

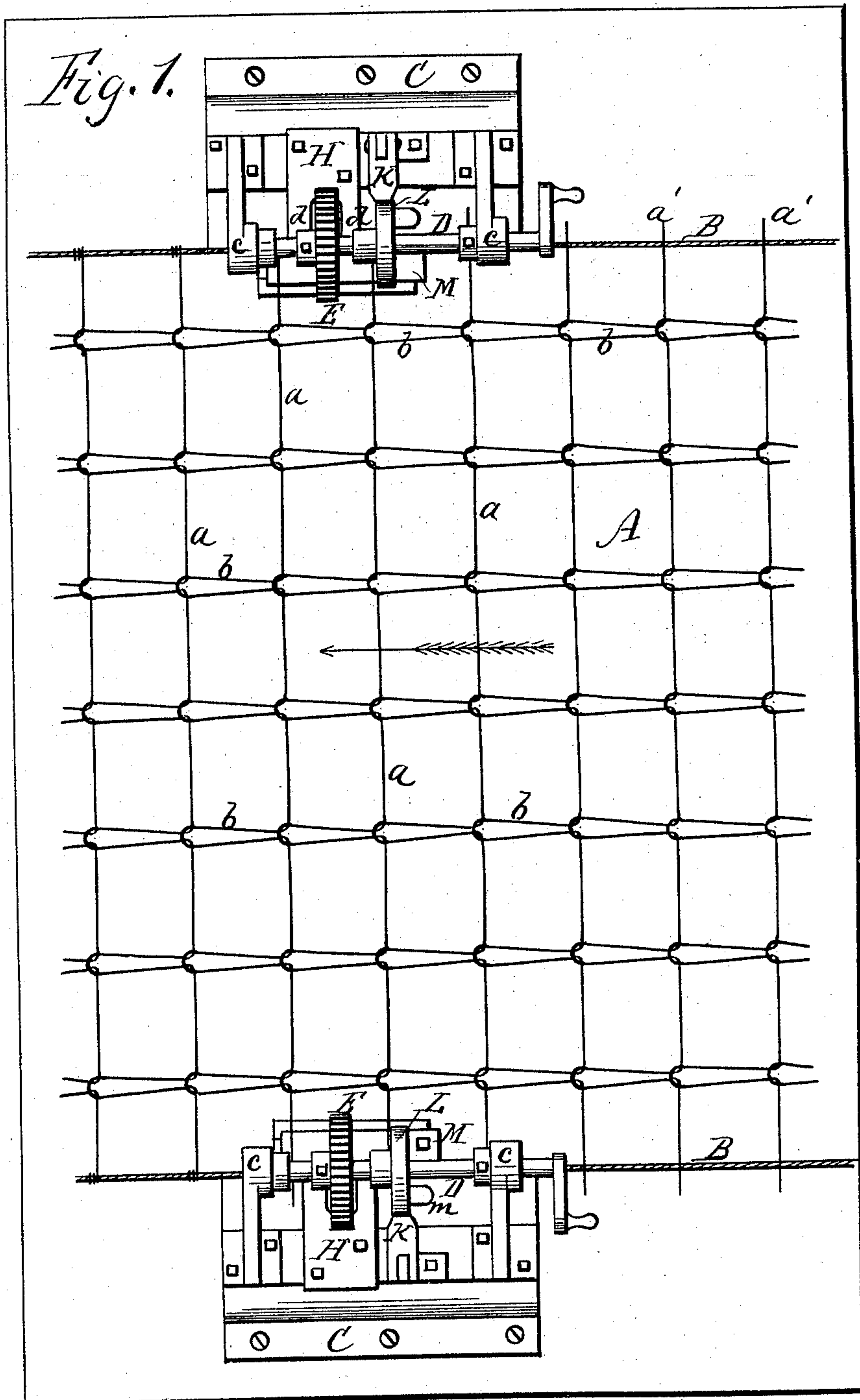
(No Model.)

3 Sheets—Sheet 1.

W. P. RANDALL.
WIRE FENCE MACHINE.

No. 518,426.

Patented Apr. 17, 1894.



Witnesses.

C. R. Osgood.

F. B. Hutchinson

Inventor:

Wm. P. Randall,
per R. F. Osgood.

THE NATIONAL LITHOGRAPHING COMPANY,
WASHINGTON, D. C.

(No Model.)

