

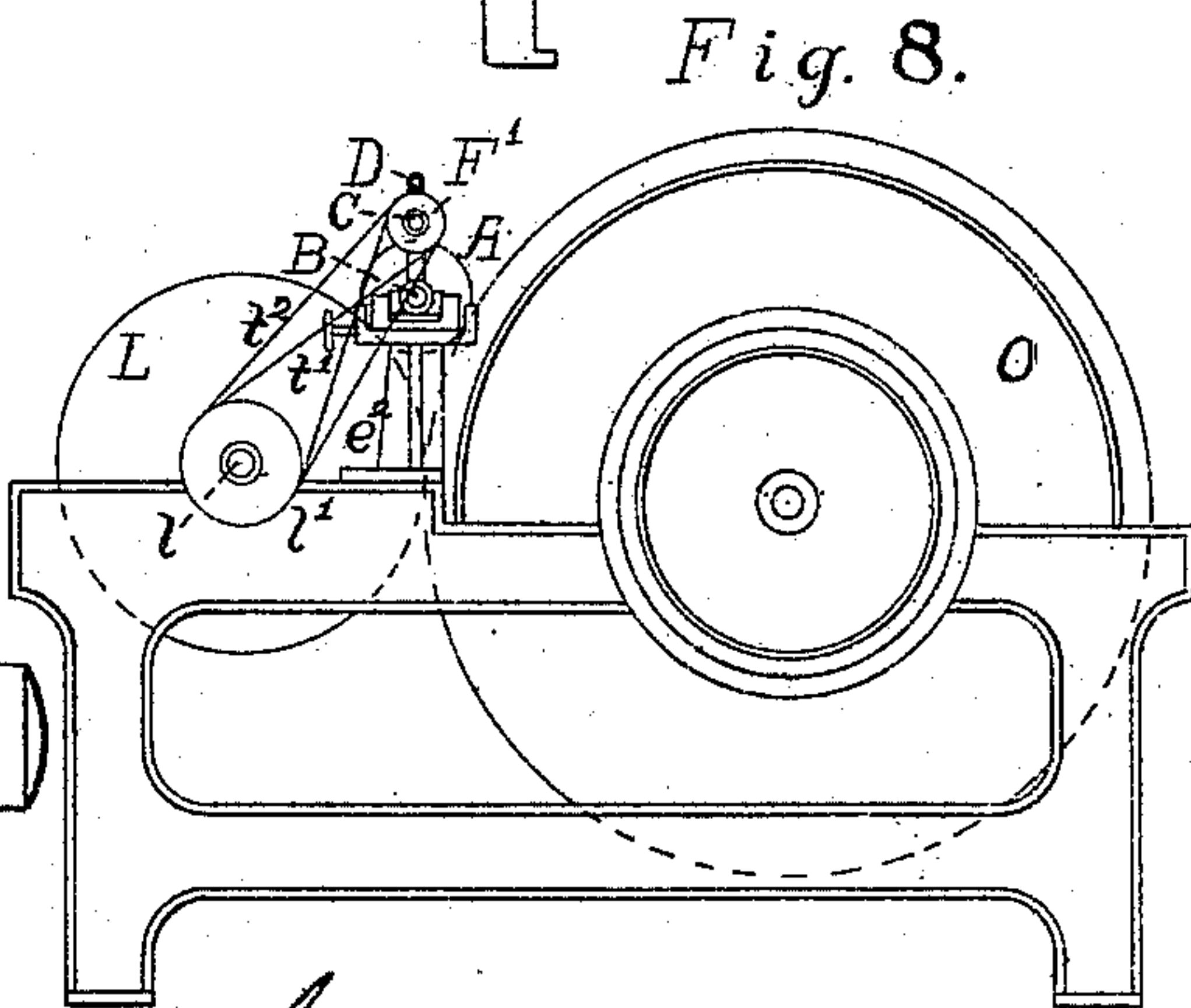
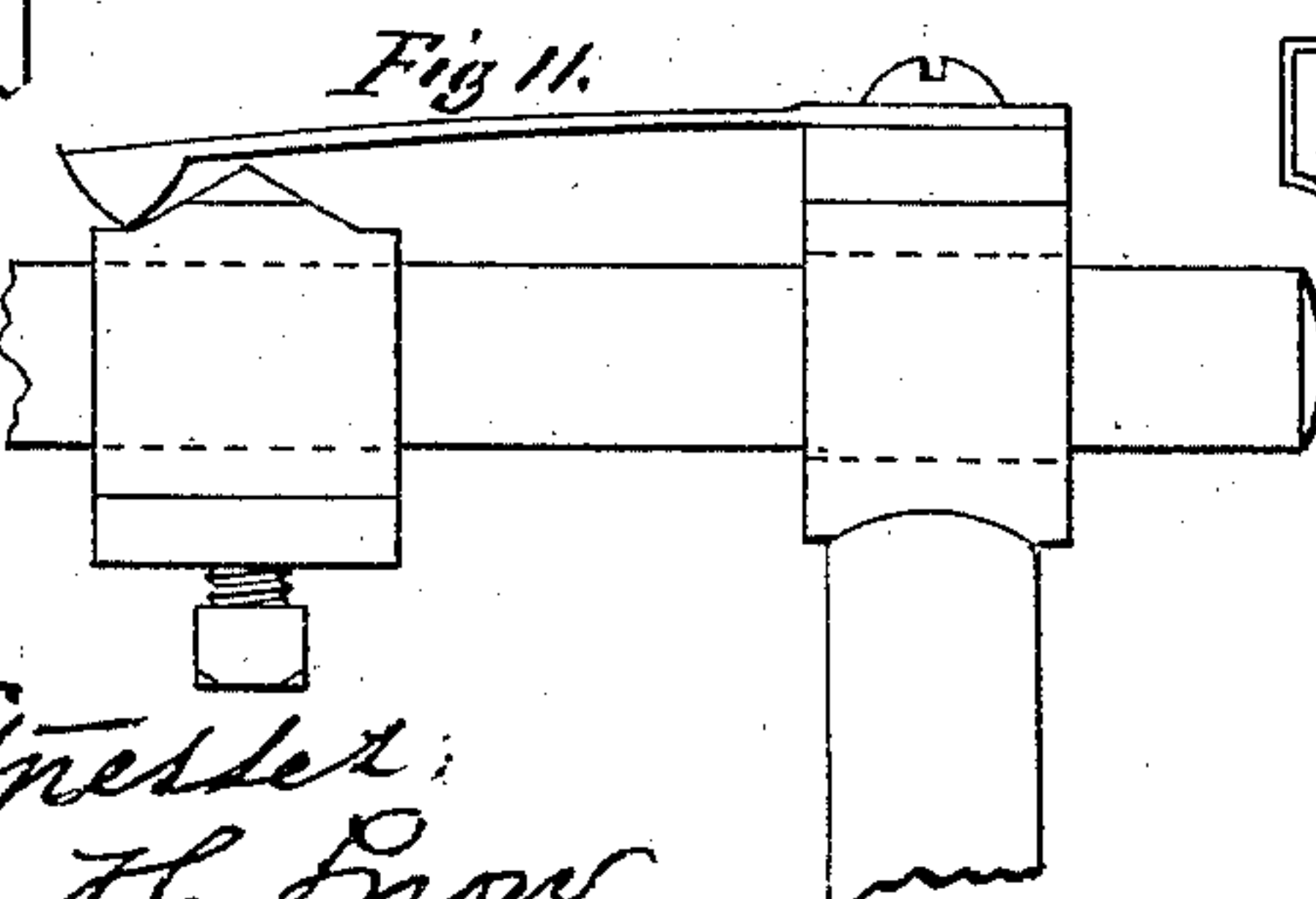
