

(No Model.)

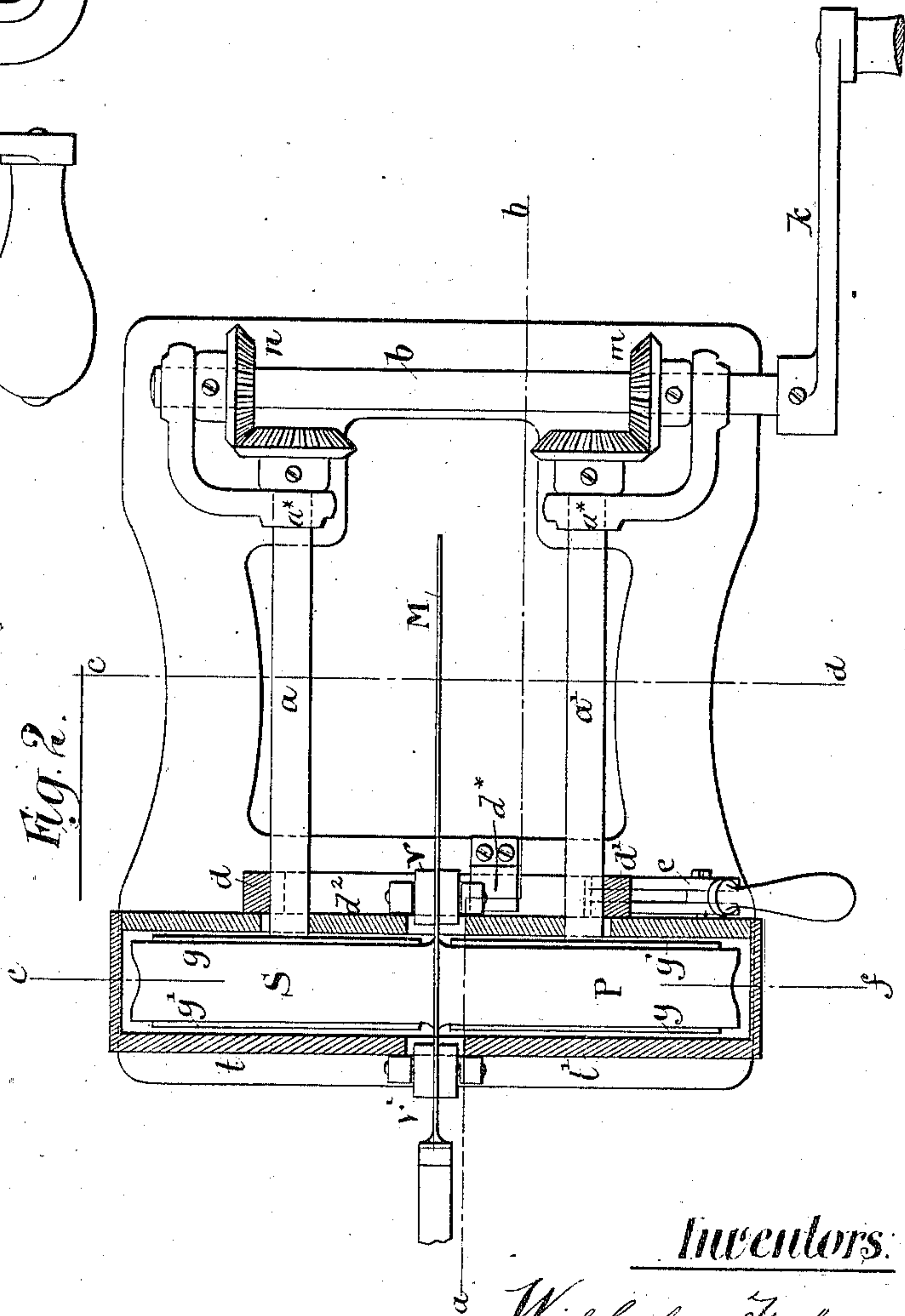
