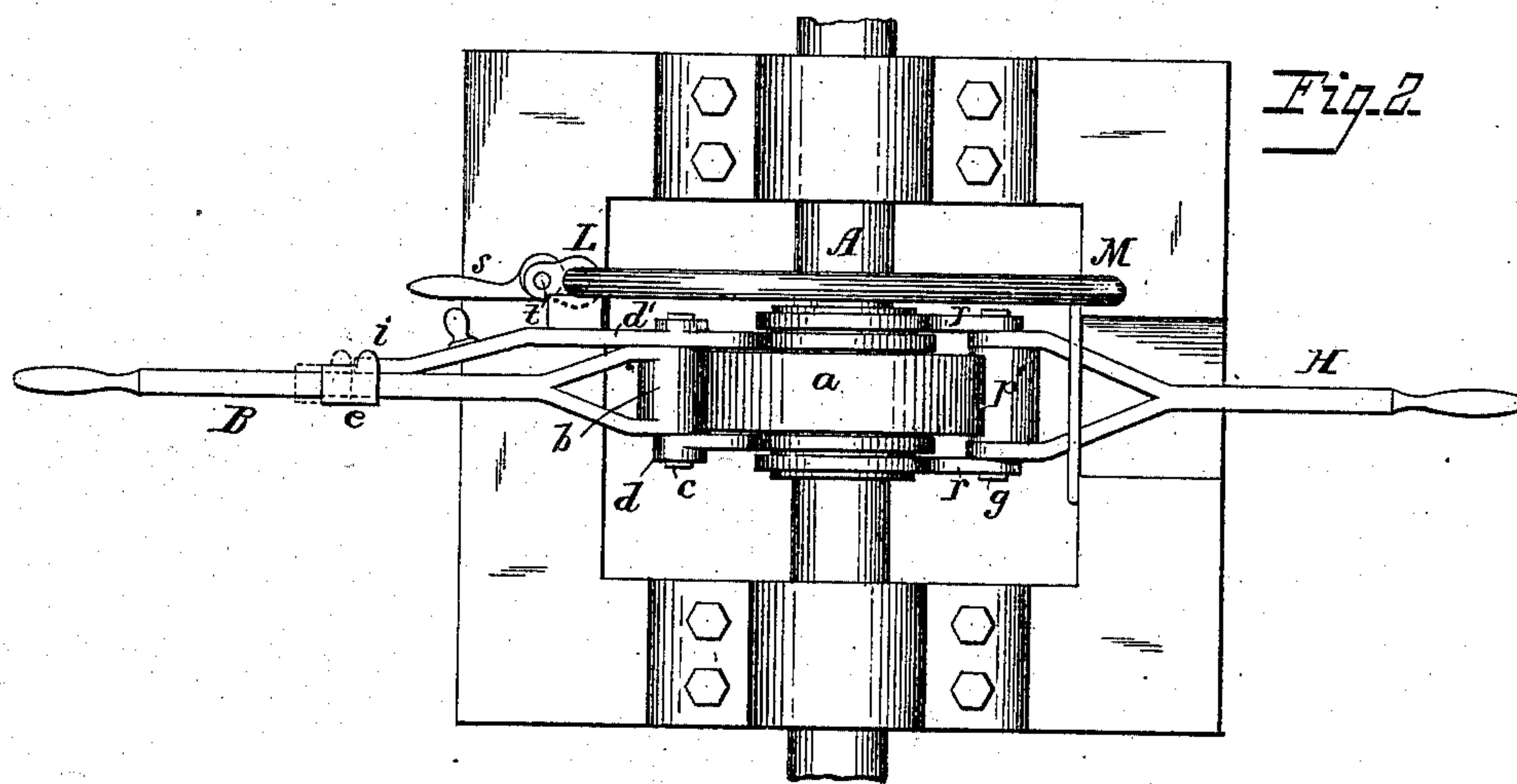
