

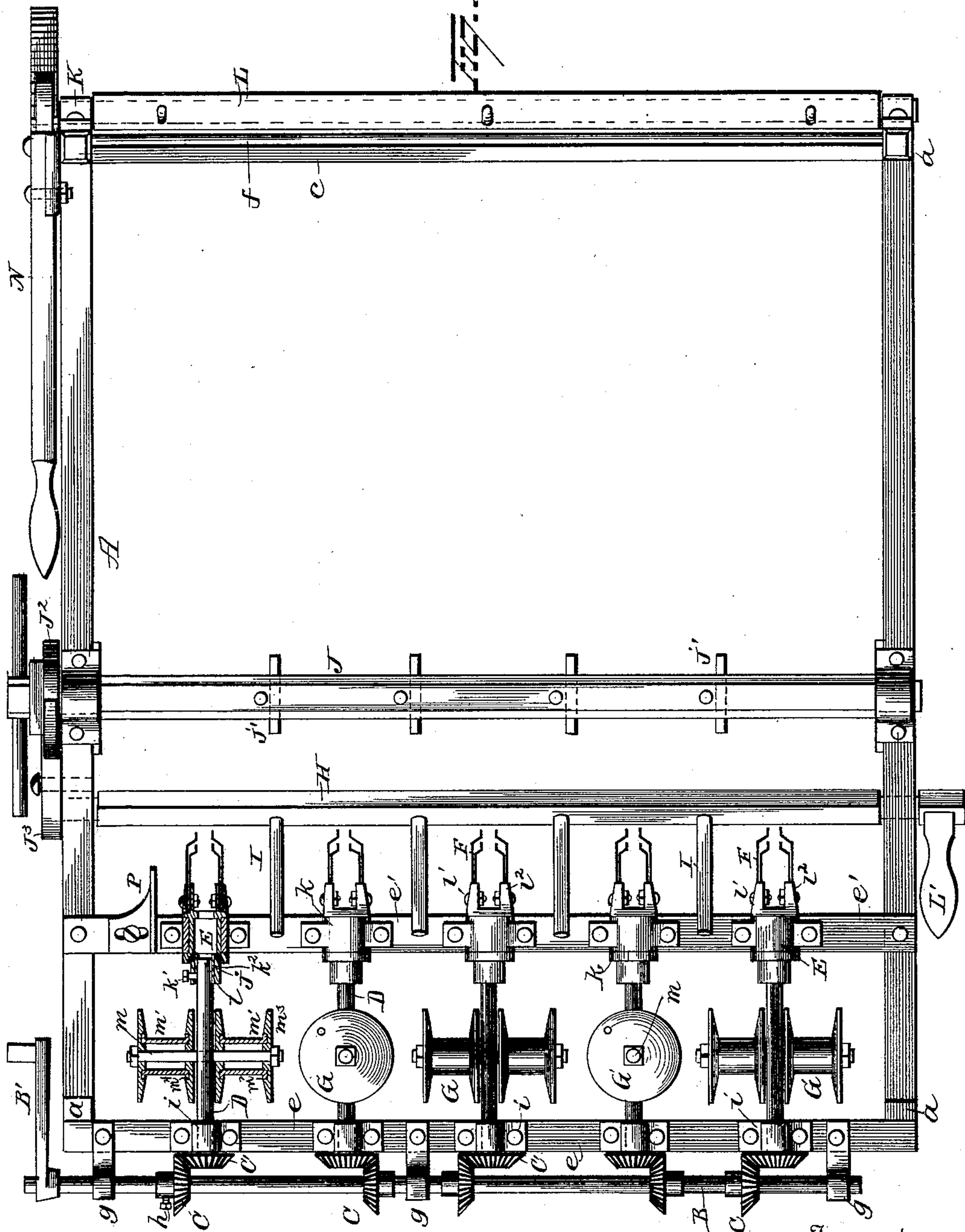
(No Model.)

3 Sheets—Sheet 1.

J. M. ORCUTT.
WIRE AND SLAT FENCE MACHINE.

No. 444,559.

Patented Jan. 13, 1891.



