

J. G. FISHER & S. COONS.

Improvement in Sickle-Grinders.

No. 132,652.

Patented Oct. 29, 1872.

Fig. 1.

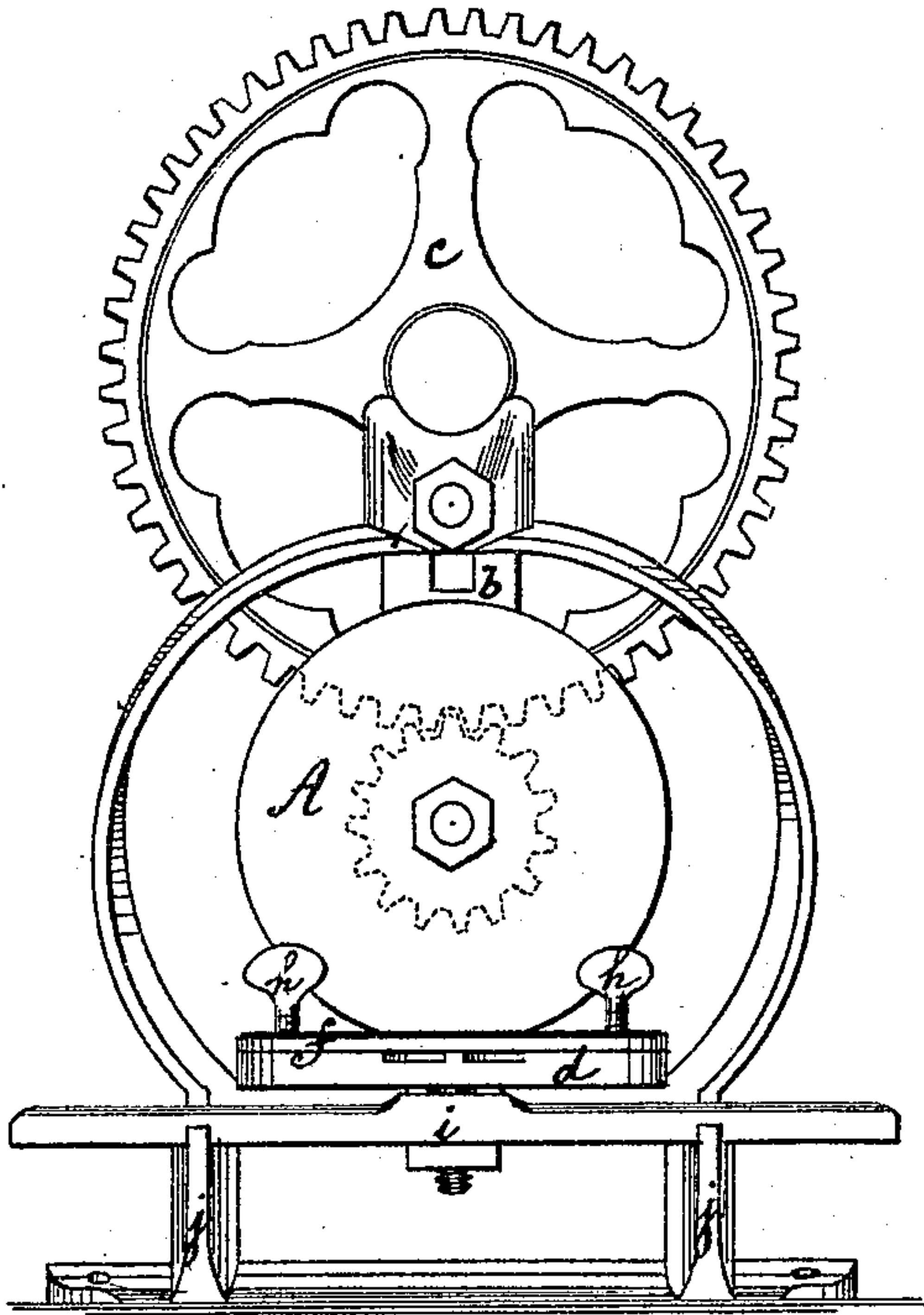


Fig. 2.

