(No Model.) 2 Sheets—Sheet 1.

A. CROSSLEY.

MACHINE FOR RIVETING AND DRESSING WHEELS.

No. 346,987. Patented Aug. 10, 1886.

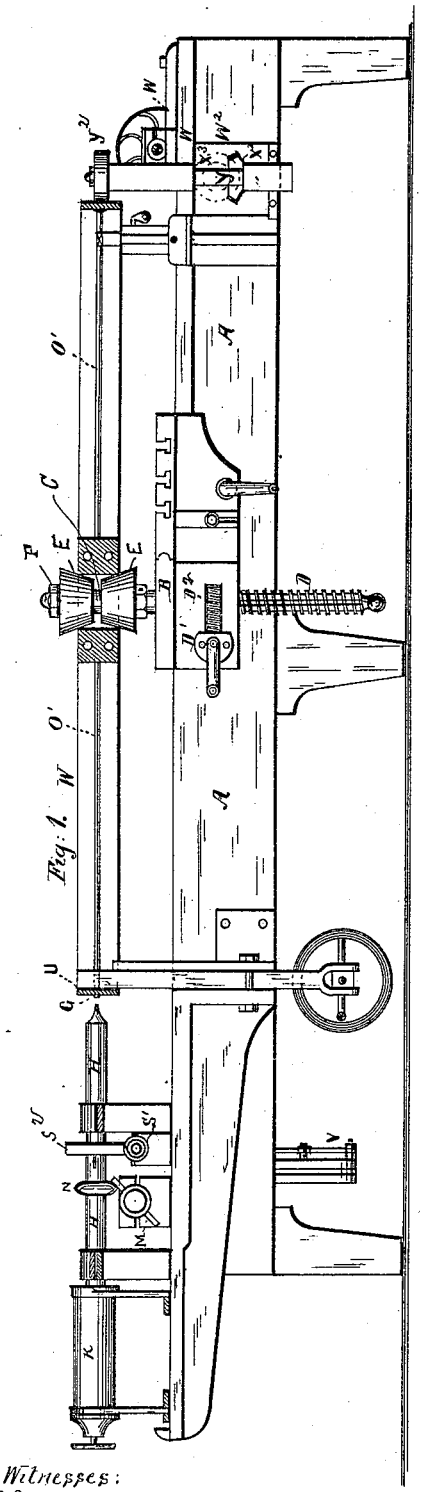

Fig. 1.

