2. Sheets. Sheet. 1.

W. I. Jordan,

# Bending Fifth Wheels.

No 100,903. Patented Mar. 15. 1870.

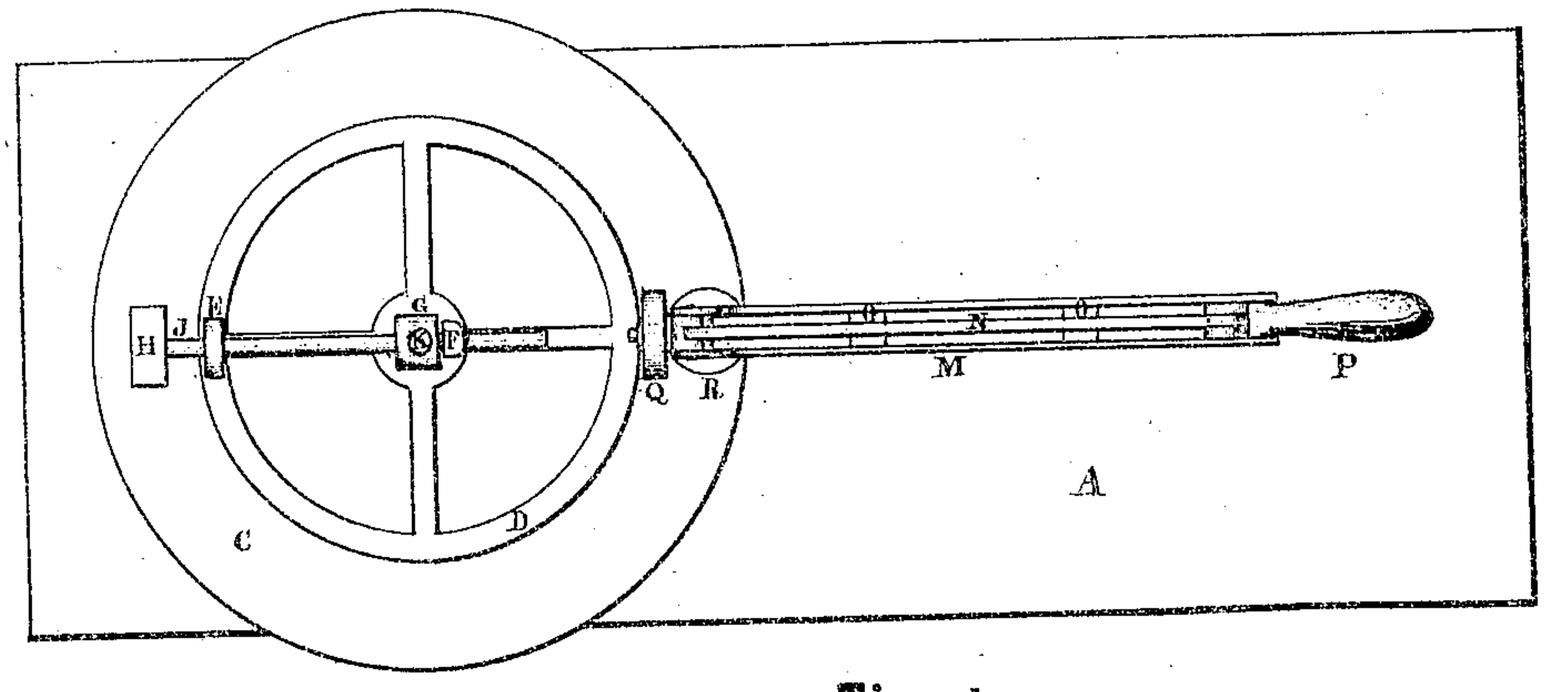



Fig. 1.

