(No Model.) 2 Sheets—Sheet 1.

E. J. YOUNGS.

PICKET FENCE MACHINE.

No. 390,739. Patented Oct. 9, 1888.

Fig. 1

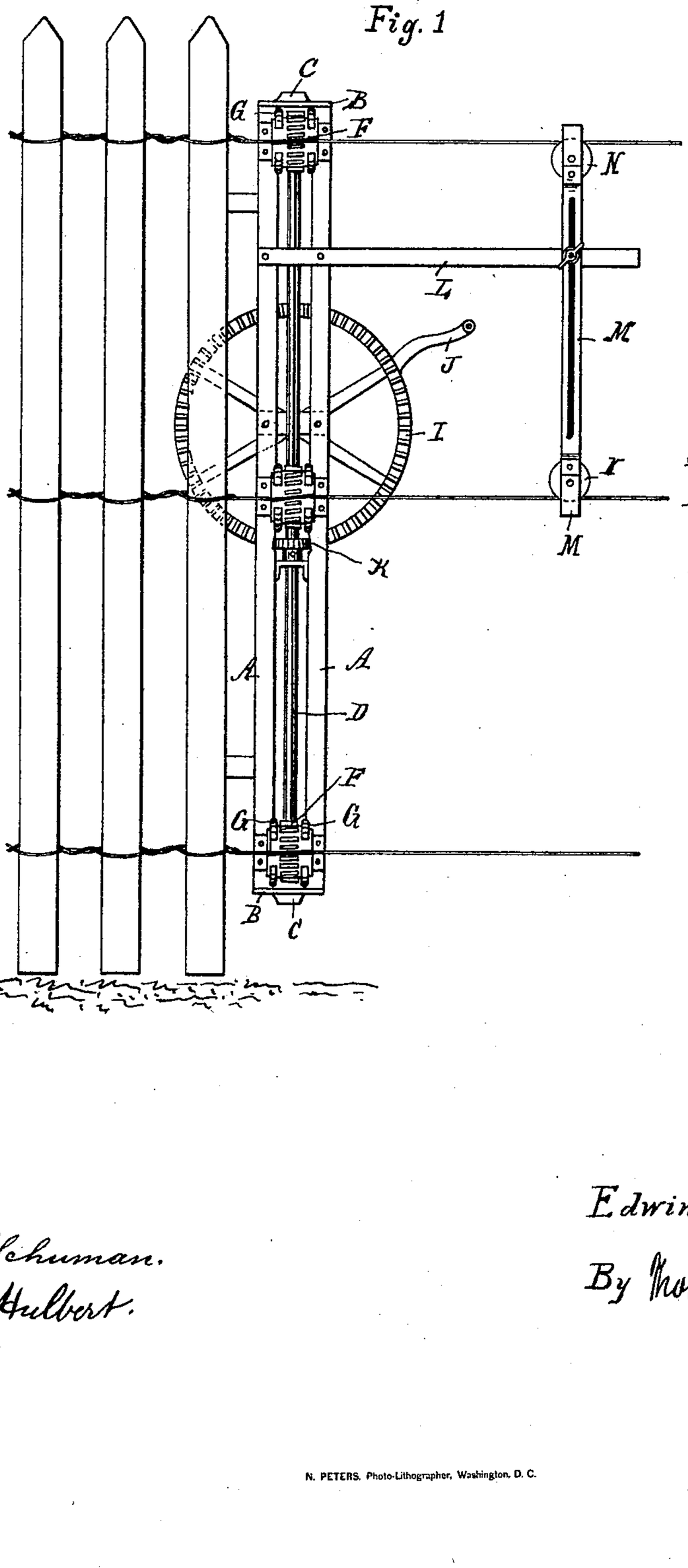
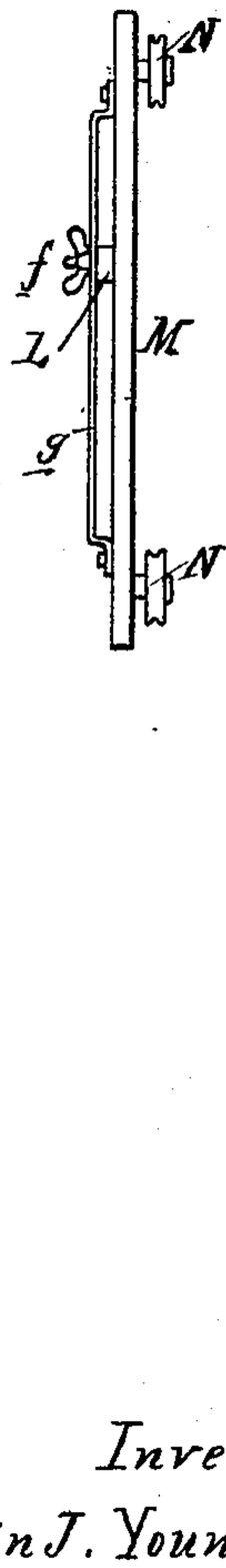


Fig. 6



Attest:
John Schuman.
P. M. Hulbert.

