Feb. 13, 1951 P. A. RAHAIM 2,541,544

COMPRESSING MACHINE HAVING TWO PIVOTED DIES CLOSED BY RECIPROCATING MOUNT FOR THIRD DIE

Filed July 19, 1946 3 Sheets-Sheet 1

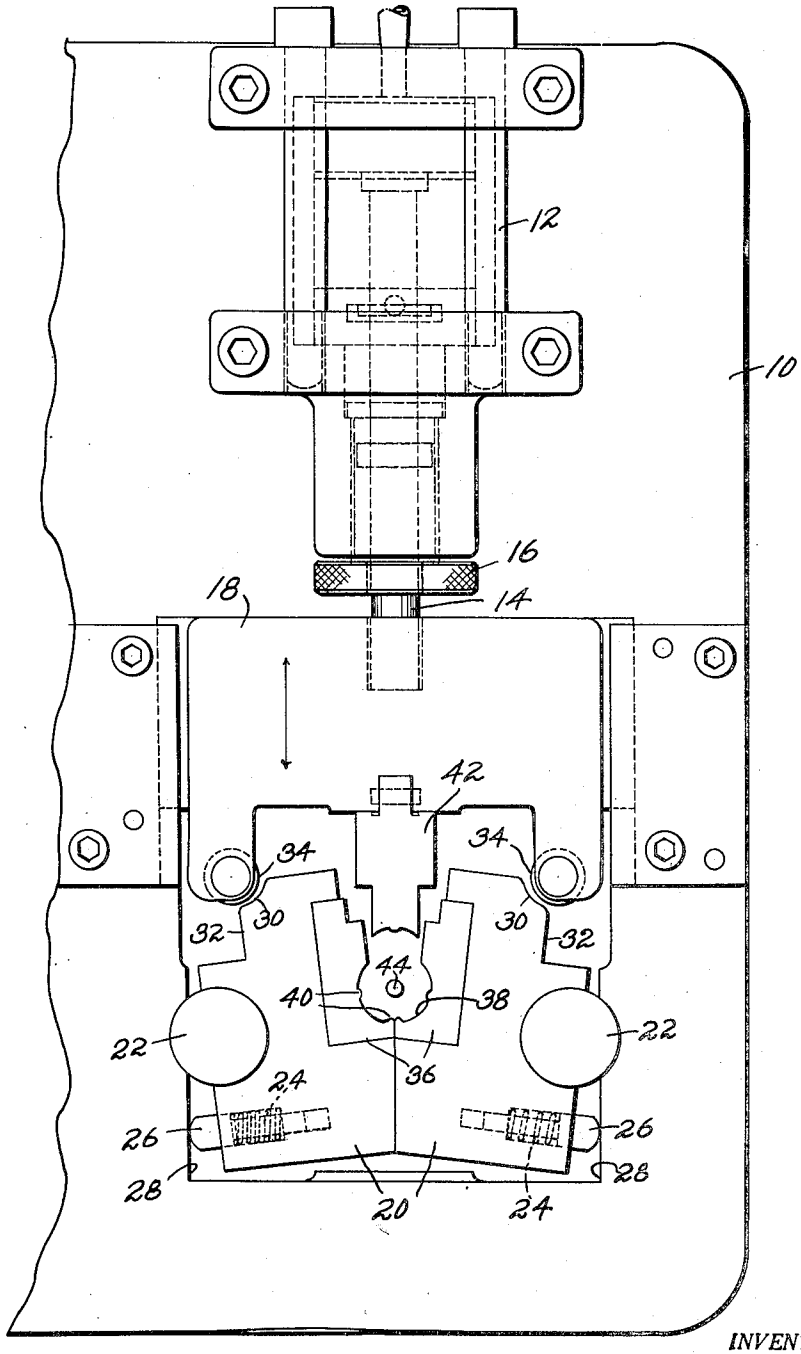


Fig. 1.