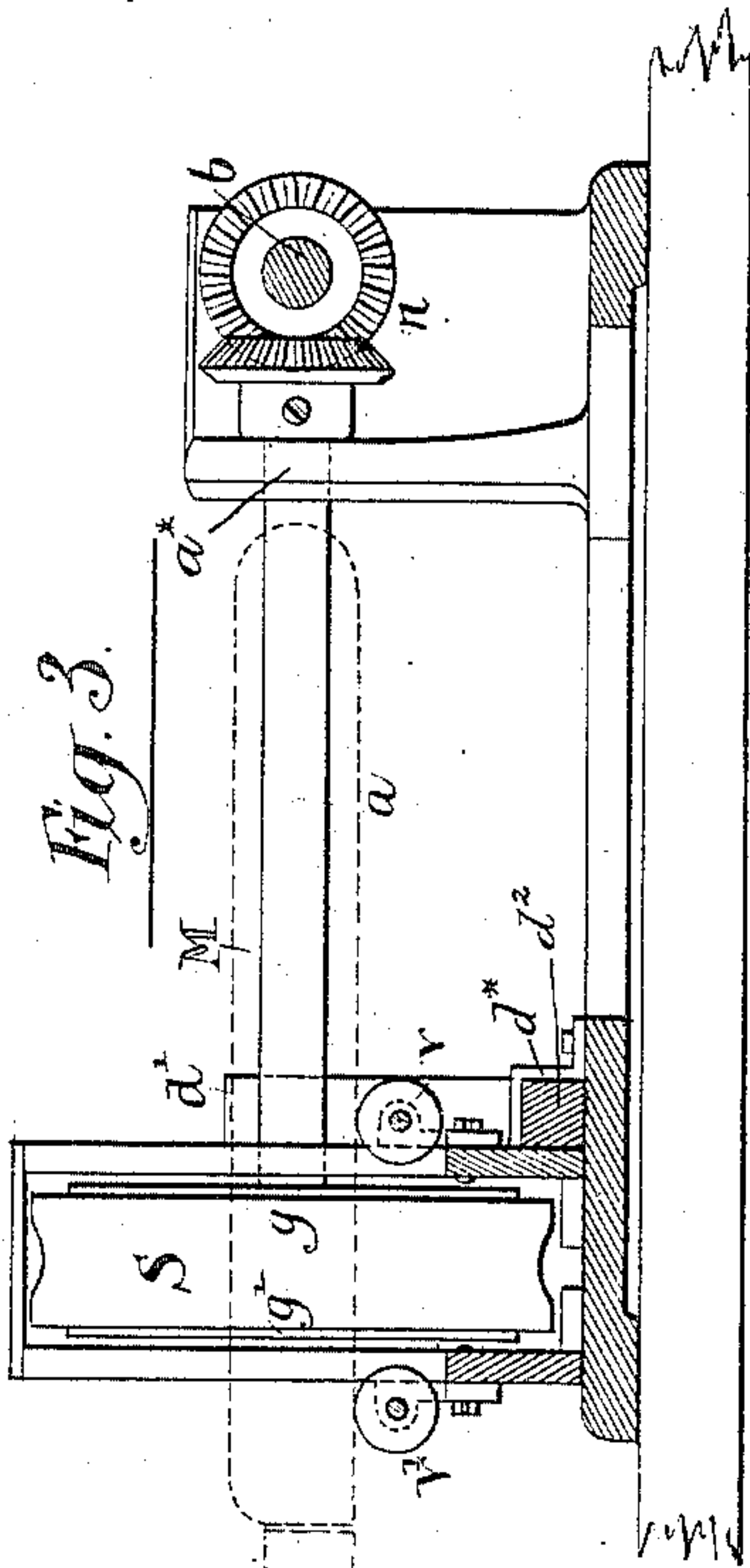
