

R. Potts,

Making Fifth Wheels,

Nº 69,936,

Patented Oct. 15, 1867.

Fig. 3

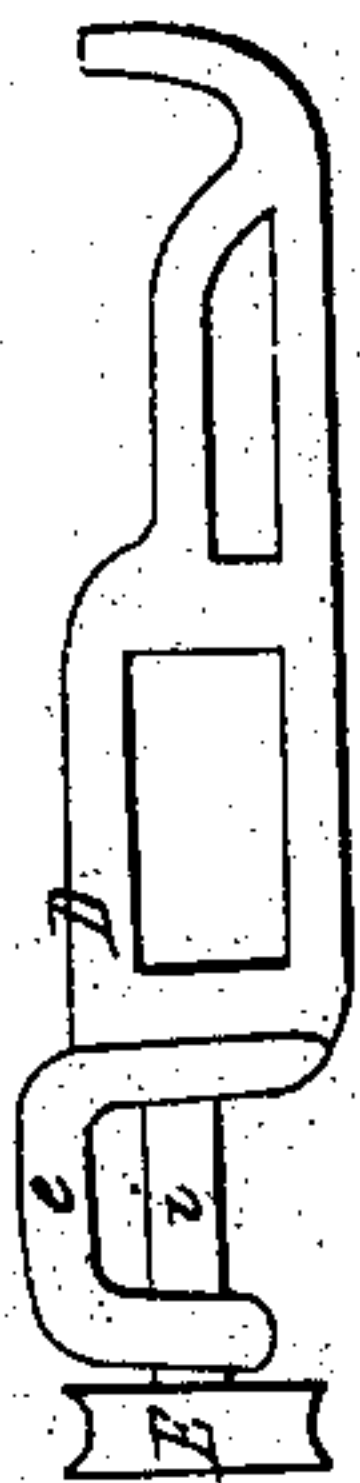


Fig. 1

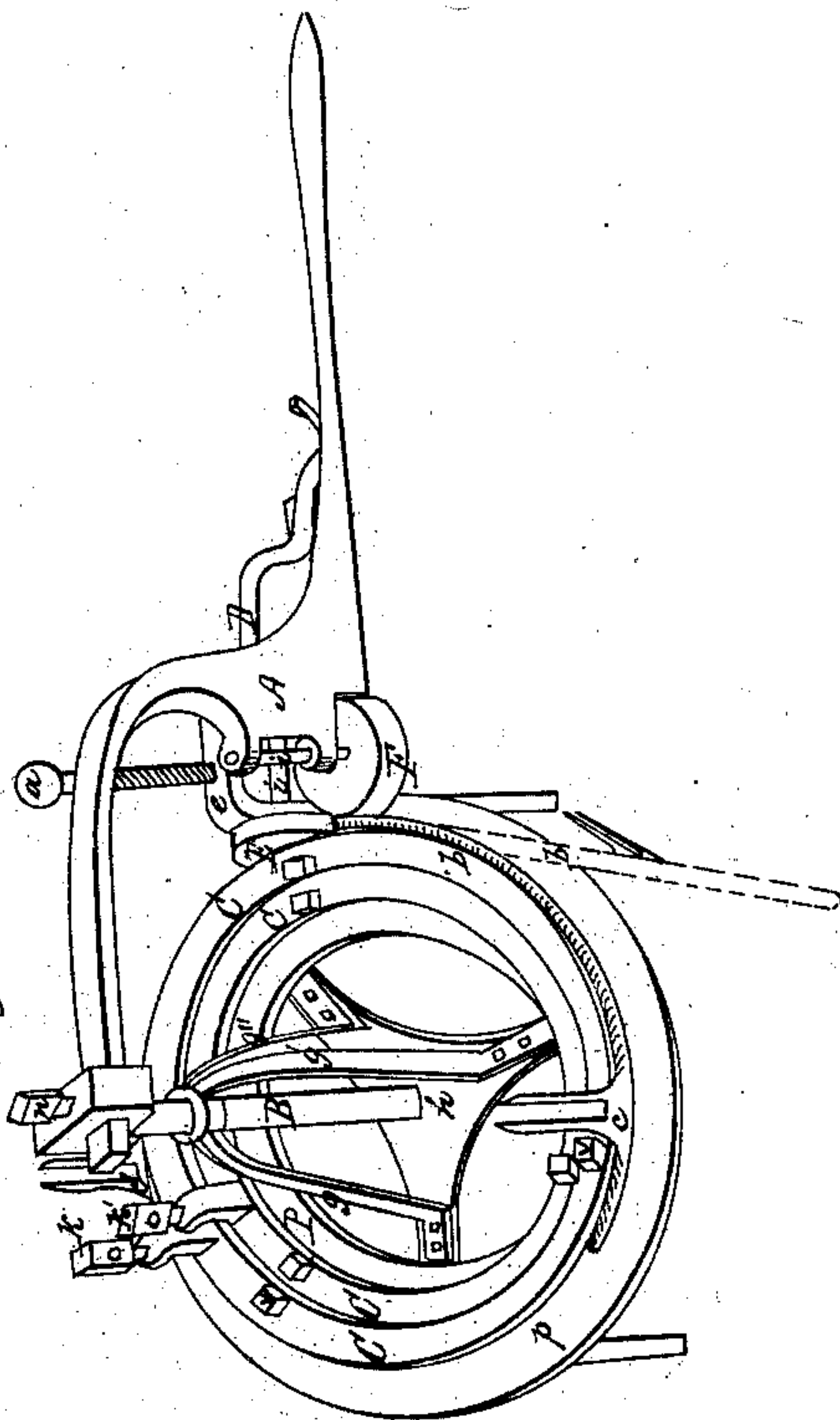
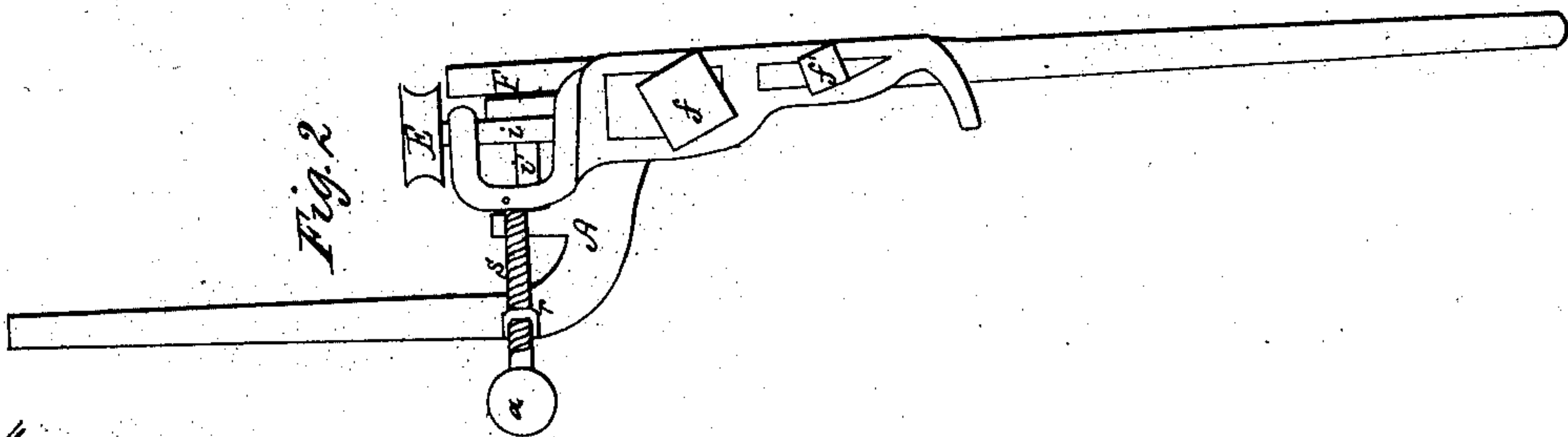


