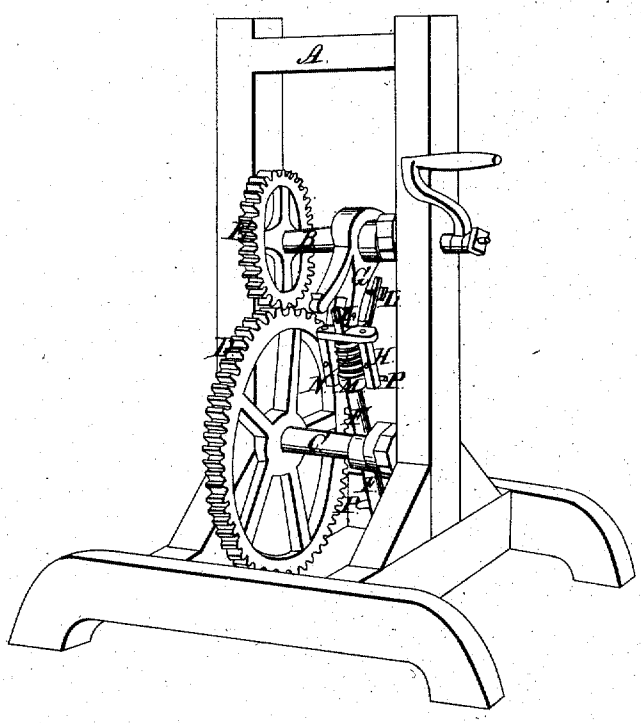
No Printed Specification Available

7021X

# T. W. Harvey,

## Cotton Press.

Patented Apr. 27, 1832.



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Apl. 27, 1852

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Thomas H. Harvey Canastota New York.

# Letters Patent (= 7,021 X)

The Schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Thomas H. Harvey himself of the improvement being a Rotary Toggle Joint Press

To all whom these Presents Thomas H Harvey of Canastota Chenango County State of New York have made an improvement being a Rotary Toggle Joint Press which is described as follows

1st The frame marked A in the annexed drawing is constructed of any convenient size and shape adapted to the machinery intended to be used there in. 2nd The shafts B C are constructed of sufficient size and strength and placed parallel to each other turning on journals in Boxes secured to the frame. These shafts are denominated the Clamp shaft and Guide shaft upon the Clamp shaft C is a Cog wheel D of any required diameter and number of Cogs. Upon the Guide shaft is a Cog wheel E that meshes into the aforesaid Cog wheel and is of half the diameter. Upon the Clamp shaft are placed a number of Clamps F perfectly constructed for the purpose intended in number twice that of the number of Circle heads G to be threaded into which they are placed for the purpose hereinafter to be made. Upon the Guide shaft are placed a number of Toggle Circle Arms H the number of these to be the same as the number of Clamps. The peripheries of the Circles in which they turn are of equal diameter. The length of the arms H of the Toggle Joint from the fulcrum centre to equal the length of either from the periphery of the Circle of the shaft. The arm from the fulcrum I or joint outward is pivoted forward by the application of a spring K to the shaft C the joint the pitch being governed by a regulating screw L. The shaft C from forward of the arm I is pivoted to the arm H the pitch being governed by a regulating screw M. Upon the end of the arm H is placed a Clamp N which is governed by a Clamp O. I secure the shaft from forward thereof and by the sliding different implements in the end of the arm H all kinds of work can be done. The sliding frame P and may arm I moving

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the opposite die upon the Clamp Shaft C. (see after more particularly described in the operation of the Press.

## Operation

The material to be (embossed) struck developed cut or operated upon is placed by any convenient machinery in the die attached to either shaft. The machine being put in motion by the revolving of the cog wheels D D the arms B of the Toggle Joint are brought in contact with the Clamps E before they arrive at the parallel line of the centres of the shafts, this sliding piece [illegible] being thrown out by the spiral spring H and the arms being pitched forward in a line with the Clamps to the centre of the Clamp Shaft by the operation of the spring [illegible] and regulating screw to and at a point where the points meet. The end of the arm strikes a bearing P on the clamp and retards the motion of the outer end of the arm by the slower movement of the Clamp Shaft while the accelerating motion (ten to one) of the pin Shaft brings up to straighten the Toggle Joint at the maximum of power on the parallel line of the centres of the Shafts so that a central impression is given to the arm upon the centre of the Clamp Shaft during the contact of the points.

The size of the wheels and their proportions, the diameter of the Clamps, the length of arm, the proportion of speed of one shaft to the other, the number of Toggle Joints to the number of Clamps, may all be varied by different arrangements and proportions retaining however the same principle of action of the press. The pressure can be given not only directly upon dies placed at the junction of the two points as before described but by an application of the Press upon a lever upon which the dies may be placed and is also adapted to give motion to a lever distinct from a press.

The power may be applied to either shaft and the press worked with the shafts in a perpendicular horizontal or other position. This Press can be employed for making Nails, rivets, screw pins, buttons, and [illegible] brick or coining money and striking all kinds of dies or any other impression upon all kinds of metal or other material.

What I claim as my invention is the application of the principle of the herein described Rotary Toggle Joint Press whether the same be made in the form represented in the accompanying drawing or in any other way upon the same principle it being of little importance to me [illegible] of [illegible] [illegible] applications [illegible] the same principle [illegible] the [illegible] for Rotary