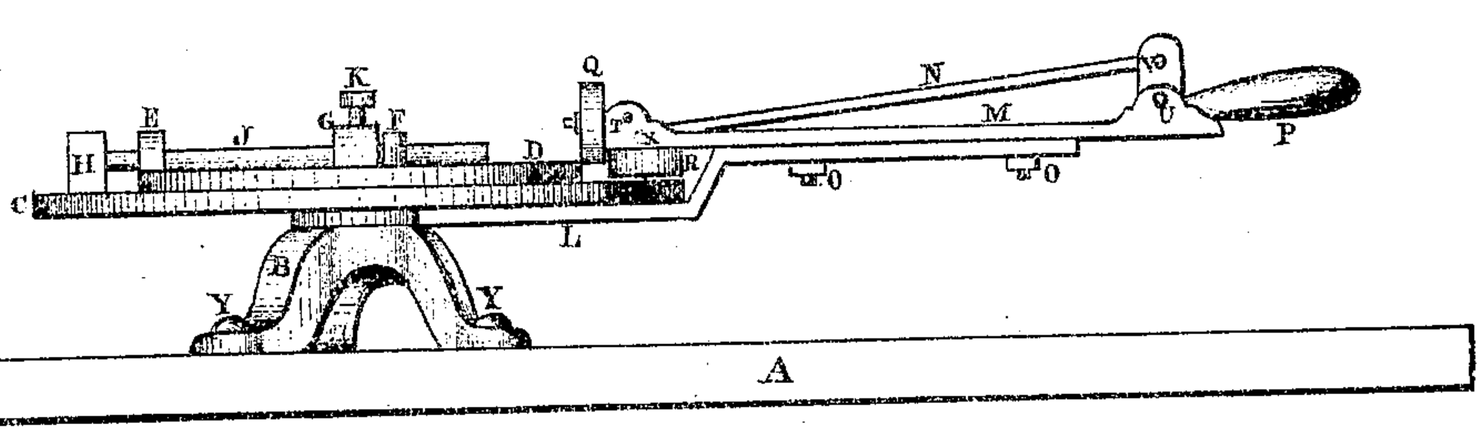
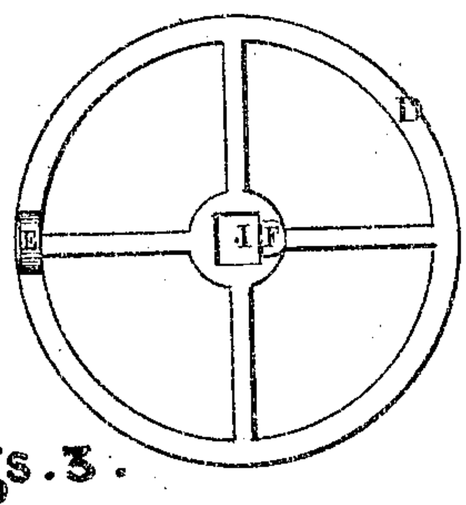
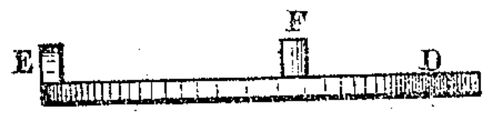



Fig. 2.




Figs. 3.




Witnesses.
Geo. N. Raff
And. Choffin.

W. I. Jordan Inventor
by Edwards & Attorney.

W. J. Jordan, 2 Sheets. Sheet. 2.

Bending Fifth Wheels.

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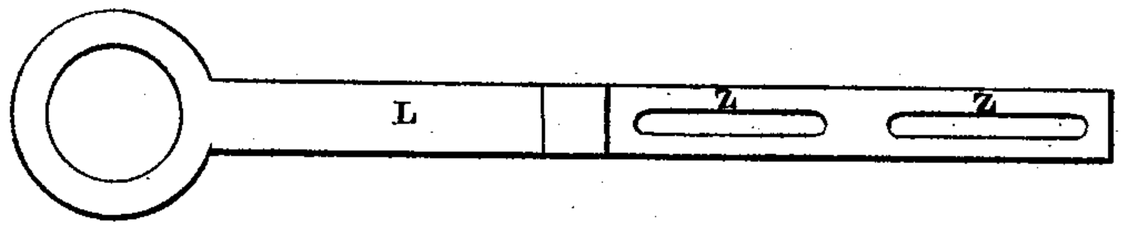
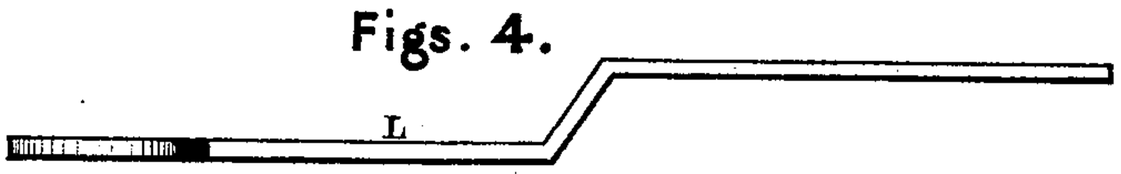
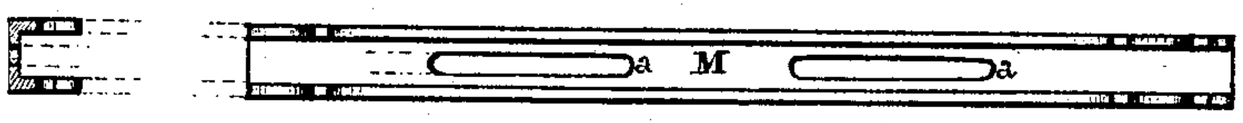
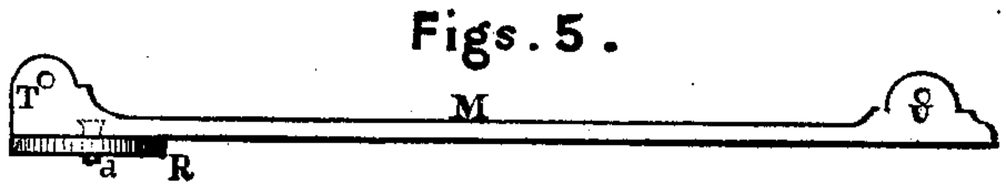


