

No. 719,008.

PATENTED JAN. 27, 1903.

E. A. JOHNSTON.
FOLDING FRAME FOR GRINDERS.

APPLICATION FILED OCT. 20, 1902.

NO MODEL.

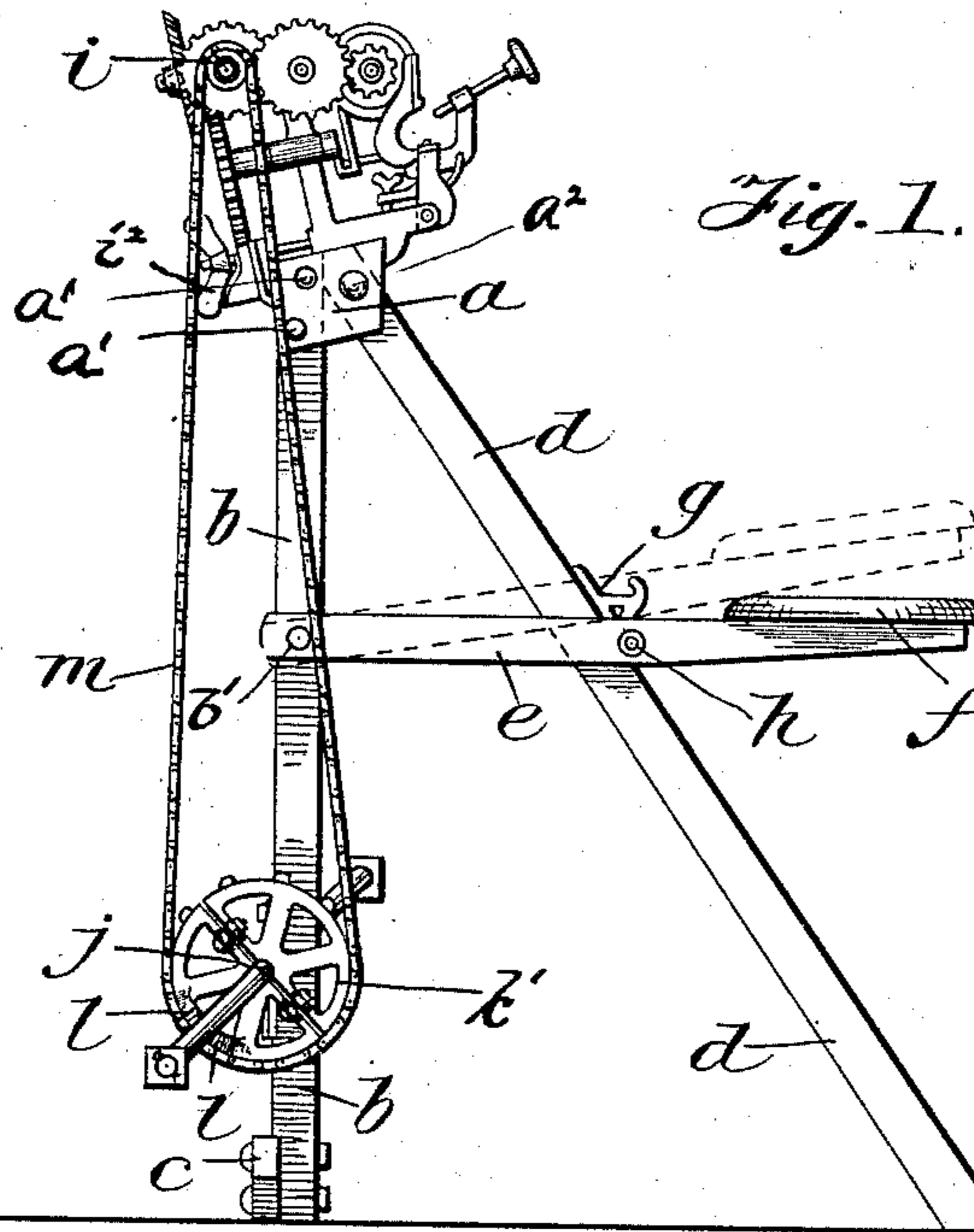


Fig. 1.

