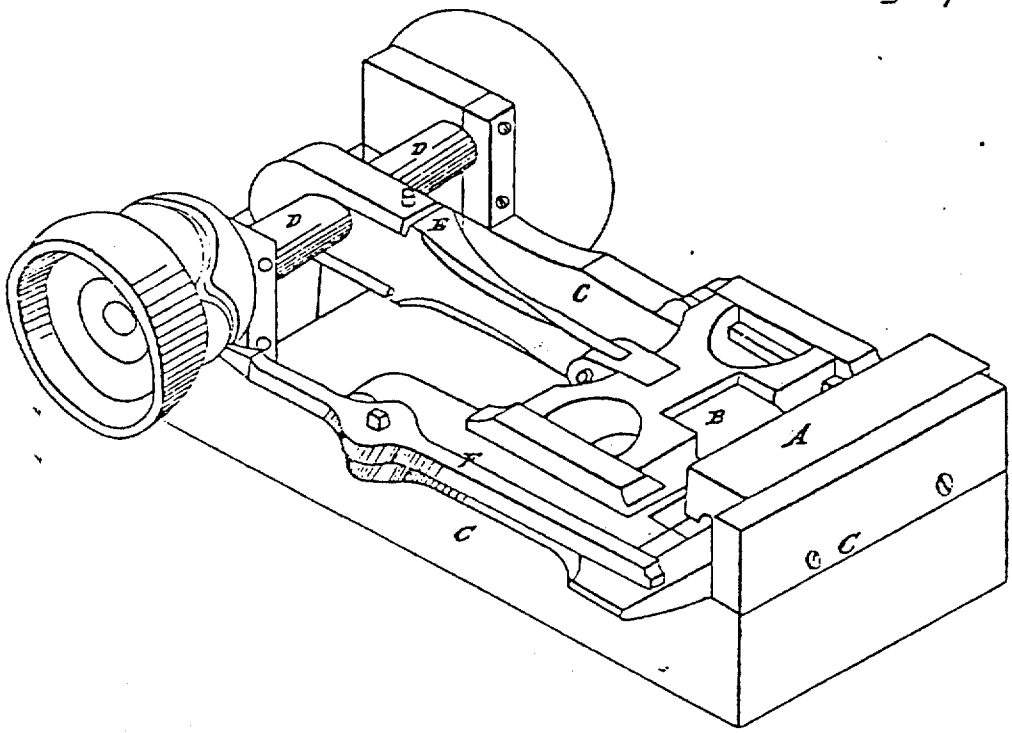
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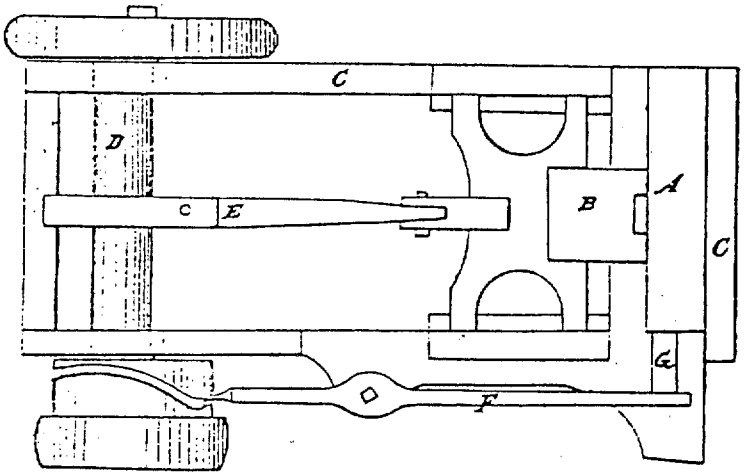
Making Hinges,

No. 9.666 X

Patented May 17, 1836.







May 17, 1836.

Patented May 17, 1836.

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Lorad Rouse

The schedule referred to in these Letters Patent and making part of the same containing a description in the words & the said Lorad Rouse himself of his improvement in the Machine for making Butts and Hinges.