3 Sheets—Sheet 2.

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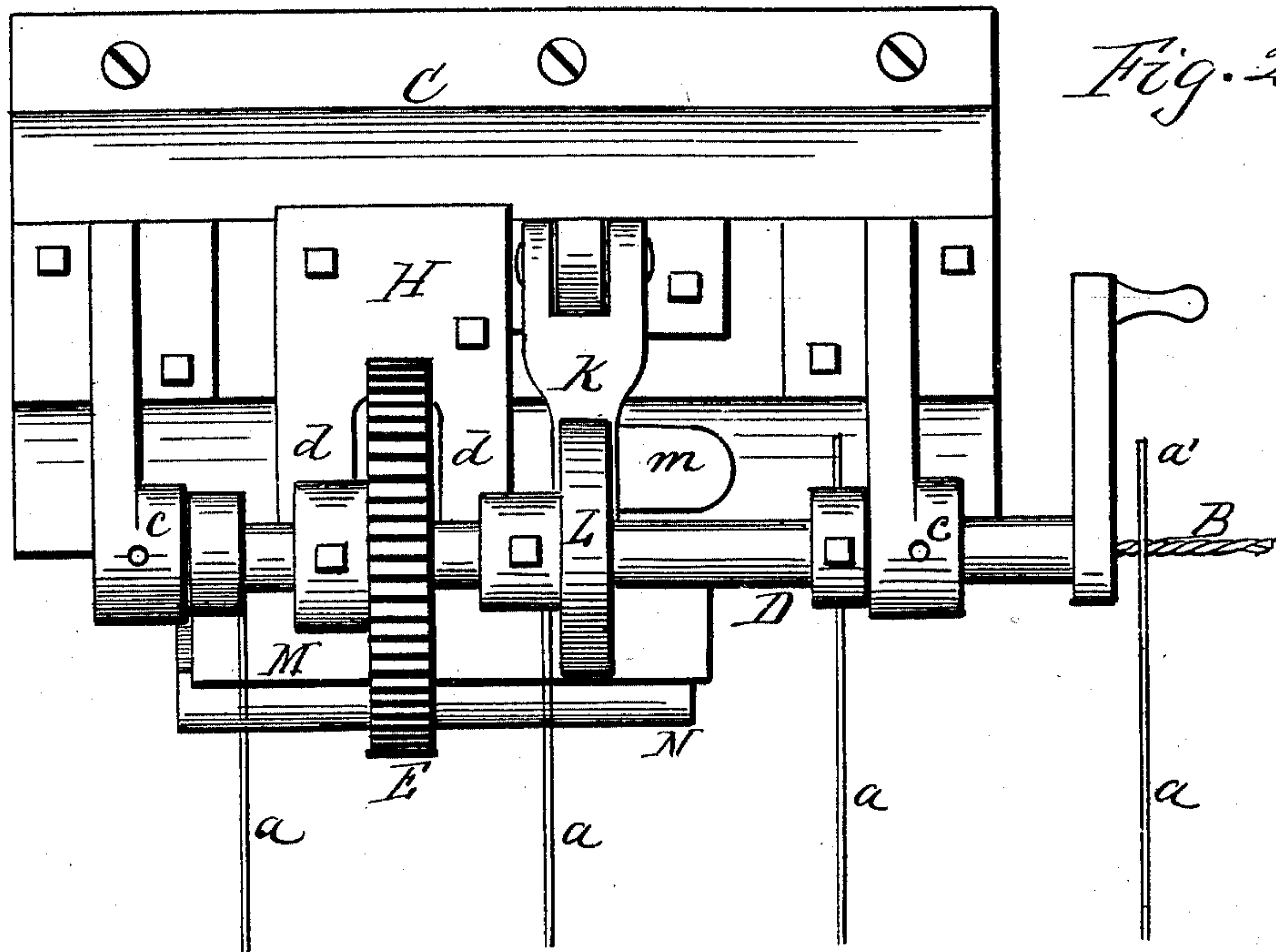


Fig. 2.