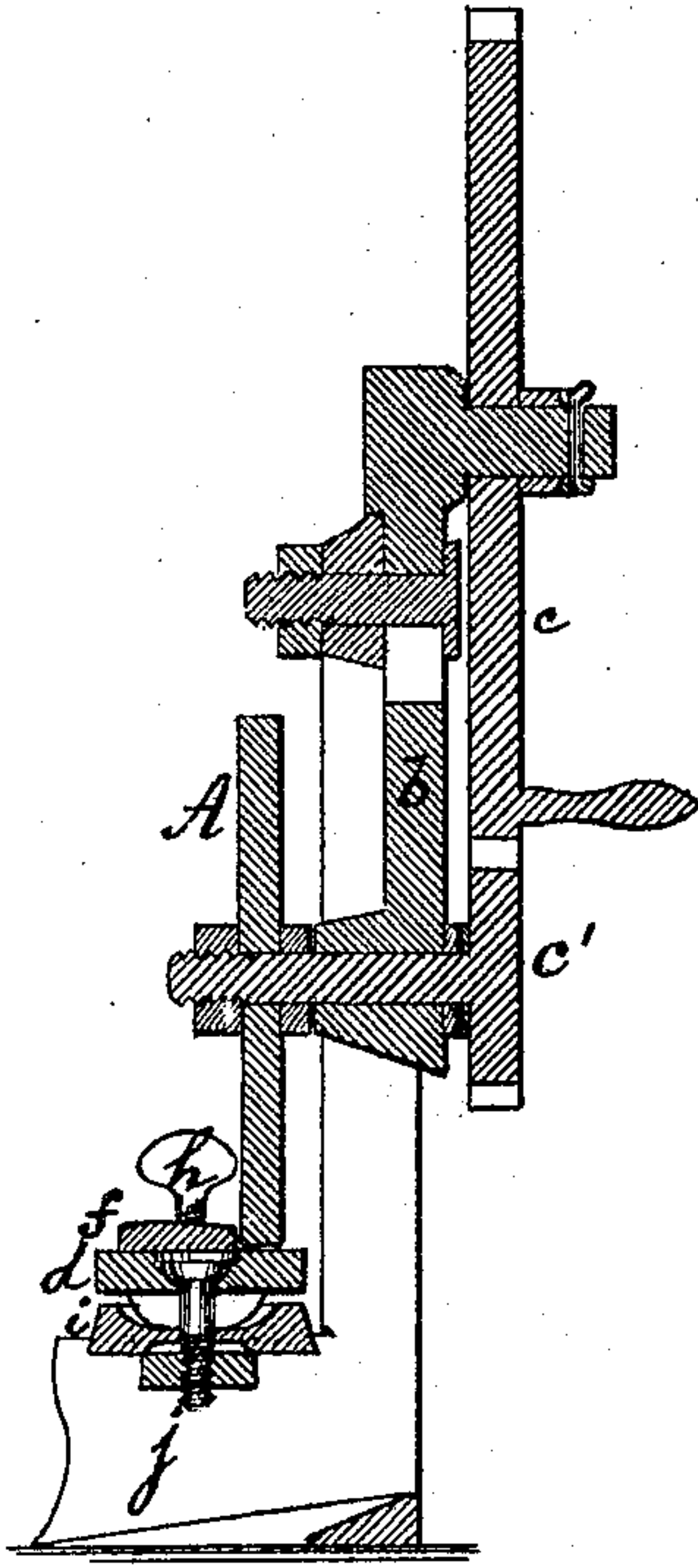
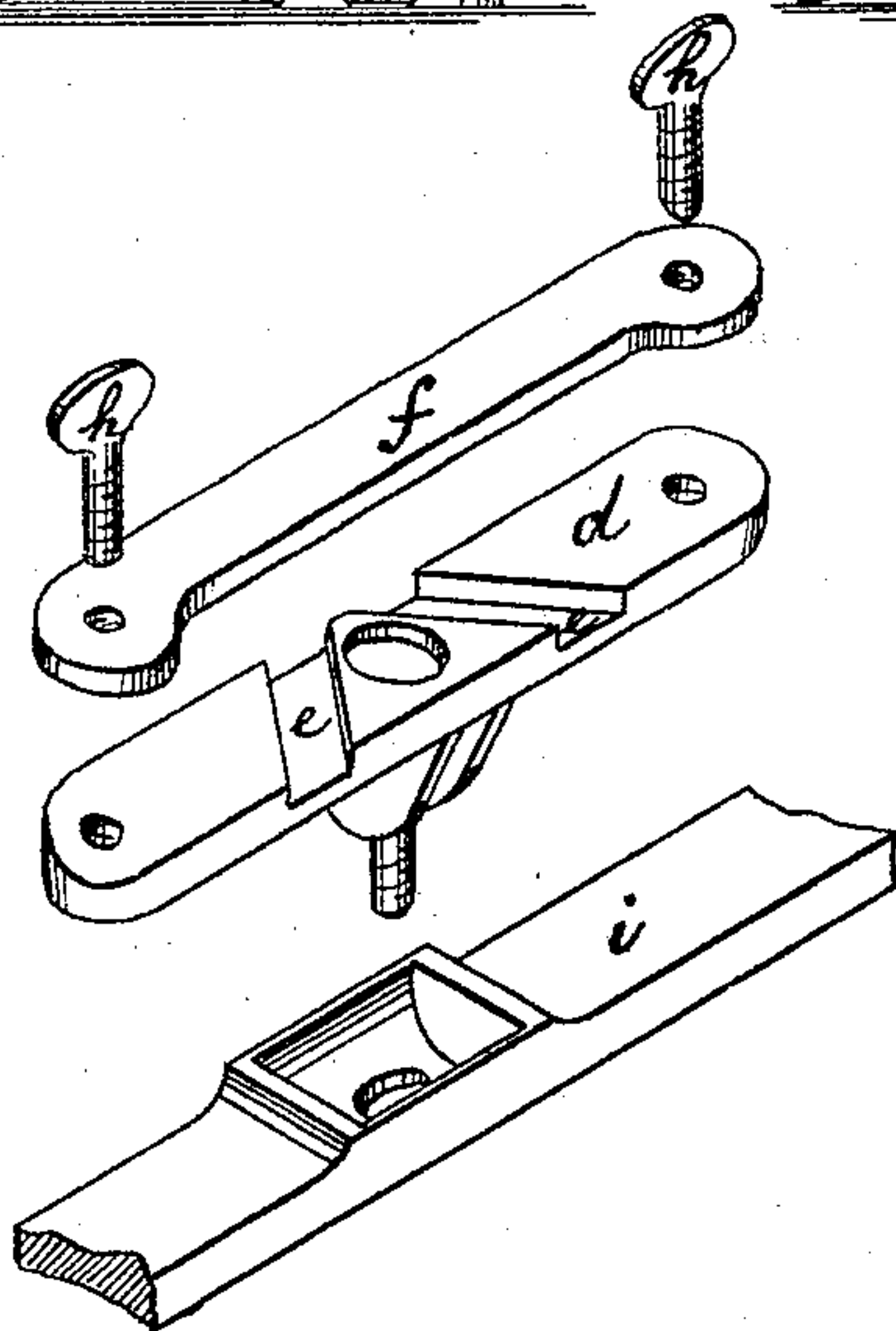


