

(No Model.)

J. P. LIPPS.
ADJUSTABLE SIEVE.

No. 272,278.

Patented Feb. 13, 1883.

Fig. 2.

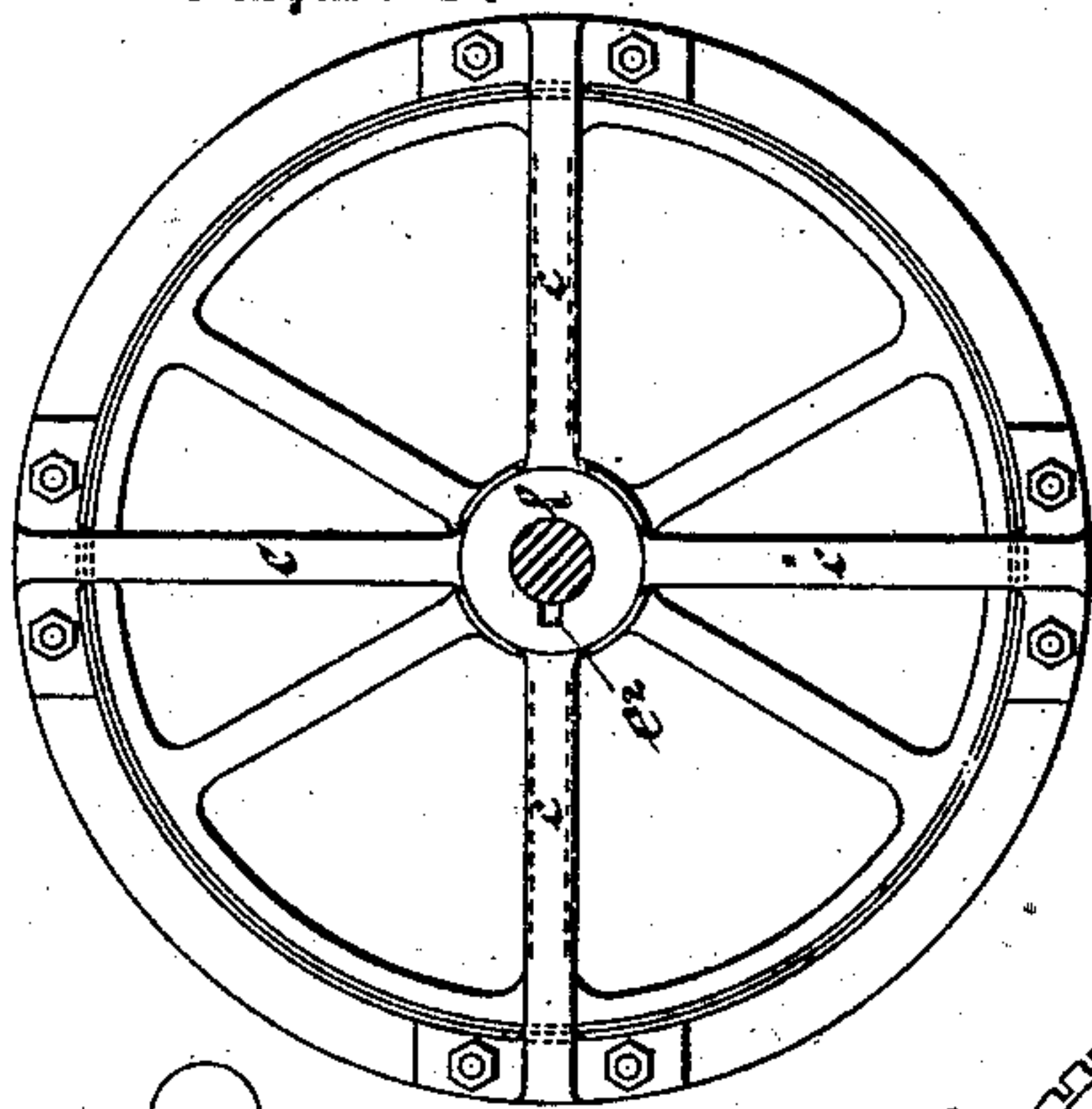


Fig. 7.