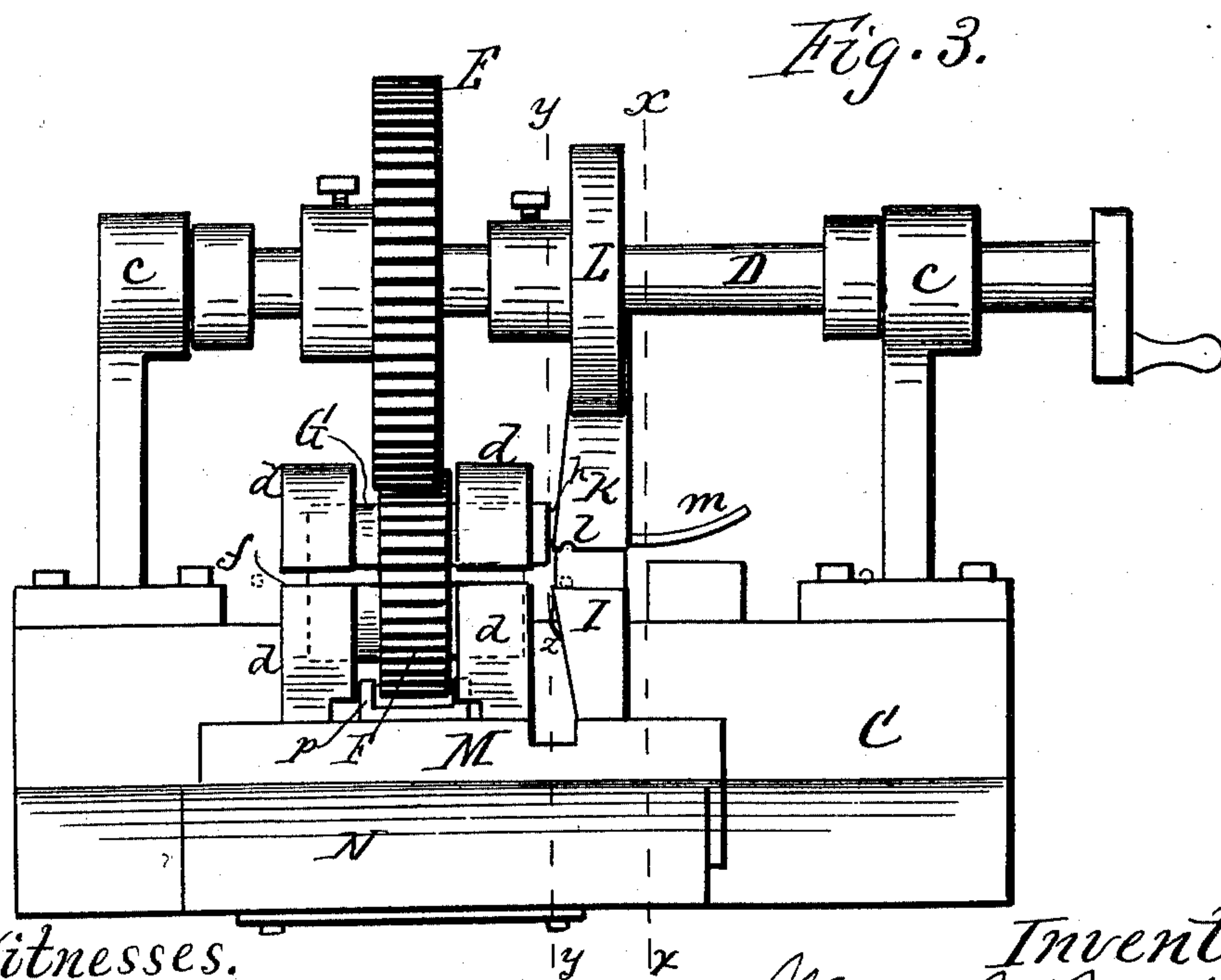


Fig. 3.