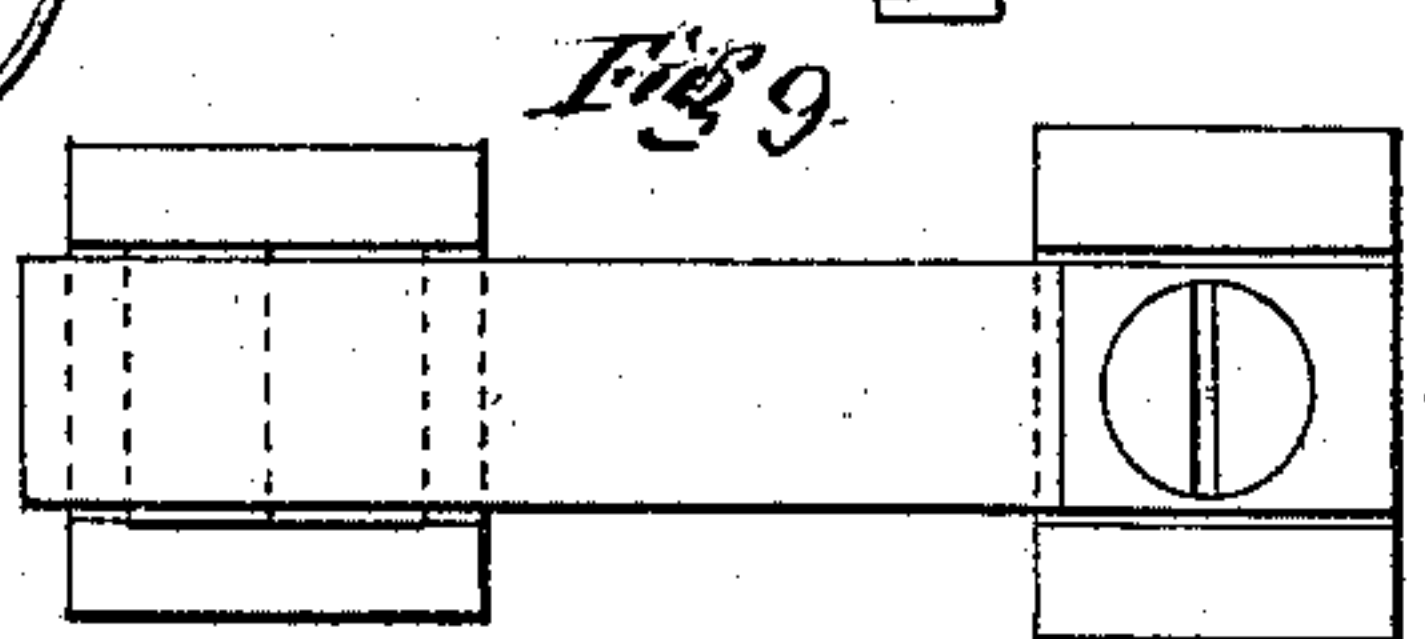