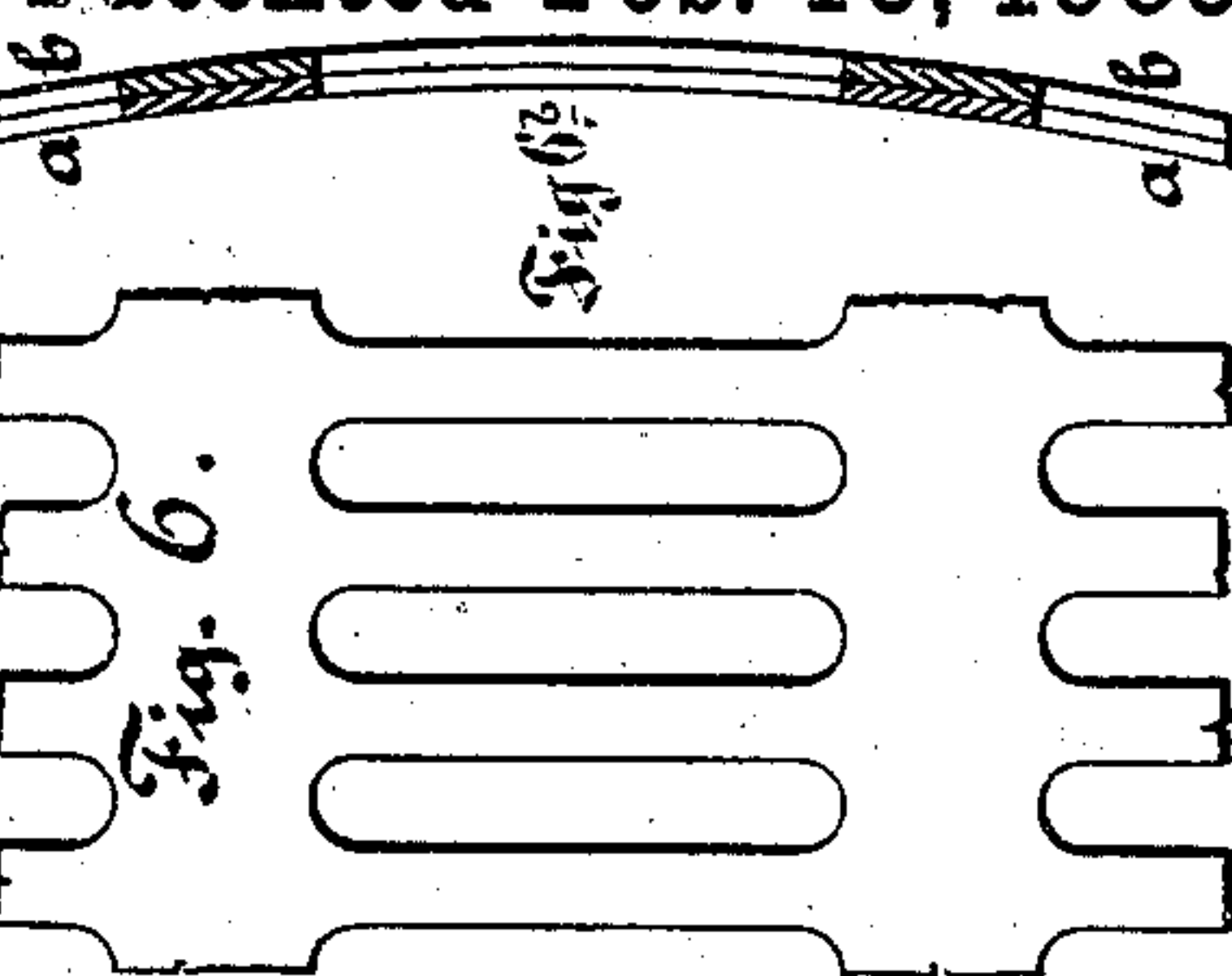


Fig. 4.