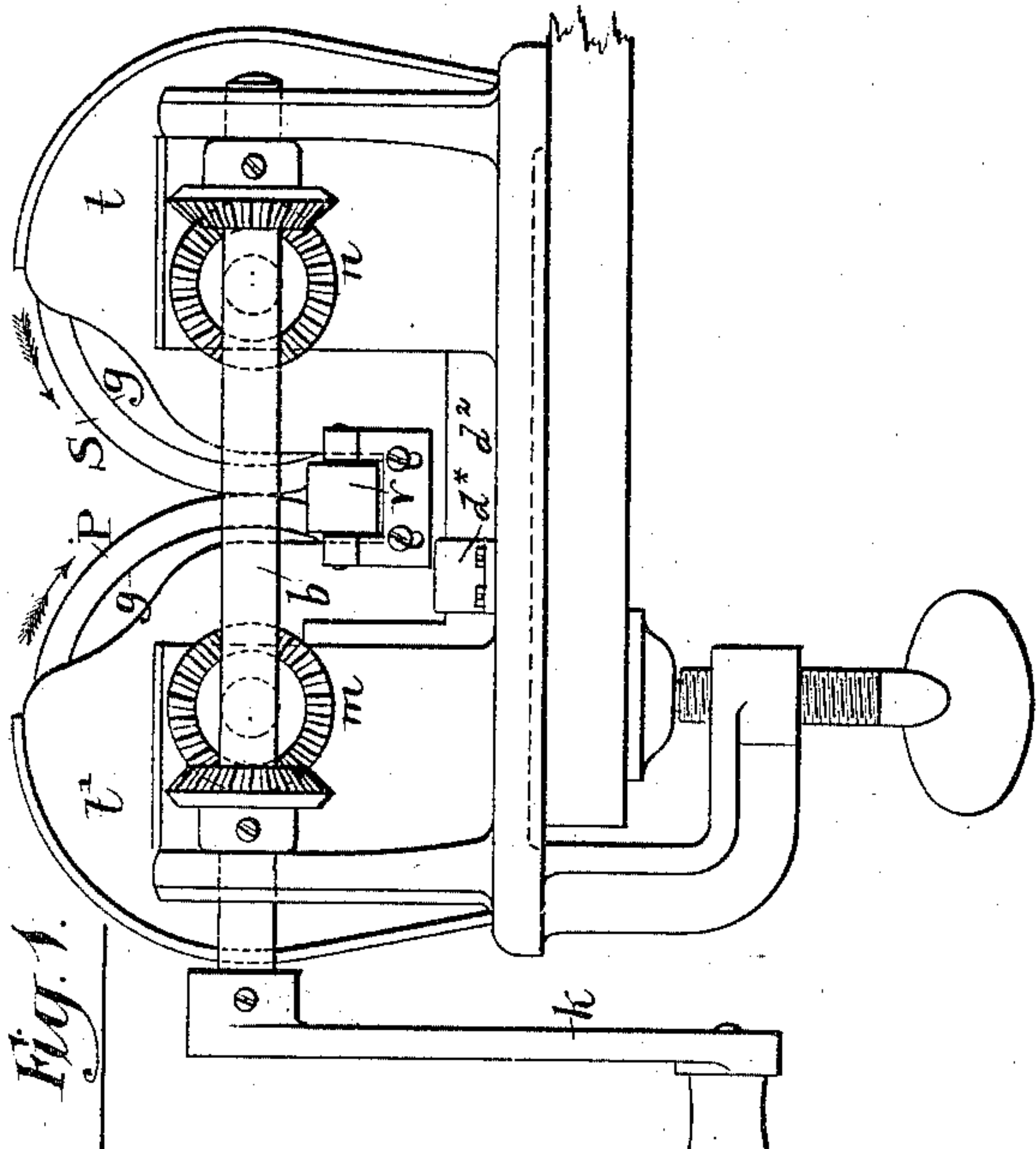
2 Sheets—Sheet 1.