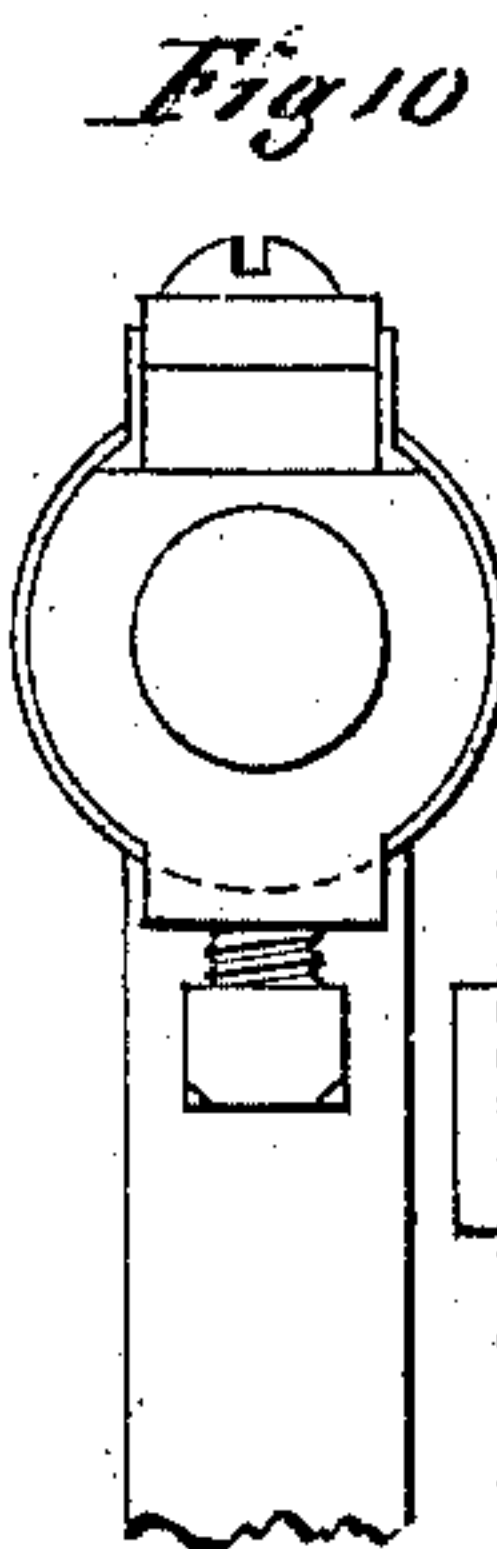
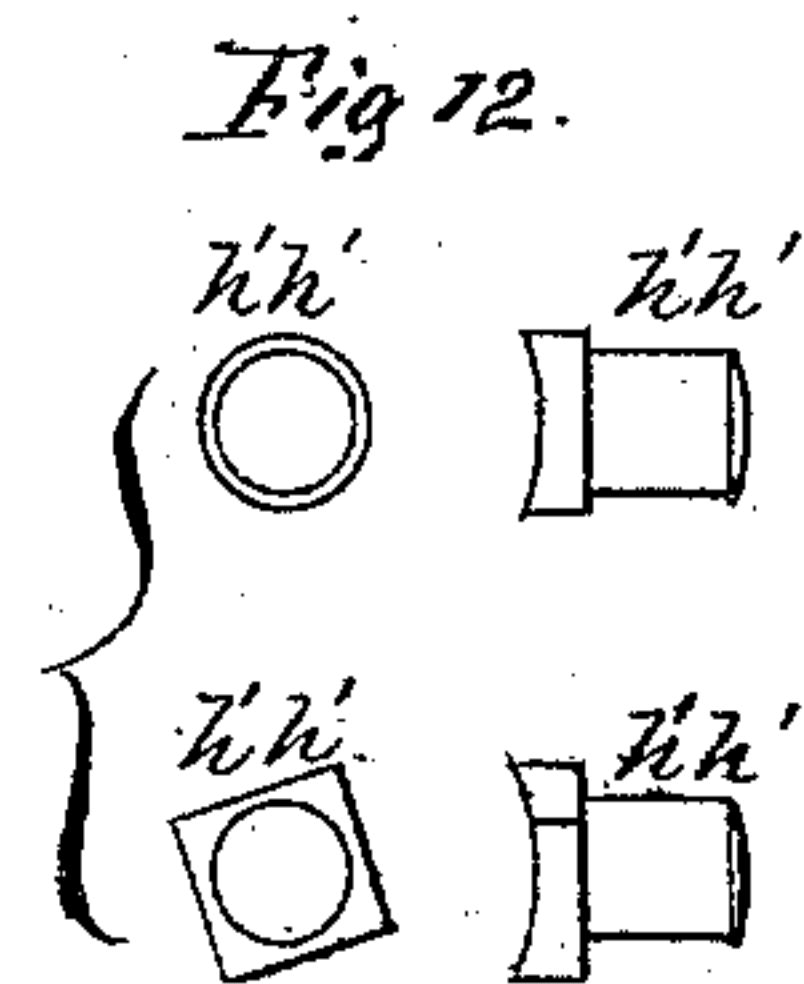
