

from the mat on its backward thrust, thereby unthreading the needle, substantially as described. 44th. The pivoted upper and lower grip-arms  $p$ ,  $p^1$ , connected at their rear ends by a slot  $p^2$ , and pivot bolt  $p^3$ , spring  $p^4$ , connecting the said grip-arms between their pivots and their rear connection, rocking-lever  $P^1$ , swinging-arm  $p^2$ , hinged to the rear end of said rocking-lever, connecting-rod  $p^3$ , hinged respectively to the swinging-arm  $P^2$ , and lower grip-arm  $p^1$ , projecting cam arm  $B^1$ , fixed on a revolvable shaft and adapted to contact at each revolution with the forward end of the rocking-lever  $P^1$ , and crossing needle  $J$ , whereby the grip-arms are sharply closed upon the projecting end of the diagonal strand to unthread the needle, substantially as described. 45th. In a machine for inserting diagonal strands in cane weaving, a mechanism for inserting the diagonal strand, in combination with a sliding support mounted in rear of said mechanism, a clamping device mounted on said sliding support and arranged to clamp the mat of cane just in rear of the adjusting and holding clamp, an adjusting and holding clamp mounted on the main frame in front of the said sliding support and mechanism adapted to move said sliding support rearward a short distance as the main clamp is opened, to feed the mat one step forward, substantially as described. 46th. In a machine for inserting diagonal strands in cane weaving, mechanism for inserting the diagonal strand, in combination with a sliding support mounted in rear of said mechanism, a clamping device mounted on the said support and arranged to clamp the mat of cane just in rear of the adjusting and holding clamp, a main adjusting and holding clamp mounted on the main frame in front of said sliding support, mechanism adapted to move said sliding support rearward a short distance as the main clamp is opened, to feed the mat one step forward, and the rear drum and mechanism for turning the same actuated by the sliding feed-support to wind the finished mat upon the drum simultaneously with the feed, substantially as described. 47th. The sliding support  $R$ , provided with standards  $r^2$ , forming a kind of yoke, upper clamp-bar,  $S$ , mounted on the upper ends of these standards, lower clamp-bar  $S^1$ , mounted loosely on said standards and movable vertically, rock-shaft  $S^2$ , mounted in said standards below the clamp-bars and provided with eccentrics  $s^1$ , and skew-gear pinion  $s^2$ , eccentric straps  $s^3$ , applied to said eccentrics and hinged to the lower clamp-bar, bell-crank lever  $s^4$ , mounted loosely on its support and having one arm  $s^5$ , provided with a skew-gear segment  $s^6$ , engaging with the said skew-gear pinion, main shaft and cam  $B^3$ , fixed thereon and provided with cam groove  $b^7$ , and the short arm  $s^7$ , of the said bell-crank lever, provided with a pin fitted into the cam groove  $b^7$ , substantially as described. 48th. The standard,  $Q$ , provided with ways in combination with the support,  $R$ , provided with a base  $r$ , mounted and adapted to slide between the ways on said standard, clamp-bars  $S$ ,  $S^1$ , mounted on said support to grip the finished mat of cane, bell-crank lever  $R^1$ , pivoted to the standard,  $Q$ , and having one of its arms hinged to the sliding base,  $r$ , bell-crank lever  $R^2$ , mounted loosely on its support and having its outer arm,  $r^2$ , connected to the inner arm  $r^1$ , of the lever  $R^1$ , by slot in one and pin on the other, and revolvable cam  $B^2$ , provided with cam-groove,  $b^7$ , engaging with the pin on the end of the inner arm  $r^1$ , of the lever  $R^2$ , substantially as described. 49th. In a machine for inserting diagonal strands in cane weaving, a stationary clamping mechanism for adjusting and holding the mat in fixed position, in combination with a crossing-needle, mechanism for reciprocating the crossing-needle diagonally of the mat, cutting mechanism to sever the diagonal strip, mechanism for unthreading the needle after drawing through the strand, movable clamping mechanism for feeding the mat, a sliding support on which said feed-clamp is mounted, movable back and forth to make the feed, a main driving-shaft, a series of cams fixed on said shaft and adapted to actuate the said several mechanisms and connecting devices between said cams, and the said respective mechanisms whereby the latter are actuated by the said cams respectively, substantially as described.

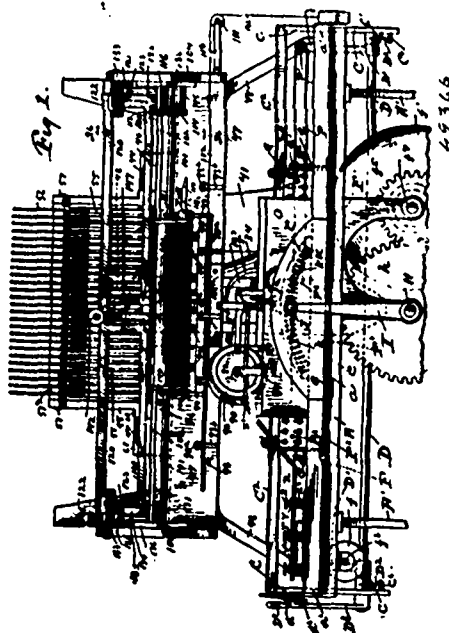
#### No. 49,366. Typograph Machine.