Witnesses
G. F. Downing
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Inventor
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By his Attorney
H. A. Seymour

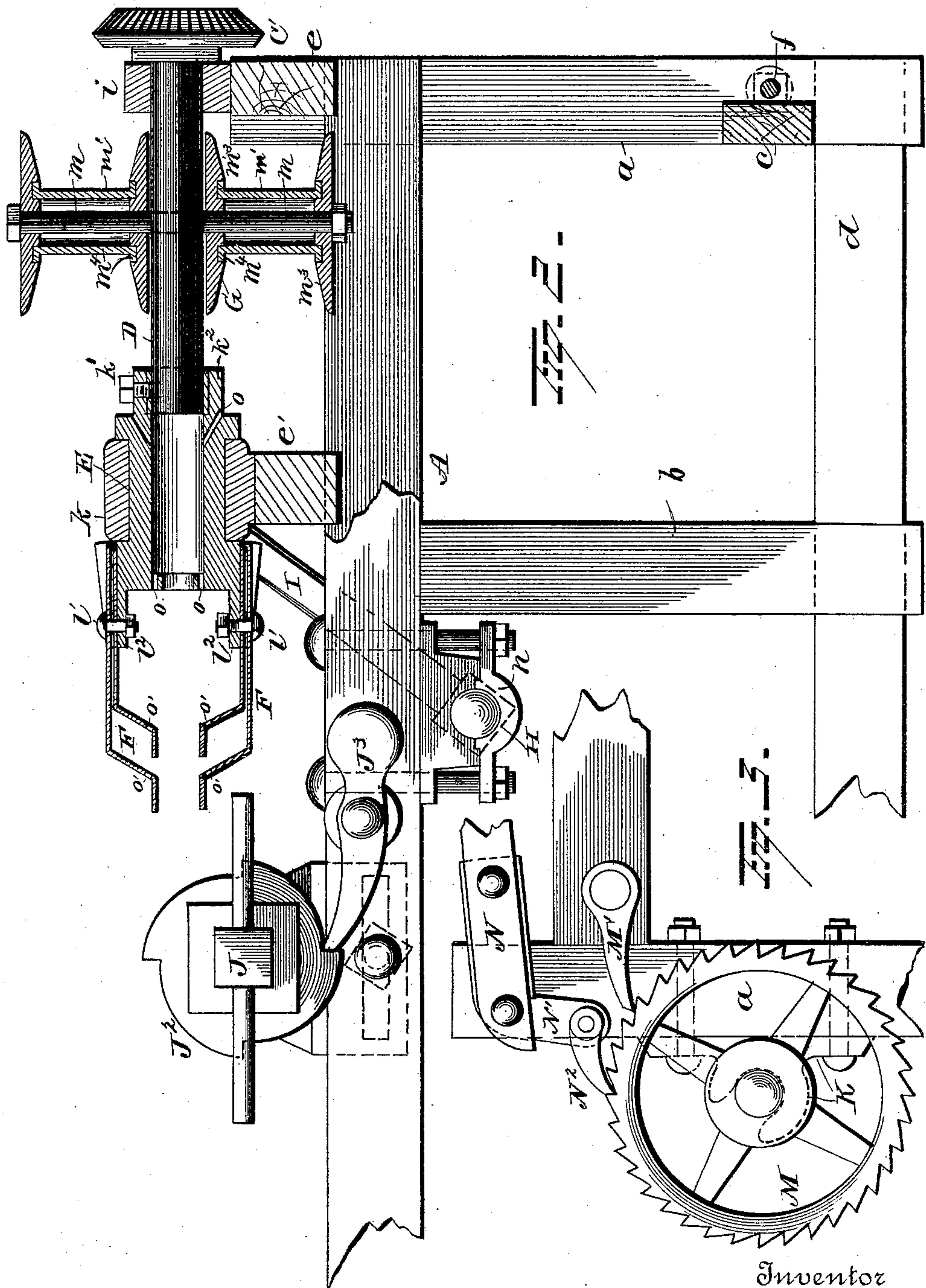
