R. W. DAVIS.

MACHINE FOR MAKING METAL FELLIES.

No. 186,810. Patented Jan. 30, 1877.

Fig. 2.

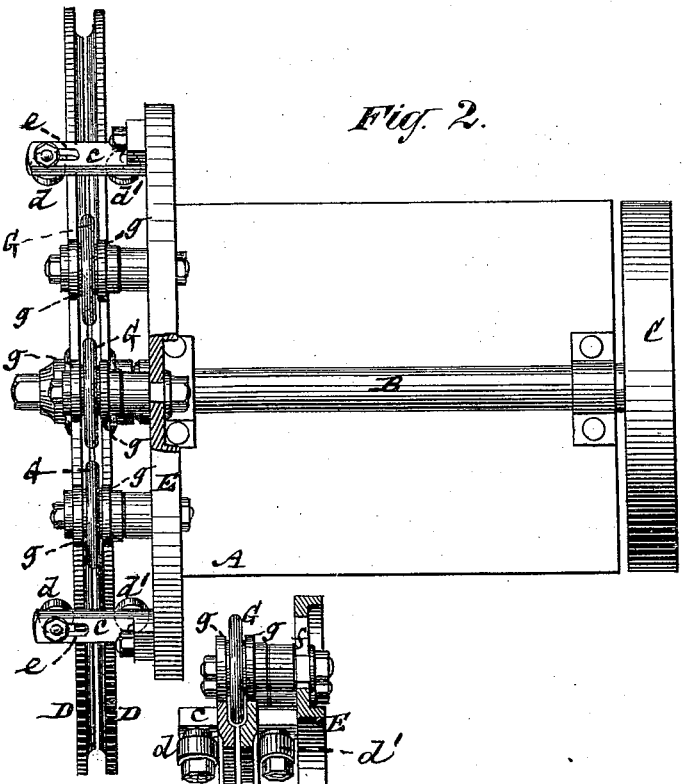


Fig. 1.

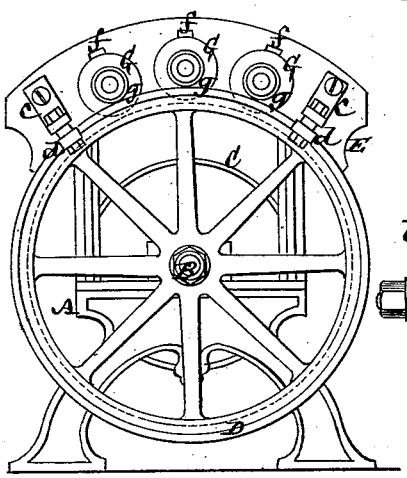
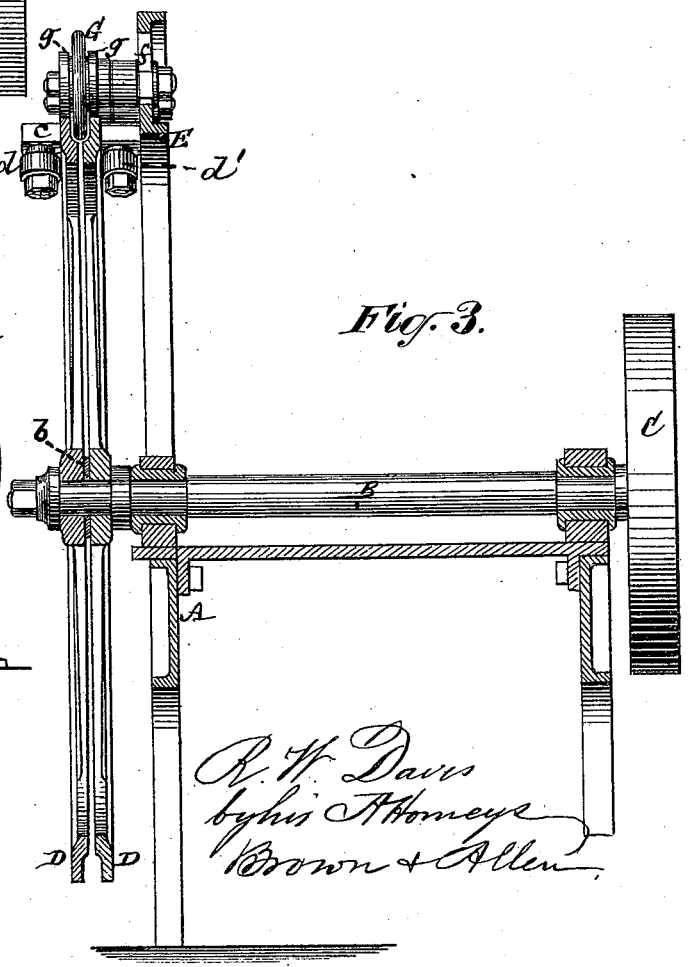


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

ROBERT W. DAVIS, OF ELMIRA, NEW YORK, ASSIGNOR TO EDWIN ELDRIDGE, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR MAKING METAL FELLIES.