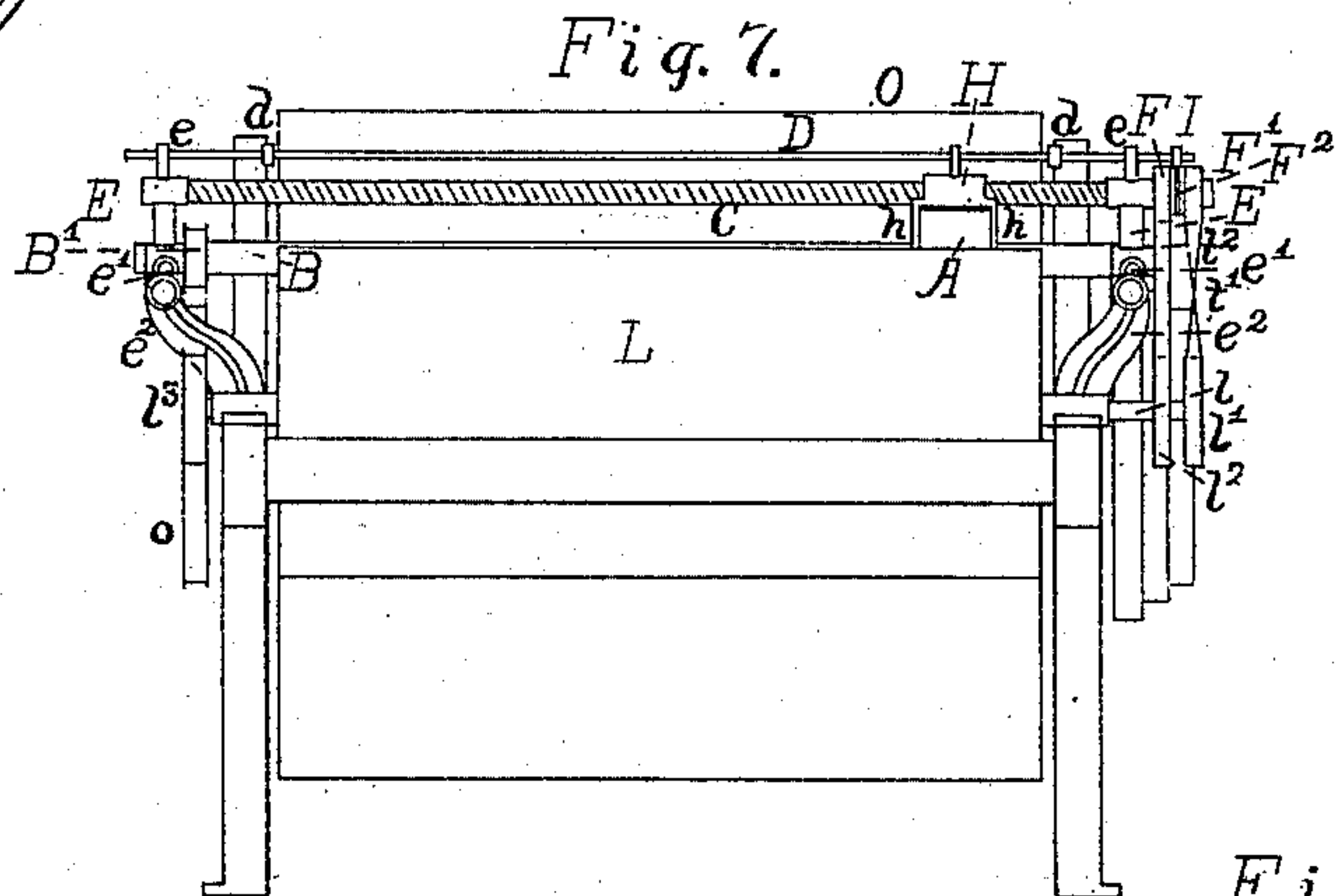
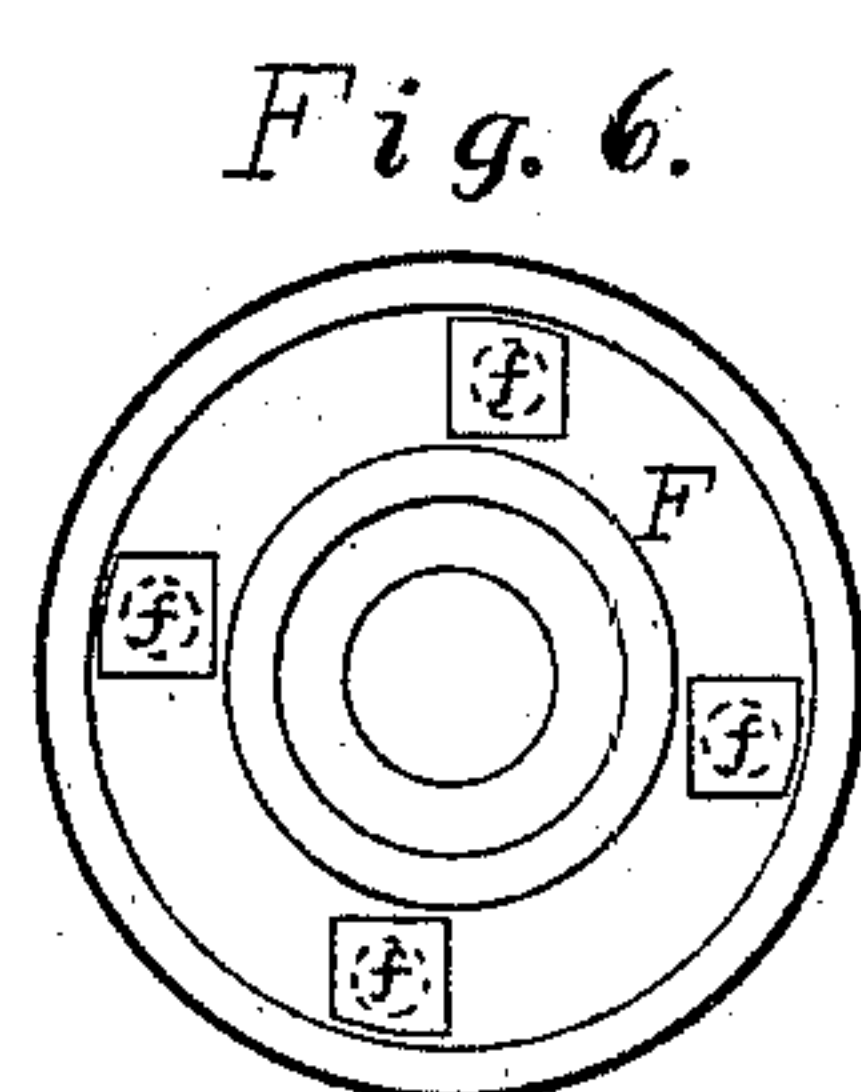
