T. E. BARROW.

FRICTION-CLUTCH.

No. 169,614. Patented Nov. 9, 1875.

Fig. 5

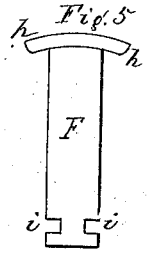


Fig. 4.

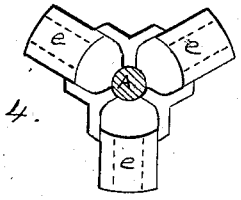


Fig. 3.

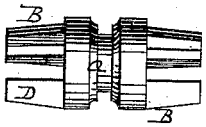


Fig. 2.

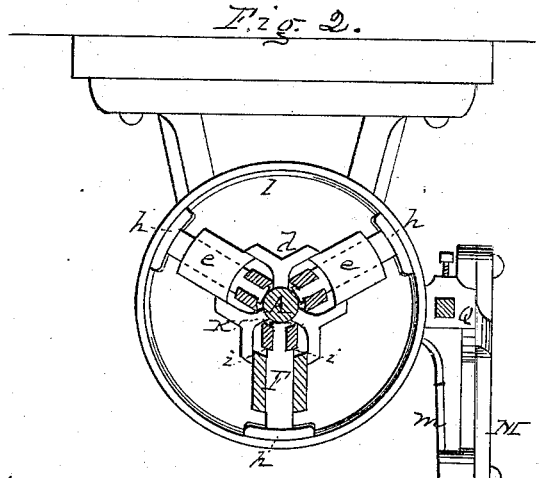
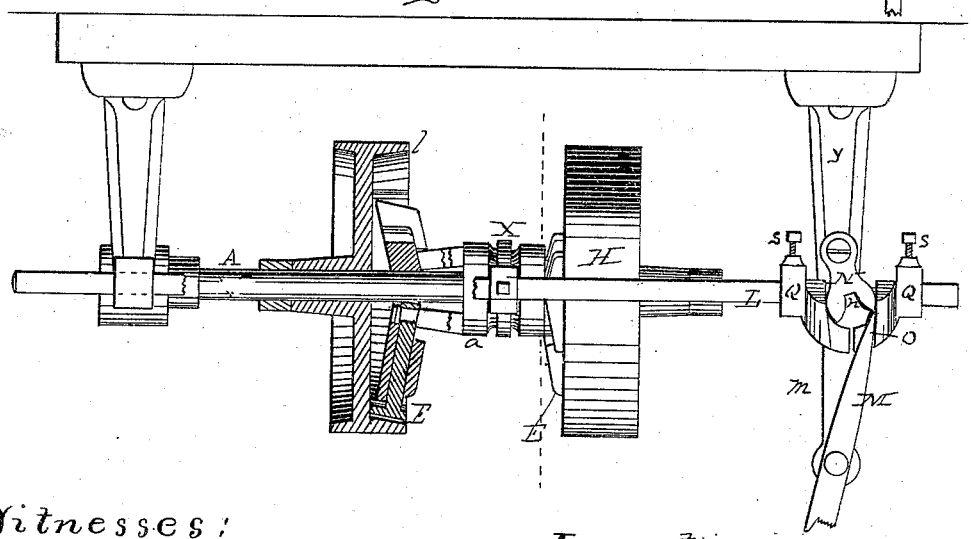


Fig. 1.



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Chas. C. Gill
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Inventor:
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By his attys,
Cox and Cox

UNITED STATES PATENT OFFICE.

THOMAS E. BARROW, OF MANSFIELD, OHIO.

IMPROVEMENT IN FRICTION-CLUTCHES.

Specification forming part of Letters Patent No. **169,614**, dated November 9, 1875; application filed February 26, 1875.

To all whom it may concern:

Be it known that I, THOMAS E. BARROW, of Mansfield, Richland county, Ohio, have invented a new and useful Improvement in Friction-Clutches, of which the following is a specification, reference being had to the accompanying drawings.

The invention relates to an improvement in friction-clutches, as more particularly described hereinafter.

The object of the invention is to provide a convenient device for regulating the speed of shafts driven by belt-wheels and analogous devices.

Figure 1 is a side elevation of a device embodying the elements of the invention. Fig. 2 is an end elevation of same partly in section. Fig. 3 is a detached view of the crown. Fig. 4 is a similar view of a part of the spider. Fig. 5 is a like view of the slide F.

A, in the accompanying drawings, is a wheel-shaft provided with the crowns B, which are placed movably upon the shaft, and connected by the collar *a*, which forms an annular slot between the crowns, the fork of the arm *x* entering above and below, while the base of the arm is secured to the shifting-rod L. The outer edge of the crowns is provided with the prongs D, arranged in the present instance in equidistant groups of two, and gradually curving or inclining inward from base to point. To the shaft A are firmly secured the spiders E placed with their appurtenances within the flanged wheel H, and having about their centers the frames *d*, having three recesses to receive the ends of a corresponding number of radiating casings, *e*, in which are provided the slides F having the bearings *h* at one end, and at the other the slots *i* to receive the prongs of crowns B, as shown. Thus, when a crown, B, is forced toward a wheel, H, the slides F are expanded, the bearings *h* coming in contact with the flanges *l* of the wheel H, which is loosely mounted upon the shaft A, while a contrary movement of the crown retracts the bearings and frees the wheel. M is a lever having a pivot-fulcrum in the hanger *m*, its handle depending so as to be within convenient reach. The arm N is pivoted to the standard *y*, and opposite the pivot is provided with a notch, *n*, to receive the end of the lever M, and oscillating in the concavity of the plates Q, forming a coincident arch, and attached to the shifting-rod by set-screws, *s*, so arranged as to permit adjustment. When the end of the lever M passes out of the notch *n* the cam is effectually locked. The nearer the plates Q are brought together the greater the movement required of the shifting-rod.

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

1. The crown B, provided with the prongs D, in combination with the spider E and slides F, substantially as shown and described.

2. The combination of the lever M, arm N, and adjustable plates Q on the shifting-rod L, substantially as described, and for the purpose specified.

In testimony that I claim the foregoing improvements in friction-clutches, as above described, I have hereunto set my hand and seal this 9th day of February, 1875.

THOMAS E. BARROW. [L. S.]

Witnesses:

F. W. WAGNER,

GEO. W. STATLER.