A. ASSMAN.

Improvement in Grinding Apparatus.

No. 132,231. Patented Oct. 15, 1872.

Fig. 1.

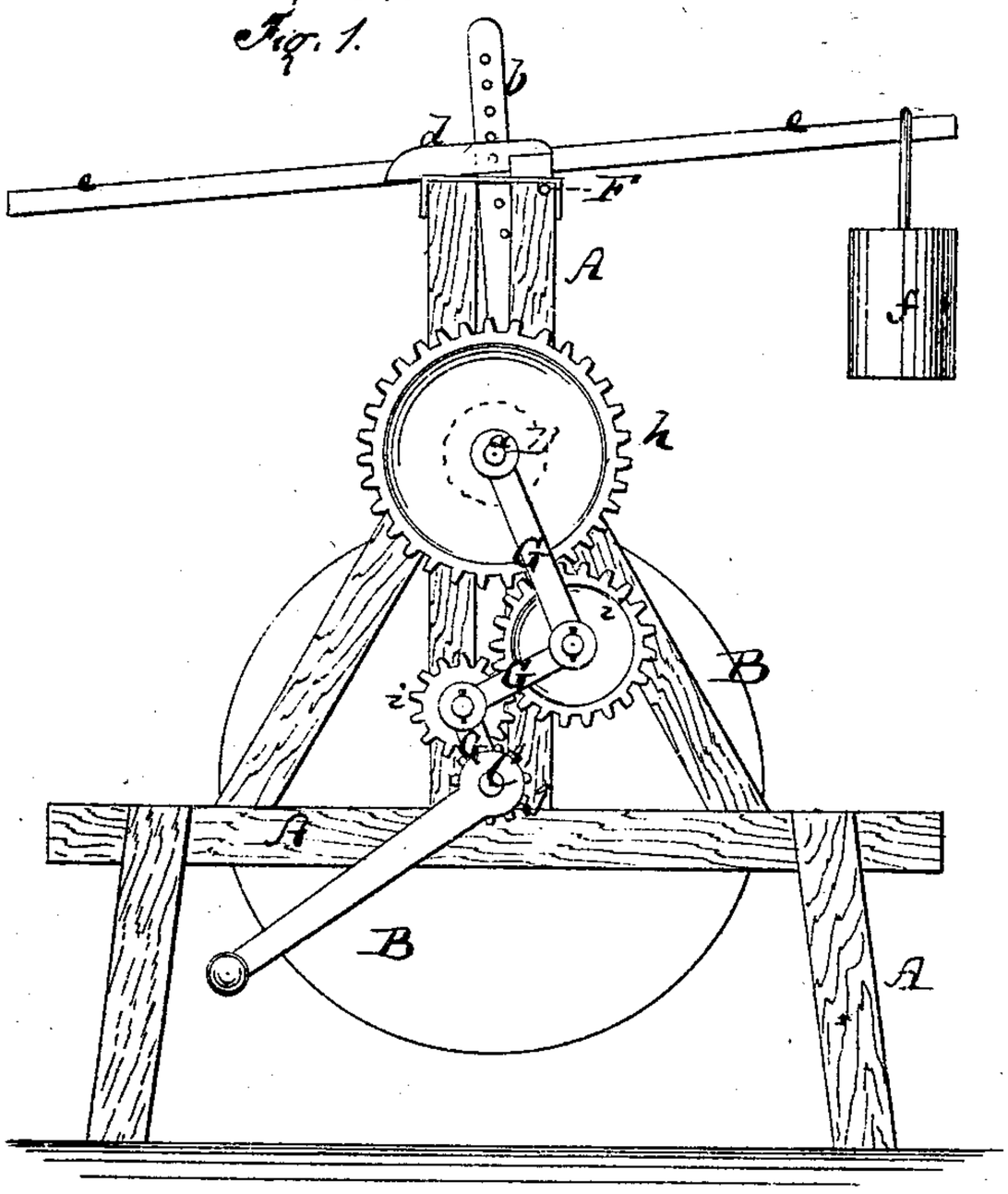


Fig. 2.