W. FABIAN & A. TELLER.

KNIFE CLEANING APPARATUS.

No. 314,658.

Patented Mar. 31, 1885.



Witnesses:

Klaus M. Lohscheid  
Matthew Pollack

Inventors:

Wilhelm Fabian  
Adalbert Teller  
by their attys.  
Brown & Hall

(No Model.)

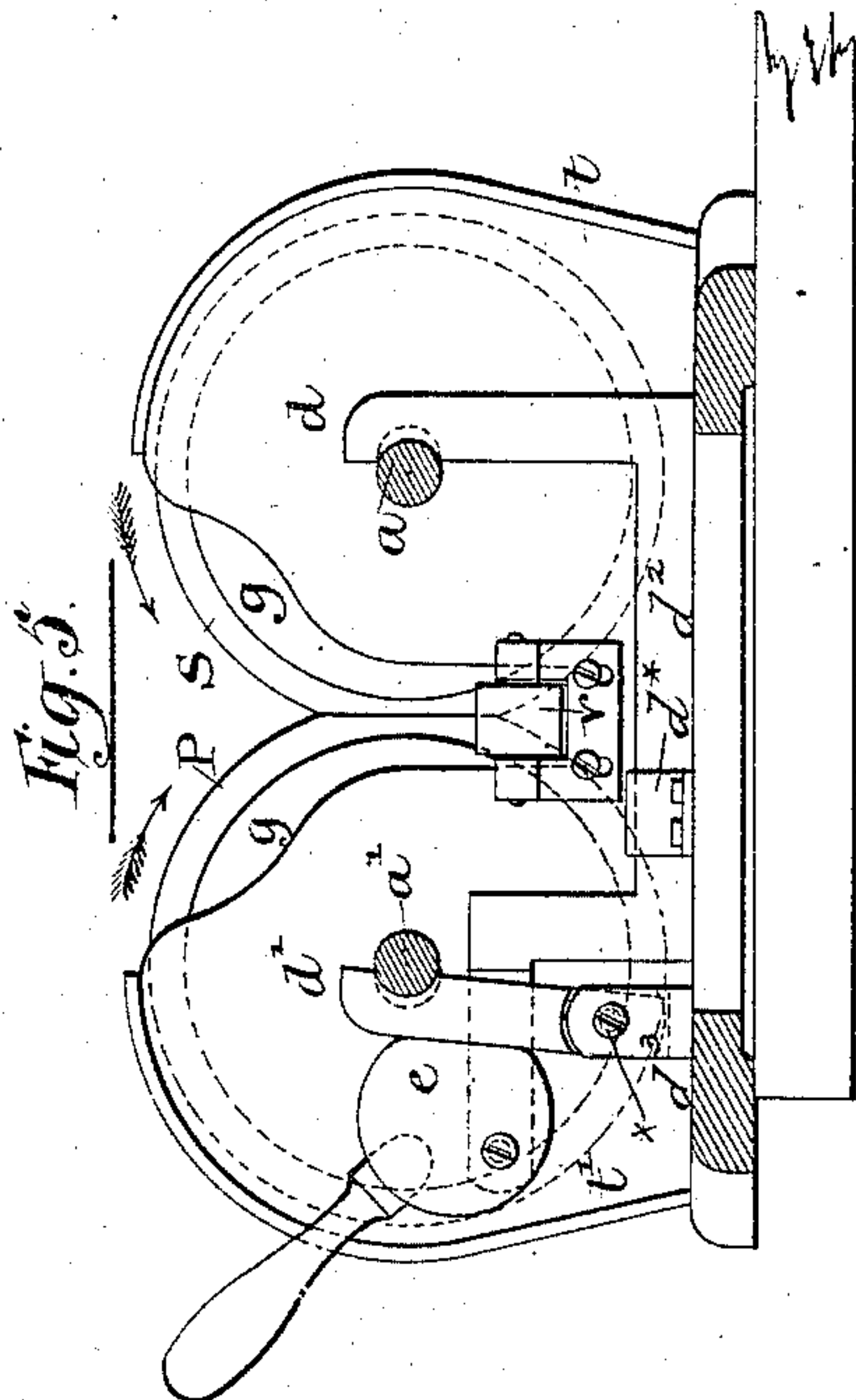
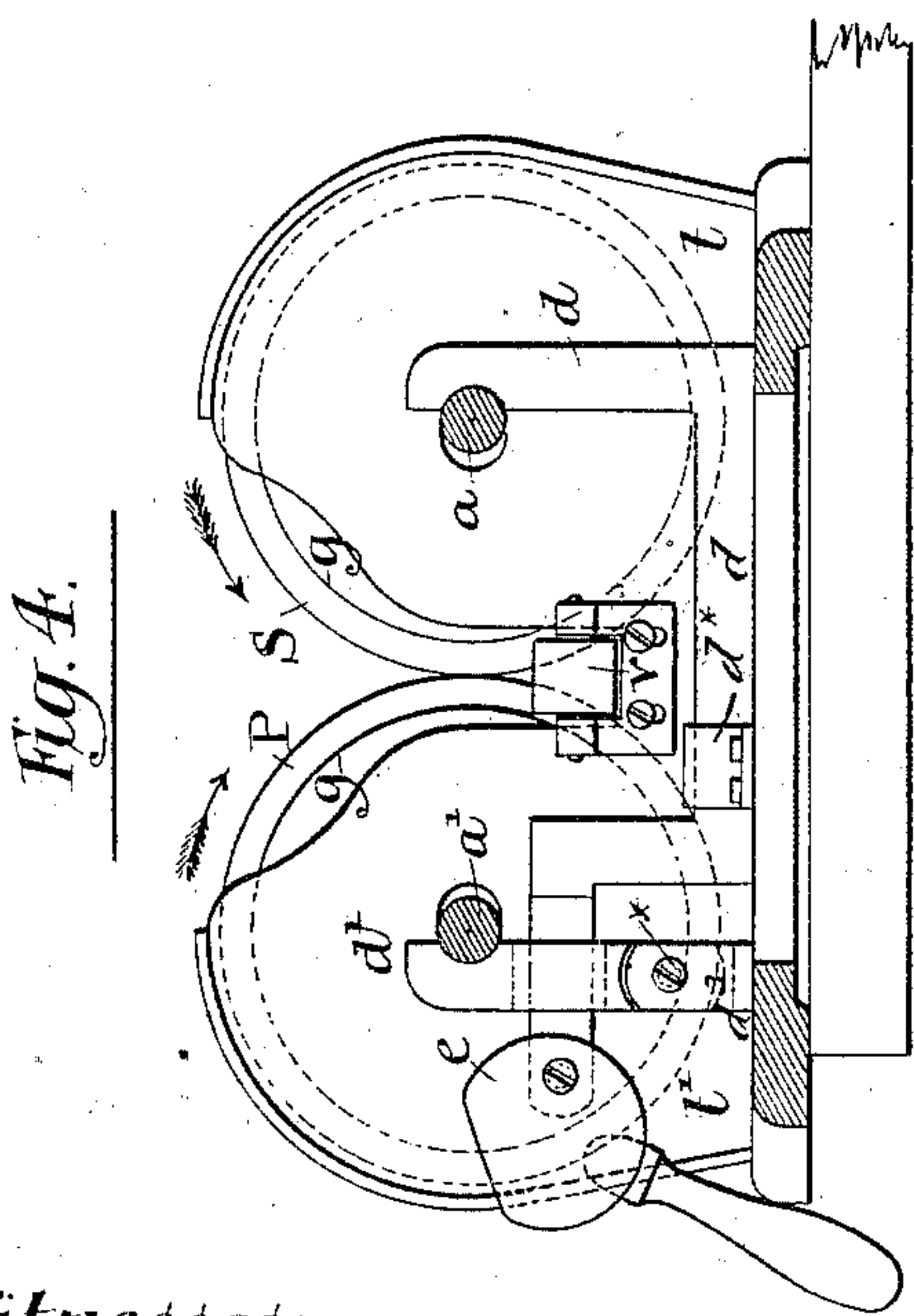
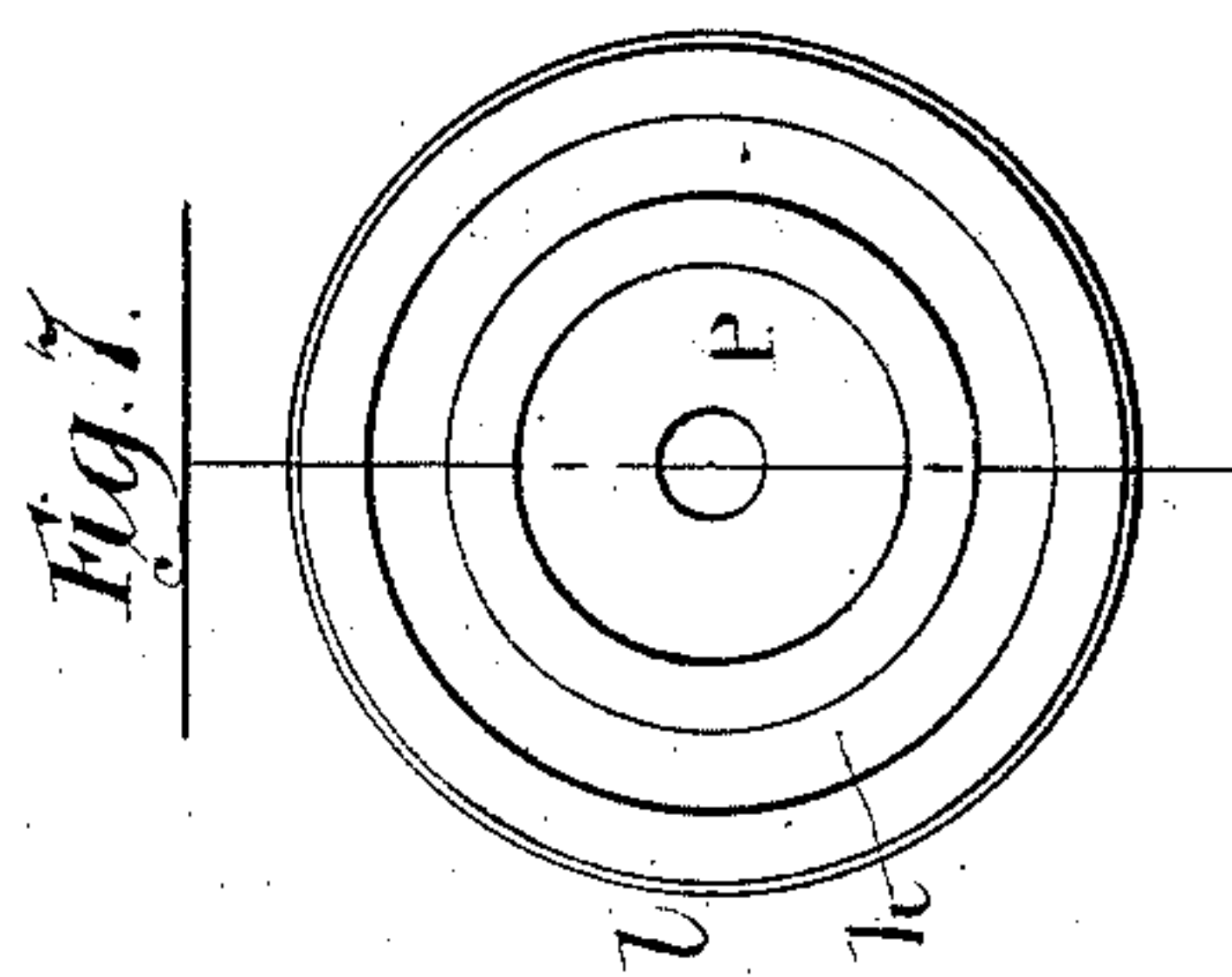
