

No. 693,016.

Patented Feb. 11, 1902.

J. J. HEYS.  
LEVELING MACHINE.

(Application filed Nov. 21, 1901.)

(No Model.)

2 Sheets—Sheet 1.

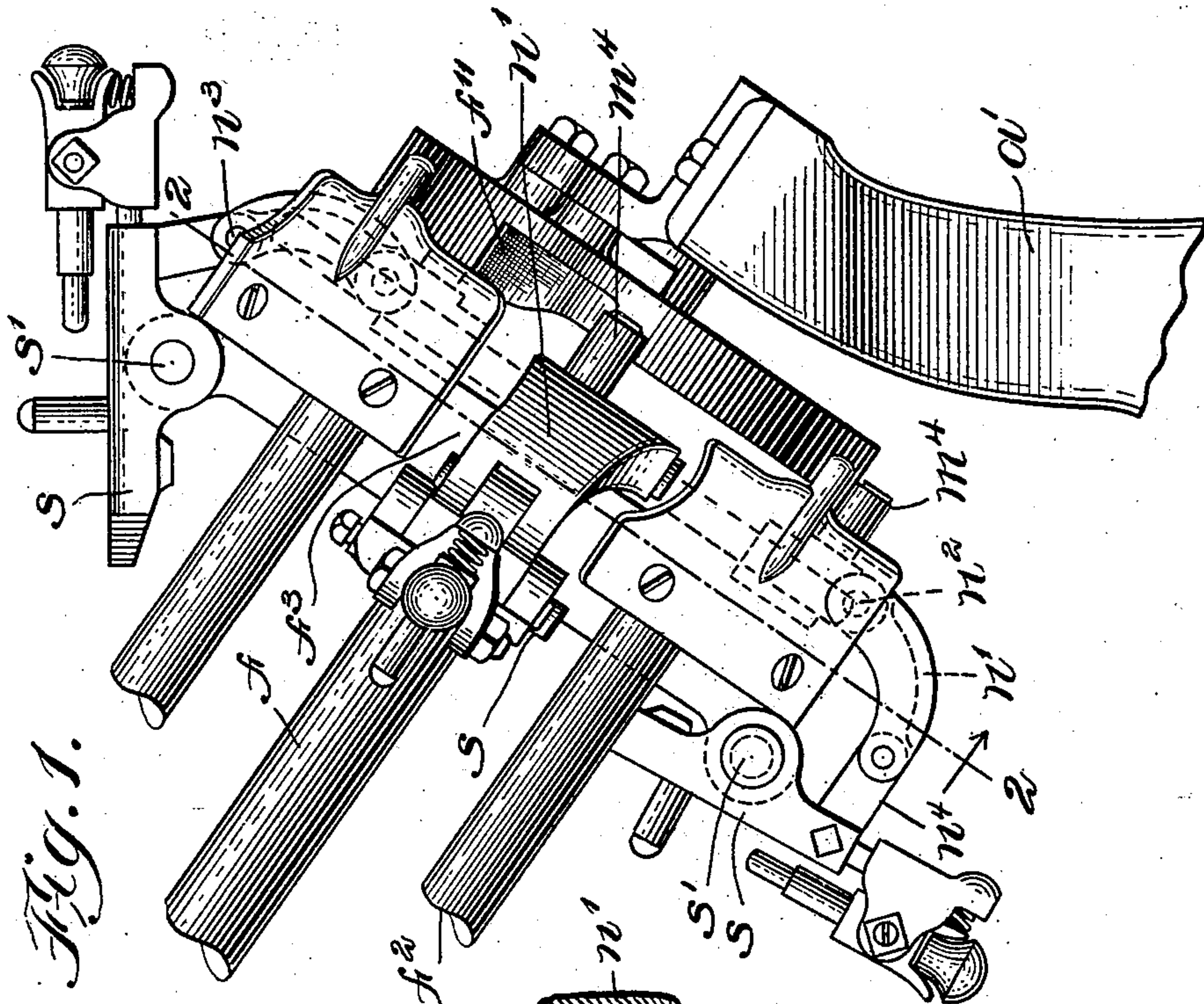


Fig. 1.

