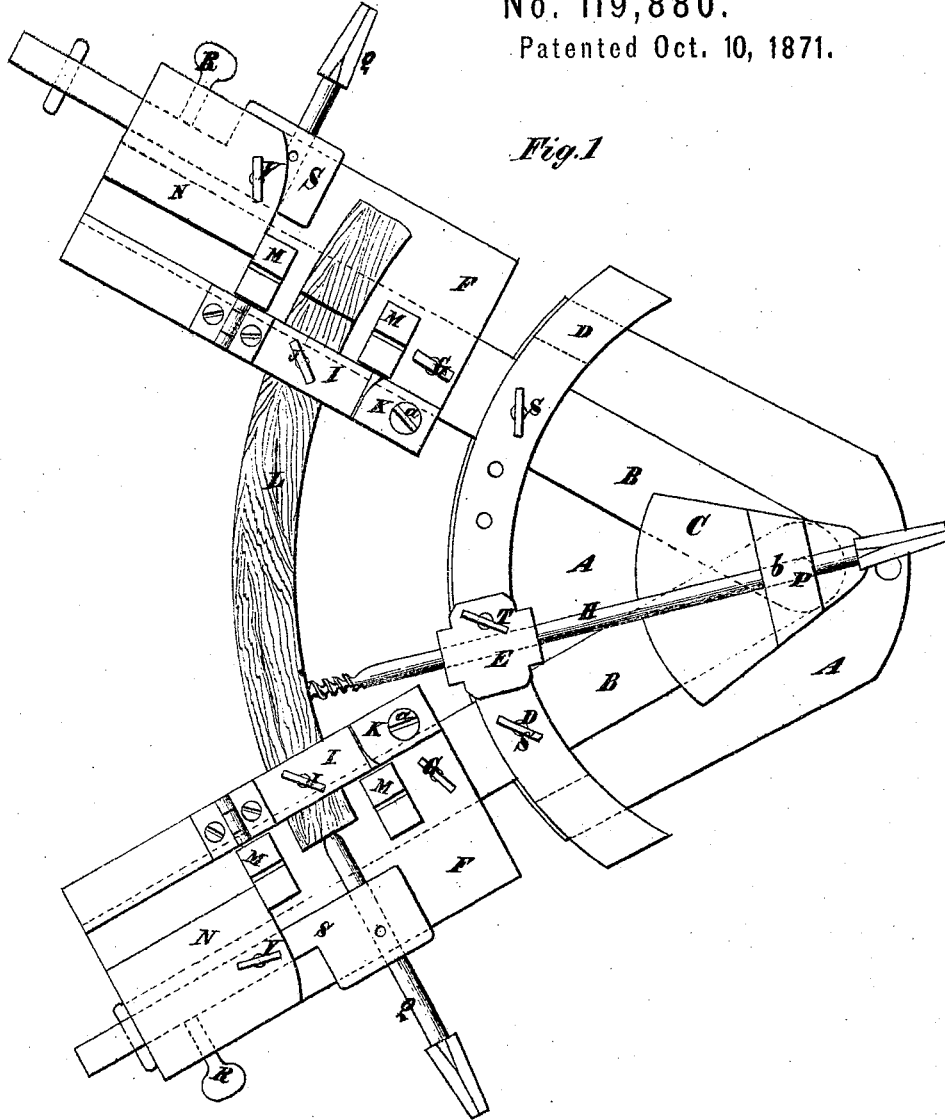


*William L. Perry's Machine for Fitting & Boring Felloes.*

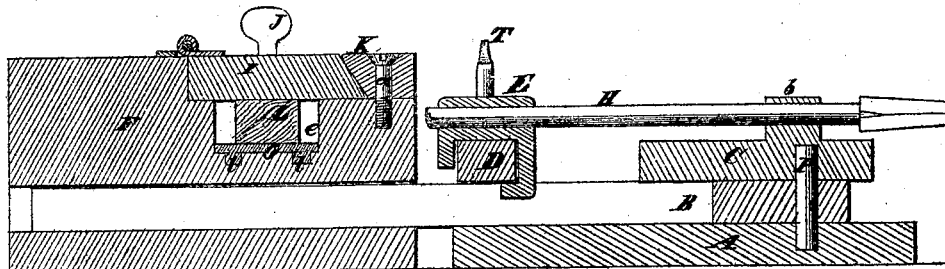
No. 119,880.

Patented Oct. 10, 1871.



*Fig. 1*

*Fig. 2*



*Witnesses*  
*Fred. Harper*  
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# UNITED STATES PATENT OFFICE.

WILLIAM LAWRENCE PERRY, OF JONESVILLE, SOUTH CAROLINA.

## IMPROVEMENT IN MACHINES FOR FITTING AND BORING FELLIES.

Specification forming part of Letters Patent No. 119,880, dated October 10, 1871.

*To all whom it may concern:*

Be it known that I, WILLIAM LAWRENCE PERRY, of Jonesville, in the county of Union and State of South Carolina, have invented a new and Improved Machine for Fitting and Boring Fellies; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawing forming a part of this specification.