Inventor:
Edwin J. Youngs.
By Thos. G. Pagnell Son
Atty's

(No Model.) 2 Sheets—Sheet 2.

E. J. YOUNGS.

PICKET FENCE MACHINE.

No. 390,739. Patented Oct. 9, 1888.

Fig. 2

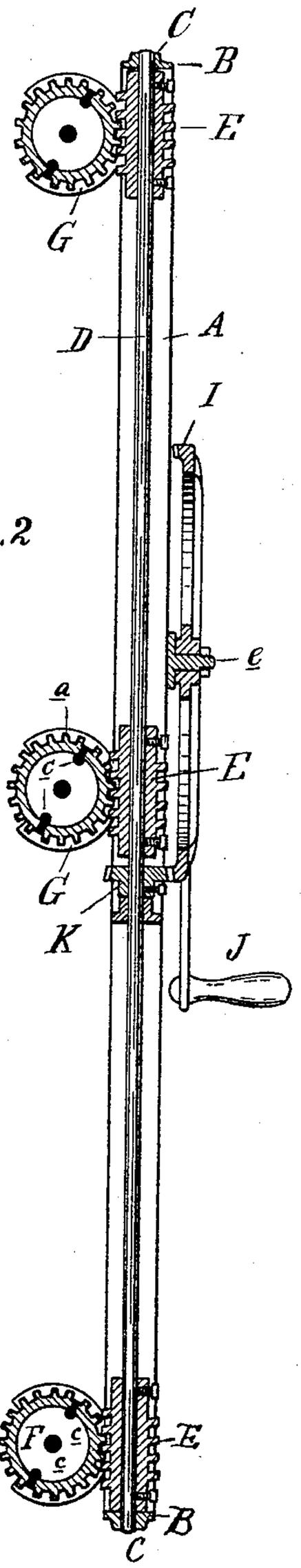


Fig. 3

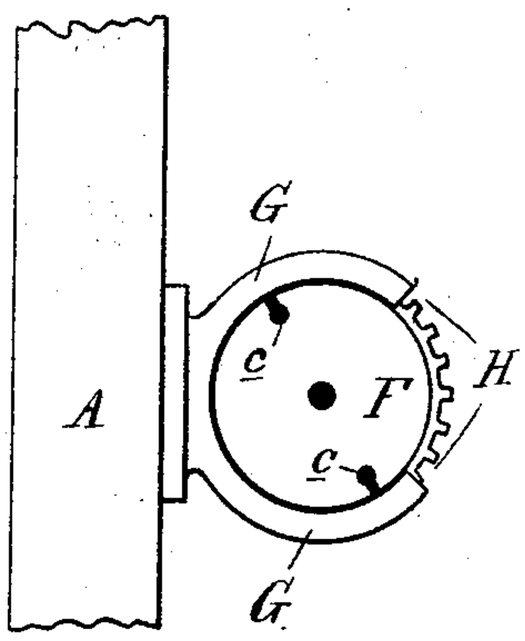


Fig. 4

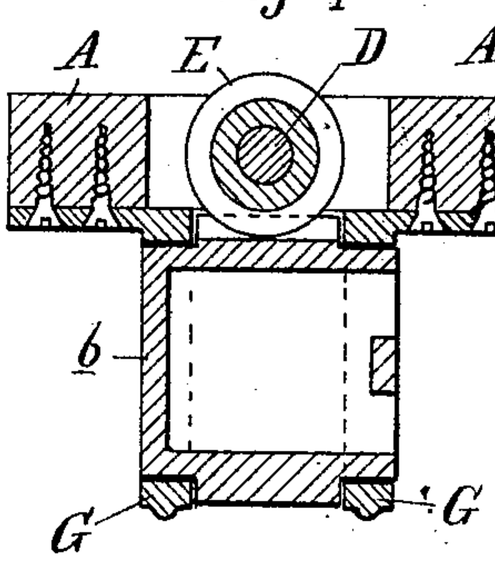
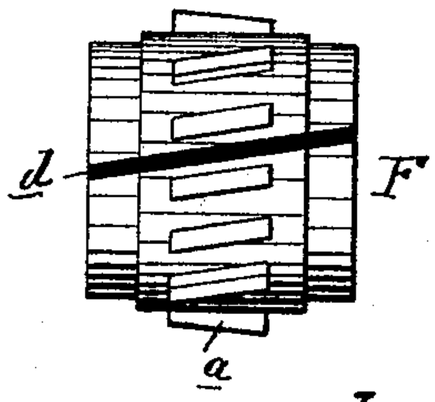


Fig. 5



Attest:
John Schuman.
L. M. Hulbert.