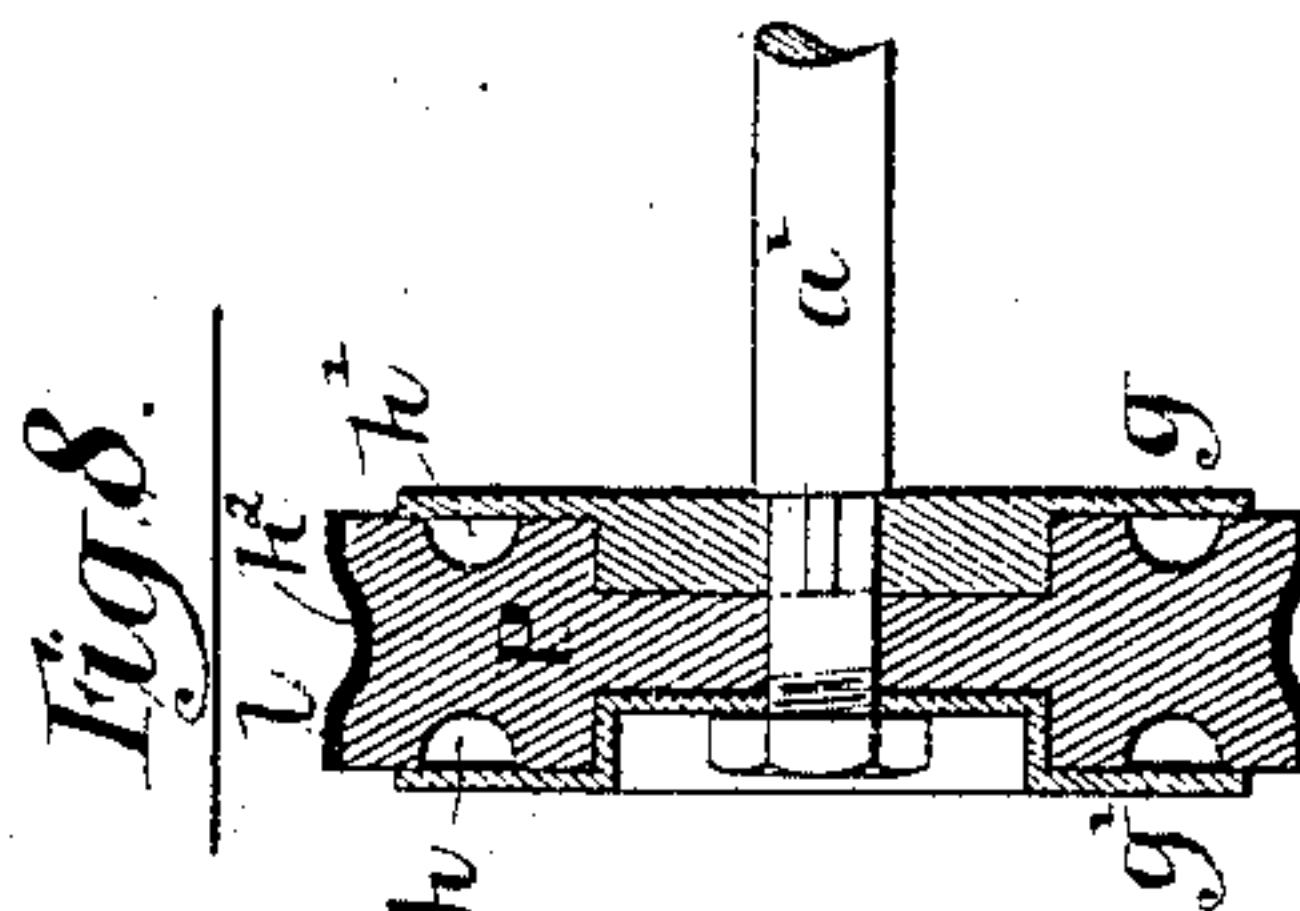
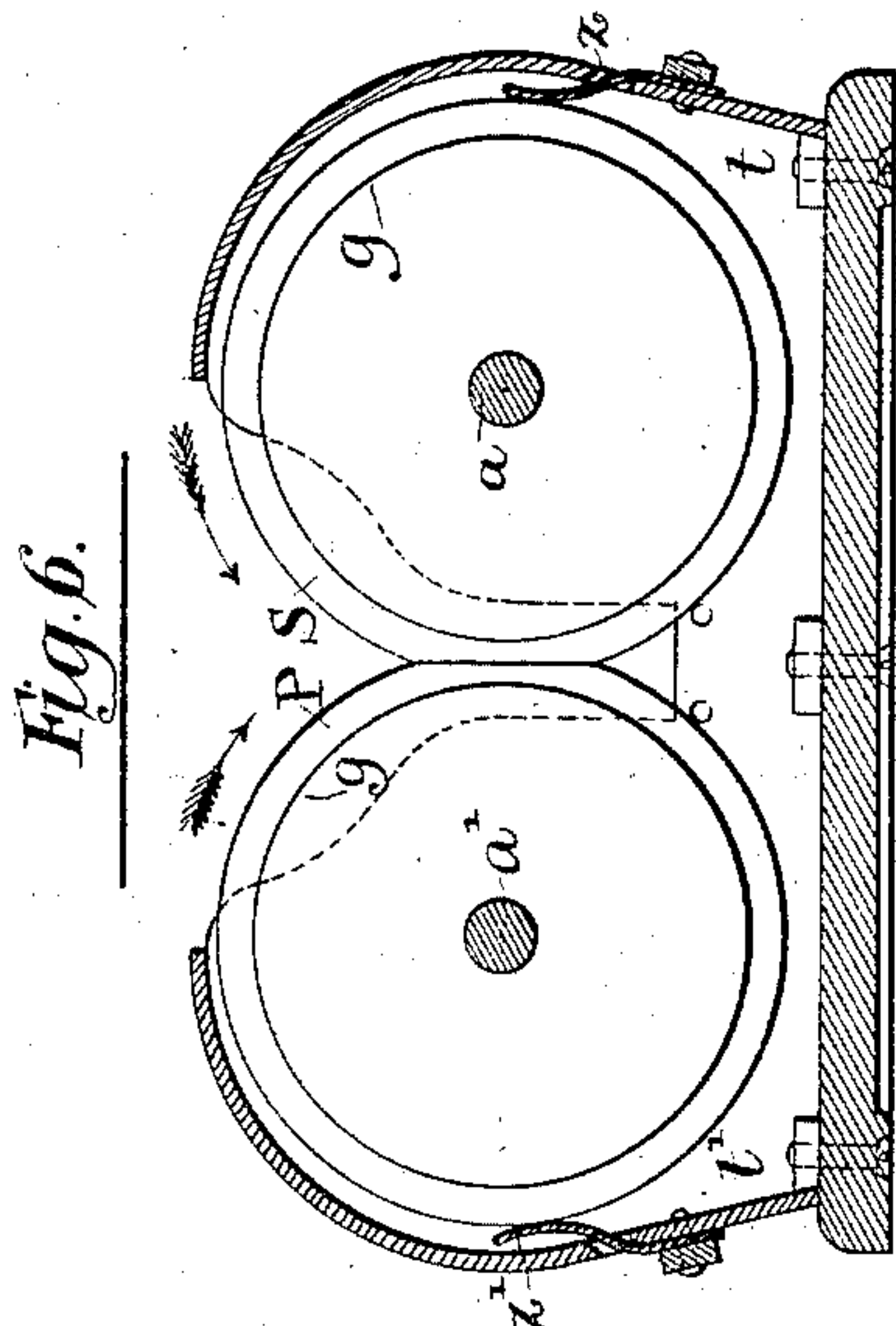
2 Sheets—Sheet 2.

