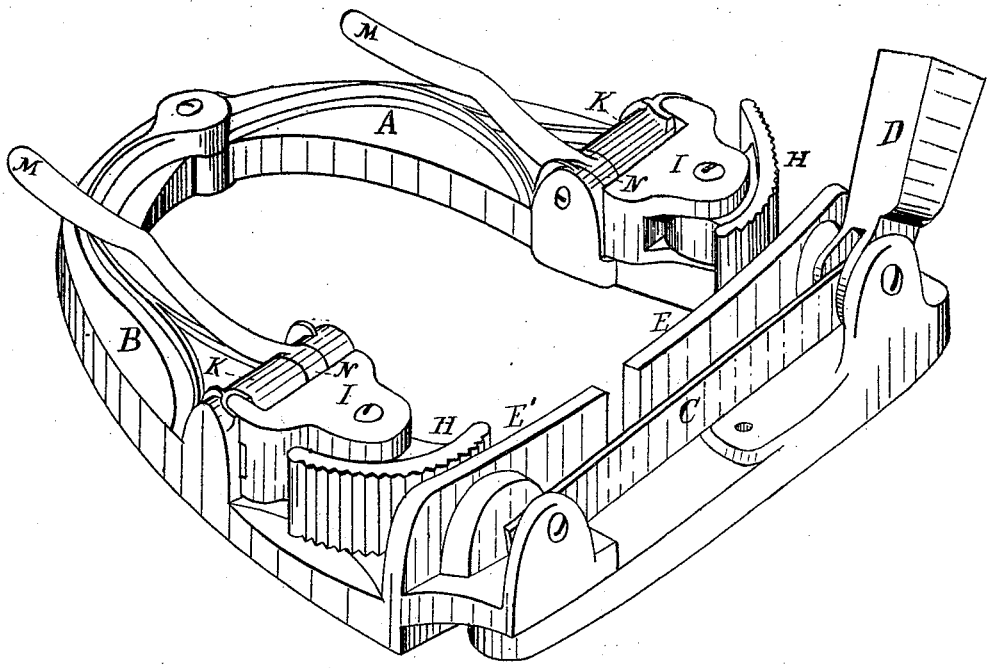
2 Sheets—Sheet 1.

N. SAWYER.

MACHINES FOR UPSETTING TIRE.

No. 184,669. Patented Nov. 21, 1876.

Fig 1.



Witnesses.
B. C. Pole
R. B. Whitman.

Nelson Sawyer Inventor by
C. S. Whitman
atty.

2 Sheets—Sheet 2.

N. SAWYER.

MACHINES FOR UPSETTING TIRE.

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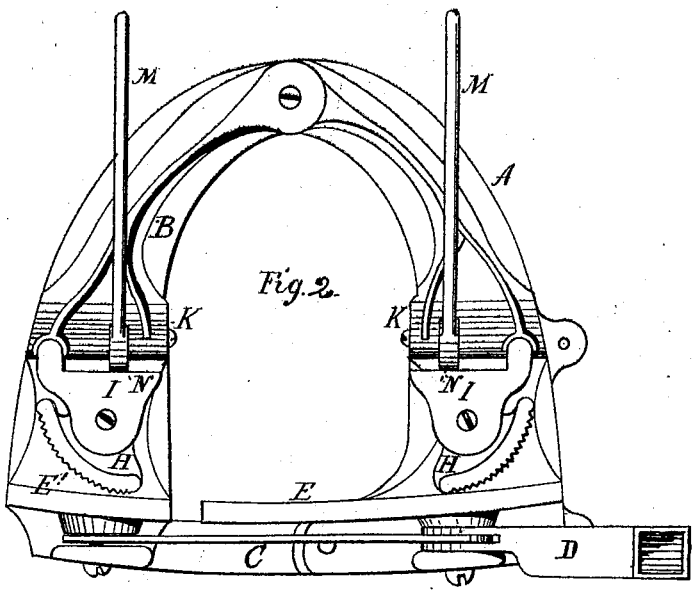


Fig. 2.

Fig 3.