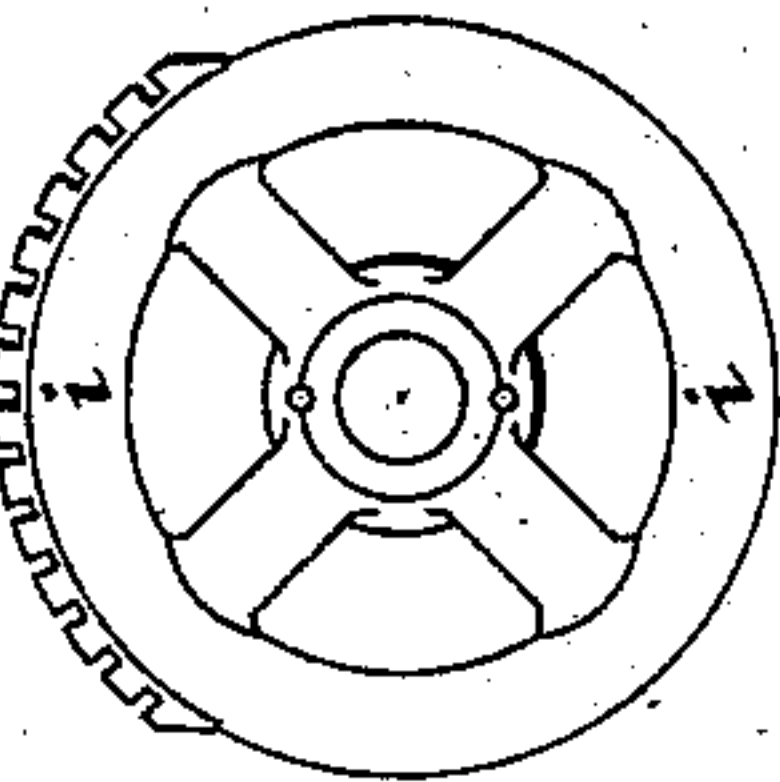


Fig. 3.