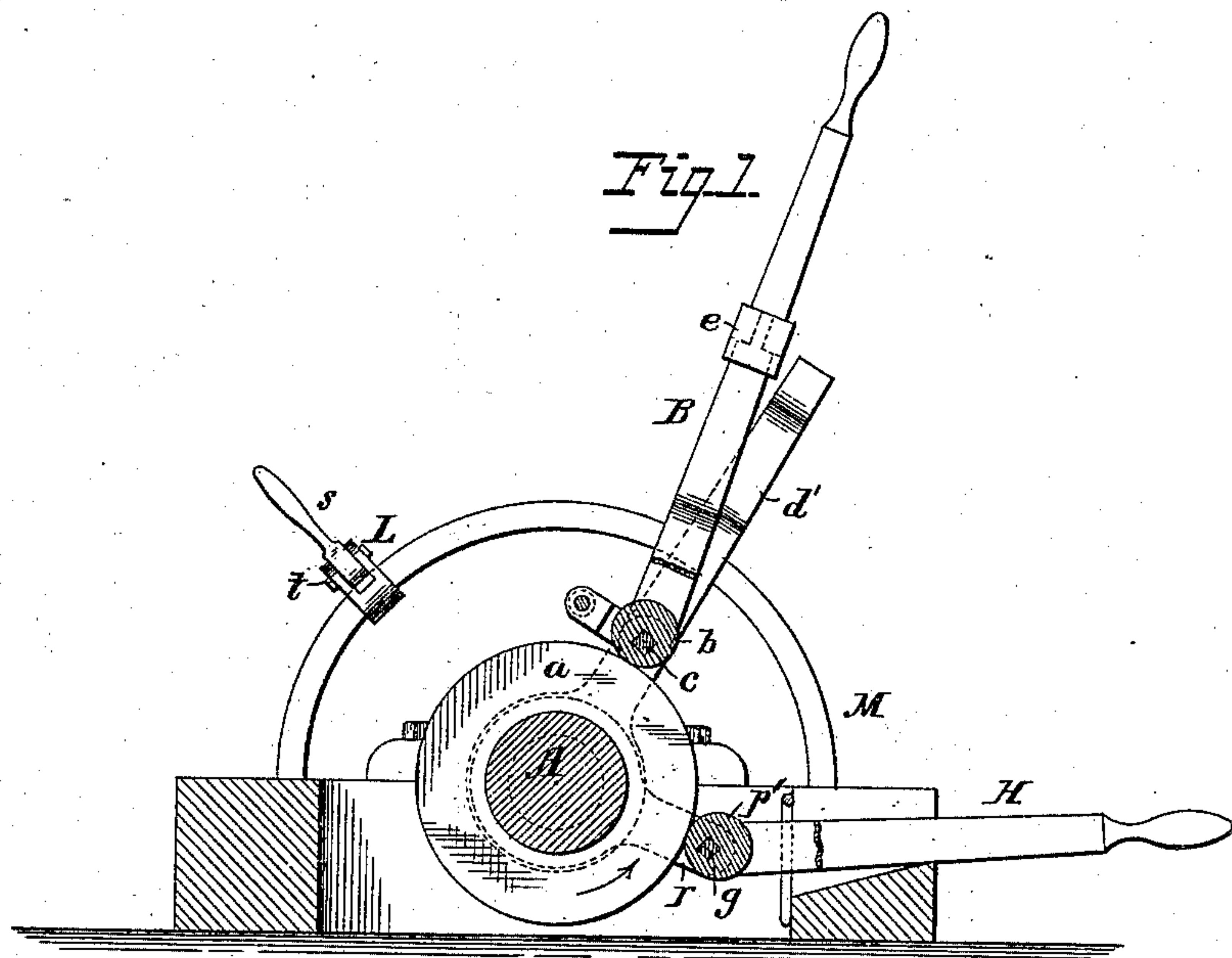