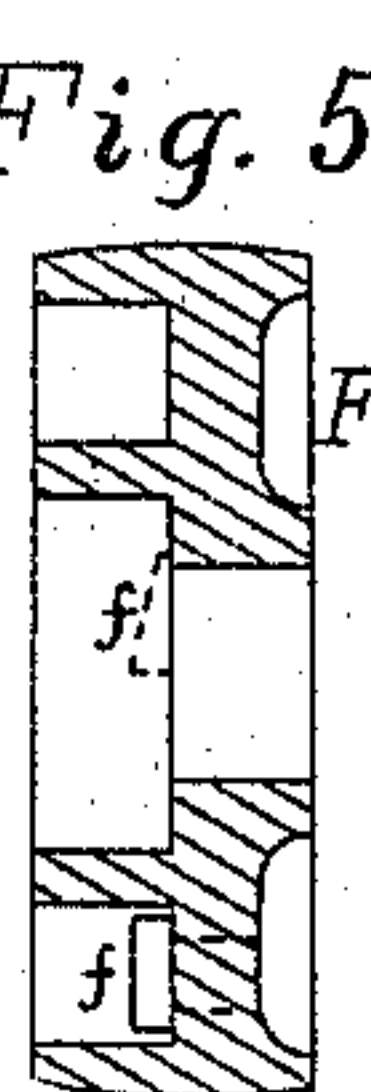
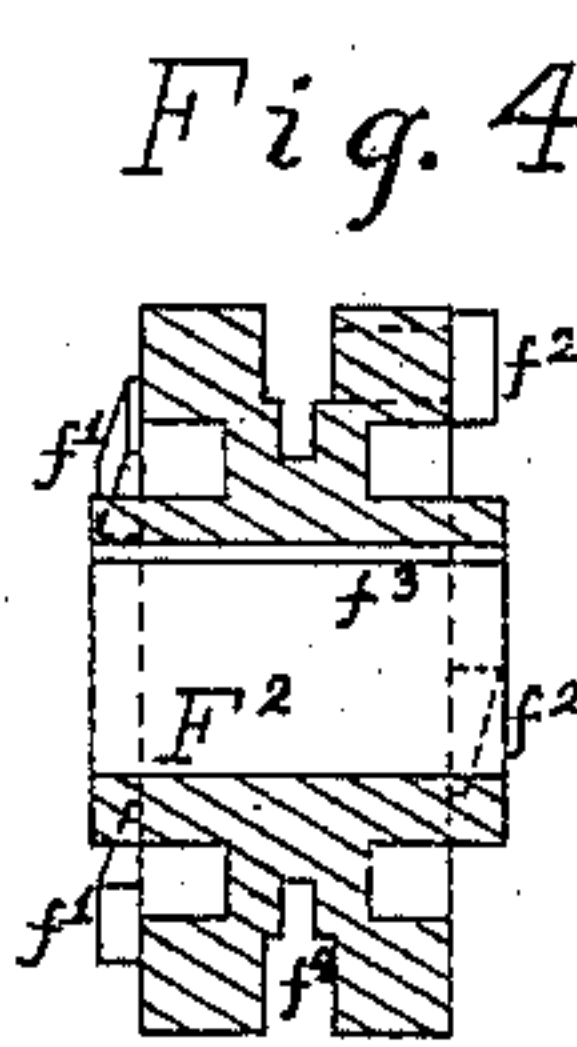