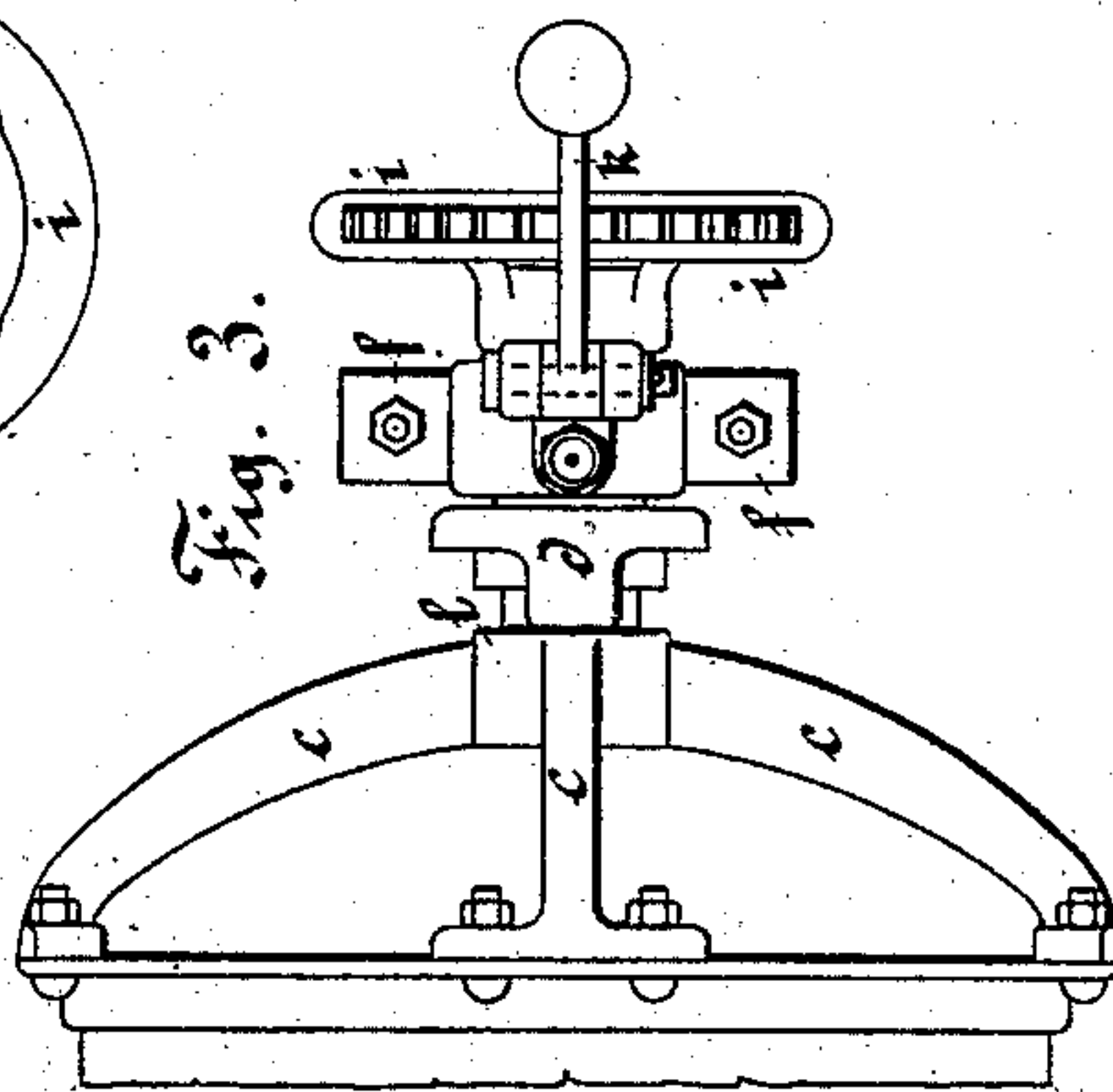


Fig. 1.

