

(No Model.)

F. B. MILES.
METAL PLANING MACHINE.

No. 275,242.

Patented Apr. 3, 1883.

FIG. 1.

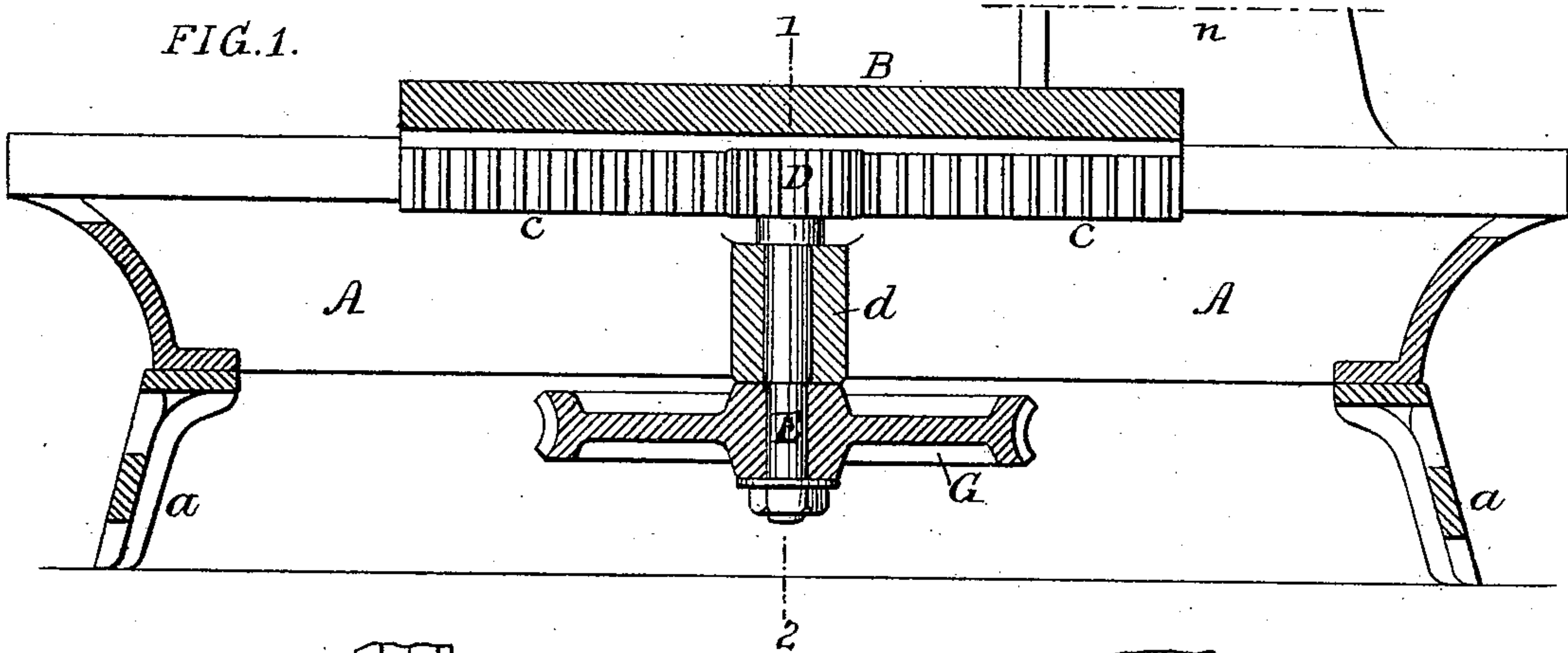


FIG. 2.