(Machine typographique.)

Emil Werner and Moses Montague Hobart, both of Cleveland, Ohio, U.S.A., 3rd July, 1895; 6 years.

**Claim.**—1st. In a typograph-machine, the combination with the type-die impressing plunger, a vertically reciprocating frame provided with a horizontal track extending lengthwise of said frame and a type-die carrier movably mounted upon said track and provided with two or more series of reciprocating type-dies arranged substantially as indicated, of suitable means whereby said vertically reciprocating frame and horizontally reciprocating type-die carrier are actuated to bring the selected die in either or any of the series of type-dies in proper position relative to the type-die impressing plunger, substantially as set forth. 2nd. In a typograph-machine, the combination with the type-die impressing plunger, a vertically reciprocating frame provided with a horizontal track extending lengthwise of said frame and a wheeled type-die carrier mounted upon said track and provided with two or more series of reciprocating type-dies arranged substantially as indicated, of suitable means whereby said vertically reciprocating frame and horizontally reciprocating type-die carrier are actuated to bring the selected die in either or any of the series of type-dies in the proper position relative to the type-die impressing plunger, substantially as set forth. 3rd.

In a typograph machine, the combination with the type-die impressing-plunger, a vertically reciprocating frame, type-die-carrier



adapted to reciprocate endwise of said frame and provided with two or more series of reciprocating type-dies arranged substantially as shown, said vertically reciprocating frame comprising at each end a U-shaped member  $C$ , flanged inwardly as at  $C^1$ , and plates or bars as at  $C^2$ , secured to said inwardly projecting flanges, rigidly connecting said U-shaped members with each other and constituting a track, the type-die carrier having upwardly extending arms  $d^2$  provided at their upper end, respectively, with a wheel mounted on the adjacent rail or way of the track aforesaid, of suitable means whereby said vertically-reciprocating frame and said horizontally-reciprocating type-die carrier may be actuated to bring the selected die in either or any of the series of type-dies in proper position relative to the impressing plunger, substantially as set forth. 4th. The combination, with the bed of the typograph-machine, a vertically-reciprocating frame, sideways  $a^1$  for said frame, the latter being provided with a track extending lengthwise thereof, a horizontally-reciprocating type-die-carrier mounted on said track, two or more series of type-dies having suitable bearing in said type-die-carrier and arranged substantially as indicated, and suitable mechanism for actuating the type-dies to impress the matrix-blank or matrix, of a shaft extending in the direction of the length of said vertically-reciprocating frame, suitable means operatively connecting said frame with the shaft aforesaid, and suitable means for oscillating said shaft, the arrangement of parts being such that by oscillating said shaft in the one direction or the other the aforesaid frame and type-die-carrier supported thereby are elevated or lowered to bring the desired series of type-dies at the proper elevation relative to the aforesaid type-die plunging or actuating mechanism, substantially as set forth. 5th. The combination, with the bed of a typograph-machine, a vertically-reciprocating frame, sideways for said frame, the latter being provided with a track extending lengthwise of the frame and a type-die-carrier mounted upon and adapted to reciprocate endwise of said track, two or more series of type-dies having suitable bearing in said type-die-carrier and arranged substantially as indicated, and suitable mechanism for actuating the type-dies to impress the matrix-blank or matrix, of a shaft extending lengthwise of said vertically-reciprocating frame, rock-arms operatively mounted on the shaft and operatively connected with said frame, a lever operatively mounted on said shaft for oscillating the same, the arrangement of parts being such that by manipulating said lever in the one direction or the other the aforesaid frame and type-die-carrier supported thereby are elevated or lowered to bring the desired series of type-dies at the proper elevation relative to the aforesaid type-die plunging or actuating mechanism substantially as set forth. 6th. In a typograph-machine, the combination with the type-die impressing-plunger, a vertically-reciprocating frame, a type-die-carrier mounted upon and adapted to reciprocate endwise of said frame, said type-die-carrier having two or more series of type-dies arranged substantially as indicated, of a shaft extending in the direction of the length of said supporting-frame, suitable means for operatively connecting said frame with the shaft, and a hand-lever operatively mounted on the shaft, of a stationary segment provided with as many notches or recesses as there are series of type-dies and with notches or recesses arranged in a plane concentric with the axis of the aforesaid shaft, a latch