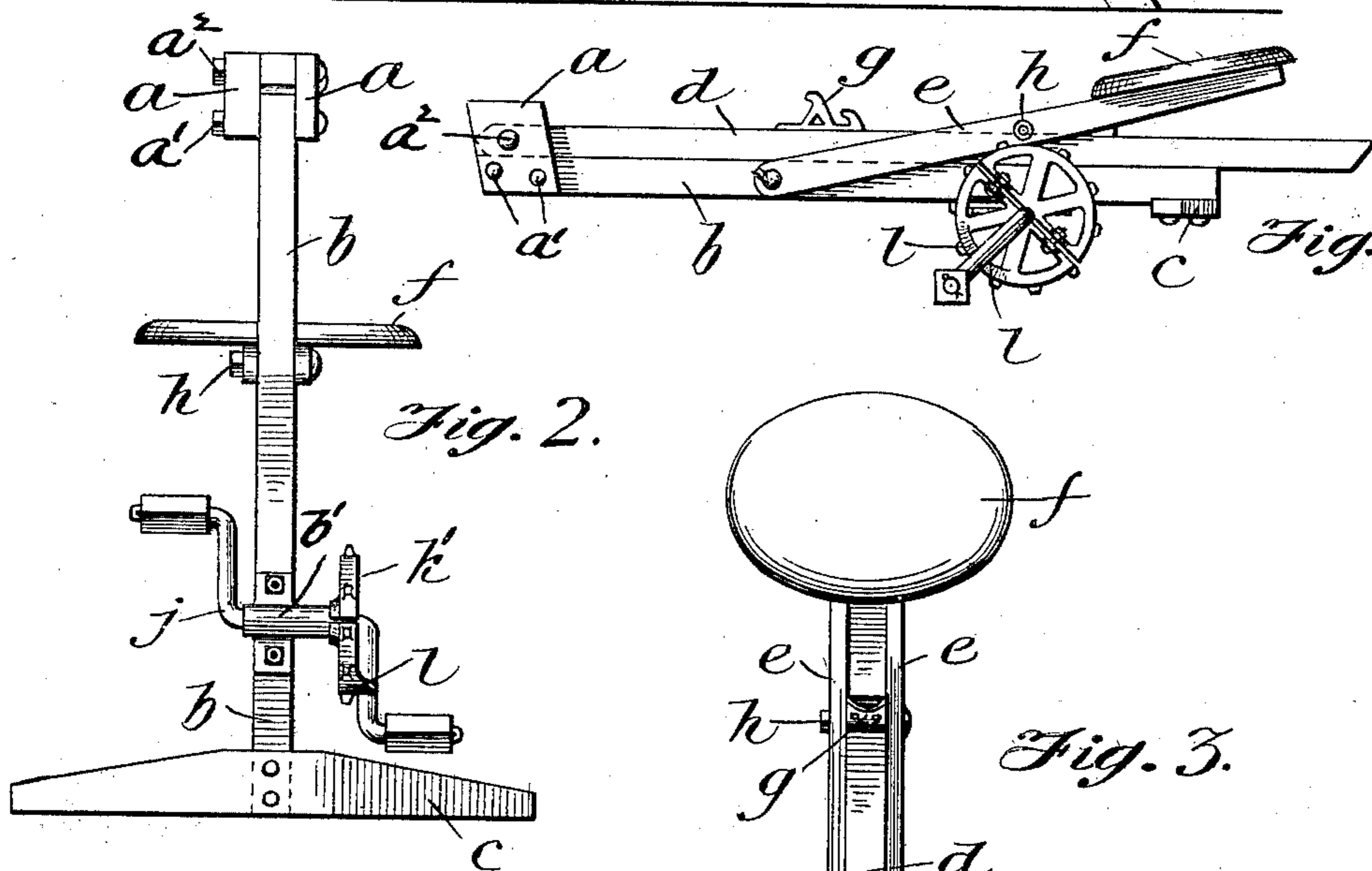


Fig. 2.