Fig. 2



Witnesses;
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United States Patent Office.

ROBERT POTTS, OF CHATHAM, NEW YORK.

Letters Patent No. 69,936, dated October 15, 1867.

IMPROVEMENT IN MACHINES FOR BENDING METALS.

The Schedule referred to in these Letters Patent and making part of the same.

Be it known that I, ROBERT POTTS, of Chatham, in the county of Columbia, and State of New York, have invented a new and useful Machine for Bending Circles for the front axles of wagons; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of the same, reference being had to the annexed drawings, making a part of this specification, in which—

Figure 1 is a perspective view.

Figure 2, a longitudinal elevation of the sweep or revolving lever detached.

Figure 3, a side view of the slotted sliding-frame which carries the grooved press-pulley or roller.

The nature of my invention consists in attaching an iron circle or ring of any required diameter to a bed-plate of cast iron, and by means of a revolving sweep with rollers attached, forming a circle of iron of the same curvature as the ring around which it is formed.

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

The entire machine, except the screws used, should be made of cast iron. Upon the bed-plate *p p'* I attach firmly, by means of the set-screws *v v v*, one of the circles *C*, (two of which are represented on the drawings,) of the size or curvature required for the circle to be bent. This ring or forming circle *C* should be of greater thickness than the iron *b'* intended to be bent, to afford a sufficient bearing. An upright shaft or revolving post, *B*, passes through the bottom of the bed-piece *p p'*, and is secured from withdrawing by a nut at the bottom end, and is supported above by the tripod-brace *g g' g''*. The thumb-screw *n* secures the sweep or revolving lever *A* to the head of the upright *B*. To this sweep are attached two press-rollers or pulleys *E F*. The top roller *E* is more or less grooved to fit the oval, half round, or other shaped iron, and the thumb-screw *a* is employed to regulate the pressure of this pulley or roller, by applying it to the top of the box-piece *e* which supports the shaft or axle *i*. This box-piece *e* is connected with the sliding frame *D*, and forms part of it, (see figs. 2 and 3.) The roller or pulley *F*, which revolves at right angles to *E*, is secured to the sweep *A* by means of two fixed journals, in which its axle or shaft *i'* revolves. This roller is adjusted, and its pressure against the outside of the rod to be bent, regulated, by means of the set-screw *n*, in the head of the revolving centre-post *B*.

Its operation is easily understood. The clips *c c'* having been welded to the circle iron, it is then heated to redness, or nearly so, throughout its entire length. One end is then placed under the set-screw *k* and firmly fixed; the sweep *A* is then brought round, so that the press-rollers *E* and *F* are in contact with the iron to be bent. The slotted frame, fig. 3, which carries the grooved pulley or roller *E*, is movable on the screws *f f*, so that it can be quickly moved back to allow it to pass outside the clips. Having passed the first it is moved up again and the roller applied to the top of the circle-bar *b*, which keeps it close to the table or bed-plate *p p'*, until by the revolution of the sweep the second clip is reached, when it is slipped back as before, until that is passed, and then again applied. In the mean time the roller *F* has all the while been doing its work of pressing the circle-iron close against the forming ring *C*, and giving it the curvature required. The bed-piece *p p'* may be attached to a firm table or bench, or be supported on legs of convenient height. The dotted lines *b*, fig. 1, indicate the position of the circle-rod before being bent to the position or form represented by *b*.

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

The adjustable frame *D*, arranged as specified, in combination with the sweep *A*, substantially as and for the purpose described.

ROBERT POTTS.

Witnesses:

ALEX. S. ROWLEY,

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