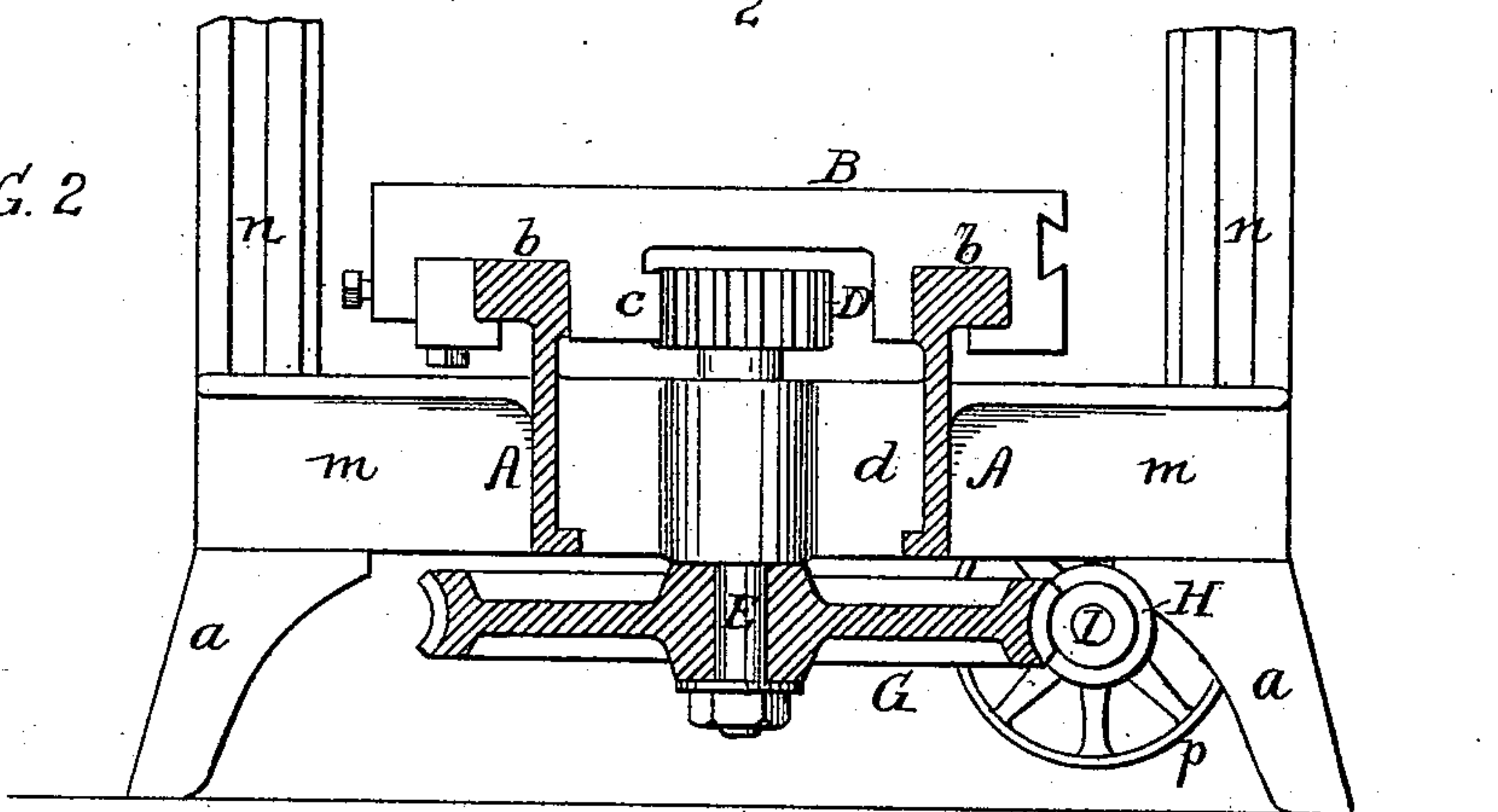
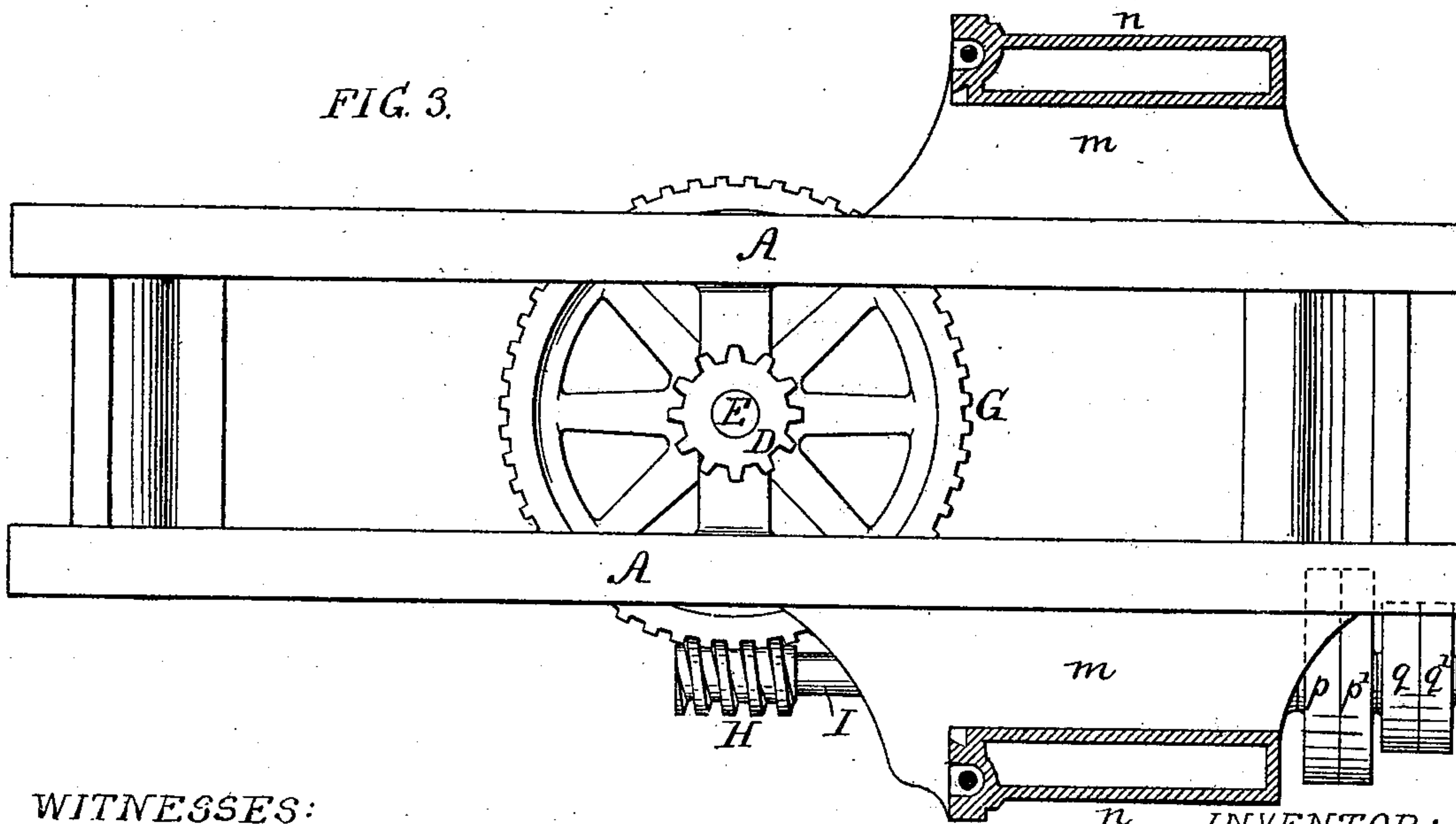