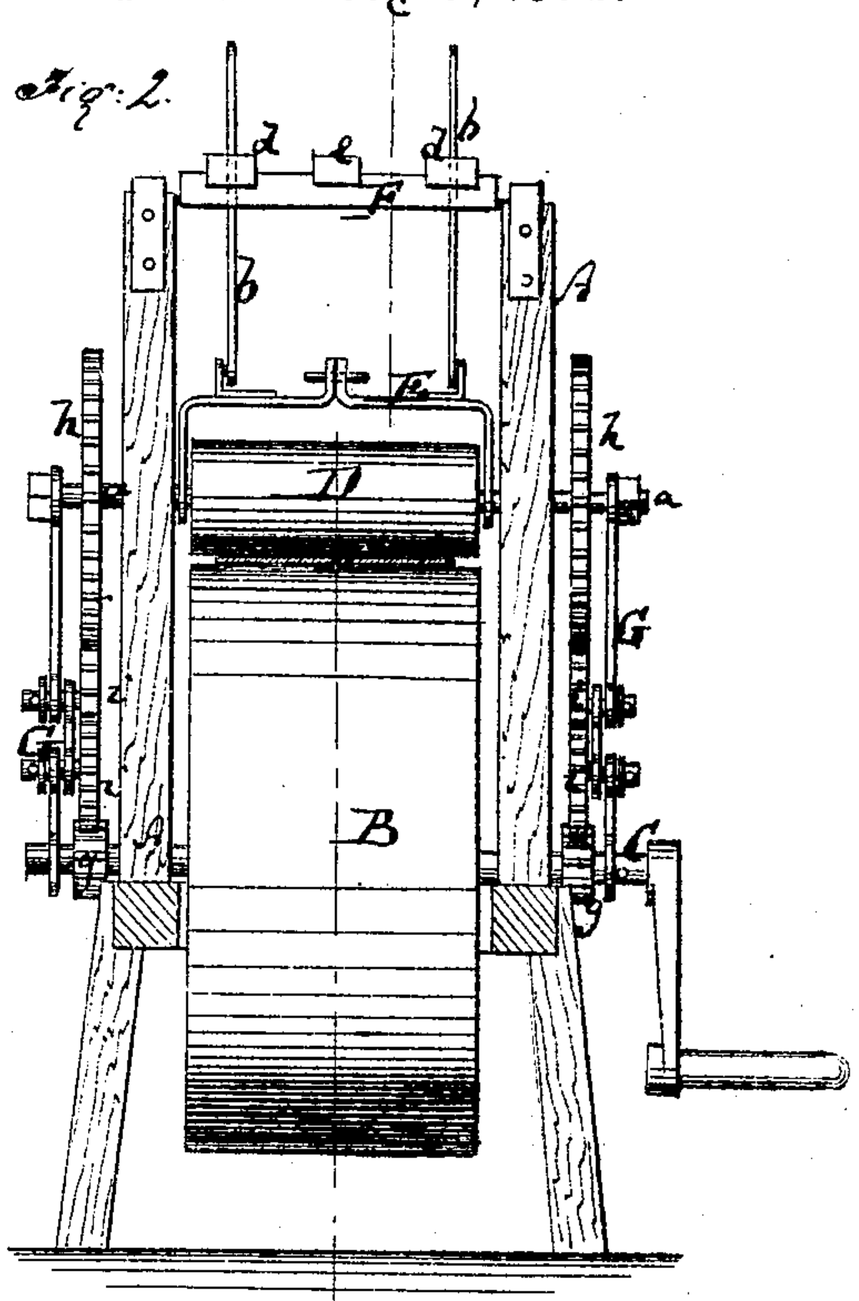
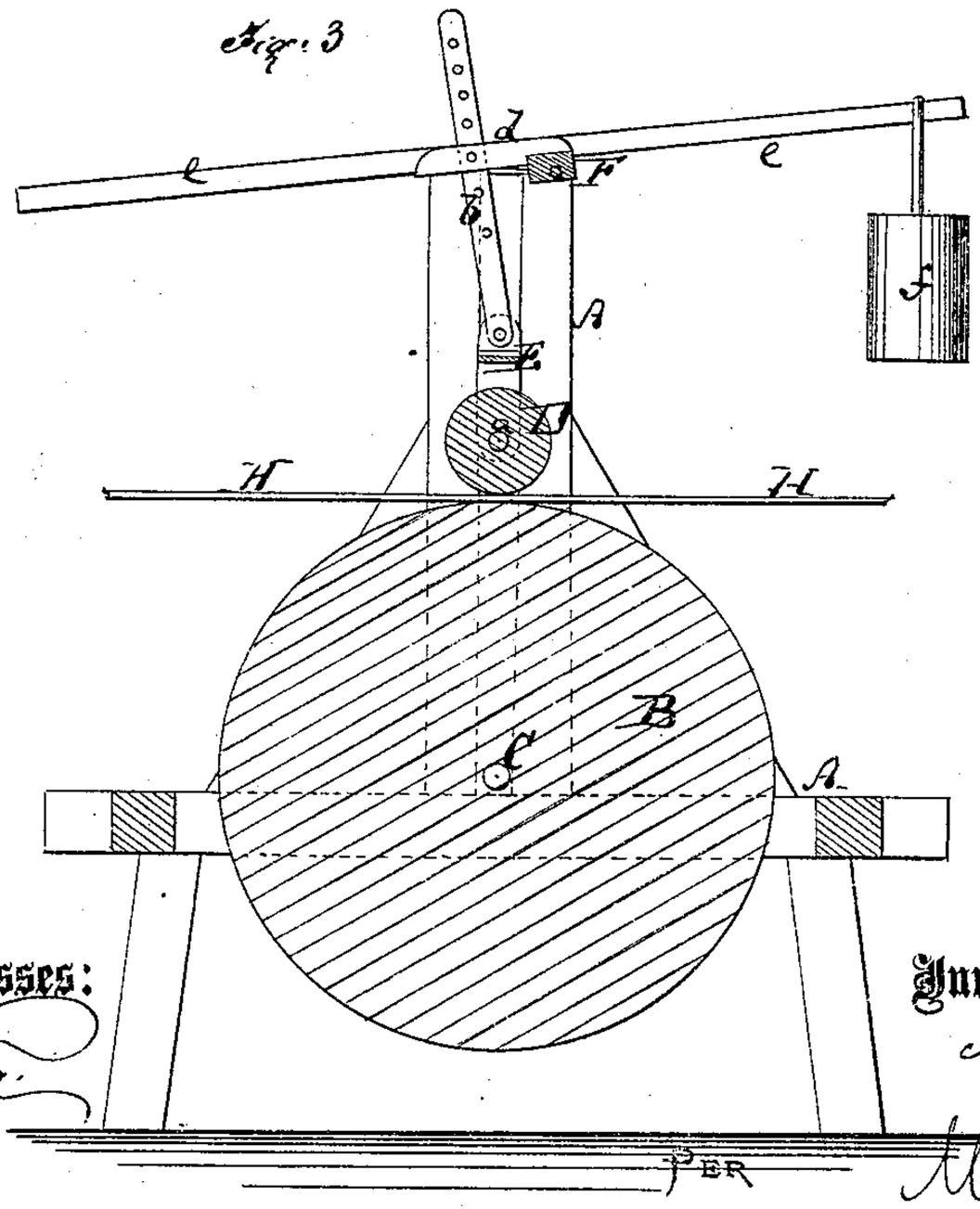