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Wm. P. Randall,
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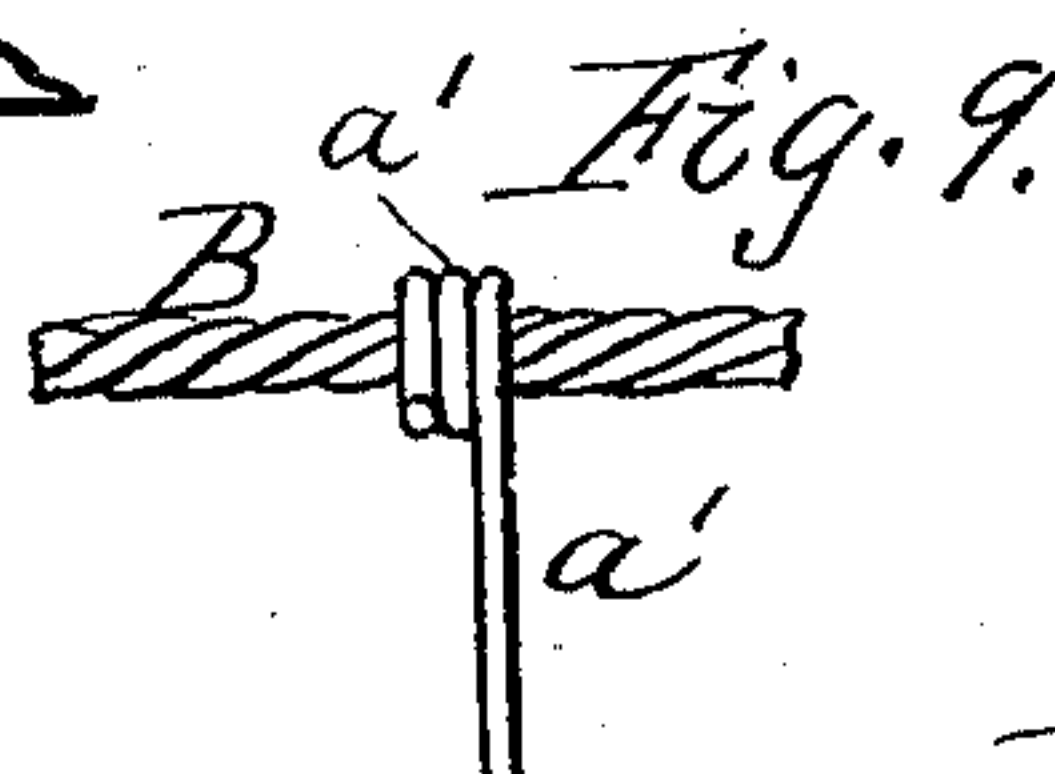
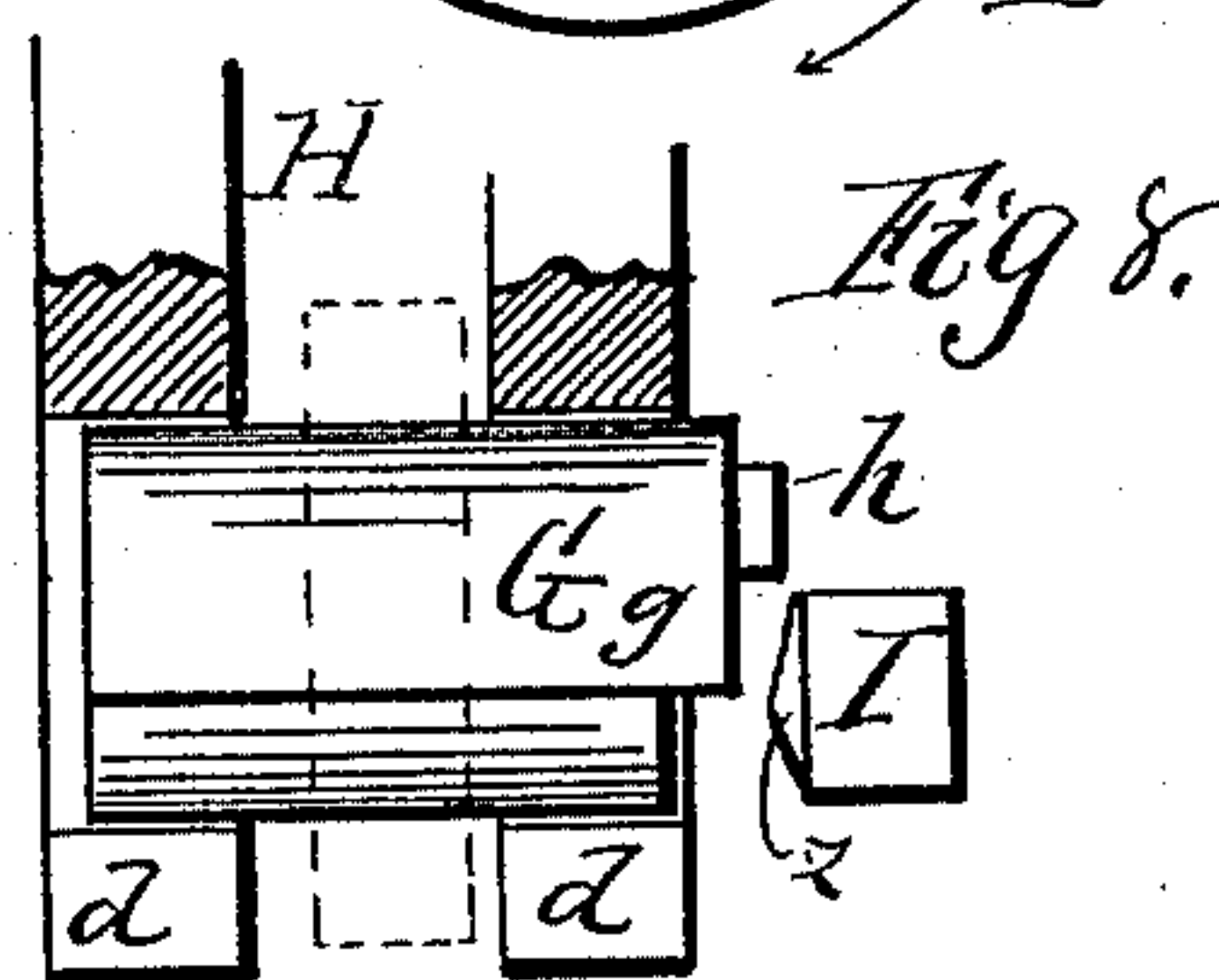
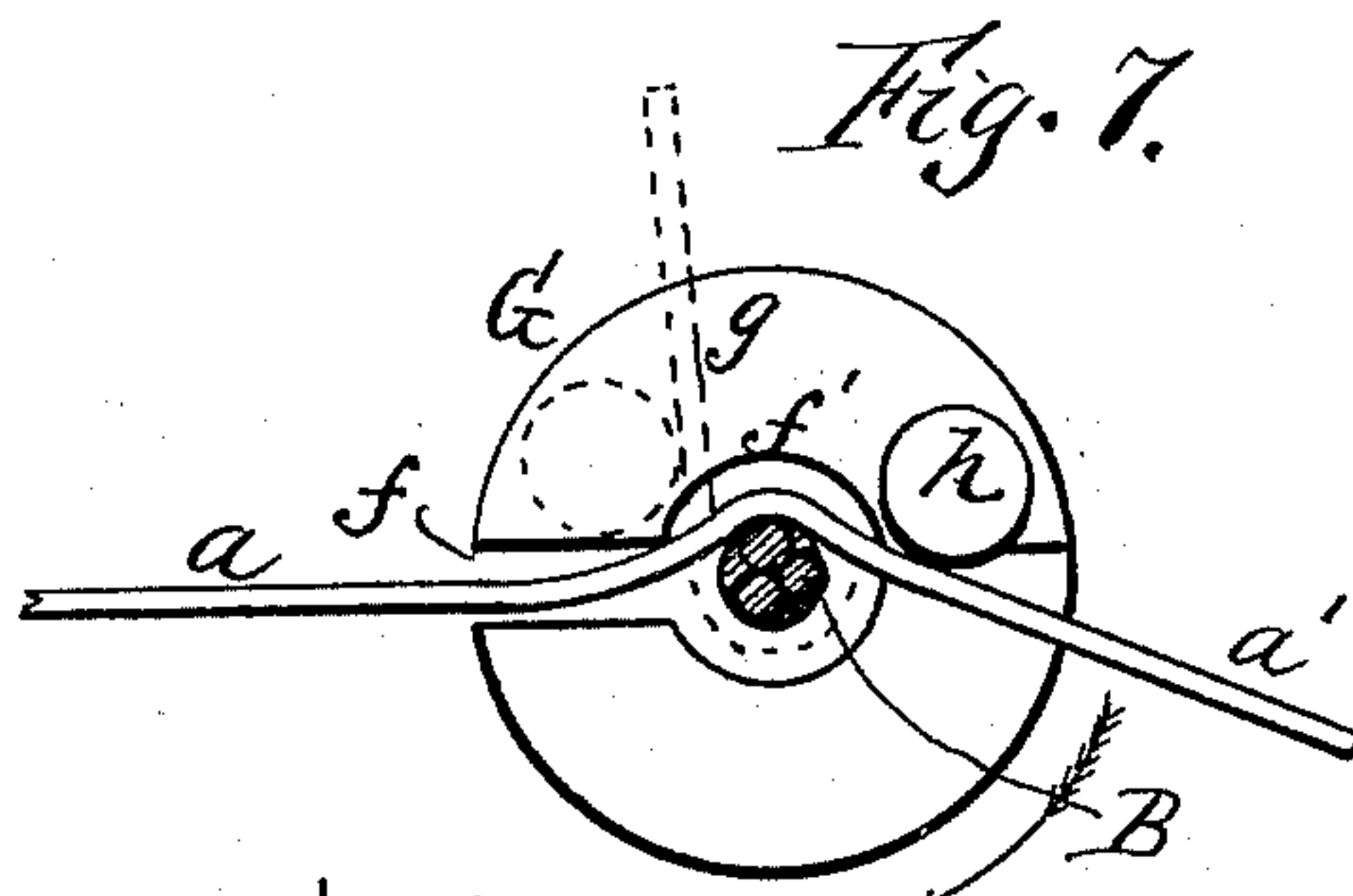
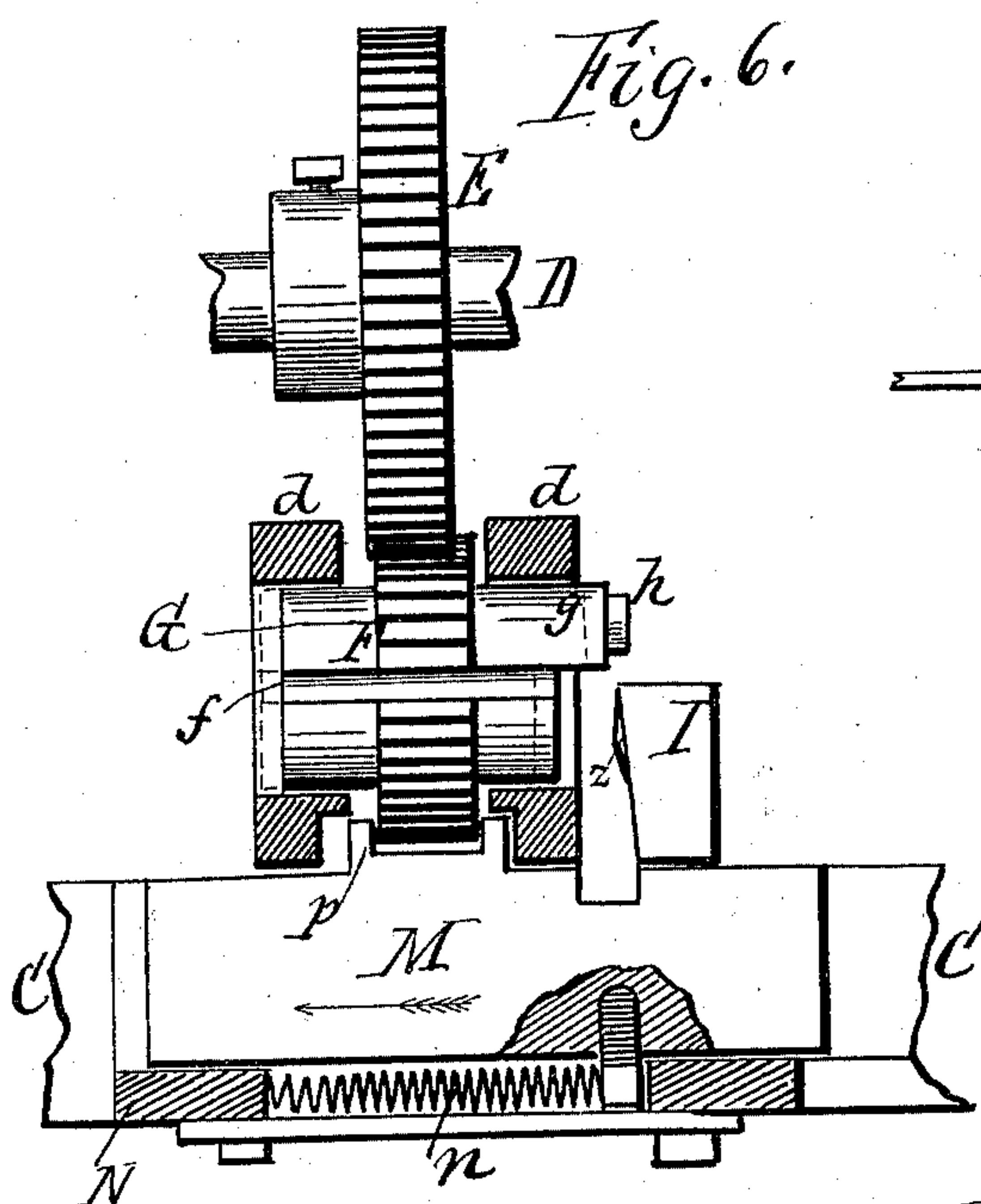
