

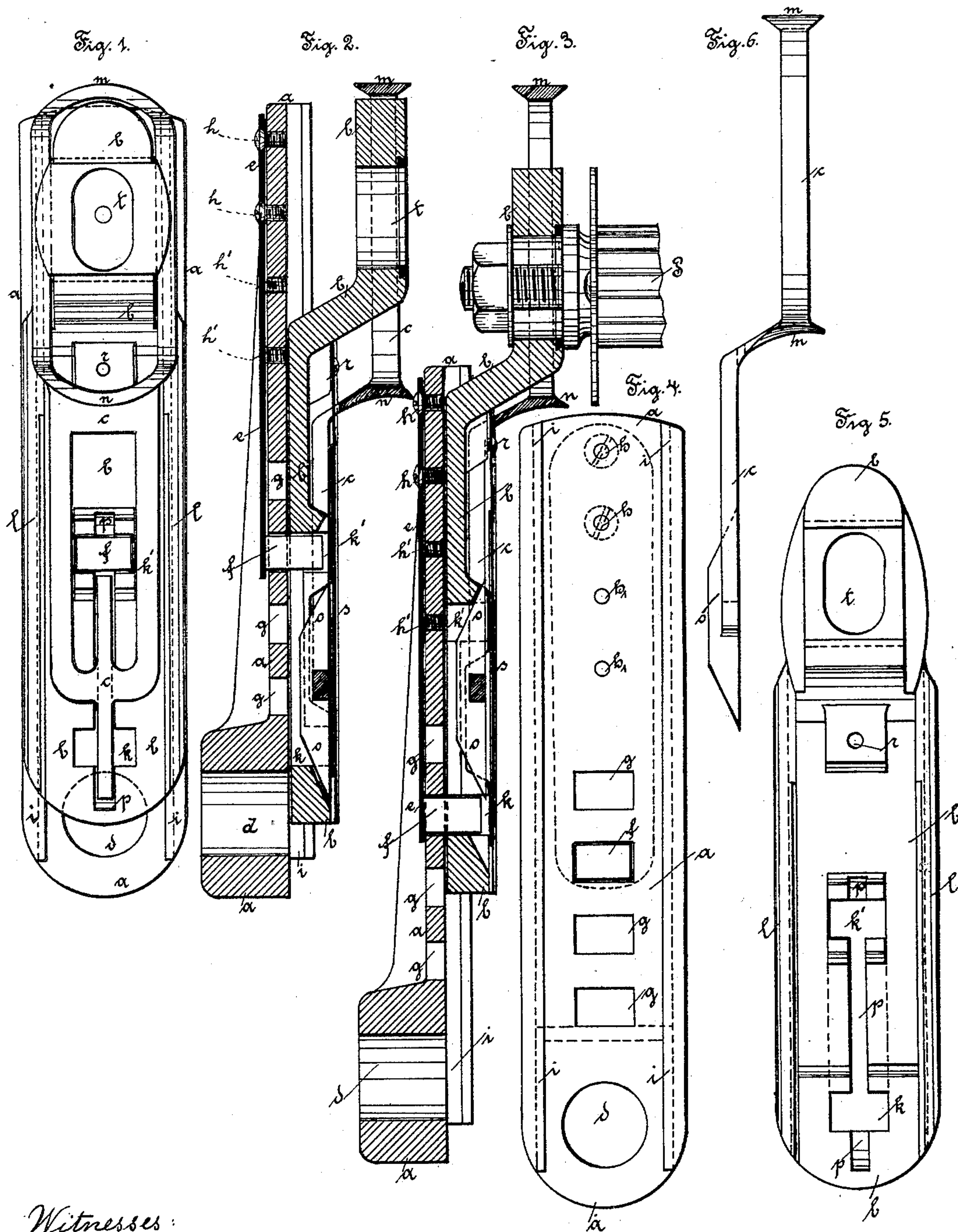
(No Model.)

F. L. ROEDEL.

ADJUSTABLE CRANK FOR VELOCIPEDES.

No. 394,135.

