to lift the same, whereby the momentum of the weight is rendered available to actuate the escapement and prolong its action in the event of the finger key being suddenly released. 25th. The finger key, the independently movable weight, and the pin or like device through which the key lifts the weight, in combination with the escapement and the escapement operating rod actuated by the weight. 26th. The finger key, the weight actuated thereby, the arm pivoted to the weight, the rod, the adjustable connection between the arm and rod, and the escapement connected to the rod, all combined, substantially as described and shown. 27th. In combination, with a channeled magazine and escapements to deliver the matrices one at a time therefrom, the traveling belt beneath the magazines to receive the matrices, the assembling block H, to receive the matrices from the belt, and the polygonal wheel acting to sustain the belt and to advance the matrices within the block. 28th. The magazine and escapement mechanism to deliver the matrices, in combination with the inclined traveling belt and the assembling block to receive the matrices from the belt. 29th. The magazine and escapement mechanism to deliver the matrices therefrom, in combination with the channels F, and the inclined traveling belt. 30th. In combination, with the assembling block grooved to admit the assembled matrices, the yielding resistant *i*, and the angular wheel acting to advance the matrices against the resistant. 31st. The vertically movable assembling block into which the matrices are delivered from one end, in combination with the horizontal slide having the rigid resisting finger thereon, whereby the assembled matrices are permitted to rise with the block without interference on the part of the resistant. 32nd. The vertically movable assembling block, the horizontal slide with its matrix-resisting finger, the weight and intermediate connections to retract the slide and the dog to prevent retrograde motion, said elements combined, substantially as shown. 33rd. In combination, with the vertically movable block or support for the aligned matrices, the horizontally movable shifter having two arms between which the matrices are presented by the block. 34th. The vertically movable block channeled to admit of the matrices passing therethrough from one side to the other, in combination with mechanism located at a low level to deliver the matrices to the block, and the horizontally movable shifter located at a higher level to remove the assembled matrices from the block. 35th. The shifter, consisting of the two arms J, J^1, fixed to horizontal slides, and the spring, substantially as shown, tending to approximate the arms. 36th. The vertically movable assembling block, in combination with the horizontally movable resistant, the horizontally movable shifter having the spring actuated arms, one of which engages the resistant, and the dog to hold the other arm, whereby the shifter is gradually opened, the aligned matrices delivered thereto and the shifter closed upon the line preparatory to the shifting action. 37th. The assembling block grooved or channeled to receive the matrices and mounted to move vertically, in combination with the yielding resistant and retracting devices therefor, the dog to hold the resistant as it is advanced, and the lever adapted to raise and lower the composing block and to disengage the dog, whereby the elevation of a completed line of matrices and the restoration of the detent to the position for starting a new line are secured by one operation. 38th. In combination, the vertically movable block in which the matrix line is assembled, the horizontally movable shifting device, the vertically movable yoke to which the shifting device delivers the matrices, and the casting mechanism to which the matrices are lowered by the yoke. 39th. In combination, with the vertically movable assembling block, the horizontally movable resistant *i*, to oppose the incoming matrices, the shifter having the horizontally and independently movable arm J, J^1, one of which engages the resistant, the spring tending to draw the shifter arms together, and the latch to hold the arm J, as its companion recedes during the assemblage of the matrices. 40th. The horizontally movable shifter, consisting of the two arms and their independent sustaining slides secured against vertical motion, and the spring, substantially as shown, to approximate the arms. 41st. In combination, with the horizontally sliding shifter I, the rock shaft having its arms connected to the shifter, the second arm and its actuating cam to advance the shifter, and the weight or its equivalent to retract the shifter. 42nd. The matrices having opposing shoulders at opposite ends, in combination with the supporting yoke acting against the upper shoulders, the mold adapted to engage the lower shoulders, and mechanism, substantially as described, for moving the yoke to apply tensile strain to the matrices. 43rd. The combination of a series of matrices, a series of tapered space bars, a support against which the matrices are seated and aligned, a pressure device to hold the matrices against said support, and a pressure device acting to move the space bars in the same direction that the matrices are urged, whereby the action of the space bars in justifying the line is prevented from disturbing the alignment of the matrices. 44th. The matrices and the tapered space bars, in combination with suitable supports to maintain the space bars and matrices in line, and pressure devices acting in the same direction against the space bars and matrices respectively. 45th. In combination, with the matrices having shoulders thereon, the grooved mold to engage said shoulders, the movable support for the mold, the vertically movable yoke to sustain the matrices, the vise or clamp opposing the mold, and the cam and suitable intermediate connections for raising and lowering the yoke. 46th. In combination, with the mold, the vertically movable yoke to sustain the matrices, the vise opposing the mold and provided with yielding face M^2, to sustain the yoke against the mold. 47th. In combination, with the vise or clamp and the matrix-sustaining yoke, the mold provided with the adjustable bearing N^5, to act against the yoke. 48th. In combination, with the slide and the mold wheel pivoted on an arm on the slide the mold wheel gear, its actuating pinion and the stop motion gear, as described and shown, connected to said pinion. 49th. In combination, with the vertically movable yoke L, its actuating lever provided with projection l^{11}, and roller l^{12}, and the actuating wheel having projection l^{10}, and the peripheral cam surface, as described. 