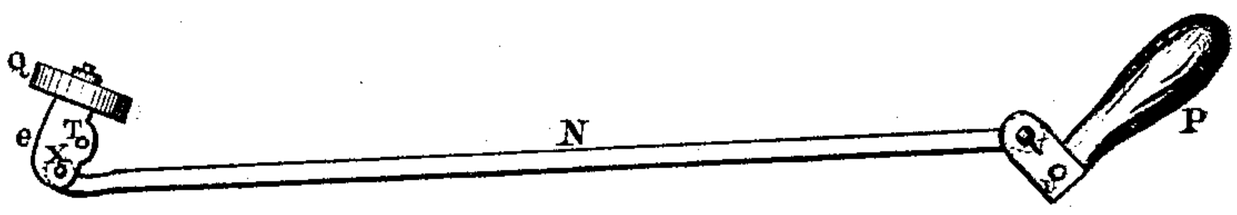

Figs. 4.




Figs. 5.




Figs. 6.


Figs. 7.




Fig. 8.

Witnesses.
Geo. W. Raff.
And. Choffin.

W. J. Jordan, Inventor
by Job Abbott Attorney

# UNITED STATES PATENT OFFICE.

WILLIAM J. JORDAN, OF NEW LISBON, OHIO.

## IMPROVED MACHINE FOR BENDING FIFTH-WHEELS.

Specification forming part of Letters Patent No. **100,903**, dated March 15, 1870.

*To all whom it may concern:*

Be it known that I, W. J. JORDAN, of New Lisbon, Columbiana county, Ohio, have invented certain Improvements in Machines for Bending Fifth-Wheels for Vehicles; and I do hereby declare that the following is a full, clear, and exact description of my invention, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon, of which drawings—

Figure 1 is a plan of my improved machine. Fig. 2 is a side view of the same. Figs. 3 are plan and side view of the bending-die. Figs. 4 are plan and side view of the rotating arm. Figs. 5 are plan, section, and side view of slotted slide. Figs. 6 are side view of mechanism for operating press-wheel, and plan of bent-lever handle for same. Figs. 7 are plan and side view of swinging block for press-wheel. Fig. 8 is a side view of retaining block and rod.

The nature of my invention consists in certain improvements in machines for bending fifth-wheels for carriages and other vehicles, said improvements consisting in the novel combination of the retaining-block for holding the end of the iron to be turned into a circle with the frame and bending-die; also, in the novel construction of mechanism for carrying the bending-wheel; also, in the novel construction of mechanism for operating the press-wheel, these several improvements making the machine very simple and cheap in construction, and very easy to adjust to any required size of work, as well as insuring its easy and correct operation.

To enable others skilled in the art to make and use my invention, I will proceed to describe its construction and operation.