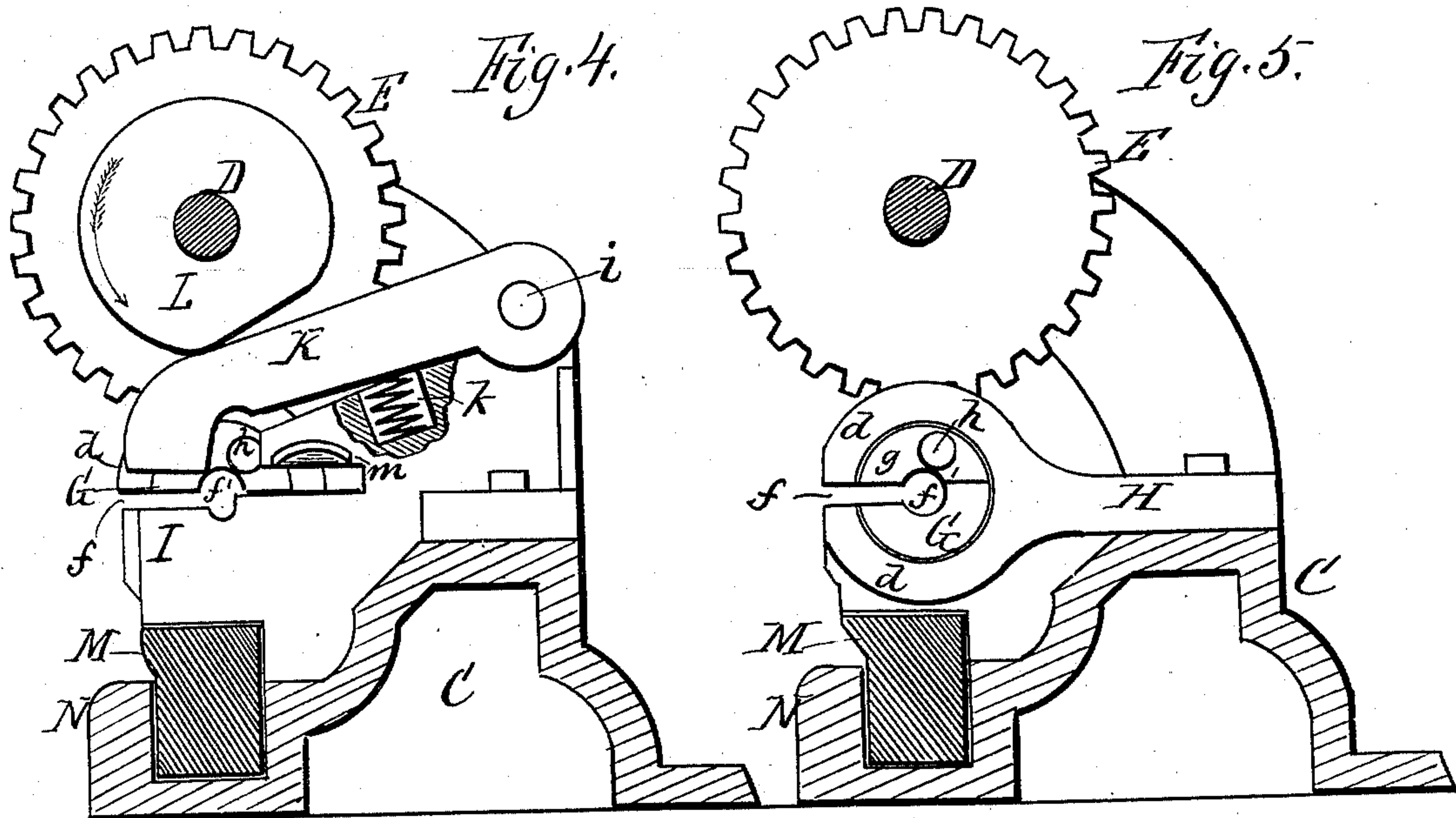
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per R. F. Osgood,
Atty.