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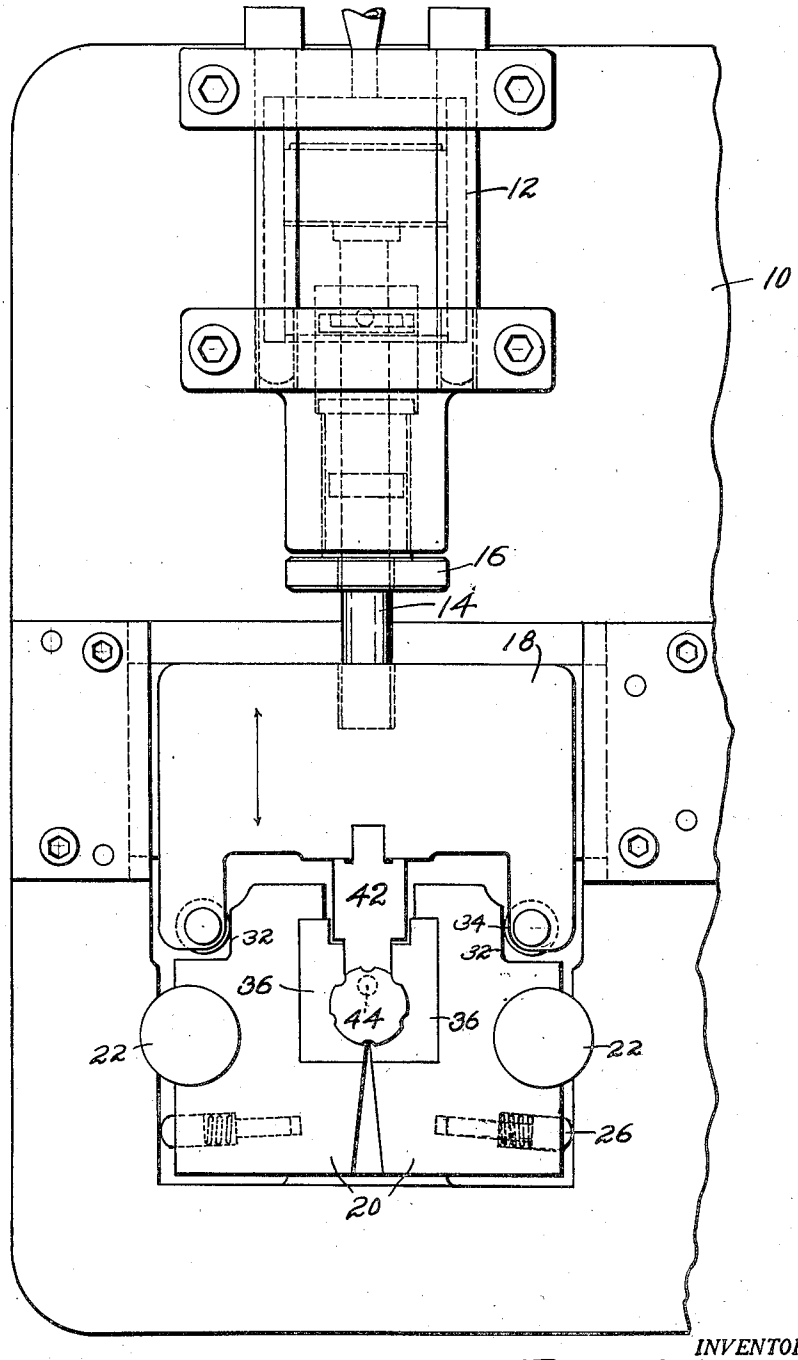


Fig. 2.

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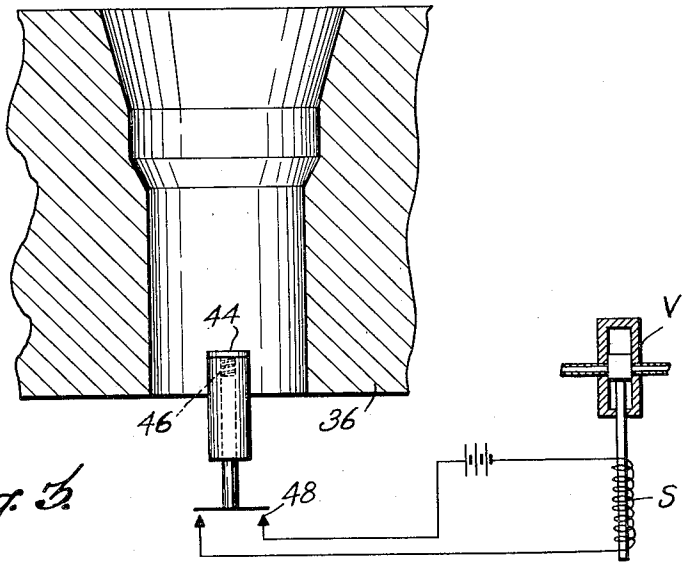


Fig. 5.

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UNITED STATES PATENT OFFICE

2,541,544

COMPRESSING MACHINE HAVING TWO PIVOTED DIES CLOSED BY RECIPROCATING MOUNT FOR THIRD DIE

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Application July 19, 1946, Serial No. 684,833

1 Claim. (Cl. 144—49)

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This invention relates to compressing machines for compressing wood, metal, plastics, or any similar material in a simple, quick, easy and efficient manner.