Specification forming part of Letters Patent No. **186,810**, dated January 30, 1877; application filed August 16, 1876.

To all whom it may concern:

Be it known that I, ROBERT W. DAVIS, of Elmira, in the county of Chemung and State of New York, have invented certain new and useful Improvements in Machines for Forming Metal Fellies; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawing, which forms part of this specification.

This invention more particularly relates to the manufacture of U or trough shaped steel or metal fellies for the wheels of wagons and other vehicles.

The invention consists in a revolving wheel-former composed of two annular sections, arranged face to face with each other, but separated at their center by a disk or packing, in combination with outer guides or guide-rollers on the upper or one side of the axis of said former, and arranged to keep the two annular sections thereof in proper forming relation with each other on said side of the axis, while such annular former-sections are free to spring apart on the other side, to facilitate the delivery of the felly after the same has been formed by its passage between and around the confined forming portions of the annular sections of the revolving wheel-former, and under any number of free forming-rollers entering within the latter.

The invention also consists in certain combinations of adjustable forming-rollers and adjustable guide-rollers with the rotating annular wheel-sections which constitute the wheel-former, whereby the felly is more perfectly formed, and provision is made for adjusting the machine to make different diameters, thicknesses and widths of fellies.

Figure 1 represents a front-end view, upon a reduced scale, of a felly-forming machine constructed in accordance with my invention. Fig. 2 is a plan of the same upon a larger scale, and Fig. 3 a longitudinal vertical section thereof.

A is the frame of the machine, on which is mounted a rotating shaft, B, driven by a pulley, C, or otherwise. Clamped on the one end of this shaft, so as to be rotated with or by it, is a revolving wheel-former, composed of two annular sections, D D, which are counterparts of each other and arranged face to face, and of a shape on their perimeters corresponding with the exterior form of the required felly in its transverse section. These annular sections D D are separated from each other at their hubs by a plate or disk, *b*, the thickness of which may be varied, according to the required width of the felly.

E is an upper frame, mounted on the main frame A, and arranged to extend above the former-wheel D D, on the back or one side of it. This frame E carries, by means of brackets *e e*, arranged at suitable distances apart, guides or guide-rollers *d d'*, arranged to bear on the outer sides or faces of the annular former wheel-sections D D in their upper course of travel. The outer ones, *d*, of these rollers may be adjustable in slots *e* of the brackets, to provide for varying the distance apart of the annular sections D D, to suit different widths of felly, accordingly as a thicker or thinner disk, *b*, is introduced between the annular sections D D, or as wear or other exigencies may require. These guides or rollers *d d'* keep the annular sections D D of the wheel-former bound from separating or springing apart in their upper course of travel, a the metal strip used to form the felly or felly section is introduced over and within the hollow or grooved perimeter of the wheel-former and as said strip passes around and within the latter, and under forming-rollers G G, entering within the grooved perimeter of the wheel-former. These forming-rollers G G ar also adjustable within slots *f f* in the fram E, in or out relatively to the axis of the wheel former, to suit different thickness or diameter of felly, or as wear of the working parts m require.

Said rollers G G are constructed with hu or flanges *g g* on their opposite sides or face These hubs bear on or work in close contigui with the perimeters of the wheel-sections D, whereby they serve to gage or equalize t metal of the strip as it is formed into a trou shape by its passage within the channel groove shaped wheel-former D D, and un and past the sides of the forming-rollers G

The wheel-former D D not being bound

the opposite sides of its axis by guides or guide-rollers *d d'*, the sections of which it is composed are free to separate or spring apart below the axis, thereby releasing the formed belly as it comes round to such point, and allowing of the same to drop or be freely delivered.

I claim—

1. The combination of the rotating annular wheel-sections D D, with their central separating piece or plate *b*, the guides or guide-rollers *d d'* on one side of the axis of said wheel-sections or divided wheel-former, and one or more forming rollers, G, on the same side of said axis, substantially as specified.

2. The combination of the adjustable forming-rollers G with the rotating annular wheel-sections D D, essentially as described.

3. The combination of the adjustable guide-rollers *d d'* with the rotating annular wheel-sections D D, substantially as shown and described.

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Witnesses:

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