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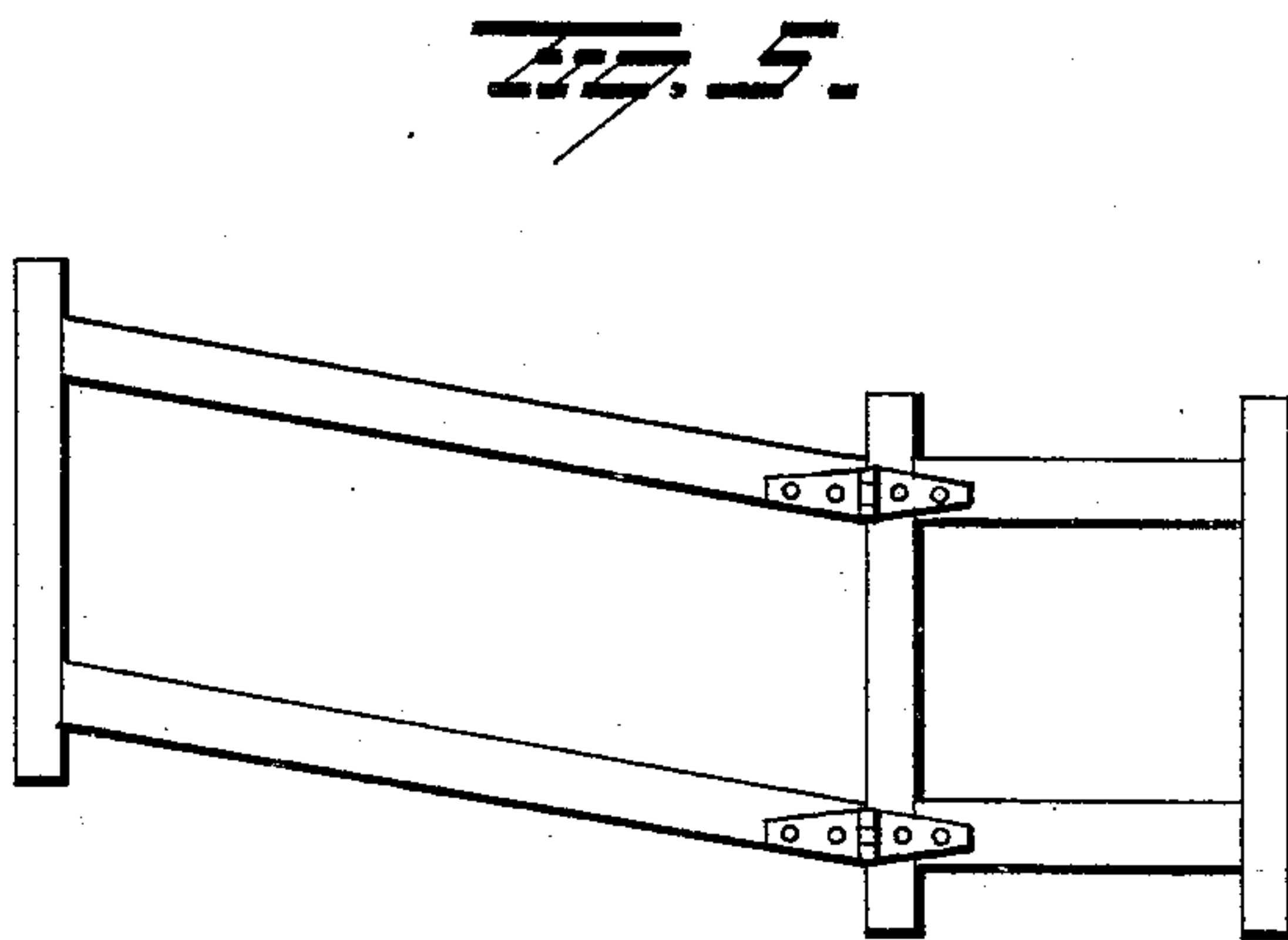
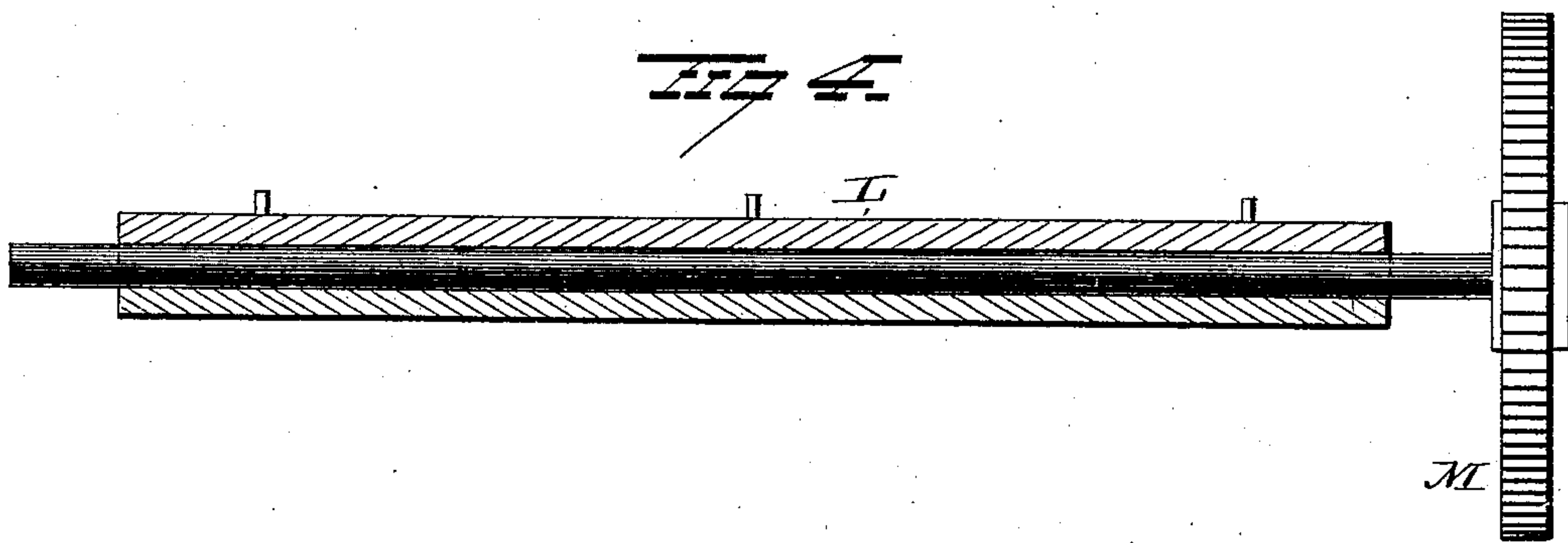
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3 Sheets—Sheet 3.