Objects of the invention include the provision of a compressing machine comprising a pair of dies having outlines conforming to the article to be compressed in combination with an additional die for cooperation therewith, the first two dies acting to compress the article in diametrical opposite directions and in combination with the third die to compress the article in diametrical opposite directions at right angles to the first named compression.

Further objects of the invention reside in the provision of a machine as above stated including a single operator member for actuating the plurality of dies above defined in the manner stated; and the provision of a compressing machine of the class described including power means for actuating the dies to accomplish the compression in combination with a switch located between the dies in a manner so that when the article is inserted between the dies it will trip the switch so as to actuate the power means to carry out the compressing function automatically.

Other objects and advantages of the invention will appear hereinafter.

Reference is to be had to the accompanying drawings in which

Fig. 1 is a plan view of the machine showing the dies open,

Fig. 2 is a similar view showing the dies closed in the compressing relation, and

Fig. 3 is an enlarged section through the dies showing the start and stop switch diagrammatically.

For purposes of illustration the present machine is illustrated as having dies for compressing a wooden or the like tenon but it is to be understood that the compressing action may be used for any other material desired. The word "tenon" as used herein refers to tenons, dowels, pins, etc., of any material.

The machine is provided with a base 10 having one or more power cylinders 12 thereon arranged in parallel relation, each cylinder having a piston rod 14 which is adjustable by means of a nut 16 for varying the range of movement thereof. Each piston rod 14 is secured to an operator 18 and it is to be noted that in Fig. 1, the piston is retracted so that operator 18 is inactive whereas in Fig. 2 the piston rod is advanced to accomplish the compressing function.

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A pair of dies 20 are pivotedly mounted on bushings 22 so as to be enabled to pivot from the position of Fig. 1 to the position of Fig. 2, against the action of dashpot springs 24 acting on pins 26, the latter finding a reaction point on a wall 28 in a recess in the bed of the machine. Each die is provided with a lateral wall 32 which turns inwardly as at 30 to provide an adjacent wall at an angle thereto, these walls being engaged by rollers 34 on the operator 18; and as the latter advances, it will be obvious that the dies 20 are pivoted toward each other from the Fig. 1 to the Fig. 2 position.

Each die is provided with a removable insert 36 having an operating surface 38 made to the shape desired for the compressed article and it is to be noted that as the dies 20 pivot toward each other the inserts 36 move in a similar manner and come to the position shown in Fig. 2, this position defining a circle if desired. The compressing surface 38 may be provided with projections 40 to form indentations in the article being compressed.

The operator 18 is provided with a die 42 which moves therewith in the direction of the arrows, but it is to be noted that the dies 20 reach the Fig. 2 position just prior to the impact of the die 42 so that the compression is accomplished first at diametrical opposite points prior to the finishing compression at diametrical points arranged at 90° to the first mentioned diameter.

The cavity formed by the die is provided with a push-button switch 44 which is arranged to actuate a mechanism such as a solenoid S to accomplish the operation of the power cylinders 12. This switch is spring-pressed upwardly by a spring 46 and makes a contact at 48, this contact being connected to the solenoid to operate the latter through a source of electric current for opening and closing a valve V to the power cylinders 12.

Having thus described my invention and the advantages thereof, I do not wish to be limited to the details herein disclosed, otherwise than is set forth in the claim, but what I claim is:

Compressing machine comprising a pair of

swinging compressing dies, an operating element therefor, a pair of extending arms on the operating element, said arms being spaced sufficiently to engage the open dies and swing the same together to closed position upon advancing movement of the element, means to advance and retract the element, each die having a cam surface engaged by the arms to swing the dies and having an adjacent, straight surface in line with the direction of motion of the element so that the latter advances after the dies are closed, and a die on the element.

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REFERENCES CITED

The following references are of record in the file of this patent:

UNITED STATES PATENTS

Number	Name	Date
920,396	Scheid	May 4, 1909
1,467,262	Barker	Sept. 4, 1923
1,506,075	Neal	Aug. 26, 1924
1,546,538	Fisher	July 21, 1925
1,644,801	Van der Werff	Oct. 11, 1927
1,865,199	Martel	June 28, 1932
1,940,980	Svenson	Dec. 26, 1933
1,979,208	Friden	Oct. 30, 1934
2,253,713	Lancaster	Aug. 26, 1941
2,257,132	Schoenky	Sept. 30, 1941
2,320,680	Temple	June 1, 1943

FOREIGN PATENTS

Number	Country	Date
607,400	Germany	Dec. 27, 1934
115,242	Australia	June 11, 1942