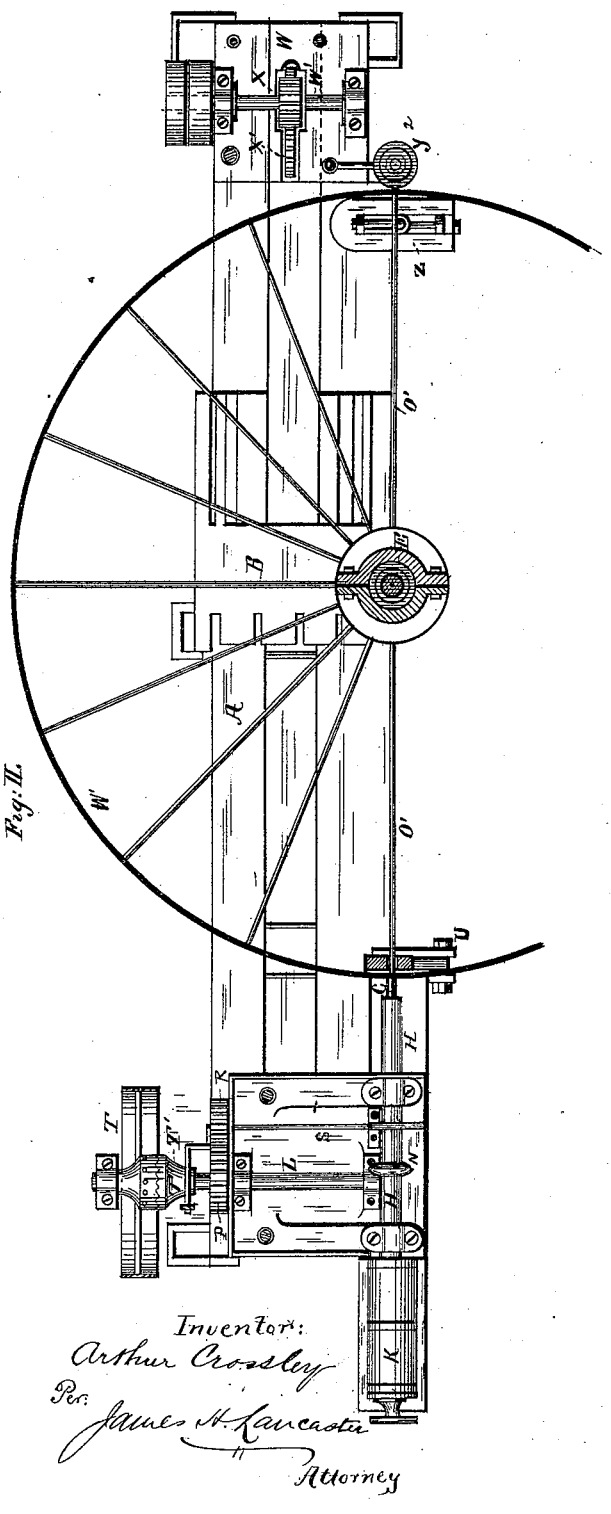

Fig. II.

Witnesses:
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(No Model.) 2 Sheets—Sheet 2.

A. CROSSLEY.

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Fig. III.

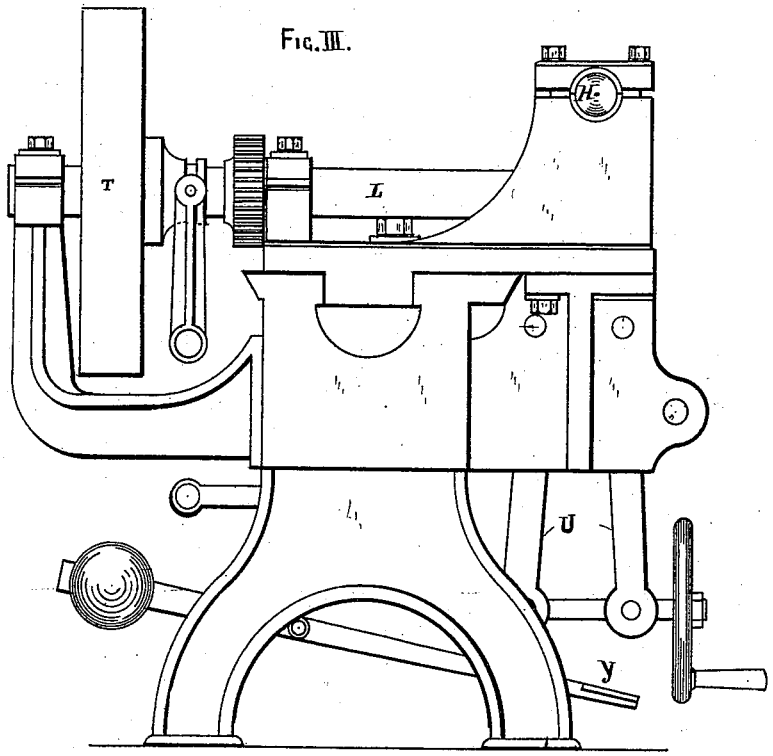


Fig. V.

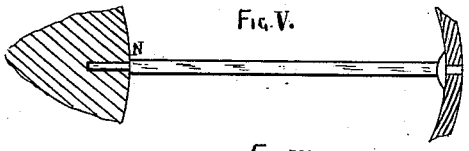
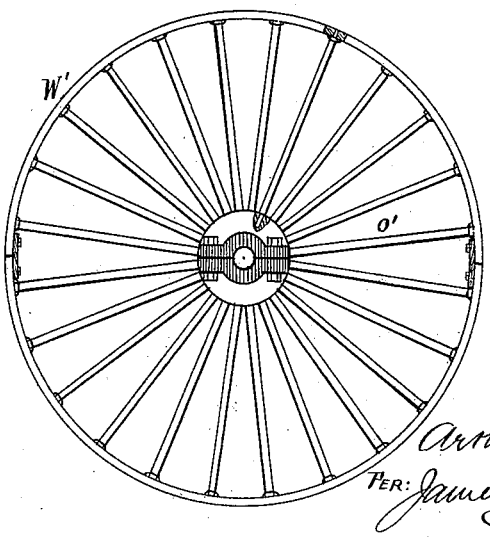


Fig. IV.