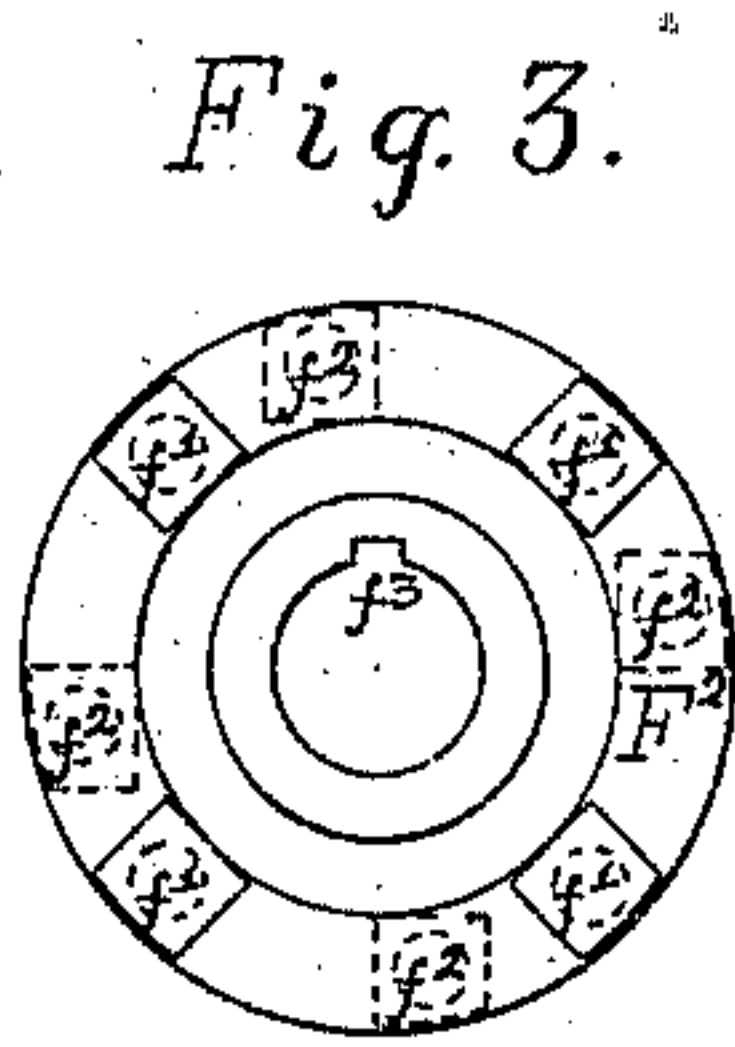
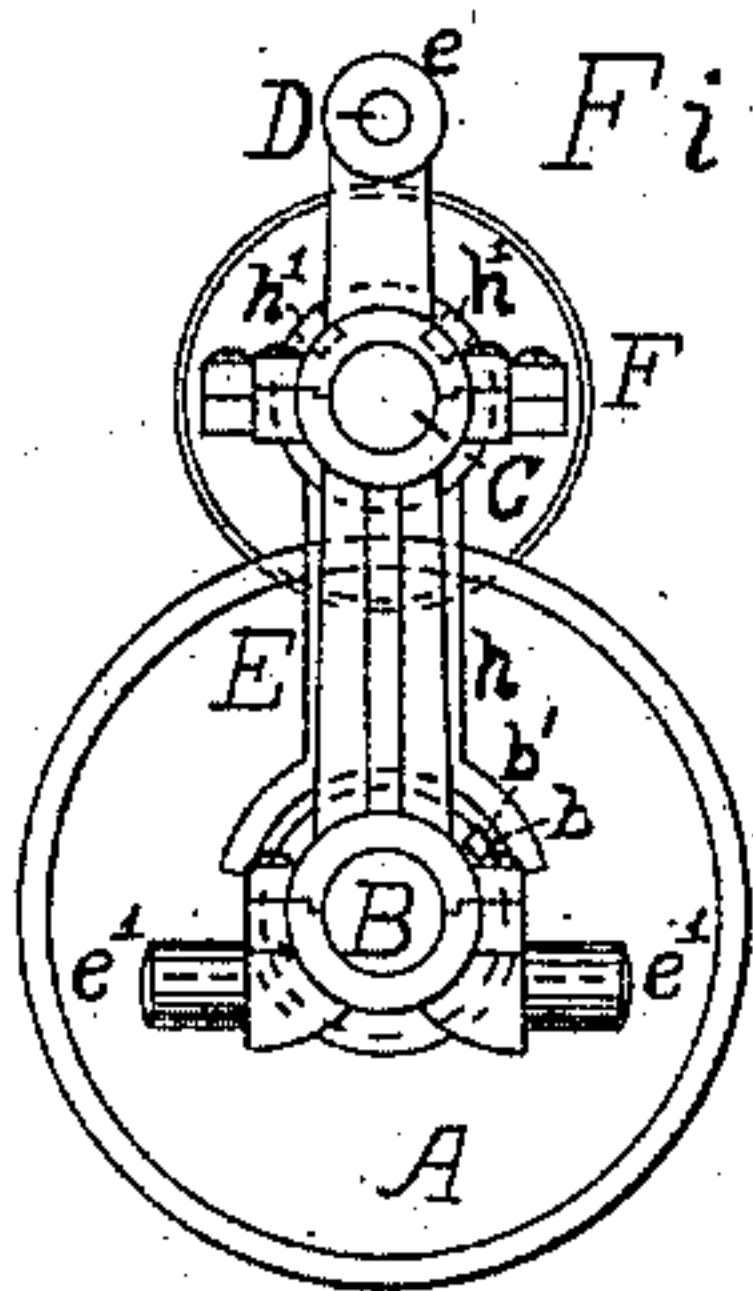