The base B of the machine is secured, by screws or bolts Y Y, to the floor or table A, as shown. In the center and at the top of this base is fixed the center-pin G, the lower part of which is turned round to form a journal for the rotating arm L, and the upper part of which is made of a square or angular section to prevent any rotation of the table C and bending-die D, which have holes at their centers to correspond with the angular section of the pin G, and set over said pin, as shown. The bending-die D is made of an external diameter equal to the interior diameter of the wheel to be formed, and has the lugs E and F secured on it, as shown. The retaining-block H is screwed on the end of the rod J, which rod is passed through holes formed in the lugs E F and center-pin G, and is held by the clamp-screw K in said center-pin, as shown in Figs. 1 and 2. The rotating arm L has a circular eye formed at its end, as shown in Figs. 4, which eye fits over the circular part of the center-pin G under the table C, as shown in Fig. 2. The outer end of the arm L is bent up, so as to bring it above the top of the table C, and is provided with the slots Z Z, as shown in Figs. 2 and 4. The slide M is of a U-shaped section, and has the slots *a a* formed in it, through which pass the bolts O O, which pass through the slots Z in the arm L and secure the slide to said arm. The bending-wheel R is pivoted on the pin *d* at the end, and on the under side of the slide M, and the swinging block *e* is pivoted on a bolt, T, between the sides of the slide M, as shown in Fig. 2. The press-wheel Q is journaled on the pin S on the swinging block *e*, and the rod N is attached by a pin, X, to the block *e* below the bolt T, which forms the axis of motion for said block. The bent-lever handle P is pivoted by a bolt, U, between the sides, and at the outer end of the slide M, and the rod N is secured to the short arm of said handle by the bolt V, as shown in Figs. 1, 2, and 6.

Now, to form any required wheel, a bending-die, D, of the proper size is placed on the table C, and the retaining-block H is set so as to leave a space between it and the bending-die D equal to the width of the iron to be formed, and it is fastened in this position by the clamp-screw K. The slide M is then fastened on the arm L by means of the bolts O O in such a position as to leave a space between the bending-wheel R and the bending-die D equal to the width of iron to be formed, and the arm L is swung around, so as to bring the bending-wheel R against the block H. The wheel Q being then thrown up into the position shown in Fig. 6, the bar of iron to be formed is placed between the bending-wheel R and the bending-die D, with its end between the retaining-block H and the bending-die, when, by pressing down the handle P,

the press-wheel Q is brought down onto the bar of iron in the position shown in Figs. 1 and 2. Now, by moving the arm L around the table C in the direction of the bar to be formed, it is evident that the bending-wheel R will force the iron around onto the bending-die D, and thus effect the circular form required for the wheel, the press-wheel Q serving to prevent the iron from bending upward as it is bent into the circular form required.

Where the axle-clips are formed on the iron for the fifth-wheel before it is formed into the circular shape, the bent-lever handle P can be thrown up whenever the press-wheel Q comes to a clip in forming the wheel, which will throw the wheel Q back into the position shown in Fig. 6, and thus allow the bending mechanism to pass the clip. By forming the lugs E and F on the bending-die D, two points of attachment are obtained between said die and the retaining-block H, consequently no movement of the die can take place without a corresponding movement of the retaining-block, from which it is evident that the danger of the bending-die and iron moving around with the movement of the bending mechanism L M R Q, and drawing the end of the iron from behind the block H so as to prevent the forming of the bar, is fully obviated.

Having thus fully described my improved machine, what I claim therein as new and of my invention, and desire to secure by Letters Patent, is—

1. The combination of the bending-die D, provided with lugs E F and angular center-hole I, retaining-block H secured on rod J, and angular center-pin G, provided with clamp-screw K, the several parts being constructed and arranged substantially as and for the purpose specified.

2. The rotating arm L and slotted slide M, provided with the bending-wheel R, when used in combination with the center-pin G and bending-die D, substantially as and for the purpose specified.

3. The combination of the slotted slide M, swinging block *e*, provided with press-wheel Q, rod N, and bent-lever handle P, the several parts being arranged substantially as and for the purpose specified.

4. The combination of the bending-die D, center-pin G, table C, rotating arm L, slide M, provided with bending-wheel R, swinging block *e*, provided with press-wheel Q, rod N, and bent-lever handle P, the several parts being arranged substantially as and for the purpose specified.

As evidence that I claim the foregoing I have hereunto set my hand in presence of two witnesses this 3d day of January, 1870.

WM. J. JORDAN.

Witnesses:
DAVID H. STEM,
CONRAD HUNE.