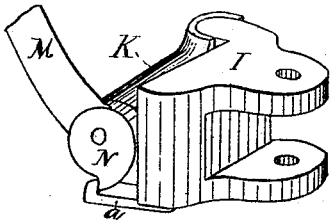
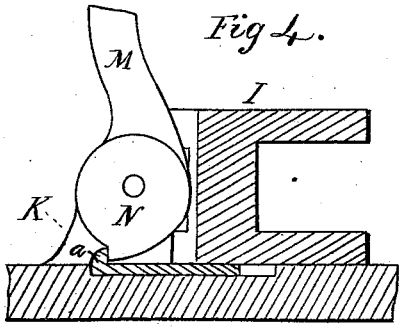


Fig 4.



Witnesses
B. C. Pole
N. B. Whitman.

Nelson Sawyer Inventor by
C. S. Whitman
atty

UNITED STATES PATENT OFFICE.

NELSON SAWYER, OF GREENFIELD, MASSACHUSETTS, ASSIGNOR TO THE WILEY & RUSSELL MANUFACTURING COMPANY, OF SAME PLACE.

IMPROVEMENT IN MACHINES FOR UPSETTING TIRES.

Specification forming part of Letters Patent No. **184,669**, dated November 21, 1876; application filed July 12, 1876.

To all whom it may concern:

Be it known that I, NELSON SAWYER, of Greenfield, county of Franklin, and State of Massachusetts, have invented a Machine for Upsetting or Shrinking Tires. The following description, taken in connection with the accompanying plate of drawings, hereinafter referred to, forms a full and exact specification, wherein are set forth the nature and principles of the invention, by which the same may be distinguished from others of a similar class, together with such parts thereof as are claimed as new, and are desired to be secured by Letters Patent of the United States.

My invention relates to that class of tire-upsetting machines in which cams are provided for securing the tire in position; and the nature thereof consists in providing means for adjusting and detaching the said cams, as hereinafter described.

In the accompanying plate of drawings, in which corresponding parts are designated by similar letters, Figure 1 is a perspective view of a machine for shrinking or upsetting tires having my improvements applied thereto. Fig. 2 is a plan view of the same. Fig. 3 is a view of the mechanism for operating the cam-carrier and cam. Fig. 4 is a vertical section, illustrating the action of the cam-lever upon the carrier.

The stationary arm or bed-plate of the machine is generally secured to a plank frame. The movable arm B is pivoted to the bed-plate A, and actuated through the medium of the connecting-rod C by the lever D. The tire is held in place against the jaw E, attached to the said bed-plate, and the jaw E′, secured to the said movable arm, by cams H, the milled surfaces of which firmly gripe the said tire. The said cams partially revolve horizontally upon carriers I, which are pivoted to, and supported against, the shoulders K. The said carriers are forced outward and drawn inward by means of the eccentric levers N, which have their fulcrums in the said shoulders K, and are provided with handles M. When it is desired to force the said carrier, to which is pivoted the said milled cam, outward, the handle M is depressed, which causes the eccentric end of the said lever to revolve against the back of the said carrier and push it outward. When it is desired to detach the said milled cam from the tire the said carrier is withdrawn by raising the handle M in such a manner as to cause the end of the short arm of the lever to engage with the lug *a* at the bottom of the said carrier.

It will be obvious to those skilled in the art to which the invention relates that other known mechanical equivalents may be substituted for the cam-lever as a means for operating the said carrier without changing the principle of my invention.

I claim and desire to secure by Letters Patent of the United States—

1. In a tire shrinking or upsetting machine, the means provided for adjusting and disengaging the cams, consisting of a carrier pivoted to an upright shoulder, and operated by a cam-lever or other equivalent mechanism, as and for the purposes described.

2. The combination of the bed-plate, the movable arm, the milled cams, the carriers, and the cam-levers, as and for the purposes described.

In testimony that I claim the foregoing I have hereunto set my hand this 13th day of June, 1876.

NELSON SAWYER.

Witnesses:

PHILIPP SEIBERT,

J. M. ROWLEY.