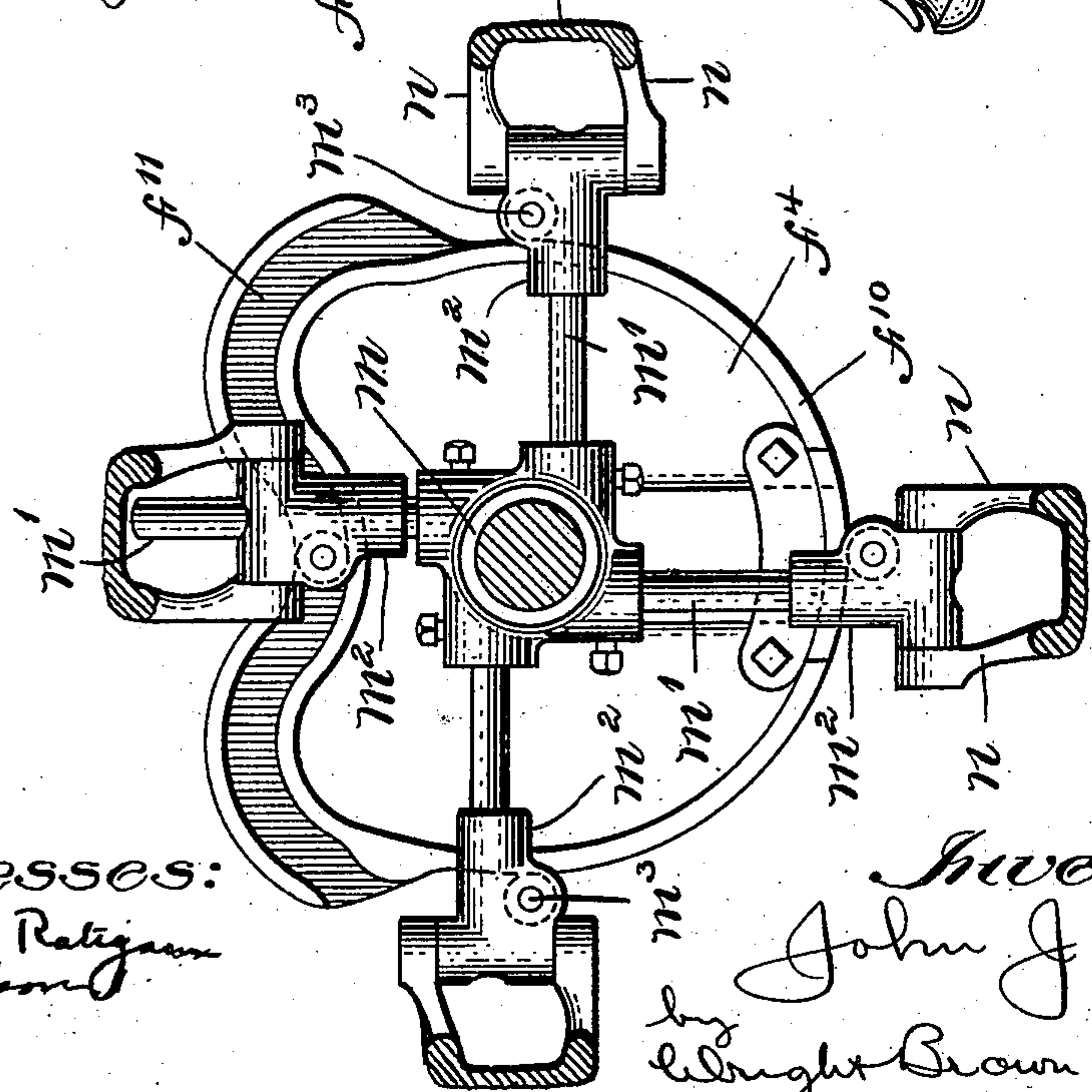


Fig. 2.