J. M. ORCUTT.
WIRE AND SLAT FENCE MACHINE.

No. 444,559.

Patented Jan. 13, 1891.



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UNITED STATES PATENT OFFICE.

J. MARCUSS ORCUTT, OF HARRISONBURG, VIRGINIA.

WIRE-AND-SLAT-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 444,559, dated January 13, 1891.

Application filed August 1, 1890. Serial No. 360,681. (No model.)

To all whom it may concern:

Be it known that I, J. MARCUSS ORCUTT, a citizen of Harrisonburg, in the county of Rockingham and State of Virginia, have invented certain new and useful Improvements in Fence-Machines; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in machines for manufacturing fencing, and more particularly to such as are employed for wiring wood fencing, the object of the invention being to produce a machine by means of which wired wood fencing may be quickly, easily, and substantially built.

A further object is to provide a fence-machine with improved twisting-heads and to so construct said heads that they may be easily and quickly adjusted without the necessity of disturbing any other part of the apparatus and without removing any part thereof.

A further object is to provide a fence-machine with a device for holding the pickets in position while the wire is being twisted.

A further object is to provide for making a fence with an adjustable guide, whereby the top of the finished fence will be even and the pickets in line with each other.

A further object is to provide improved devices for feeding and winding the finished fence.

A further object is to so construct a fence-making machine that it may be adapted to fences of different sizes or heights.

With these objects in view the invention consists in certain novel features of construction and combinations and arrangements of parts, as hereinafter set forth, and pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of my improved fence-machine, one of the reels and twister-heads being shown in section. Fig. 2 is an enlarged view in side elevation. Fig. 3 is an enlarged detail view of a part of the gearing. Fig. 4 is a detached view of the reel on which the fence is reeled. Fig. 5 is an enlarged detail view.