This invention consists in a machine of novel construction, whereby the ends of the fellies of wheels of any diameter are first cut to any desired length at the proper angle to fit together and are afterward bored for the reception of the dowel-pins and for the spokes without removing or readjusting them.

In the accompanying drawing, Figure 1 is a plan of my machine, and Fig. 2 is a central section of the same.

Similar letters of reference indicate corresponding parts in both figures.

A is the base-plate of the machine, which is of sector-like form, may be secured to any table or other suitable support, and has pivoted to its center, by a pin or pivot, P, which forms the common center of the machine, two arms, B B, the contiguous ends of which are mortised into each other. Above these arms is another smaller sector-shaped plate, C. At the forward side of the base-plate, over the arms B B, is an arc-shaped race D, which is secured near its ends to the base-plate, and is provided with set-screws *s s*, by which the said arms B B may be secured in any position. On the race D there is also a sliding carrier, E, which forms the bearing for the forward portion of the spoke-auger H. This auger is of ordinary form, and has a head for the reception of a brace-socket. The sector-shaped plate C has formed on it a raised bearing, *b*, in which the rear end of the said auger H is supported. The sliding carrier E is provided with a clamping or set-screw, T, and has extending from its front a lug which bears against the front of the race D, and has extending from its back another lug, whose lower end is bent under the race, thereby bearing against the back and under side of the race and securing the carrier on it. F F are two boxes having longitudinal slots or holes through them to receive the arms B B, on which they slide, and provided with set-screws G G. At the adjacent edges of these boxes, above the

general surface of the tops of the blocks, are hinged gates I I, which bear on the felly, and are provided with set-screws J J, which clamp and securely hold the felly. These gates have beveled ends, and are secured, when down, by beveled abutting-plates or hasps K K, which are pivoted to the blocks by screws *a a*, and may be turned so that their beveled sides will bear on the beveled sides of the gates to secure them, or may be turned at right angles thereto to release them. Under each gate is a recess, *e*, at the bottom of which there is a plate, O, which is secured in place by projecting lugs *l l*, and on which the felly L rests. Just inside the said gates, immediately over the centers of the arms B B, are two miter-boxes, M M, one on each side of the recess *e*, for the reception of the saw, by which the end of the felly is cut at a proper angle to fit the neighboring one. Near the outer sides of the said boxes are slides *s s*, the shape of which is shown in the drawing, which work within suitable bearings N N on top of the boxes. Each of these bearings is provided with two set-screws, R and V, one of which, R, impinges against the side of the slide, and the other, V, on the top thereof. These slides carry the dowel-pin augers Q Q, which extend transversely through them.

In practice I shall make a scale on the arms B B to gauge the boxes for wheels of different radiuses, and shall also make one on the race D to gauge the different length of fellies. To cut and bore a felly the boxes are first adjusted and clamped on the arms B B to the radius of the wheel of which the felly forms a part; the felly is then placed in the recess *e* and the gates shut down and secured by the abutting-plates or hasps K; the arms are then adjusted relatively to each other to bring the intended ends opposite the miter-boxes; the felly is then securely clamped in position by the screws J J and cut by saws working in the said miter-boxes. After it is thus cut the spoke-auger H is turned opposite the places where the spoke-holes are to be bored, which may also be gauged by adjusting the carrier E by a scale on its race D, and a brace is then applied to the head of the auger to operate it and bore the holes. To bore the dowel-pin holes the slides S S are first slid up to bring the augers opposite the centers of the ends of the fellies, and they are then securely clamped in position by the screws R and V, and wrenches or braces

are applied to the ends of the augers, which are thereby turned to bore the holes, and after this is accomplished the augers are withdrawn from the holes and the slides slid back out of the way to permit the removal of the felly from the machine. A felly cut and bored by my machine is exactly true, as all the parts move from a common center, which in all sizes of fellies coincides exactly with the center of the wheel of which it is to form a part. By the use of my machine much time and labor are saved over the old laborious way of cutting fellies while held in an ordinary bench-vise.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. The combination of the arms B B pivoted to the common center P, and the boxes F F, adjustable lengthwise of said arms, substantially as and for the purpose herein set forth.

2. The combination of the race D and its set-screws with the said arms B B, substantially as described, for the purpose of securing them in position.

3. The carrier E containing the forward bear-

ing of the spoke-auger H, and provided with a set-screw, T, the race D, and the sector-like plate C which contains the rear bearing of said auger, the whole being arranged relatively to the boxes F F and arms B B, substantially as and for the purpose herein specified.

4. The combination of the dowel-auger slides S S with the boxes F F, substantially as and for the purpose herein set forth.

5. The combination of the miter-boxes M M with the boxes F F, substantially as and for the purpose herein described.

6. The combination of the gates I I, the abutment pieces K K by which the same are secured, and the set-screws J J with the boxes F F, substantially as and for the purpose specified.

7. The arrangement of the dowel-auger slides S S, the miter-boxes M M, gates I I and their abutment pieces K K relatively to each other on the boxes F F, substantially as described.

WILLIAM LAWRENCE PERRY.

Witnesses:

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