Witnesses:  
Adeline C. Ratigan  
A. D. Harrison

Inventor:  
John J. Heys  
by Elmer Brown & Company  
his attys

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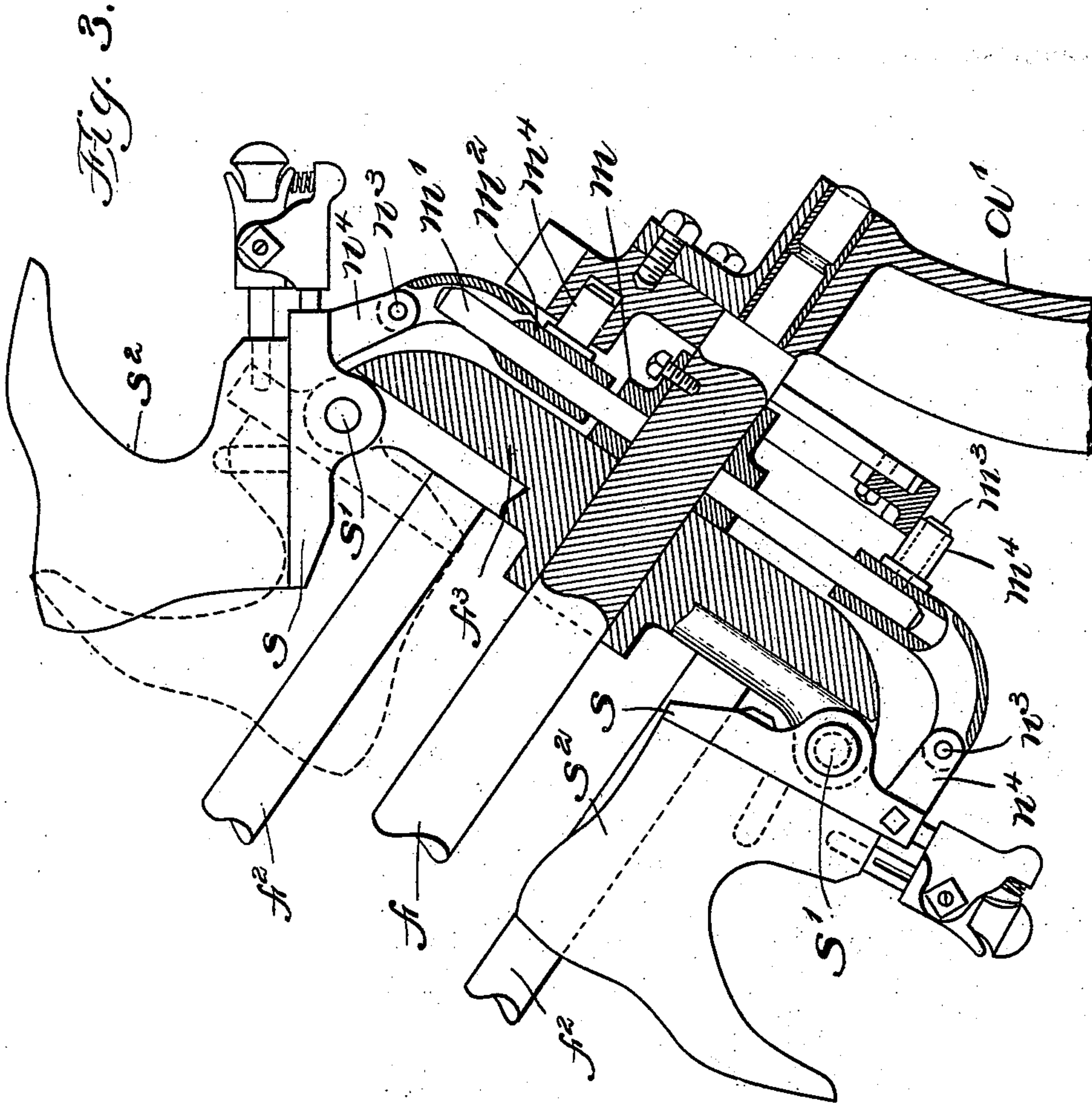
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Witnesses:  
Adeline C. Ratigan  
A. D. Harrison

Inventor:  
John J. Heys  
by  
Wright Brown & Quincy  
his attys



# UNITED STATES PATENT OFFICE.

JOHN J. HEYS, OF LYNN, MASSACHUSETTS, ASSIGNOR OF ONE-HALF TO  
MAURICE V. BRESNAHAN, OF LYNN, MASSACHUSETTS.