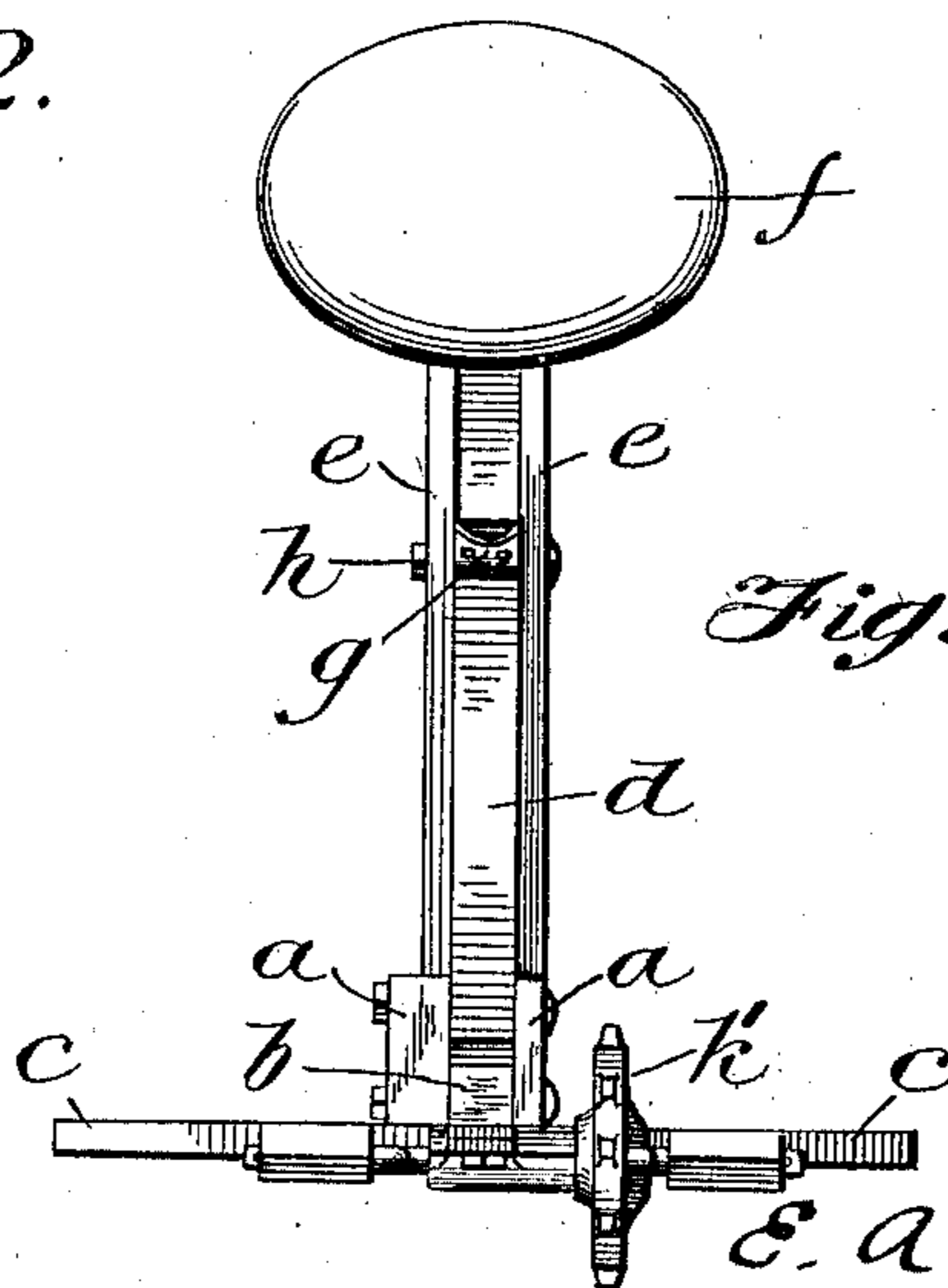


Fig. 3.

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UNITED STATES PATENT OFFICE.

EDWARD A. JOHNSTON, OF CHICAGO, ILLINOIS, ASSIGNOR TO INTERNATIONAL HARVESTER COMPANY, OF CHICAGO, ILLINOIS, A CORPORATION OF NEW JERSEY.

FOLDING FRAME FOR GRINDERS.

SPECIFICATION forming part of Letters Patent No. 719,008, dated January 27, 1903.

Application filed October 20, 1902. Serial No. 127,994. (No model.)

To all whom it may concern:

Be it known that I, EDWARD A. JOHNSTON, a citizen of the United States, residing at Chicago, county of Cook, State of Illinois, have
5 invented certain new and useful Improvements in Folding Frames for Grinders; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to
10 which it appertains to make and use the same.

The invention relates to the construction of stands or frames for temporarily supporting grinding-machines, especially the small sickle-grinders that are now so commonly employed
15 for grinding the knives or sections of cutter-bars for mowing and reaping machines.

The object of the invention is to provide an improved construction of such frame, having particularly in view to make it foldable into
20 a narrow compass for transportation and storage, and at the same time to have the construction such that it can be extended to form an adequate and rigid support for the grinder, as well as to afford a seat for the operator.

The construction has been designed especially for the sickle-grinder of my Patent No. 665,328, of January 1, 1901, but it is well adapted to receive and support most any form of grinder that is provided with clamps to
30 fasten it to a table, block, or other flat base.

As will be seen on reference to the patent above referred to, the grinder therein illustrated and described is only adapted to be operated by hand and is intended to be clamped
35 to the drive-wheel of the machine; but the present improvement adapts that grinder to be operated by foot-power, thus leaving the hands free to manipulate the tools being ground, and also provides a convenient support permitting the implement to be set up
40 when it is desired for use away from the machine and where some sort of special support is required.

The invention is illustrated in the accompanying drawings, wherein—

Figure 1 is a side view of a stand constructed in accordance with my invention. Fig. 2 is an elevation of the front end of the same. Fig. 3 is a plan view, and Fig. 4 is a
50 view of the stand closed.

Referring to the views, *a a* denote a sectional block, the two parts of which are bolted together by bolts *a' a' a'*. *b* denotes a vertical standard, which is rigidly secured at its upper end to the block by means of the bolts
55 *a' a'* above referred to. At the lower end of this standard there is a foot-piece *c*, bolted crosswise, as shown in Figs. 2 and 3, and which affords a firm lateral support.