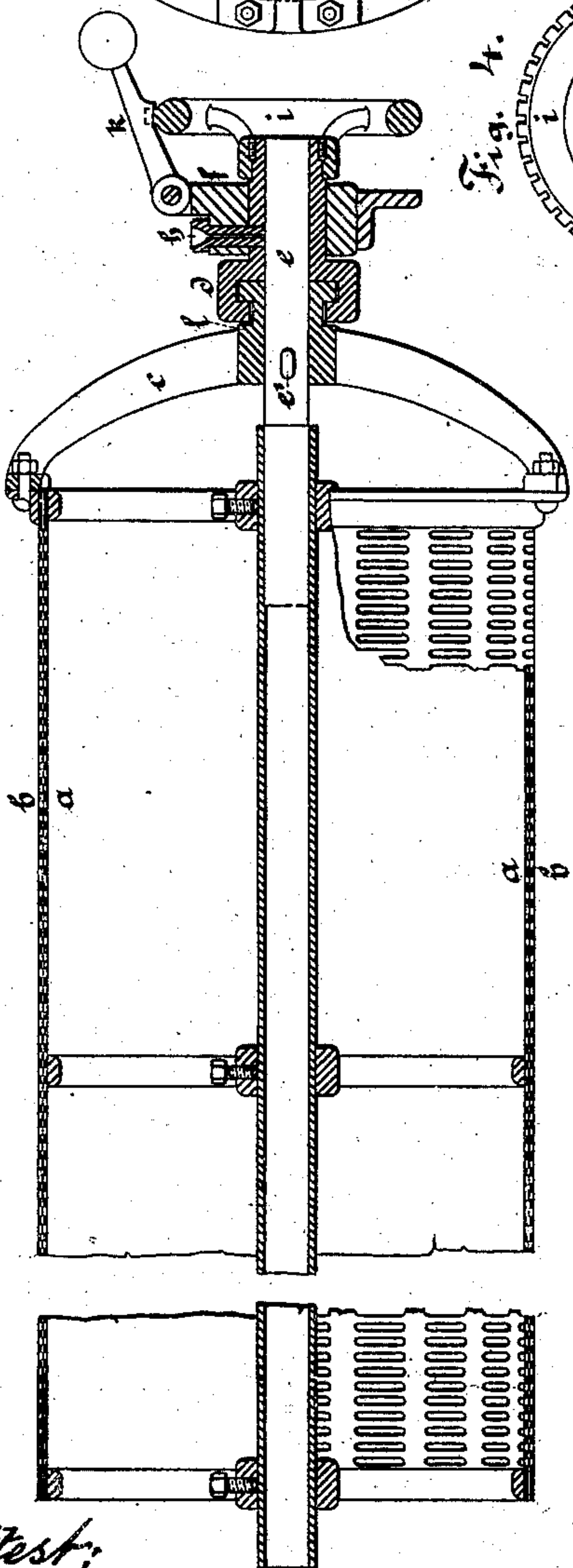
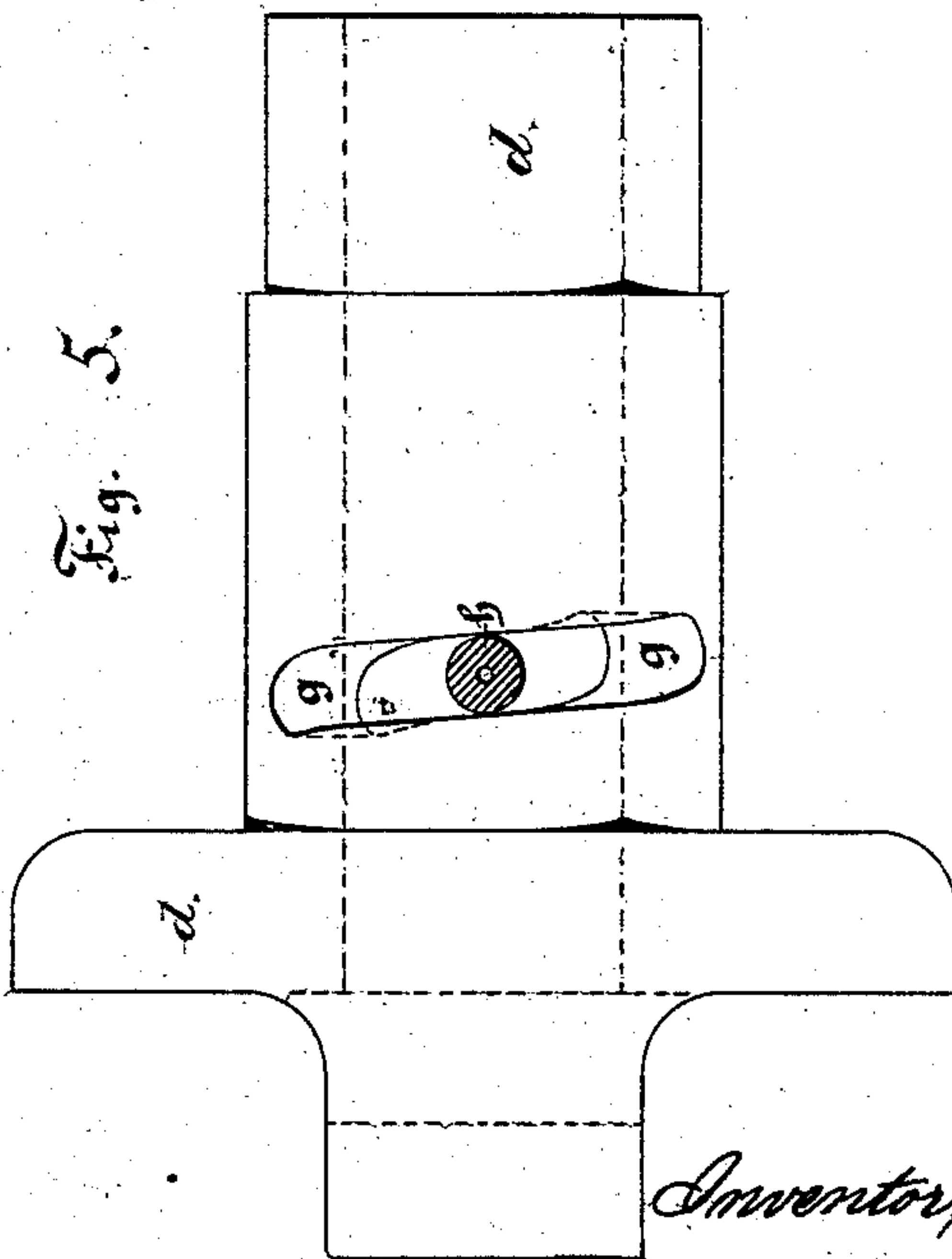


Fig. 5.



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UNITED STATES PATENT OFFICE.

JOHANN P. LIPPS, OF DRESDEN, SAXONY, GERMANY.

ADJUSTABLE SIEVE.

SPECIFICATION forming part of Letters Patent No. 272,278, dated February 13, 1883.

Application filed September 2, 1882. (No model.)

To all whom it may concern:

Be it known that I, JOHANN PHILIPP LIPPS, of Dresden, Saxony, German Empire, engineer, have invented new and useful Improvements in Adjustable Sieves, of which the following is a specification.