W. FABIAN & A. TELLER

KNIFE CLEANING APPARATUS.

No. 314,658.

Patented Mar. 31, 1885.



*Witnesses:*

*Louis M. Whitehead.*

*Matthias Pollock*

*Inventors:*

*Wilhelm Fabian  
Adalbert Teller  
by their Atty's  
Brown & Hall*



# UNITED STATES PATENT OFFICE.

WILHELM FABIAN AND ADALBERT TELLER, OF HAMBURG, GERMANY.

## KNIFE-CLEANING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 314,658, dated March 31, 1885.

Application filed July 12, 1884. (No model.)

*To all whom it may concern:*

Be it known that we, WILHELM FABIAN and ADALBERT TELLER, both subjects of the Emperor of Germany, and residents of Hamburg, in said Empire, have invented a new and useful Improvement in Knife-Cleaning Machines, of which the following is a specification, reference being had to the accompanying drawings.

10 This machine, embodying our invention, consists in its essential parts of two rollers or disks of peculiar shape, of soft vulcanized india-rubber, which are pressed together at their peripheral surfaces and rotated against each other, while the knife to be cleaned is passed between them in a manner that will be hereinafter described. The india-rubber rollers or disks are constructed in such manner that they easily flatten off while pressed together, and bear upon the knife across its full width, in consequence of which the polishing of its full surface is completed by passing it once between the rollers or disks.

Figure 1 in the drawings is a rear elevation of the machine. Fig. 2 is a plan of the same, with the upper portion of the casing which contains the rollers or disks removed. Fig. 3 exhibits a vertical section in the line *a b* of Fig. 2. Fig. 4 represents a vertical section in the line *c d* of Fig. 2, showing the rollers or disks with the pressure removed. Fig. 5 represents a section like Fig. 4, except that the rollers or disks have the pressure applied. Fig. 6 represents a vertical section in the line *e f*. Fig. 7 is a front view of one of the rollers or disks alone and without side plates, between which the elastic material is secured, such plates being omitted; and Fig. 8 is an axial section of the same.

40 Similar letters of reference indicate corresponding parts in the several figures.

The two india-rubber disks or rollers P and S, each of which is formed, essentially, in accordance with disk P, (shown in Figs. 7 and 8,) have their shafts *a a'* supported in bearings of the machine-stand, in which they can slide in a horizontal direction within certain limits, while by a handle, *k*, intermediate shaft, *b*, and gearing *m n* they can be rotated against each other. A knife, M, placed between the disks or rollers, will consequently be touched by them at both sides as soon as

the disks or rollers are brought close together. By turning an eccentric, *e*, out of its position of Fig. 4 into that shown in Fig. 5, the disks 55 or rollers can be pressed together. The arms *d* and *d'*, that engage behind shafts *a* and *a'*, are in that case brought nearer together, as will be understood with reference to the drawings. The arm *d*, which holds the shaft *a*, 60 projects rigidly upward from one end of a horizontal bar, *d<sup>2</sup>*, which is free to slide on the bed of the machine, and is guided in a loop or strap, *d<sup>3</sup>\**. To the opposite end of the bar *d<sup>2</sup>* is pivoted the eccentric or cam *e*. The arm 65 *d'* is pivoted at *\** to a support, *d<sup>3</sup>*, and by moving the cam-lever *e* in one direction it draws or moves the arms *d d'* toward each other, and brings the peripheries of the rollers or disks together. This movement is so slight that 70 it does not interfere with the outer bearings, *a\**, of the shafts *a a'*, said bearings being very short, nor with the proper engagement of the wheels *m n*, which drive said shaft. The construction of disks or rollers P and S, 75 each with one or more concave groove or grooves, *h<sup>2</sup>*, at its outer circumference, and concentric grooves *h* and *h'* at the sides, near the outer edge, as shown in Fig. 8, allows the material to be flattened off to a broad plane, 80 while the disks are pressed together without giving much resistance to the transmission of rotation, and without distorting the material in any damaging manner. At the line of contact the peripheries of the two disks or rollers are flattened off so as to form a tangent 85 plane of about the width of the knife, similar to that shown in Figs. 2, 5, and 6 of the drawings, while the material from the circumference of the disks is displaced toward the 90 grooves *h h'*.

To prevent the edges of the rollers or disks from being pressed too far outward by the knife while this is shifted sidewise, side plates, *g* and *g'*, are applied, that nearly cover 95 the sides of the disks. The knife bears with the back on rollers *v v'* or on a smooth plane or projection of the stand. The disks or rollers are covered at the circumference by strips of leather, *l*, and polishing-powder or other 100 polishing material is applied, which may be applied by hand or fall between the disks or rollers from a hopper above them; or the disks or rollers may partly revolve within small

troughs  $t t'$  of the casing, furnished with polishing material, strips of leather or metal,  $z z$ , being applied to strip off all superfluous powder.

5 What we claim as our invention, and desire to secure by Letters Patent, is—

1. The combination, in a knife-cleaning machine, of two revolving rollers or disks of elastic material having grooves in their circum-  
10 ferences and sides, substantially as and for the purpose herein described.

2. The combination, with the elastic rollers

or disks having grooves  $h^2$  in their circumferences and grooves  $h h'$  in their sides, of the side plates,  $g g'$ , covering the said grooves  $h h'$  in their sides, substantially as described, and as illustrated in the accompanying sheet of drawings.

WILHELM FABIAN.  
ADALBERT TELLER.

Witnesses:

F. ENGEL,  
F. CLAIRMONT.