A represents the main frame of the machine, comprising four uprights *a* and two uprights *b*, end connection-timbers *c*, side con-

necting-timbers *d*, and cross bars or timbers *e*. The uprights *a* at each end of the machine are also preferably connected by metallic brace-rods *f*.

Secured to and projecting rearwardly from the connecting-timber *e* is a series of brackets *g*, in which is journaled a shaft *B*, which lies parallel with the connecting-timber *e* and provided at one end with a crank *B'*, by which to operate it.

On the shaft *B* a series of bevel gear-wheels *C* are located and made fast thereto by means of a set-screw *h*, passing through a collar integral with each gear-wheel or pinion, said gears or pinions being so arranged that each alternate one shall face in the same direction.

Secured on the cross-timber *e* is a series of journal-boxes *i*, in which one end of a series of shafts *D* are mounted, each shaft *D* having a pinion or gear-wheel *C'* secured thereto and adapted to mesh with the pinions *C* on the shaft *B*, so that when the shaft *B* is rotated each alternate shaft will be rotated in the same direction and the intermediate shafts will be rotated in the reverse direction.

The other ends of the shafts *D* are mounted in the shank *j* of a series of twister-heads *E*, which latter are revolubly mounted in journal-boxes *k*, secured to the cross-timber *e'*.

At the rear end of the shank of each twister-head *E* an integral collar *l* is located and provided with a screw-threaded perforation for the reception of a set-screw *k'*, whereby the twister-head may be secured to the shaft *D*, and encircling each shaft *D* within the shanks of the twister-heads is a loose sleeve *k²*. By thus attaching the twister-heads to the shafts *D* it will be seen that they may be readily adjusted relatively thereto by simply unscrewing the set-screws *k'*, thus avoiding the necessity of removing any part of the mechanism when adjustment of the twister-heads is necessary.

Each twister-head *E* is provided with two arms *l²*, which project forwardly therefrom at opposite sides and are perforated for the reception of screw-bolts *l'*, which secure twisting-fingers *F* to said arms *l²*. Each finger *F* of the twister-heads is composed of a piece of flat spring metal bent upon itself and secured to the arms of the twister-head at the folded end. The free ends of the fingers are bent inwardly and then outwardly,

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the inwardly-projecting portions of each finger being somewhat separated and parallel with each other, and the outwardly-projecting ends of the portions of each finger being in line with each other.

Secured to the shafts D at points between the twister-heads E and the pinions C' is a series of double reels G, each reel being disposed at right angles to the next adjacent reel, as shown in Fig. 1. In constructing the reels G a shaft or spindle *m* is passed through the shafts D, and a sleeve *m'* is located on each end of said spindle and adapted to rotate thereon. Each end of each sleeve *m'* is provided with a flange *m'*, adapted to enter annular grooves in the inner faces of disks *m*³, located at the ends of each sleeve *m'*. In this manner a double reel will be produced which is very simple in construction and easy of application to the machine.

Secured to the side timbers *b* at points in or approximately in line with the forward ends of the twister-fingers are journal-boxes *n*, in which the ends of a shaft H are journaled, and projecting upwardly from said shaft at points between the twister-heads is a series of fingers I, which when a slat or paling is placed in the twister-heads serve to force it therefrom after the wire shall have been twisted, said shaft being operated by means of a handle L' on one end thereof.

Secured upon the side timbers *b*, in advance of the twister-heads and shaft H, is a shaft J, having a series of pins *j'* projecting from the periphery thereof at right angles to each other, over which shaft the finished fence is adapted to pass, and by means of which it is fed forward to a receiving-reel, presently to be described. On one end of the shaft J a ratchet-wheel J² is secured, which a pawl J³, pivoted to the frame-work, is adapted to engage and prevent rotation of said shaft in one direction, and beyond the ratchet-wheel J² said shaft J is provided with a handle by means of which to rotate it.