My invention relates to cylindrical sieves provided with means for adjusting or varying the size of the slits or perforations thereof; and the improvements consist in the particular construction and combination of means for carrying out the adjustment while the sieve is in operation.

Figure 1 of the annexed sheet of drawings represents my improved sieve in a sectional side elevation, the supporting-frame and all parts fixed thereto, except the plumber-block *f*, being omitted, as they present no novel features. Fig. 2 is an end view; Fig. 3, a plan of a portion of the sieve with the adjusting devices. Figs. 4 and 5 are parts belonging to the latter; Fig. 6, Fig. 6^a and Fig. 6^b show a portion of the sifting-surface in plan and in longitudinal and transverse section. Fig. 7, finally, is a section of the said surface with different relative position of parts. Figs. 5, 6, and 7 are drawn to a larger scale than the other figures.

The drum of the sieve consists of two cylinders, *a* and *b*, of sheet metal, inserted one into the other and so fitted together that while being in close reciprocal contact they may be shifted in respect to each other longitudinally. Both cylinders are provided in a like manner with holes forming, by preference, transverse slits and registering together. When the movable one of these cylinders, which, according to the drawings, is the outer one, *b*, is so adjusted in respect to the other or inside cylinder that the holes of the former correspond with those of the latter, as shown by Fig. 6, the entire width of the holes will be free for the materials to pass through, whereas when the relative position of the cylinders is altered the bars or solid portions of one cylinder will more or less cover the holes of the other one, whereby the free width of the holes is reduced. (See Fig. 7.) The adjustment of the movable cylinder is effected by devices constructed as follows—viz., to the end of the cylinder *b* are fixed by means of an angle-iron ring the arms

c c, converging in a boss, *l*, through which the end *e* of the sieve-shaft passes. *e'* is a feather or stud engaging with a groove, *e''*, in the boss *l*, and serving to prevent the latter, with the arms *c* and the cylinder *b*, from rotating on the shaft and on the cylinder *a*, respectively, whereas it allows these parts to be shifted in regard to each other longitudinally. On the end of shaft *e* is passed a sleeve, *d*, (shown to a larger scale in Fig. 5,) and which grasps with two claws into a groove turned in the boss *l*, or which is coupled thereto in any other known manner and so as not to interfere with the rotation of the sieve. This sleeve lies in a plumber-block, *f*, and serves as a bearing or bush for the end of shaft *e*. It is provided with a helical or oblique slot, *g*, Fig. 5, into which projects a pin, *h*, screwed into the plumber-block *f*, and through which a hole may be drilled lengthwise, serving as a lubricating-channel. On the outer end of the sleeve *d* is fixed the hand-wheel *i*, having notches on its periphery, into which a pawl, *k*, catches. When this pawl is lifted and the hand-wheel *i* and sleeve *d* are turned the latter will be forced, by the engagement of the pin *h* with the slot *g*, to screw itself forward or backward in the plumber-block *f*. This will cause the boss *l* and the arms *c c* to be moved lengthwise on the end *e* of the sieve-shaft, (which is prevented from being displaced by means of collars on the journal at its other end,) and the cylinder *b* to be shifted in regard to the cylinder *a*. It will be manifest that the shaft *e* turns in the sleeve *d*, and that the latter is capable of being rotated to such an extent as will insure the proper adjustment or variations of the holes in the cylinders *a b*. The object of the notched wheel *i*, mounted on the sleeve *d*, and the pawl *k*, pivoted to the plumber-block *f*, is to hold the sleeve in a fixed position after it has been turned to adjust the cylinders *a b*.

I claim as my invention—

1. In combination with the two perforated cylinders *a* and *b*, adjustably inserted one in the other, the adjusting device consisting of the sleeve *d*, having the helical or oblique slot *g*, and the plumber-block *f*, provided with the pin *h*, projecting into the slot *g*, the said sleeve

being coupled to the cylinder *b*, substantially as and for the purpose set forth.

2. The combination of the sleeve having the notched hand-wheel *i* and helical slot *g*, and the plumber-block *f*, provided with the pawl *k*, and pin *h*, with the perforated cylinders *a* *b*, shaft *e*, arms *c*, and boss *l*, turning in the sleeve *d*, as and for the purpose set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHANN PHILIPP LIPPS.

Witnesses:

PAUL DRUCKMÜLLER,

CARL SCHRÖDER.