## LEVELING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 693,016, dated February 11, 1902.

Application filed November 21, 1901. Serial No. 83,184. (No model.)

*To all whom it may concern:*

Be it known that I, JOHN J. HEYS, of Lynn, in the county of Essex and State of Massachusetts, have invented certain new and useful Improvements in Leveling-Machines, of which the following is a specification.

This invention has for its object to provide certain improvements in the machine illustrated and described in Letters Patent No. 684,239, granted to me October 8, 1901; and it consists in certain features of construction and arrangement of parts, as illustrated upon the accompanying drawings, described in the following specification, and pointed out in the appended claims.

Referring to the accompanying drawings, Figure 1 shows a portion of a leveling-machine equipped with my improvements. Fig. 2 represents a section on the line 2 2 of Fig. 1 looking in the direction of the arrow. Fig. 3 represents a longitudinal section.

The machine to which my present improvements are applied is shown as a whole in the Letters Patent hereinbefore referred to and need not be described in detail.

$a'$  indicates a portion of the standard, in which is journaled the rotary shaft  $f$ , driven by any suitable means. To said shaft is rigidly secured the disk  $f^3$ , connected by rods  $f^2$  with a worm-wheel, (not shown,) likewise secured to the shaft, as in said patented machine.

$f^4$  represents a cam having the concentric portion  $f^{10}$  and the path  $f^{11}$ . Said cam is secured to the frame, whereby it is held against rotation as the shaft  $f$  rotates.

$s$   $s$  represent jack-tables pivoted at  $s'$  to the disk  $f^3$ , each table having provisions for the reception of a jack or last  $s^2$ .

Secured to the shaft  $f$  there is a collar  $m$ , having radial pins or guides  $m'$ , arranged to project under each jack-table. On each of the pins or guides is a sliding sleeve  $m^2$ , having a laterally-projecting pin  $m^3$  and roller  $m^4$  in operative engagement with the cam  $f^4$ . This cam is so formed that as the shaft  $f$  rotates one sleeve will be forced inward away from the end of its supporting-pin by the portion  $f^{11}$ , while the other sleeves will be forced outward toward the ends of their supporting-pins by the portion  $f^{10}$  of said cam. To each sleeve is pivoted the inner yoke-like ends  $n$  of curved links or connecting-rods  $n'$  by means of

studs or pintles  $n^2$ , the outer ends of said links or rods being pivoted by pintles  $n^3$  to ears or lugs  $n^4$  on the jack-tables  $s$ . From this description it will be observed that as the sleeves  $m^2$  are moved inward and outward on the radial guides the jack-tables are swung about their pivots toward or away from the shaft  $f$ , as indicated by dotted lines in Fig. 3, to a position for pressure and a position of clearance, respectively.

I am enabled to secure several advantages from the construction described, among which may be noted the ease of removing broken connections between the jack-tables and the cam and supplying duplicate parts, the simplification of the mechanism, and the location of the said mechanism outside or in front of the disk  $f^3$ , when they are readily accessible.

Having thus explained the nature of the invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made or all of the modes of its use, I declare that what I claim is—

1. In a leveling-machine, a rotary carrier, a plurality of jack-tables pivoted thereto, a stationary cam, a plurality of radial guides rotating with said carriers, sleeves movable on said guides and having projections for operatively engaging said cam, and connections between said sleeves and said jack-tables.

2. In a leveling-machine, a rotary carrier, a plurality of jack-tables pivoted thereto, a stationary cam, a plurality of radial pins, a sleeve slidably mounted on each pin, and having a projection to operatively engage said cam, and a link pivoted to each sleeve and to one of the jack-tables.

3. A leveling-machine having a rotary carrier, a jack-table pivoted thereon, a radial guide rotating with said carrier, a sleeve sliding on said pin and having a laterally-projecting pin, a link pivotally connected to said sleeve and to the jack-table, and a stationary cam having the concentric portion, as at  $f^{10}$ , and the cam-path as at  $f^{11}$ .

In testimony whereof I have affixed my signature in presence of two witnesses.

JOHN J. HEYS.

Witnesses:

M. B. MAY,

GEORGE PEZZETTI.