Patented Dec. 4, 1888.



Witnesses:
Alfred Joughman
Max Spitzer.

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UNITED STATES PATENT OFFICE.

FRANZ LOUIS ROEDEL, OF ELSTERBERG, SAXONY, GERMANY.

ADJUSTABLE CRANK FOR VELOCIPEDES.

SPECIFICATION forming part of Letters Patent No. 394,135, dated December 4, 1888.

Application filed July 10, 1888. Serial No. 279,545. (No model.)

To all whom it may concern:

Be it known that I, FRANZ LOUIS ROEDEL, of Elsterberg, Saxony, Germany, have invented a new and Improved Adjustable Crank for Velocipedes, of which the following is a specification.

This invention relates to a crank for bicycles and other velocipedes that may be lengthened and shortened while the machine is in motion.

The invention consists in the various features of improvement, more fully pointed out in the claims.

In the accompanying drawings, Figure 1 is a front elevation of my improved crank with the face-plate removed. Fig. 2 is a sectional side elevation of the same, showing it shortened. Fig. 3 is a similar view showing it lengthened. Figs. 4, 5, and 6 are detail views of the parts *a*, *b*, and *c*, respectively.

The crank is composed, essentially, of three parts, *a*, *b*, and *c*. The plate *a* is screwed upon the axle *d*. To its back there is secured by screw *h* a spring, *e*, carrying at its free end a bolt, *f*. The bolt projects through one of a number of openings, *g*, of plate *a*. By unscrewing spring *e* and attaching it at a different screw-hole—say *h'*—the bolt *f* may be made to project through another of the openings in plate *a*. At its face the plate *a* is provided with a pair of rails, *i*, that guide a slide, *b*. This slide is provided with the openings *k k'*, and is locked to the plate *a* when the bolt *f* projects into either one of these openings. Into the opening *t* of slide *b* there is screwed the treadle *P*. The slide *b* is provided with guides *l*, between which there is placed the slide *c*. This slide has two foot-pieces, *m n*. Near one of its ends the slide *c* is provided with a tapering projection, *o*, beveled at both sides. This projection extends through a slot, *p*, that connects the openings *k k'* of slide *b*.

s is a face-plate secured by screw *r* to slide *b*, and serving to exclude dirt.

The operation of the device is as follows:

If the crank is to be lengthened from the position shown in Fig. 2 into that shown in Fig. 3, the foot is pressed upon foot-piece *n*. This will cause the slide *c* to move, so that its tapering projection *o* will push the bolt *f* backward to clear plate *b*. Thus the positive connection between the parts *a b* will be broken, and the slide *b* will be carried along with slide *c* until the bolt *f* is in line with opening *k*. The bolt will now shoot forward and into this opening to again positively connect the parts *a b*. The crank will now be lengthened. To shorten it, the foot is pressed upon the foot-piece *m*, when the projection *o* will crowd the bolt *f* out of opening *k*. The slide *b* will now again move with slide *c* until the bolt shoots into opening *k'*.

The extent of motion of the parts may be regulated by projecting the bolt *f* through either one of the openings *g* of plate *a*. This is accomplished, as already described, by screwing the spring *e* to either one of the screw-holes *h'*.

What I claim is—

1. The combination of plate *a* with the slide *b* and with the slide *c* and bolt *f*, the slide *b* carrying treadle *P*, and being adapted to be locked to plate *a* by bolt *f*, substantially as specified.

2. The combination of plate *a* with slide *b*, having connected openings, and with the slide *c*, having a projection, *o*, that enters said openings, and with a spring-bolt secured to plate *a*, substantially as specified.

3. The combination of plate *a*, having a series of openings, *g*, with the slide *b* and with spring-bolt *f*, and with the slide *c*, having foot-pieces *m n*, and nose *o*, that is adapted to operate bolt *f*, substantially as specified.

In testimony whereof I affix my signature in presence of two witnesses.

FRANZ LOUIS ROEDEL.

Witnesses:

CONST. HUGO KNABE,
CARL PIETZITH.