

wedge laterally, to vary its effect upon the mould blade. 62nd. In a mechanism for forming justified lines of types such as described the combination of the following elements, to wit, a die case controlled, as to its movements for bringing any die or matrix to the centre point, by two actuating mechanisms operating relatively in transverse directions, said actuating mechanism each deriving motion from reciprocating drivers or levers having a uniform range of motion and provided with a yielding connection and controllable stops for arresting the motion of the die case, a mould located at the centre point for the die case and provided with a mould blade for varying the width of the mould, controlling mechanism, including the normal wedge, for adjusting the position of the mould blade to correspond with the width of the selected or centred matrix, and a justifying mechanism acting through the normal wedge to vary the adjustment of the mould blade. 63rd. In a machine for forming justified lines of types, the combination of the following elements, to wit, the die case, the mould with movable mould blade, the normal wedge reciprocating in unison with the die case and controlling the position of the mould blade, and a justifying mechanism operating to vary the position of the mould blade said justifying mechanism receiving its movement of adjustment from the controllable actuating mechanism of the die case through a controllable member, and acting upon the mould blade only when connected to a driver through a controllable member, whereby the actuating mechanism of the die case is utilized to set the justifying mechanism, and the latter can be rendered operative upon the mould blade during the formation of any of the types which are to form the line. 64th. In a type forming machine such as described, the combination of the following elements, to wit, the die case and its two actuating mechanisms each furnished with a series of controllable stops for limiting the movements of the die case, the mould provided with a movable mould blade, the normal wedge for adjusting the mould blade, said wedge receiving motion from one of the die case actuating mechanisms and having its position determined by the controllable stop pins thereof, a justifying mechanism, furnished with an adjustable member, connections between the other die case actuating mechanism and the adjustable member of the justifying mechanism, including a controllable member, whereby the movements of the die case actuating mechanism as affected by its controllable stops may be utilized to set the adjustable member of the justifying mechanism, a reciprocating driver for actuating the justifying mechanism, to render it operative upon the mould blade, and a controllable connecting member for said driver. 65th. In a justifying mechanism for varying the position of the mould blade, the combination with the pivoted frame with which the mould blade adjusting devices are connected, of the driving slide reciprocated in said frame, the adjustable head carrying the compound slide, and the controllable pin for connecting the compound slide to the driving slide for transmitting motion to the pivoted frame and through the latter to the mould blade. 66th. In a justifying mechanism for controlling the position of the mould blade, the combination with the pivoted frame to which the mould blade controlling devices are connected, of the reciprocating driving slide, the pivoted adjustable head or member, the compound slide engaging the said adjustable head and pivoted frame, and the controllable pin for connecting the compound slide with the driving slide. 67th. In a justifying mechanism for determining the width of the mould, the combination of the pivoted frame, the pivoted adjustable head, the compound slide engaging the said frame and head, the driving slide mounted upon the pivoted frame, the controllable pin carried by the compound slide for engaging the driving slide, and the latch for retaining the pin in position. 68th. In a justifying mechanism for type making machine the combination of the normal wedge and its supporting frame, the pivoted frame connected to the normally wedge frame and controlling its position and that of the mould blade, the adjustable pivoted controlling member or head, the compound slide composed of two sections pivoted together, the one riding in ways in the adjustable controlling head and the other in ways in the pivoted frame, the driving slide reciprocating upon the pivoted frame, the controllable pin carried by the compound slide and adapted to engage the driving slide, and a latch carried by the driving slide for engaging the pin, to retain it temporarily in position. 69th. In a machine for forming justified lines of types, the combination of the following elements, to wit, a type mould provided with an adjustable mould blade, controlling devices, including the normal wedge, for adjusting the mould blade, a frame normally parallel with the normal wedge, pivoted at one end and connected to the movable support of the normal wedge, a driving slide mounted to reciprocate longitudinally of the pivoted frame, an adjustable head or guide pivotally supported beneath the pivoted frame, with its axis parallel with that of said frame, a compound slide whose sections are pivotally connected, the one riding in ways in the pivoted frame and the other in the adjustable head, a pin carried by said compound slide and adapted to enter an orifice or seat in the driving slide, and a latch carried by the driving slide for engaging the pin, said latch being operated by an obstruction on the pivoted frame, to disengage said pin at the completion of the stroke of the driving slide so as to disconnect the compound slide from its driver. 70th. In a type forming machine such as described, the combination with the adjustable head or member of the justifying mechanism which determines the variation in width of the type formed in the mould, of a driver, controlled as to the extent of its movement, by the stop pins of the die case actuating mechanism, and, as to the

