

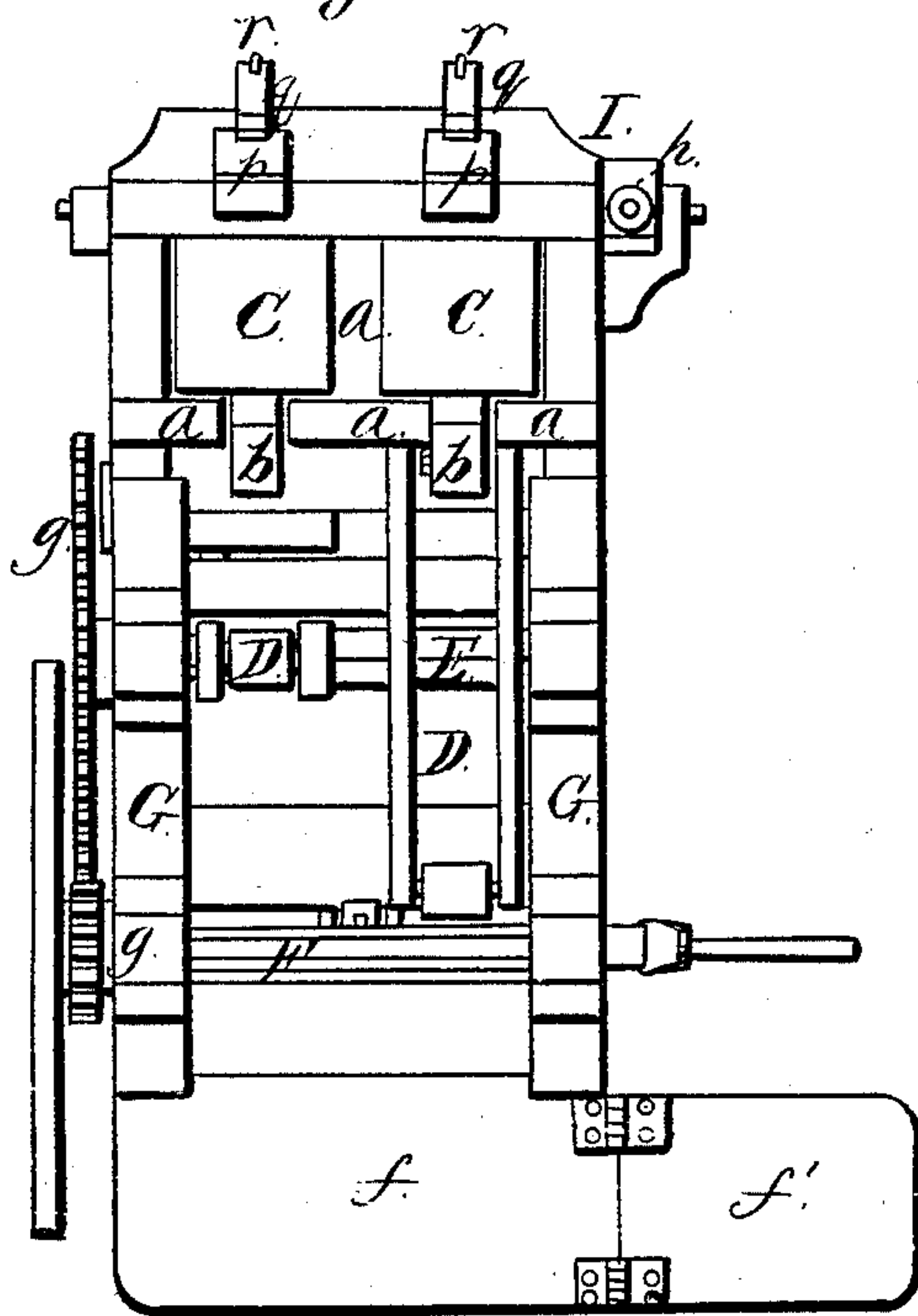
*T. Robjohn.*

*Road Rammer.*

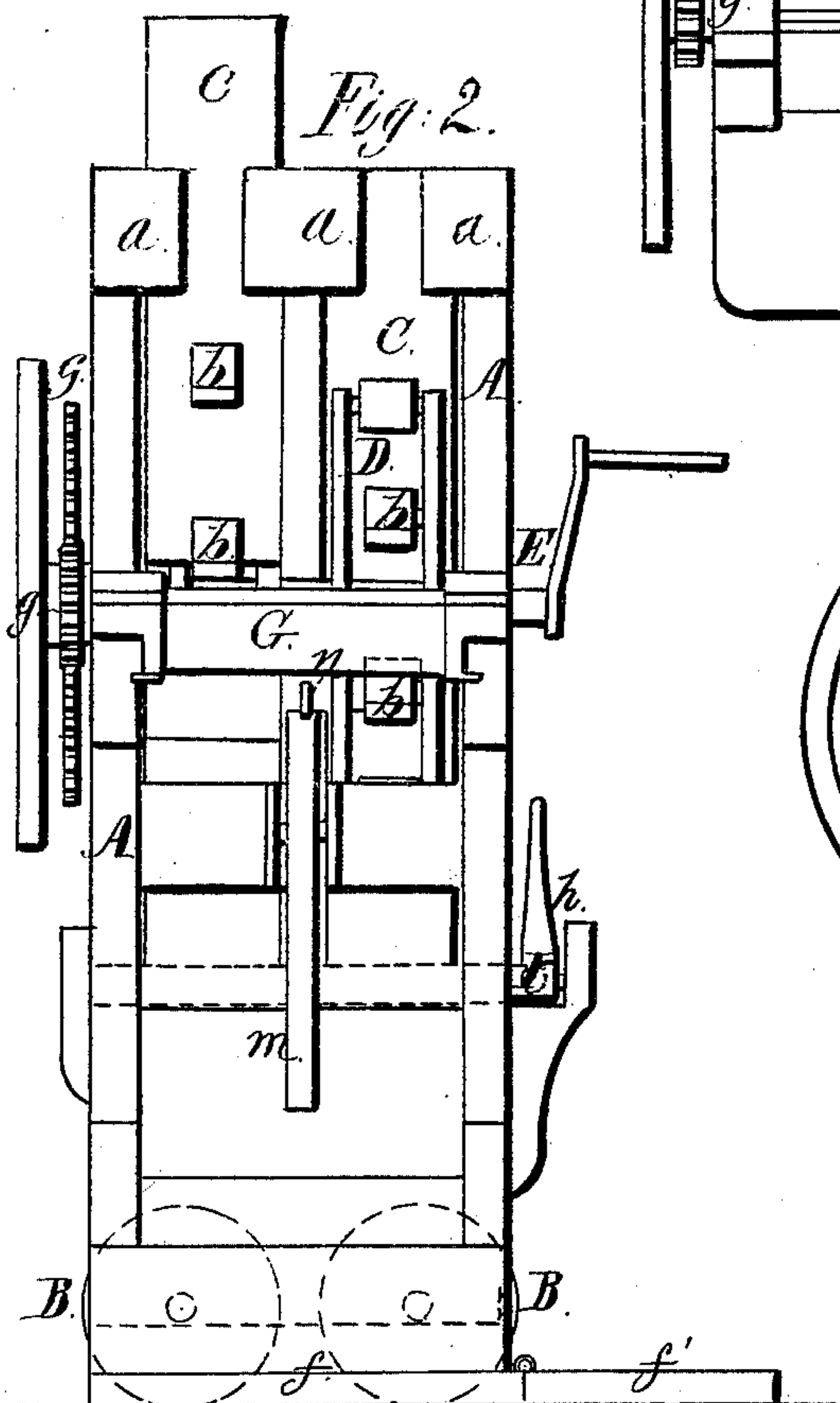
*N<sup>o</sup> 4,443.*

*Patented Aug. 31, 1869.*

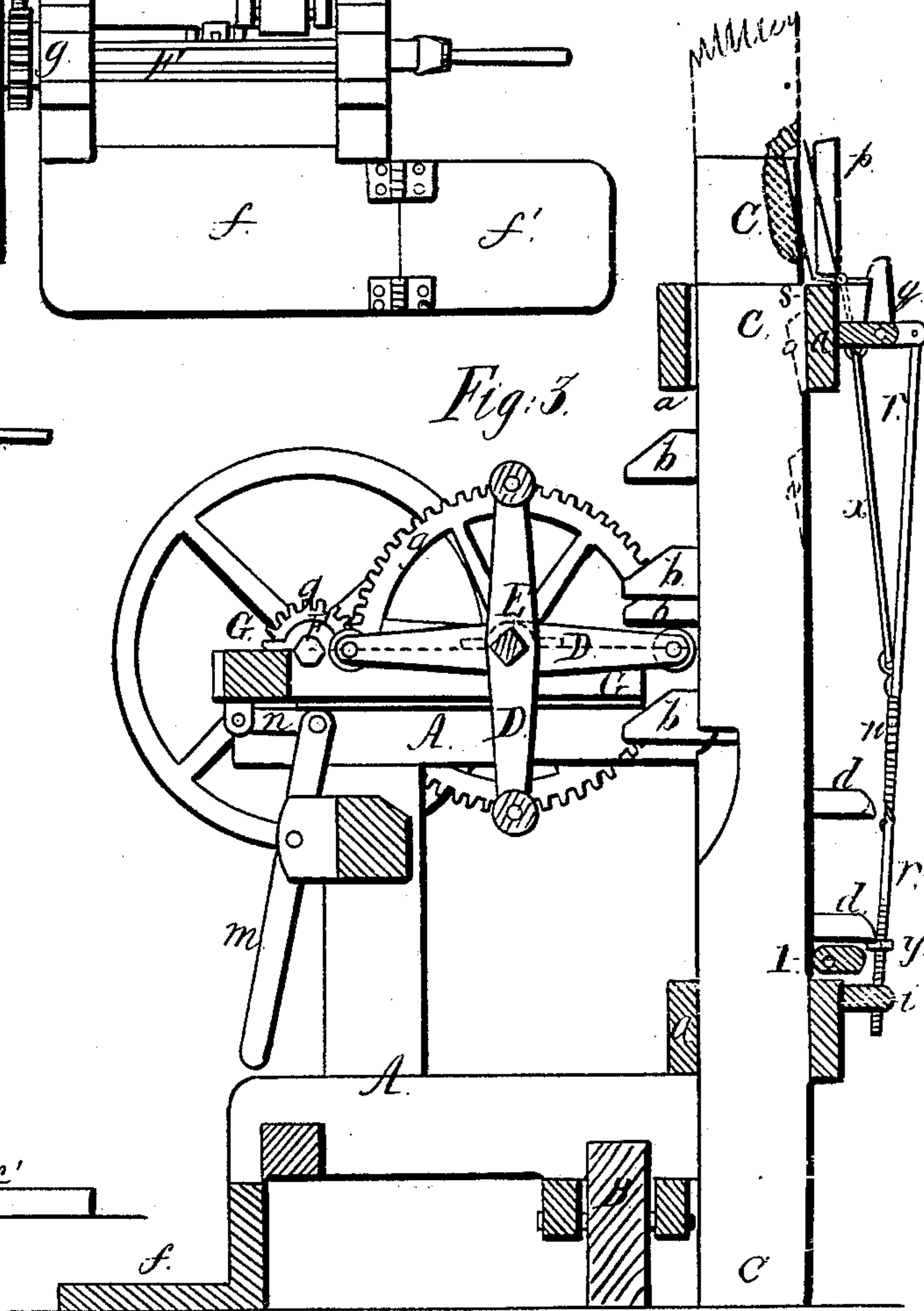
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



*Witnesses:*

*Geo. Haynes  
J. McCowley*

*Inventor.*

*Thos Robjohn*



# United States Patent Office.

THOMAS ROBJOHN, OF NEW YORK, N. Y.

Letters Patent No. 94,443, dated August 31, 1869.

## IMPROVED PAVERS' RAMMER.

The Schedule referred to in these Letters Patent and making part of the same.

*To all whom it may concern:*

Be it known that I, THOMAS ROBJOHN, of the city, county, and State of New York, have invented a new and improved "Pavers' Rammer;" and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, which form part of this specification, and in which—

Figure 1 represents a plan view of a pavers' rammer constructed according to my invention;

Figure 2 represents a rear elevation of the same; and

Figure 3, a vertical section, taken at right angles to fig. 2.

Similar letters of reference indicate corresponding parts in the several figures.

This invention has for its object the more uniform, rapid, and convenient ramming of stone pavements than is attainable with the ordinary hand-rammer; and to this end,

It consists in a ramming-apparatus of novel construction, whereby the desired end is attained.

Referring to the accompanying drawings—

A is a rectangular wooden frame, composed of timbers fitted together, and secured by means of tenons and mortises, or otherwise.

Said frame is provided at its rear end with a platform, *f*, upon which the operator is designed to stand, not only for the convenience of the operator, but, also, for the purpose of steadying the machine while the same is in operation.