50th. In combination, with a horizontal guide to deliver the line of matrices, a mold at a lower level, a distributing mechanism at a higher level, a series of matrices shouldered to engage the mold and resist upward motion, a vertically movable yoke to sustain the matrices, and a yoke operating lever and cam wheel, the wheel shaped to present the yoke successively to the guide, the mold and the distributer and to exert an upward pressure on the yoke while the matrices are engaged with the mold wheel. 51st. In a linotype machine and in combination with the independently sustained mold and clamping mechanism, the melting pot mounted on long supports, whereby the excessive transmission of heat from the pot to the other parts is avoided. 52nd. In combination, with the main frame, the melting pot sustained thereon by long legs, the mold sustaining slide extended past the pot out of contact therewith, and the actuating cams for said parts located in rear of the pot. 53rd. In a type casting machine, a main frame and a mold sustained thereon, in combination with a melting pot connected to the frame solely by long legs or arms, the latter having their points of attachment widely separated from the mold. 54th. In combination, with a mold and a melting pot provided with a delivery mouth co-operating with the mold, an exhaust pipe communicating with said mouth, and a valve to close said communication. 55th. A mold and a melting pot having a delivery mouth to close the mold, in combination with an exhaust pipe communicating with said mouth, and a valve to close said communication. 56th. In a type casting machine, the combination of a mold, a melting pot and pump for filling said mold with metal, an exhaust passage for removing the air from the mold. 57th. In a type casting mechanism, the combination of the mold, the melting pot, the pump piston to drive the metal from the pot into the mold, the exhaust passage, the valve to close said passage, and the actuating lever and its connections for closing the valve when the pump is operated. 58th. In combination, with the melting pot having the isolated delivery passage, the piston in said passage to expel the metal, and the second piston acting to deliver the molten metal to the delivery passage. 59th. In combination, with the melting pot, the gas pipe leading thereunder, the mercury chamber through which the pipe communicates, and the second mercury chamber connected to the first. 60th. In a type casting mechanism, the melting pot, the mercury chamber through which the gas passes to heat the pot, the second mercury chamber connected to the first, and the adjustable screw or spindle to vary the level of the mercury. 61st. In combination, with the melting pot and its piston to eject the molten metal, the piston operating lever, its depressing spring and the lifting cam having an abrupt shoulder, whereby the spring is caused to give the piston a sudden action. 62nd. The melting pot mounted on pivoted legs, the pivoted arms S^5, and the intervening spring, in combination with the cam acting on arm S^5. 63rd. The matrix clamp or vise N, hinged to the main frame, in combination with means, substantially as shown, for locking it rigidly in operative position. 64th. In combination, with the main frame and the hinged vise, the screws threaded into the vise and having T-heads seated in slots in the frame. 65th. In combination, with the main frame and supports for the matrices and space bars, a slide to actuate the space bars, and a frame M, to sustain said slide hinged to the main frame to swing out of operative position and locking devices to hold the same in place. 66th. In combination, with a mold and series of matrices, the vise frame with the jaw M^4, the sliding jaw, its closing spring and the dog, to hold it against the action of the spring. 67th. In a matrix clamping mechanism, the vise frame, its two jaws one of which is movable to and from the other, the spring to close the jaw, the dog to hold it open, the screw, and the nut on said screw to act against the movable jaw. 68th. The mold, the matrices, and the vertically movable yoke to sustain the matrices, in combination with the clamp having two jaws, the spring to close said jaws, the dog to hold them open, and the dog-releasing device actuated by the yoke, whereby the presentation of the matrices in front of the mold causes the action of the clamp to confine them. 69th. In combination, with the distributer rail toothed to engage the matrices, a screw lying parallel therewith to advance the matrices thereover 70th. In combination, with the toothed distributer rail two screws extended along its opposite sides, substantially as shown, whereby the matrices are advanced along the rail and permitted to descend therefrom between the screws. 71st. In combination, with the matrices and the space bars having heads of greater width, the sustaining guide or channel O^1, having the horizontal ledges or shoulders to sustain the matrices and the oblique grooves O^4, to release the space bars. 72nd. In combination, with the matrices and the space bars of greater width at the head, the guide or channel having horizontal shoulders to sustain the matrices, and grooves O^4, to discharge the space bars and the overlying rail with teeth O^5, to prevent the escape of the matrices. 73rd. In combination, with horizontal supports for the matrix line, the toothed distributer rail thereover, the feed screws lying beside the rail, and the lifter to present the successive matrices to the rail and screws. 74th. The horizontal matrix-sustaining lips O^6, O^7, as shown, in combination with matrices adapted to engage said lips at their opposite ends, the horizontal slide to urge the line of matrices forward, and the lifter in position to act between the lips on the foremost matrix. 75th. The distributer rail, the feed screws and the lifter arm, in combination with the eccentric mounted on one of the screws as shown. 76th. In combination, with the distributer rail the two feed screws and the hinged supports for the forward screw.

No. 36,543. Case for Samples.

(*Caisse à échantillons.*)

Marshal Lundy, Newmarket, Ontario, Canada, 5th May, 1891; 5 years.

Claim.—An improved sample case, consisting of the frames A, divided into compartments B, protected by a glass front, and by a removable back C, the said frames being arranged around a shaft G, and locked at their bottom to the base plate H, and at their top by a flanged cap I, the cap and base plate being journaled on the shaft G, substantially as and for the purpose hereinbefore described.

No. 36,544. Valve. (*Soupape.*)

John Robert Meadowcroft, Montreal, Quebec, Canada, 5th May, 1891 : 5 years.

Claim.—1st. In a valve, the combination, with the inlet and outlet sections forming a common passageway, of a central valve chamber,