P. JONES.

Hub-Mortising Machine.

No. 210,858. Patented Dec. 17, 1878.

Fig. 1.

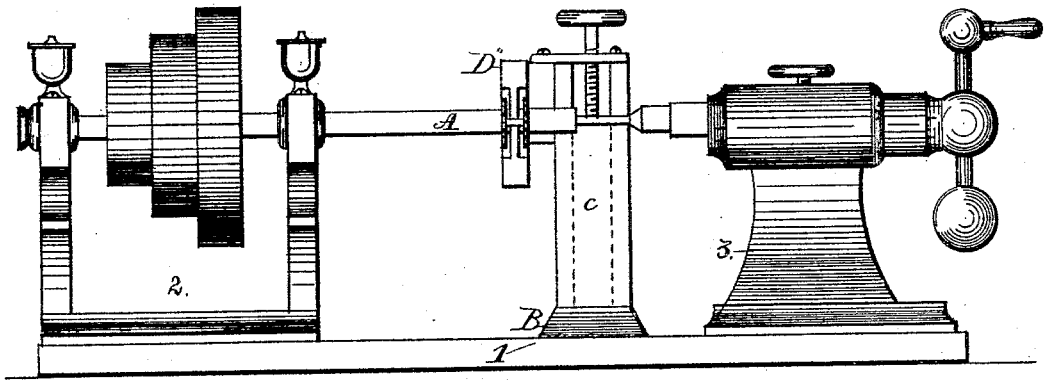


Fig. 2.

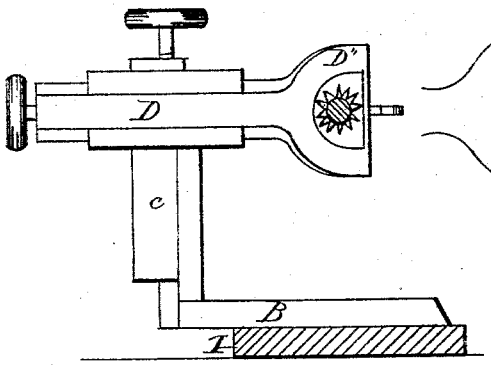


Fig. 3.

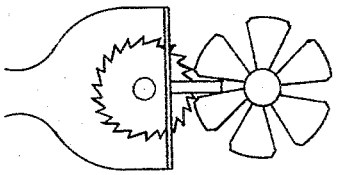
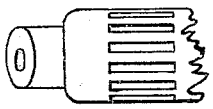


Fig. 4.



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UNITED STATES PATENT OFFICE.

PHINEAS JONES, OF NEWARK, NEW JERSEY.

IMPROVEMENT IN HUB-MORTISING MACHINES.

Specification forming part of Letters Patent No. **210,858**, dated December 17, 1878; application filed October 23, 1878.

To all whom it may concern:

Be it known that I, PHINEAS JONES, of the city of Newark, Essex county, in the State of New Jersey, have invented a new and useful Improvement in Machines for Chamfering Mortises in Hubs for Carriage-Wheels; and I do hereby declare that the following specification, taken in connection with the drawings furnished, is sufficient to enable others skilled in the art to make and use the same.

My invention consists of a machine provided with means for supporting and adjusting, and cutters for chamfering the mortises of wooden hubs for carriage-wheels; and it has for its object simplicity of construction, adaptability, with means for ready adjustment for the varied sizes of hubs upon which such labor is to be performed.

Referring to the drawings, Figure 1 represents a front view of my improved machine. Fig. 2 represents a side view of the adjustable rest or support, showing the cutters in position for chamfering the hub. Fig. 3 is a detail. Fig. 4 represents a section of a wheel-hub chamfered.

To explain more fully in detail, 1, 2, and 3 represent, respectively, bed, head, and tail-stock thereon, which parts are similar to those of the ordinary hand-lathe, to which my improvements may be readily adapted. The cutters and the adjustable rest and gage, which by their combination form the more important part of my invention, are shown more clearly in Fig. 2 of the drawings.

A is a mandrel, upon which are placed one or more saws or suitable cutters, variable in their relations to each other by a screw-nut or set-screw, or other means which will enable the operator to vary the distance of the cutters apart.

The cutters or saw-teeth are preferably filed fleaming, or like a crosscut-saw, that greater ease may be secured in their operation in cutting while the hub is traversed either in a right or left direction for that purpose.

The rest, which is represented in Figs. 1 and 2, consists of a base (represented at B) provided with a suitable vertical guide or guides, in connection with which a slide, *c*, is secured, and adapted to be operated up and down by means of an adjusting-screw or other equivalent mediums—such as a rack and pinion, wedge, or otherwise—whose object would be to either elevate or lower the rest at the will of the operator, in order to cause the cutters to cut or chamfer the mortises of the hub in a uniform manner. To this vertical-acting slide is connected a horizontally-acting slide, D, which is intended for and adapted to regulate the depth of the chamfer, which slide is provided with a tongue or projection, D″, upon which the hub is rested while being operated upon. I have represented this tongue as adapted to enter the mortise to be, and while being, operated upon, although it is obvious that the tongue could be placed lower down upon the rest at the proper angle, and so support the hub at other points, or within mortises other than the one undergoing the operation of being chamfered.

I have represented a screw as a means for the adjustment of the horizontal slide or rest, although other equivalent means may be adopted, especially such as have been already mentioned for the vertical slide. I would remark, however, that the horizontal-acting slide may be pivoted with a vertical-acting slide or device provided with a projection, upon which the hub may rest in manner capable of being adjusted vertically, thereby dispensing with the first-mentioned vertical-acting device.

The operation of my improved chamfering device may be stated thus: Take a hub which has been mortised, and place it in position for operation by resting the mortise upon the projection D″, and then adjust the rest vertically to cause the cutters to cut equally and alike upon both sides of the mortise, the depth being determined by means of the horizontal adjustment. The hub may be fed along the projection or support D″ by hand or by automatic operating mechanism, by which the operation of chamfering is completed at one operation, by which a great saving of time and perfection in the work are secured.

It will be obvious to those skilled in the art that a great and important result is secured by the mechanism operating in a manner to cut both sides of the mortise at one operation, as well as cutting only to the required depth, and in a manner to render it unnecessary to change cutters for the different lengths of mor-

tises, by the employment of which the operator saves much time and produces a greater degree of uniformity in results.

Having thus set forth my invention, what I claim as new, and desire to secure by Letters Patent of the United States, is—

1. The combination, with two or more cutters, adjustable toward or from each other, of a horizontally and vertically movable rest for the hub to be operated on.

2. The combination, with two or more cutters, adjustable toward or from each other, of a horizontally and vertically movable rest provided with a projection for sustaining a hub, a bed, bearings, and mandrel, substantially as set forth.

In testimony that I claim the foregoing I have hereunto signed my name, before two subscribing witnesses, this the 15th day of October, A. D. 1878.

PHINEAS JONES.

Witnesses:

WM. H. BALDWIN,

JOHN DANE, Jr.