To all to whom these presents shall come. Be it known that I Lorad Rouse of the City of Troy in the County of Rensselaer and State of New York have invented a new and useful Machine for Making Butts & Hinges & that the following is a full and exact description thereof. The improvement is to be applied to the Manufacturing of Butts & Hinges of Malleable or ductile Metal. The two plates which form the Butt or Hinge are to be prepared separately & in the ordinary method of Making Hinges of like description each with projections from one edge, the tongues corresponding to the spaces between the tongues of the other plate with one of which they are to be combined. These tongues turned ~~on~~ on a centre pin form what are called the eyes of the Hinge, and when placed to gether the eyes of each plate between those of the other plate and pin at right angles through them constitute the joint of the Hinge. The machine here to be described is for bending the tongues of the hinge plate from the straight and cylindrical position they are in when first prepared and forming them into eyes, to do this a rod is to be formed in a block of steel or other suitable material to be prepared for the purpose, which is to consist of an upper part or piece of the shape and size of the hinge plate for which it is designed & having on the under side of the block a recess equal to about the length of plate with the tongues cylindered and then to be inserted in a circular recess in the upper side of the lower part of the block, the upper part of this opening into the recess for the eyes of the hinge. The lower part of this opening into the recess for the eyes of the hinge is to be the same as the upper

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of a pitfall or end sides of the hinge plate after the eye is formed, The whole of this opening is to be extended through the entire length of the block. This constitutes the die. And the eyes of the hinge are formed by placing the plate with the tongues extended within the groove at its mouth and forcing the tongues end foremost into the circular termination of it. The effect of which will be that as the tongues enter the circle in the direction of a tangent line from it, the ends are forced round its surface, which for this purpose should be smooth, till the tongues conforming to the curve become bent flatwise in their whole length so as to bring the ends over to their own surface or to that of the plate to which they belong. To effect this operation a steel follower adapted to the groove and the end of it to the edge of the hinge plate should be provided and a reciprocating movement given to it sufficient in extent and power to force the tongues effectually into the die and then to return back far enough to allow the hinge plate to be removed and another placed before the follower ready for a like operation. This may be done by fixing the die firmly upon a frame to be provided for the purpose and carrying a shaft with a crank or eccentric action to operate before it. And a pitman or shackle bar connected therewith and extended to and connected with the follower by a flexible joint such as is ordinarily applied to operations of that kind will give the movement required. Or such other means or devices as are commonly used for producing movements of like nature, as well as such methods for obtaining the necessary power as by wheels gearing or otherwise may be adopted in that case as shall be deemed expedient. The follower may be supported and kept true in its operation by means of projections or arms to slide or working from it horizontally and connected or by tongues and grooves or otherwise with the fixtures of the frame provided for the purpose.

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A lever or levers extending along on one side of the frame from near the shaft to a point opposite the end of the die, may be so connected with the machinery as to have a lateral movement out and in given to the end next the shaft by means of a cam upon the side of the wheel which turns the shaft or of a wheel or pulley connected and revolving with it; so that by suspending or attaching it by a moveable joint to a fixture of the frame provided for the purpose as its fulcrum at such point between the two ends ~~thereon~~ as shall be selected, the same reciprocating motion will thereby be given to the end opposite the die, which by attaching a follower thereto extending towards the end of the die, and so as to have it move backwards and forwards in the direction of the length of the die it may be made to enter into it and remove the hinge plate after the eye is formed by pushing it out at the opposite end. The relative position of the cam which gives this motion in respect to the movement of the other follower may be such as to cause the inward and outward motion of the two followers so far to alternate with each other so that when the first is being withdrawn from the die and preparatory to its return with another hinge plate before it, the end follower will pass in and remove the plate which is finished. So also the extent of the motion of the end follower may be adapted to such a purpose by the location of the fulcrum of the lever as in fixing it nearer one end than the other, or as the extent or the length of the lever or size of the cam may require. Or instead of a lever for the above purposes the same effect may be produced by means of a shaft along the side of the frame to be connected by gears with the revolving shaft in front of the die and having a crank or eccentric motion opposite the end of the die so as to give the out and in motion of the end follower, the necessary connecting appendages being supplied as circumstances require. In order to accelerate the return of the end follower after being