At the forward end of the frame A journal-boxes or brackets K are secured to the uprights *a* for the reception of the ends of a receiving-reel L, upon which the finished fence is adapted to be wound as it is fed from the twisting mechanism by the shaft J. This reel L is preferably composed of a central metallic rod having a covering of wood of a size insufficient to completely surround the metallic rod, said covering being made in two sections. By this means it will be observed that when it is desired to remove a coil of fence from the reel it is simply necessary to remove the reel from the machine and withdraw the central rod, whereupon the coil of fence can be readily removed.

The reel L is provided at one end with a ratchet-wheel M, with which a dog M', pivoted to the frame-work, is adapted to normally engage and prevent the reel from backward rotation. Pivoted to one of the uprights *a* in proximity to the ratchet-wheel M is a lever

N, from the lower end of which an arm N' projects, and pivotally connected to the free end of this arm is a dog N², adapted to engage the teeth of the ratchet-wheel M, whereby the receiving-reel L may be rotated.

Assuming now that the twister-heads are in position to receive a paling and that the arms or fingers I of the shaft H are between the twister-heads, a paling is inserted in the twister-heads and forced forwardly by the fingers I against the feeding-shaft J. The twister-heads are then operated and the wire passing from the reels G through perforations *o* in the heads and perforations *o'* in the ends of the fingers F will be twisted. The shaft J will then be partially rotated to feed the paling forward and the operation repeated upon another paling, and so on, the finished fence being coiled upon the reel L, as previously explained.

Heretofore it has been proposed to employ single twisting-fingers; but I have found that after constant use these fingers are liable to become bent or weakened and thus impair the effectiveness of the machine, and that by providing double twisting-fingers, as above described, this objection is obviated and sufficient strength given to the twisting-fingers to withstand the strain brought to bear upon them.

In order that the tops of the palings may be made to align with each other and the top of the fence thus made to present an even appearance, an adjustable stop or guide P is secured to the cross-timber *e'*, against which stop or guide the palings abut as they are inserted in the twister-heads.

The machine, as represented in the drawings, is provided with five twister-heads, as that is the number usually employed for fences of ordinary heights; but should it be desired to employ a smaller number of twist-ers for a smaller fence it is simply necessary to loosen the set-screws of the pinions C corresponding with the twister which it is desired to prevent from rotation.

Should it be desired to construct an unusually high fence, that portion of the frame forward of the uprights *b* will be hinged to said uprights, as shown in Fig. 5, and the parts attached to that portion of the frame correspondingly lengthened.

A fence-machine constructed as above set forth and comparatively cheap to manufacture is effective in operation, comprises a small number of parts, and is easy to manipulate.

It is evident that slight changes might be made in the details of construction of my invention without departing from the spirit thereof or limiting its scope, and hence I do not wish to limit myself to the precise details of construction herein described, and shown in the drawings; but,

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

1. In a fence-machine, a twister-head having double twister-fingers and each finger having an eye therein adapted to receive wire, substantially as set forth.

5 2. In a fence-machine, a twister-head having double twister-fingers, each of said twister-fingers being composed of a strip of spring metal bent upon itself at the rear end and secured to the twister-head, substantially as set forth.

10 3. In a fence-machine, the combination, with a series of shafts, of a series of twister-heads and sleeves adjustably secured to said shafts and adapted to lock or release the twister-heads, substantially as set forth.

15 4. In a fence-machine, the combination, with a series of shafts, of a series of twister-heads having perforated shanks to receive said shafts, a collar on each shank, and a set-screw passing through said collar, whereby the shank is adjustably secured to the shafts, substantially as set forth.

20 5. In a fence-machine, the combination, with a shaft and a series of pinions adjustably se-

cured thereon, of a series of shafts carrying 25 pinions adapted to mesh with the first-mentioned pinions, a double reel secured to each shaft of the series, and a twister-head adjustably secured to each of said shafts, substantially as set forth.

30 6. In a fence-machine, the combination, with twisting mechanism, of a shaft having a series of fingers for forcing the palings forward, means for operating said shaft, a shaft having a series of pins therein for feeding the finished fence forward, means for operating said 35 shaft and ratchet mechanism for preventing its rotation in one direction, a receiving-reel for the finished fence, and devices for operating said finishing-reel, substantially as set forth. 40

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

J. MARCUSS ORCUTT.

Witnesses:

C. D. BEARD,
WINFIELD LIGGETT.