UNITED STATES PATENT OFFICE.

WILLIAM P. RANDALL, OF LE ROY, NEW YORK.

WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 518,426, dated April 17, 1894.

Application filed April 1, 1893. Serial No. 468,666. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM P. RANDALL, of Le Roy, in the county of Genesee and State of New York, have invented a certain new and useful Improvement in Wire-Fence Machines; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this specification.

10 This improvement relates to machines for making the wire fence patented by me March 17, 1891, No. 448,455. Said fence is composed of wire lengths having lateral loops which are interlocked. It is desirable in some cases to
15 use longitudinal cables or binding wires at the top and bottom of the fence, to which cables or binding wires the projecting ends of the wire lengths that compose the fence are attached, and my present invention consists
20 in the construction and arrangement of a machine for coiling or winding the projecting ends of the fence wires around the cables as will be more fully described and definitely claimed.

25 In the drawings—Figure 1 is a plan view showing two of the machines on opposite sides of the wire fabric, and in the act of binding the fence wires to the cables. Fig. 2 is an enlarged plan view of one of the machines.
30 Fig. 3 is a front elevation of the same. Fig. 4 and 5 are vertical cross sections respectively in lines $x x$ and $y y$ of Fig. 3. Fig. 6 is a sectional elevation of the coiling roller and spring slide that operates the same. Fig. 7
35 is a diagram showing an enlarged end view of the coiling roller in the act of coiling one of the wire lengths around the cable. Fig. 8 is a horizontal section showing the coiling roller and its holding jaws. Fig. 9 is a fragmentary view of a part of one of the binding
40 wires and the coil wound thereon.

A indicates the fence, made in accordance with my before named patent, consisting of wire lengths $a a$, having lateral loops $b b$ which
45 are interlocked.