Fig. 3.



WITNESSES:

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UNITED STATES PATENT OFFICE.

JOHN G. FISHER AND SOLOMON COONS, OF GREENSBURG, PENNSYLVANIA.

IMPROVEMENT IN SICKLE-GRINDERS.

Specification forming part of Letters Patent No. 132,652, dated October 29, 1872.

To all whom it may concern:

Be it known that we, JOHN G. FISHER and SOLOMON COONS, of Greensburg, Westmoreland county, Pennsylvania, have invented an Improved Sickle-Grinder, of which the following is a specification:

This invention relates to an apparatus for grinding the teeth of the sickle-bars of harvesters; and it consists in the combination of an emery wheel with a suitable sliding clamp for holding the sections of teeth in such position that the edges of the same shall be parallel with the wheel in order that they may be properly ground.

Figure 1 is a side view; Fig. 2, a transverse vertical section; and Fig. 3, a perspective view.

A is the emery wheel aforesaid, the same being secured to a shaft mounted in a box formed in the frame *b*, and being rotated by means of spur-gearing *c c'*, all arranged in the usual manner. The shaft of the emery wheel is sufficiently loose in its box to allow the wheel to yield upwardly when raised by projections on the cutter-teeth as they pass beneath it. The teeth are placed on a block, *d*, across the top of which run diagonal grooves *e*, leaving a V-shaped space between them, the narrowest part of which space is at the front side of the block *d*. These grooves receive the rib that extends along the under and back side of each tooth, and as the angle formed by the grooves *e*, with the back of the block *d*, are the same as those formed by the edges of the teeth with their backs when the rib aforesaid is placed in either of the grooves *e*, one edge of the tooth is parallel with the

back of the block *d*, and, consequently, with the wheel A. This insures the proper grinding of the teeth. The teeth are held on the block *d* by means of a clamp, *f*, through the ends of which set-screws *h* pass into the block. The latter is bolted to a slide, *i*, that works in grooves in the feet *j* of the frame.

The process of grinding in this machine goes on in the following manner: One end of the sickle-bar is placed on the block *d*, with its rib in one of the grooves *e*, and clamped in this position. By moving the slide *i* the bar is then drawn under the wheel A till one edge of the first tooth is ground. The bar is then unclamped, moved along a sufficient distance, clamped again, and the same side of the next tooth ground, and so on till the same sides of all the teeth are ground. The bar is then shifted to the other groove *e*, and the same process repeated with the other edges of the teeth. The slide *i* can be operated with one hand, while the other turns the crank that drives the emery wheel. The mechanism is so simple that no great amount of skill is required to operate it, a shop-boy of ordinary intelligence being entirely competent.

We claim as of our invention—

The combination of the emery wheel A with the block *d* having the diagonal grooves *e*, the clamp *f*, slide *i*, and frame *b j*, all arranged as specified.

JOHN G. FISHER.
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