It is also provided with and supported upon rollers, B B, for allowing lateral motion, said rollers being preferably so arranged as to nearly or quite balance the machine, for the purpose of reducing the friction caused by the contact of the two ends thereof with the ground.

In the front end of said frame A, and between fixed guides *a*, are fitted to slide one or more vertically-arranged lifting-mauls, or rammers or hammers, C C.

Said mauls or rammers or hammers, being loaded, faced, or bound with iron, are susceptible of an up-and-down motion, and are each provided with one or more rearward projections or studs, *b*, against which are made to act the radial or crossed lifting-arms, D, of a horizontal shaft, E, in such manner, that by the backward turning of the said shaft, the mauls or rammers are caused to be lifted and allowed to drop alternately upon the stones that are designed to be rammed.

Said shaft E is driven by a cranked countershaft, F, through a gearing-connection, *g g*, or any other suitable transmitting-medium.

The shaft E and countershaft F are or may be carried in a sliding frame, G, so that by the sliding of

the frame nearer to or further from the mauls or rammers, the arms D are made to take more or less hold under the said projecting studs *b*, thereby effecting a greater or less lifting of the mauls, as occasion may require, during the ramming-operation.

The sliding of said frame may be effected by means of a lever, *m*, and connecting-link, *n*, so arranged that the operator may regulate the stroke of the rammers at pleasure, the degree of projection of the upper ends of the rammers above the top of the frame, while the lower ends are resting on the stones below, serving to indicate to him the degree of force necessary to be applied, and, consequently, the degree of elevation necessary to be given to the rammer.

I is a horizontal supporting-bar, hinged to the frame, and provided with a lever or handle, *h*, so as, when upwardly turned, it will serve as a stop for the rammers by means of the contact of fixed studs *d d*, of the latter, with the upturned edge of the former, during the descent of the said rammers, this being for the purpose of supporting said mauls when, from any reason, it is desirable that their lower ends shall not touch the ground.

The platform *f* is or may be provided with a hinged leaf, *f'*, so arranged as, when unfolded, to support the operator in a more convenient position for turning the crank, and which, when not being used, may be folded back upon the platform, so as to be out of the way.

The apparatus is or may be provided, also, with a novel stop-motion, consisting of upwardly-projecting supporting-tumblers, *p p*, restrained by pivoted locking-hooks, *q q*, and tripped or released by means of tripping-rods *r r*.

The tumblers *p p* are hinged to the top of the frame A, and have a rearward inclination exerted upon them by means of springs *s s*, so as better to insure their engagement with suitably-arranged notches *o o*, formed in the front side of the rammers, as shown in red outline in fig. 3.

The tripping-rods *r r* are hinged or otherwise connected at their upper ends to the locking-hooks *q q*, and their lower ends fitted to slide through bearings at *i*, so that by their downward movement the said locking-hooks *q q* are withdrawn from their engagement with the tumblers *p p*, thereby releasing the latter.

Spiral springs, *w w*, are coiled around the tripping-rods *r r*, their lower ends being secured to said rods, and their upper ends, to fixed rods, *x x*, so as, by supporting the said tripping-rods, and inclining them upwardly, to hold the locking-hooks in position for engagement with the tumblers.

The tripping-rods are, moreover, provided with nuts or collars, *y y*, so arranged thereon as to be struck by the projections *d d*, of the rammers C, during the de-



scent of the said rammers, after the stones under them are sufficiently rammed to allow the face of the rammer to stand level with the surface of the finished portion of the pavement which is being laid.

By this means the rammers are stopped in an up-lifted position by the released tumblers, and are not permitted to descend or strike the stones after they have been driven or rammed down even with those upon which the machine is resting, even though the shaft may continue to turn.

What I claim as my invention, and desire to have secured by Letters Patent, is—

1. The adjustable or sliding frame G, in combination with the frame A, the lifting-arms D, and the rammers C, substantially as and for the purpose herein set forth.

2. The combination, with the frame A, of the platform *f*, having a hinged leaf, *f'*, substantially as and for the purpose herein specified.

3. The combination, with the frame A and the rammers C, of the pivoted support I and the studs *d*, substantially as and for the purpose herein set forth.

4. The supporting-tumblers *p p*, pivoted locking-hooks *q q*, and tripping-rods *r r*, combined for operation in connection with the notches *o o* and projections *d d* of the rammers, substantially as and for the purpose herein specified.

THOS. ROBJOHN.

Witnesses:

FRED. HAYNES,  
J. W. COOMBS.