1886; 5 years.