Witnesses:
C. Barrett.
M. Ellison.

Inventor:
Arthur Crossley
Per: James H. Lancaster
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UNITED STATES PATENT OFFICE.

ARTHUR CROSSLEY, OF CLECKHEATON, COUNTY OF YORK, ENGLAND.

MACHINE FOR RIVETING AND DRESSING WHEELS.

SPECIFICATION forming part of Letters Patent No. 346,987, dated August 10, 1886.

Application filed May 11, 1886. Serial No. 201,891. (No model.) Patented in England March 20, 1884, No. 5,188.

To all whom it may concern:

Be it known that I, ARTHUR CROSSLEY, a subject of the Queen of Great Britain, and a resident of Cleckheaton, in the county of York, England, have invented certain new and useful Improvements in Pulleys, and in Machinery for Making the Same; and I do hereby declare that the following is a full, clear, and exact description thereof.

The object of my invention is to produce a machine for riveting and dressing the arms of wheels to the rim without heating the same.

Referring to the drawings, Figure I is a front elevation of my machine. Fig. II is a plan view of Fig. I. Fig. III is an enlarged front elevation of Fig. I. Fig. IV is an enlarged plan view of the made-up pulley. Fig. V is a sectional view of Fig. IV.

A is an ordinary lathe-bed on which I arrange a saddle, B, carrying a vertical spindle, C. This spindle is raised or lowered by means of a screw, D, worm D′, and worm-wheel D^2. On the spindle C are placed two cones, E E′. These cones are inserted into the opening of the hub of the wheel W′, and screwed closely together by nut F. When closely screwed together they hold the wheel firmly in place. The cones permit any sizes of pulleys or wheels to be held thereto.

G is the riveting-tool, carried by spindle H. One end of this spindle rests and revolves in suitable bearings, while the other end abuts against a spring in spring-box K upon the driving-shaft L.

M is a tumbler which comes in contact with the flange N on the tool-holder spindle H. The object of this arrangement is to depress and release the spring, and thereby cause the spindle H to give a succession of blows against the end of the arm O of the wheel W″″.

P is a gear-wheel on shaft L, which gears into the wheel R on shaft S. This shaft S is provided with a worm which revolves the worm-wheel S^2 fastened on the tool-spindle H. The object of this arrangement is to cause the tool-holder to revolve slowly, so that each blow given is directly upon the end of the wheel-arm O′. This permits the riveting to be done in the most perfect and even manner.

U is a vise for holding the spoke of the wheel. The arms of this vise are fulcrumed to the bed-plate of the machine, and opened and shut by a screw-rod turned by a crank or wheel, as shown. The driving-wheel T is put in and out of gear by the clutch T′, which may be operated by the treadle V or any other means.

W is another saddle placed at the other end of the lathe-bed. This saddle carries the spindle W′ which drives shaft W^2 by means of gear-wheels x and x'. It also drives gear-wheels x^2 and x^3.

Y^2 is a revolving cutter attached to vertical spindle Y. The object of this cutter is to dress the riveted end of the arms O′ of the wheel W′.

The saddles B and W slide on the lathe-bed to accommodate different sizes of wheels, and are held in position in the usual manner.

The machine is adapted to operate on different size wheels.

The saddle or cross-head B is moved longitudinally on the frame of the machine.

Z is an adjustable rest fastened to the machine to steady the spokes O′ while the cutter Y^2 is dressing the riveted arms.

Having thus described my invention, I desire to claim—

1. The saddle B, carrying a vertical spindle, C, raised or lowered by means of screw D, worm D′, and worm-wheel D^2, and provided with the cones E E, in combination with the bed-plate A, substantially as and for the purpose set forth.

2. The combination of the gear-wheel P on shaft L, gear-wheel R on shaft S, worm S′, and worm-wheel S^2 on spindle H, for the purpose set forth.

3. The combination of the spindle W′, gear-wheels x x', shaft W^2, and bevel-wheels x^2 and x^3, all arranged substantially as and for the purpose set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 20th day of August, 1885.

ARTHUR CROSSLEY.

Witnesses:

R. J. WELSEY,

WILLIAM JOHN GILBERT.