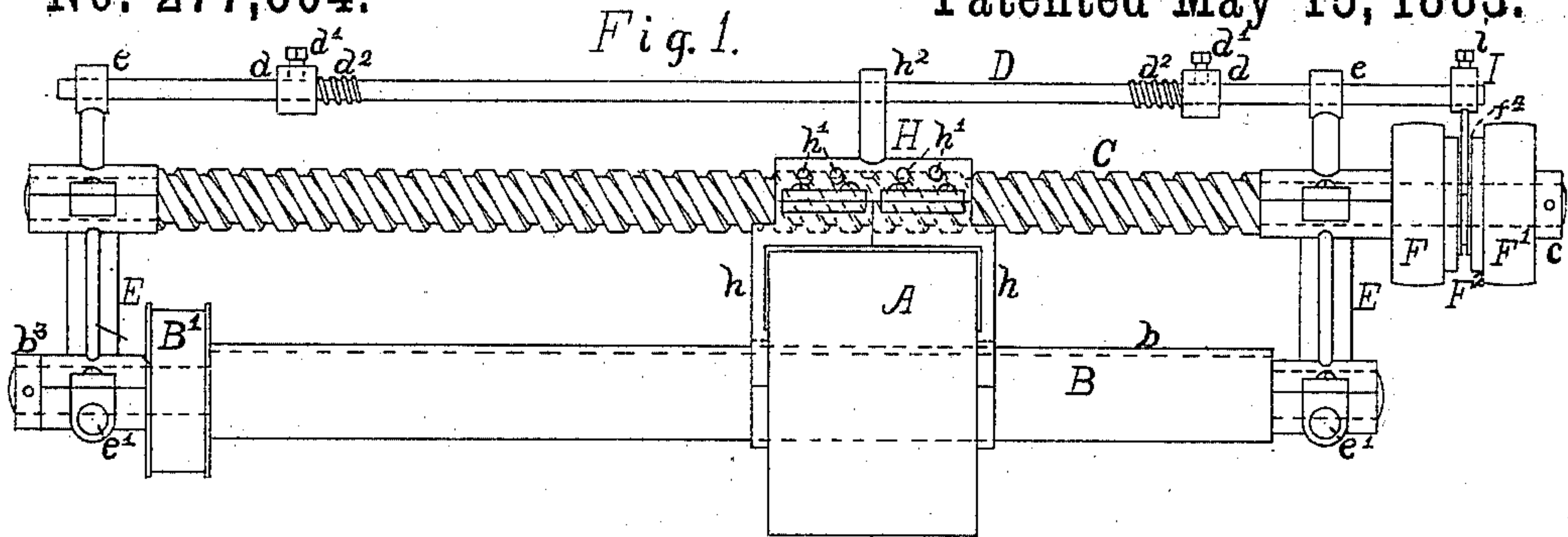
(No Model.)