(No Model.)

J. & T. H. PARVIN.
CLUTCH DEVICE.

No. 270,107.

Patented Jan. 2, 1883.



Attest:
Contra A Cooper
William Parson

John Parvin
T. H. Parvin
By Chas. E. Foster
Atty.

UNITED STATES PATENT OFFICE.

JOHN PARVIN AND THOMAS H. PARVIN, OF CARMI, ILLINOIS.

CLUTCH DEVICE.

SPECIFICATION forming part of Letters Patent No. 270,107, dated January 2, 1883.

Application filed June 6, 1882. (No model.)

To all whom it may concern:

Be it known that we, JOHN PARVIN and THOMAS H. PARVIN, of Carmi, White county, Illinois, have invented an Improved Clutch Device, of which the following is a specification.

Our invention is a clutch device intended as a substitute for the ordinary pawl and ratchet, and for imparting step-by-step movements from a reciprocating device to a shaft or wheel; and our device consists of an eccentric cylinder hung in arms turning on the shaft of a cylinder or disk, and caused to bite the disk when moved in one direction by a hand-lever, as fully described hereinafter, and as illustrated in the accompanying drawings, in which—

Figure 1 is a sectional elevation, showing our improved clutch device as applied to a shaft. Fig. 2 is a plan of Fig. 1, the parts differently arranged.

Our improved device may be employed in most situations where it is desired to convert a reciprocating into a step-by-step rotary motion, or in which an ordinary pawl and ratchet can be used. We have illustrated it in the drawings in connection with a shaft, A, which is to be turned, and a lever, B, by which the turning is to be effected. Ordinarily the desired movement would be effected by means of a ratchet-wheel on the shaft and a pawl pivoted to the lever; but this construction results in lost motion, and the ratchet-teeth are apt to break and the pawl to work loose. To avoid these difficulties, we substitute a cylinder or disk, *a*, for the ratchet-wheel and an eccentric, *b*, for the pawl. When an eccentric is used, as shown in Figs. 1 and 2, it is a plain cylinder mounted eccentrically and immovably on a shaft, *c*, extending freely through arms *d d'*, hung loosely on the shaft A, and through the lever B, so that the turning of the latter turns the eccentric *b*.

One of the arms, *d'*, may be prolonged, as shown, and the lever B may carry a slide, *e*, which has lips *i i* to receive between them the end of the arm *d'* when it is desired to lock the latter to the lever, in which case the eccentric is so turned as to be free from contact with the periphery of the disk, when the lever B may swing freely round the shaft.

When it is desired to operate the shaft the slide *e* is raised to release the arm *d'*, when pressure on the lever in either direction will turn the eccentric and bring it forcibly against

the periphery of the disk with such close frictional contact that the disk and shaft will be carried with the lever.

The eccentric is so set that an extremely slight movement of the lever independent of the arm *d'* will cause the eccentric to bite the disk and insure the desired motion.

Any desired locking device may be substituted for the slide *e*.

To prevent back motion of the shaft, we may use a second clamp or clutch, *p'*. As shown in Figs. 1 and 2, this clutch is an eccentric cylinder, *p'*, on a shaft, *g*, carried by arms *r r*, swinging on the shaft A, the cylinder being secured to a forked lever, H, which rests on part of the frame, as shown. The turning of the lever H at an angle to the arms *r* turns the clutch-cylinder and makes it bite the disk, so that the latter cannot be moved except in the direction of its arrow.

A stop, L, mounted movably on a curved bar, M, may serve to limit the movement of the lever B. This stop consists of a block having an opening to receive the bar, and slit to receive the cam or eccentric head of a lever, *s*, hung to a pin, *t*. By turning the lever the head may be caused to bite the bar firmly, or may be removed therefrom to loosen the stop.

We claim—

1. A clutch device consisting of a shaft carrying a disk, a clutch-cylinder hung between arms arranged to swing round the shaft, and a hand-lever connected to said cylinder, all as set forth.

2. The combination of the shaft A, disk *a*, eccentric cylinder, lever B, connected to the cylinder, arms carrying the cylinder, and lock devices whereby the lever may be locked to one of the arms or released, substantially as set forth.

3. The combination of the shaft A, disk *a*, eccentric *b*, lever B, and lever H, carrying a clutch device, substantially as specified.

4. The combination of the shaft, disk, eccentric, and lever B, of the arms *r r*, eccentric *p'*, and lever H, as specified.

In testimony whereof we have signed our names to this specification in the presence of two subscribing witnesses.

JOHN PARVIN.

THOMAS H. PARVIN.

Witnesses:

CHAUNCEY S. CONGER,
HAIL STORMS.