FIG. 3.



WITNESSES:
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UNITED STATES PATENT OFFICE.

FREDERICK B. MILES, OF PHILADELPHIA, PENNSYLVANIA.

METAL-PLANING MACHINE.

SPECIFICATION forming part of Letters Patent No. 275,242, dated April 3, 1883.

Application filed January 2, 1883. (No model.)

To all whom it may concern:

Be it known that I, FREDERICK B. MILES, a citizen of the United States, and a resident of Philadelphia, Pennsylvania, have invented certain Improvements in Metal-Planing Machines, of which the following is a specification.

My invention consists of simple and economical mechanism, fully described hereinafter, for actuating the reciprocating table of a metal-planing machine.

In the accompanying drawings, Figure 1 is a sectional elevation of sufficient of a metal-planing machine to illustrate my invention; Fig. 2, a transverse section on the line 1 2, Fig. 1, and Fig. 3 a plan view without the table.

The bed A of the machine is supported on suitable legs, *a*, and has parallel guides *b b*, to which is adapted the reciprocating table B. On the under side of this table is a rack, *c*, parallel with the guides, and having teeth, into which gear those of a pinion, D, on a vertical shaft, E, which has its bearing in a cross-bar, *d*, forming part of or secured to the bed A.

While the vertical shaft E may be operated from a driving-shaft through the medium of different kinds of intervening gearing, I prefer that which I will now proceed to describe. To the lower end of this said vertical shaft is secured a worm-wheel, G, into which gears a worm, H, on a driving-shaft, I, the latter having its bearings on the under side of one of the lateral extensions, *m*, of the bed A, the usual side frames or standards, *n n*, which form no part of this invention, being secured to these extensions. The shaft I is furnished with large loose and fast pulleys *p p'* and smaller fast and loose pulleys *q q'* for receiv-

ing driving-belts, by which the table can, through the medium of the gearing described, be moved faster back than it is moved forward, as in other planing-machines.

It has not been deemed necessary to illustrate or describe reversing mechanism, as any of the appliances heretofore used for this purpose may be adopted.

The gearing described possesses the advantages of being simple and direct, permits the driving-pulleys to be placed out of the way at the rear end of the machine, where belts may pass through openings in the floor from a line-shaft below. The movement of the table, moreover, is steady and free from jars, which frequently take place when a rack with horizontal teeth below the bed is used.

The simple and economical character of the mechanism will be understood without explanation.

I claim as my invention—

1. The combination of the reciprocating table of a metal-planing machine and the rack *c* with a vertical shaft, E, and its pinion D, adapted to the rack, substantially as set forth.

2. The combination of the reciprocating table of a planing-machine, its rack *c*, the vertical shaft E, and its pinion D, adapted to the said rack, with the driving-shaft I, its worm H, and the worm-wheel G on the vertical shaft, all substantially as described.

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

FREDK. B. MILES.

Witnesses:

THOMAS DUGAN,
HARRY SMITH.