C. B. & O. B. PARKER.

CARD GRINDER.

No. 277,604.

Patented May 15, 1883.



Witnesses:  
Thos H. Snow.  
John J. Neudon

Inventors:  
Chas. B. Parker  
Orestophorus B. Parker  
By A. H. Hawes,  
their Attorney.



# UNITED STATES PATENT OFFICE.

CHARLES B. PARKER AND ONESIPHARUS B. PARKER, OF SOUTH HADLEY,  
ASSIGNORS OF ONE-THIRD TO BENJ. P. GLOVER, OF HOLYOKE, MASS.

## CARD-GRINDER.

SPECIFICATION forming part of Letters Patent No. 277,604, dated May 15, 1883.

Application filed December 1, 1882. (No model.)

*To all whom it may concern:*

Be it known that we, CHAS. B. PARKER and ONESIPHARUS B. PARKER, citizens of the United States, residing at South Hadley, Hampshire county, Massachusetts, have invented a new and useful Improvement in Reversing Mechanism for Card-Grinders, of which the following is a specification, reference being had to the accompanying drawings, which are hereby made part of the same.

Similar letters of reference in the drawings indicate corresponding parts.

The object of our invention is to run the emery-wheel much more rapidly than it can now be run, and to reverse its motion or travel at any given point on either a cotton or woolen card, grinding the doffer and cylinder at the same time. The manner in which this is accomplished by our invention we will now proceed to describe.

Figure 1 is a front elevation of the grinder. A is an emery-wheel. B is the shaft which carries the emery-wheel, and B' is the pulley which drives shaft B. *b* is a spline in shaft B. *b'* is a feather in the emery-wheel, which slides in spline *b*. *b<sup>3</sup>* is the collar on shaft B. C is a double-thread screw, which moves the emery-wheel backward and forward. *c* is a collar on shaft C. D is a guide-rod, which reverses the travel of the emery-wheel. *d d* are the stops on rod D. *d'* is a set-screw which holds the said stops. *d<sup>2</sup>* is a spiral spring on rod D, which is compressed against the stops *d d* by arm *h<sup>2</sup>*, and throws the clutch by its recoil. E are the standards forming the bearing for the three shafts B C D. *e* is bearing for the shaft E. *e'* is the fulcrum-pin by which the grinder is attached to the stand on the frame of the card. *e<sup>2</sup>* is said stand. F F are the pulleys for driving the screw C. F<sup>2</sup> is the clutch. *f* is a clutch-catch in pulleys F F', shown in detailed views, Figs. 5 and 6. *f<sup>4</sup>* is the groove in clutch F<sup>2</sup>. *f' f<sup>2</sup>* are the catches

on the opposite sides of clutch F<sup>2</sup>. (Shown in Figs. 3 and 4.) *f<sup>3</sup>* is spline in the clutch F<sup>2</sup>. H is the nut on shaft C, which traverses the emery-wheel. *h h* are the arms on the nuts, which engage the emery-wheel on opposite sides. *h' h'* are the pins which form the thread in the nut H. There are eight of these—four on each side. *h<sup>2</sup>* is the arm on nut H, which reverses the motion of the emery-wheel by striking the stops *d d*. I is an arm on the shaft D, which engages the clutch F<sup>2</sup> and reverses it whenever the rod D is changed. *i* is a set-screw, which fastens arm I to the rod D. L is the doffer-cylinder on the card. *l* is the shaft of cylinder L. *l' l<sup>2</sup>* are pulleys on shaft *l*, which drive screw C by belting onto pulleys F F'. *l<sup>3</sup>* is pulley on the opposite or left end of shaft *l*, by which the cylinder L is driven. O is the main card-cylinder of the card. *o* is the pulley on shaft of cylinder O, from which the doffer-cylinder L and emery-wheel shaft B are driven. *t'* is a crossed belt from pulley *l'* to pulley F'. *t<sup>2</sup>* is an open belt from pulley *l<sup>2</sup>* to pulley F.

Fig. 2 is an end elevation of our invention. Figs. 3 and 4 are detailed views of the clutch. Figs. 5 and 6 are detailed views of the clutch-pulleys. Fig. 7 is a front elevation of a card with grinder attached. Fig. 8 is an end elevation of the same. Figs. 9, 10, 11, and 12 are details.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The combination of the removable pins, the carrier, and dust or dirt chamber recessed inside and central in the hub of the emery-wheel.

CHARLES B. PARKER.  
ONESIPHARUS B. PARKER.

Witnesses:

H. K. HAWES,  
WM. H. SNOW.