Inventor:
Edwin J. Youngs.
By Thos. G. Sprague & Son.
Atty's.

UNITED STATES PATENT OFFICE.

EDWIN J. YOUNGS, OF FLINT, MICHIGAN, ASSIGNOR TO THE CASTREE-MALLERY COMPANY, OF SAME PLACE.

PICKET-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 390,739, dated October 9, 1888.

Application filed April 21, 1888. Serial No. 271,458. (No model.)

To all whom it may concern:

Be it known that I, EDWIN J. YOUNGS, a citizen of the United States, residing at Flint, in the county of Genesee and State of Michigan, have invented certain new and useful Improvements in Picket-Fence Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to new and useful improvements in picket-fence machines; and the invention consists in the general arrangement and construction and combination of the parts, whereby great strength, combined with lightness and economy of manufacture, is obtained, all as more fully hereinafter described and claimed.

In the drawings which accompany this specification, Figure 1 is an elevation of my machine as arranged for operation. Fig. 2 is a vertical central cross-section. Fig. 3 is a front elevation of one of the twisters. Fig. 4 is a horizontal section through one of the twisters and frame. Fig. 5 is a detached view of one of the twisters, and Fig. 6 is a detached side elevation of the adjustable head of the outrigger.

The frame of the machine consists of two parallel side bars, A A, connected on top and bottom by the cross-bars B, which are preferably made of iron and centrally apertured to form bearings C for a vertical shaft, D, journaled therein. Upon this shaft are secured the worms E—one for each twister. F are rotary twister-spools, journaled in suitable bearings, G, which are secured to the frame in pairs and project laterally therefrom. Each bearing is preferably cast in one piece, and a portion of it is cut away to form an opening, H, corresponding in each pair of brackets. The twisters are cast hollow, and are provided between their bearings with suitable spurs, *a*, adapted to engage with the worms E and with the heads *b*, in which are formed the wire-passages *c*, which extend outwardly and communicate with the oblique slots *d*, formed in the periphery of each twister. To the outer face of the frame is secured the stub-shaft *e*, upon which is journaled the gear-wheel I, which is provided with the crank-handle J, and engages with the pinion K, secured upon the shaft D.

L is a lateral outrigger secured to the frame and provided at its free end with a vertical head, M, vertically adjustably secured thereto in any suitable manner, and carrying at its upper and lower ends suitable travelers, N, adapted to engage with the two upper wire strands.

In practice it will be seen that by means of the crank-wheel and pinion motion is communicated to the shaft D, and by means of the worm-gearing described motion is communicated simultaneously to all the twisters. To engage the machine with the fence-wires, one of the apertures *d* of each twister is made to register with the cut-away portions H of the bearings, so as to permit of inserting one strand of each set of fence-wires into one wire-passage of each twister, and after giving a half-turn to the twisters the other strand is inserted in the same way.

The obliquity of the apertures *d* prevents the accidental disengagement of the wires without preventing them from being readily inserted. By adjusting all the twisters to coincide together the machine may be more readily engaged and disengaged from the fence-wires, and, being of a very simple and light construction, may therefore readily be taken from and to the work. The outrigger L is fast to the frame; but its head M can be adjusted vertically and at any angle by means of the set-screw *f*, which passes through the slotted guide-bar *g*. By these means the machine is steadied in operation, and may be readily adjusted to hang vertically in going up or down hill.

It will be seen that the construction of the frame renders the machine very light, whereby all the ground connections or ground-supports may be dispensed with and the machine be directly supported upon the wires. Further, the arrangement of the shaft D with the gearing to transmit the motion from the crank to the twisters has the great advantage of simplicity and lightness over other gearing as now applied.

What I claim as my invention is—

1. The combination of the rotary twister-

spool F, provided with the head *b*, the wire-passages *c*, formed therein, the oblique slots *d*, communicating therewith, and the bearings G, partially cut away, all arranged to operate substantially as described.

2. The combination, in a picket-fence machine, of the frame, the rotary twisters, the bearings in which said twisters are journaled laterally of the frame, the cut-away portions of said bearings, the wire-passages through the twisters, the slot in the periphery of the twisters communicating with the wire passages, the vertical shaft journaled in the frame of the machine, the worm-gearing between said shaft and each twister, the pinion on said shaft, and the crank-wheel engaging with said pinion, the parts being constructed and arranged to operate substantially as described.

3. The combination, with the frame of a fence-machine, of the lateral outrigger L, rigidly secured thereto, the vertical head M, carrying the travelers N N, the slotted guide-bar *g*, and the set-screw *f*, adjustably securing the head to the outrigger, all substantially as described.

In testimony whereof I affix my signature, in presence of two witnesses, this 10th day of April, 1888.

EDWIN J. YOUNGS.

Witnesses:
WM. H. GRAHAM,
D. D. AITKEN.