B B are the longitudinal cables or binding wires used on opposite sides of the fence. The machine is for coiling or winding the projecting ends $a' a'$ around these cables.

50 C indicates the frame of the machine, which frame may be of any desired form and construction.

D is a shaft resting in suitable bearings c of the frame, and E is a spur gear on the shaft engaging with a similar spur pinion F, 55 attached to the coiling roller G. The coiling roller G is of cylindrical form so as to turn axially, and it rests loosely in two jaws $d d$ of a bearing H bolted to the main frame, said jaws being located at such a distance apart that the
60 coiling roller can have a degree of end movement longitudinally. The roller, its pinion, and the jaws above named, each have a longitudinal slot f , (Fig. 3), which slots at a given position of the roller come in line and allow
65 the projecting ends $a' a'$ of the fence wires to pass to the interior and also to progress longitudinally therein as the fence is drawn along by the reel on which it is wound. The interior is also provided with a circular pas-
70 sage f' , through which the cable B passes in the same manner. The end of the coiling roller G next to where the coiling is done is notched, one half, g , projecting outward beyond the other half, and on its projecting end
75 is a stud h standing outward and of sufficient length to strike and catch the wires a' , and coil them around the cable.

I is a block attached to the main frame, over which block the wire cable passes, said
80 block supporting the cable as it passes through the roller.

K is a dog pivoted at i to a stationary part of the frame, its front end resting over the block I. The dog is pressed up by a spring
85 k and is forced down by a cam L on the shaft D. When so forced down it strikes on the projecting wire a' that rests under it at the time, and clamps it fast on the block I while the coiling is being done. The clamping face
90 of the dog has a cross groove l , (Fig. 3,) which lies close up to the inner edge and serves to receive the wire a' and hold it straight while being coiled.

m is a guard standing in a somewhat inclined position and serving to guide the projecting ends $a' a'$ of the wires into the throat
95 of the machine.

M is a slide resting in a seat N of the frame, and forced outward by a spring n . On its
100 top is a clutch p which loosely embraces the bottom of the pinion F. The forward throw of the slide M is such as to bring the stud h in position to catch on the projecting end of

the wire clamped by the dog and commence the coiling, and its reaction is sufficient to allow the necessary back movement in coiling. When forming the first layer the end of the stud *h* strikes against an incline or swell *z* on the inner side of the block *I* and presses the roller back sufficiently for the end of the wire to lap the first layer made. After this the close contact of the wire in coiling will force the roller back by its own action. The spring presses the roller forward all the time but allows reaction while the coiling action is taking place, and therefore the face of the projecting part *g* of the roller serves as a stop to the end of the wire as it comes in and holds it in proper position to be caught by the stud.

The action of coiling is illustrated in the diagram Fig. 7, the full lines showing the commencement of the coiling action, and the dotted lines showing the coiling partially made. The projecting end *a'* of wire being held by the dog as before described, the stud strikes over the top of the wire and carries it around the cable any desired number of times and till the projecting end is fully wound up. When the coiling is complete on a single wire the fence is drawn forward by the reel to bring the next wire in position, when the same operation takes place. The slot and center passage through the roller, the pinion and the jaws in which the roller rests, allows this free progressive action of the fence.

In use two of these machines are employed, one on each side of the fence as shown in Fig. 1, each machine binding the wires on its own side.

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

1. In a wire fence machine, the combination of a slotted roller resting in slotted bearings and capable of a rotary and an end movement, gearing for imparting the rotary mo-

tion, a spring connection for giving the end movement, a stud on one end of the roller for engaging the wire to be coiled, and a clamp for holding the wire while being coiled, as herein shown and described.

2. The combination, of a slotted roller resting in slotted bearings and capable of a rotary and an end movement, gearing for imparting the rotary motion, a spring connection for giving the end movement, a stud on one end of the roller for engaging the wire to be coiled, a clamp for holding the wire while being coiled, and a guide outside the clamp for directing the wires into the throat of the machine, as herein shown and described.

3. The combination, with the block and clamp for fastening the ends of the fence wires when in position, of the slotted roller provided with a projection at one end, and a stud on the projection, as and for the purpose specified.

4. The combination, with the slotted roller resting in bearings and having free end movement, of a slide, a clutch connecting the roller with the slide, and a spring for forcing the slide outward, as herein shown and described.

5. The combination, with the slotted roller provided with a projecting stud for catching and coiling the wire, of a block on which the cable is clamped, provided on one side with an incline or swell against which the end of the stud rides and is pressed back on its first revolution to allow the free end of the wire to pass the laid portion of the same, as herein shown and described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

WM. P. RANDALL.

Witnesses:

R. F. OSGOOD,

CHAS. A. WIDENER.