Fig. 3



Witnesses:

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UNITED STATES PATENT OFFICE.

ALBERT ASSMAN, OF LINDEN, NEW JERSEY.

IMPROVEMENT IN GRINDING APPARATUS.

Specification forming part of Letters Patent No. **132,231**, dated October 15, 1872.

To all whom it may concern:

Be it known that I, ALBERT ASSMAN, of Linden, in the county of Union and State of New Jersey, have invented a new and Improved Grinding Apparatus, of which the following is a specification:

Figure 1 represents a side elevation of my improved grinding apparatus; Fig. 2 is an end elevation; and Fig. 3, a vertical longitudinal section of the same, the line *c c*, Fig. 2, indicating the plane of section.

Similar letters of reference indicate corresponding parts.

This invention relates to a new apparatus which is to be used for grinding or smoothing the surfaces of metallic springs or other flat metallic surfaces, and in which a feed-roller is employed above a grindstone, and geared together therewith in such manner that as the grindstone wears smaller the feed-roller will follow down and still remain in gear.

In the accompanying drawing, the letter A represents the frame of my improved grinding or smoothing machine. B is a grindstone hung therein and mounted on a spindle, C. D is a feed-roller as long about as the grindstone, though smaller in diameter. Its arbor *a* has its bearings in a frame, E, which is pivoted to rods *b b*, that are fastened in cranks *d* of a rock-shaft, F. The latter is hung in the upper part of the frame A and holds the roller D thus suspended above the stone B. A beam, *e*, fastened to the rock-shaft, is weighted at its back end, as at *f*, so to swing the rock-shaft as to carry the cranks *d* up and thereby hold the wheel or roller D off the stone. The stone can then be revolved without being in contact with the roller D. When the roller is to be used as a feed-roller the front end of the beam *e* is drawn down, as shown in Figs. 1 and 3. Upon the ends of the axle C are mounted pinions *g g*. Gear-wheels *h h* are mounted upon the ends of the arbor *a*. *i i* are gear-wheels hung in jointed rods G G, which connect the axle C and arbor *a*, as shown. The gear-wheels *i* connect the pinions *g* and wheels *h* to make them revolve simultaneously, the roller D receiving thus a slow motion as compared with that of the grindstone.

Whenever the device is used to brighten, smooth or abrade one side of a metallic article, H, the article is applied to the stone beneath the roller D, and the front end of the beam *e* drawn down until the roller bears on the article. The latter will then be slowly fed along and at the same time be completely brightened or smoothed by the stone. As the stone wears small the rods *b* are let down in the cranks *d* to lower the roller D accordingly, the jointed rods allowing the full descent, until finally the wheel *h* and pinions *g* are in direct contact.

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

1. The feed-roller D, suspended from a weighted rock-shaft above the grindstone B, to be raised clear of the stone when not in use, as set forth.

2. The vertically-adjustable frame E, connected by rods *b* with the cranks *d* of the rock-shaft F, and holding the roller D, as set forth.

3. The jointed rods or frame G, holding the gear-wheels *i*, which connect the grindstone with its feed-roller, as and for the purpose set forth.

4. The combination of a grindstone with a feed-roller, as set forth.

ALBERT ASSMAN.

Witnesses:
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