time or occasion of its operative connection with the devices for transmitting motion to said adjustable member, by a separate controllable member, whereby the movements of the die case actuating mechanism are utilized to determine the extent of the adjustment while the time when the adjustments to be affected is separately controlled. 71st. In a machine for forming justified lines of types, the combination substantially as described of the following elements, to wit, the die case and actuating mechanism therefor, the mould provided with an adjustable mould blade, the adjustable head or member of the justifying mechanism by means of which the degree of variation in the position of the mould blade is effected or controlled, operating devices, including a ratchet wheel for shifting the position of said adjustable head or member, a driving pawl connected to reciprocate with the die case actuating mechanism and held normally from contact with the ratchet wheel, and controllable means for throwing the pawl temporarily into engagement with the ratchet wheel. 72nd. In a justifying mechanism for type forming machines, the combination of the following elements, to wit, an adjustable head or member for controlling the degree of adjustment given the mould, a ratchet wheel operating through suitable transmitting devices upon said adjustable head or member, a reciprocating pawl held normally from engagement with the ratchet wheel and connected to controllable means for effecting engagement therewith, a holding pawl for maintaining the ratchet wheel in adjusted position, a returning spring and stop, and controllable means for withdrawing the holding pawl and permitting the return of the ratchet wheel to its initial position. 73rd. In a type forming mechanism such as described, the combination of the following elements, to wit, the reciprocating slide carrying a pawl in position to engage fixed ratchet teeth and controlled as to extent of motion by controllable stop pins, a rack connected to and moving with said slide, a gear segment engaged by the rack, pivoted on a shaft, and carrying a pawl, the latter held normally retracted and provided with controllable means for throwing it into operative relation to the part to be driven thereby, a ratchet wheel, worm and returning spring attached to the shaft upon which the said gear segment is pivoted, the holding pawl provided with controllable means for detaching it from the ratchet wheel, to permit the return of the latter under the influence of the spring, and the adjustable head or member, for controlling the degree of variation in the width of the mould, provided with a worm segment engaging the worm. 74th. In a justifying mechanism for type forming machines, such as described, the combination of the following elements, to wit, a mould provided with an adjustable section or mould blade, an adjustable head or member connected immediately to the mould blade, a controllable device for rendering the adjustable head operative upon the mould blade, to effect the prescribed adjustment of the latter, a ratchet wheel connected, through suitable transmitting devices, to the adjustable head, a driving pawl held normally from engagement with the ratchet wheel and provided with controllable means for throwing it into engagement with the ratchet wheel, a holding pawl for the ratchet wheel provided with controllable means for effecting its withdrawal or disconnection from said wheel and an actuating mechanism governing the reciprocations of the driving pawl, provided with controllable stops for determining the length of the reciprocating movements of the said pawl. 75th. In a justifying mechanism such as described the combination with the adjustable head for varying the width of the mould cavity, the pivoted frame, and the compound slide, of the reciprocating driving slide, and the controllable connecting pin, provided with a piston and cylinder, the whole carried by the compound slide in position to engage the driving slide. 76th. In a justifying mechanism such as described the combination with the ratchet wheel to and actuating the adjustable member which determines the variation in width of the mould, of the pawl mounted upon a reciprocating support, devices for controlling the extent of movement of the pawl support, and a piston and cylinder carried by said pawl support and controlling the application of the pawl to the ratchet wheel. 77th. In a justifying mechanism such as described, the combination of the adjustable head or member for controlling the extent of variation in width of the mould, a controllable member operated by a piston and cylinder for operatively connecting the movable section of the mould to said adjustable head or member, adjusting devices for said adjustable head or member provided with a piston and cylinder for controlling the connection between the transmitting and driving members thereof, and a piston and cylinder controlling the release and re-setting devices, substantially as described, whereby fluid pressure may be employed to operate the said pistons and control the setting and re-setting of the adjustable member, and the times of its application to the mould. 78th. In a type forming machine the combination substantially as described, of the mould, the fixed nozzle seat, and the reciprocating nozzle, pump and metal pot, the latter supported upon trunnions or pivots movable towards and from the nozzle seat, to compensate for expansion and contraction. 79th. In a type forming mechanism the combination substantially as described of the mould, the stationary nozzle seat, the reciprocating jet slide and a metal injecting apparatus containing nozzle, pump and melting pot pivotally supported and reciprocating in movable bearings, whereby the injecting apparatus is automatically adjusted by the engagement of its nozzle with its seat. 80th. In a type casting mechanism the combination substantially as described of the mould, the stationary conical nozzle seat, and the self adjusting and reciprocating nozzle, pump and melting pot. 81st. In a type casting mechanism the com-