Pivotaly secured to the block *a* by means
60 of the bolt *a'* is a diagonal standard or prop *d*, the pivotal connection between this standard and the block being such that the two standards may be folded together side by side, as indicated in Fig. 4.

To the vertical standard *b* at the point *b'*
65 there is pivotaly secured a seat-support *e*, consisting of two bars, as shown in Fig. 3, which extend rearwardly, one on each side of the diagonal standard *d*, and carry at their outer
70 ends a seat *f* for the operator. The standard *d* is provided at a point a little higher than the pivotal point *b'* with a hook-shaped bracket *g*, and the seat-support *e* is provided with a pin *h* (preferably removable) which,
75 when the standards are spraddled apart as shown in Fig. 1, hooks into the bracket *g* and holds the seat-support and seat in the position indicated in dotted lines in Fig. 1. The engagement of the bolt *h* with the bracket *g*
80 also serves to lock the standards in their open position, so as to prevent the accidental collapse of the frame.

As above stated, the grinder herein illustrated is that shown and described in my
85 patent of January 1, 1901. It is secured to the flat upper surface of the block *a* by means of the clamp-screw *i'* in precisely the same manner that it would be secured to the wheel of a mower or to a table or other support. As
90 herein illustrated, the grinder is provided with a small sprocket-wheel *i*, which is attached to the spur-gear *k*, (shown in Fig. 2 of the patent,) and around this sprocket-wheel an endless driving-chain *m* is thrown.

In a bearing *b'*, secured to the front side of the vertical standard *b* near its lower end, there is journaled a crank-shaft *j*, which is provided with cranks carrying pedals, as
95 shown in all the views. The chain *m* is con- 100

5 nected to and driven from this crank-shaft
 by means of a detachable sprocket-wheel k' ,
 which is made in sections, as best shown in
 Fig. 1, and is clamped around the shaft j , just
 10 inside one of its cranks, by means of bolts
 passing through ears that are secured to each
 section at their meeting edges, as clearly
 illustrated in Figs. 1 and 4. One section of
 the sprocket-wheel is provided with lugs l ,
 15 projecting laterally from a point near the rim
 of the wheel and spaced apart sufficiently to
 receive between them the crank of the shaft
 j . The wheel is thus readily attachable and
 detachable from the shaft, and the bearing
 20 b' for the shaft is of such a length as to bring
 the wheel in the same vertical plane as the
 sprocket-pinion e' on the grinder.

The construction being as thus described,
 it is to be noted that by providing for the
 25 driving of the grinder by foot-power the op-
 erator is left with his hands free to manipu-
 late the tools. It is also characteristic of the
 invention that the grinder and its driving-
 sprocket k' are readily detachable from the
 30 frame, so as to permit the latter to be folded
 and separately packed and shipped. It is also
 to be noted that when folded into the position
 shown in Fig. 4 the seat-support e may, if de-
 sired, be made to fold down more nearly par-
 35 allel with the standards b and d by simply re-
 moving the bolt h and allowing the seat f to
 rest on the lower end of the diagonal stand-
 ard d .

Having thus described my invention, what
 35 I claim, and desire to secure, is—

1. A folding frame for supporting a grinder,
 the same consisting of a block to which the
 grinder may be attached, a vertical standard

40 secured by its upper end to the block, an aux-
 iliary standard pivoted at its upper end to
 the block, and a seat-support pivoted to one
 of said standards and having a releasable en-
 gagement with the other, whereby the stand-
 ards may be held apart, or folded lengthwise
 45 together with the seat-support.

2. A folding frame for supporting a grinder,
 the same consisting of a block to which the
 grinder may be attached, a vertical standard
 rigidly secured by its upper end to the block,
 a diagonal standard pivoted at its upper end
 50 to the block, a seat-support pivoted to the
 vertical standard, and a bracket on the diag-
 onal standard with which the seat-support
 may be engaged to lock the standards sprad-
 dled apart and from which said support may
 55 be released to permit it and the standard to
 be folded lengthwise together.

3. A folding frame for supporting a grinder,
 the same consisting of a block to which the
 grinder may be attached, a vertical standard
 60 secured by its upper end to the block, an aux-
 iliary standard pivoted at its upper end to
 the block, a seat-support pivoted to one of
 said standards and having a releasable en-
 gagement with the other, a pedal-crank shaft
 65 journaled on the vertical standard, and a de-
 tachable sectional sprocket-wheel clamped
 around the shaft and locked thereto by lugs
 engaging one of the cranks.

In testimony whereof I affix my signature 70
 in presence of two witnesses.

EDWARD A. JOHNSTON.

Witnesses:

CHAS. N. CHAMBERS,
 W. M. TWOMBLY.