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thus carried into the die by the motion of the lever or of the crank upon the lateral shaft, a spring may be attached to a fixed line of the frame and be so applied to the lever or an appendage of it on one side or to an appendage of the follower on the other as to replace the follower in its outward position the instant the operating crank shall have passed the point of its ultimate action for propelling it forward. The cranks for the purpose should be formed with a termination sufficiently short or abrupt to admit of such motion. This provision is for the purpose of preventing any interference between the followers or hinge plates within the die, which a slower movement in this particular might occasion, as this is the description of the principle rather than of the specific manner in which the result is to be ~~[illegible]~~ obtained its practical application is left as a matter of discretion to be exercised in the construction of this part of the apparatus. By placing a hinge plate as prepared for the die, before the said follower with the tongues extended in the right direction the same may be carried in by it sideways and placed in the groove before the other follower ready to be forced into its position. As the plate thus supplied may be made to push before it that which is finished and remaining within the die and in that way clear or prepare the passage for the returning of the other follower. Upon this principle an upright box or tube may be provided and fixed as a hopper before the said follower in such manner that an indefinite number of hinge plates may be placed one upon another within it with the tongues all in one direction and the follower in its motion towards the die be made to carry before it into the groove the lowest hinge plate in the pile and when again drawn back to the outside of the hopper one of the pile of plates within by the proper in succession will drop down before it to be carried forward in the same manner. The hopper for this end should be so constructed as to leave a passage open between the follower and the

and the die sufficient for the Coins plates to be cleaned through
the Holes above until the Rest of Silver by the sides of the Cups
until the following Operation Cleans them from under them.
Directions for this Operation for the Inspection of Principles first and
Inspection of the die before the other Following — to Cleans the
Coins Cuppe Carried Dry. the directly into the die with the
Fingers and finished — While the ends following may
before be applied to the Removing of the Coins from the die
Then finished. — Whatever of a die of the foregoing Observations
may Change the Mode to Cleans the Coins Surface by Using the
die Then Cleaning Coins into Two Parts — the Division Commencing
at the Mean the Black Part of the Circular Termination of
the Grease most Condensing Through to the Back Side of the Black
of the two Pieces Which in this Case would be Substituted for
the Coins other Respect the die Should be the Same as that
above described. — Directions Which Should Principally Regarding the
Use of Cleaning the Coins of Silver Plate and to Re
ceive the Impression Which Should Condense an Operative
Collar Should be Placed over the Upper Standing Across the
Same and Secured by Screws in Fig three Should Stamp
and the ends so that by Cleaning the Two Standing Sides of the Collar
Upon the Upper Part of the die, it Must Serve Perpendicular to it
and Produce the Same as if it Were Constructed of One
Piece Each. and by Cleaning the Collar Each of the Two Ends
Separate it Will Release the Plates from the Impression to Which
it Must Necessarily be Subjected by the Stamp and Collar de
scribed Under Foregoing Observations, and Also Upon the Impression of the
Upper Standard. By this Arrangement there Cannot
Exist Separate and Distinct Observations. Of Claiming as my own Discovery
that Principle and Principles of Cleaning or Cleaning the Coins
of Coins on Both Sides Simultaneously as Described Under Foregoing
Observations Which Cleaning Them into a Red Condition
Will Not Impair, other Coins Which the Operation

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as above described and the principles thereby embraced and every part thereof as above combined and as constituting a whole and as specially applicable to the above purposes of bending the tongues and fastening the eyes of hinges, and to the special processes therewith connected.

Witnesses
Daniel Whiting
L. Bliss

Silas House