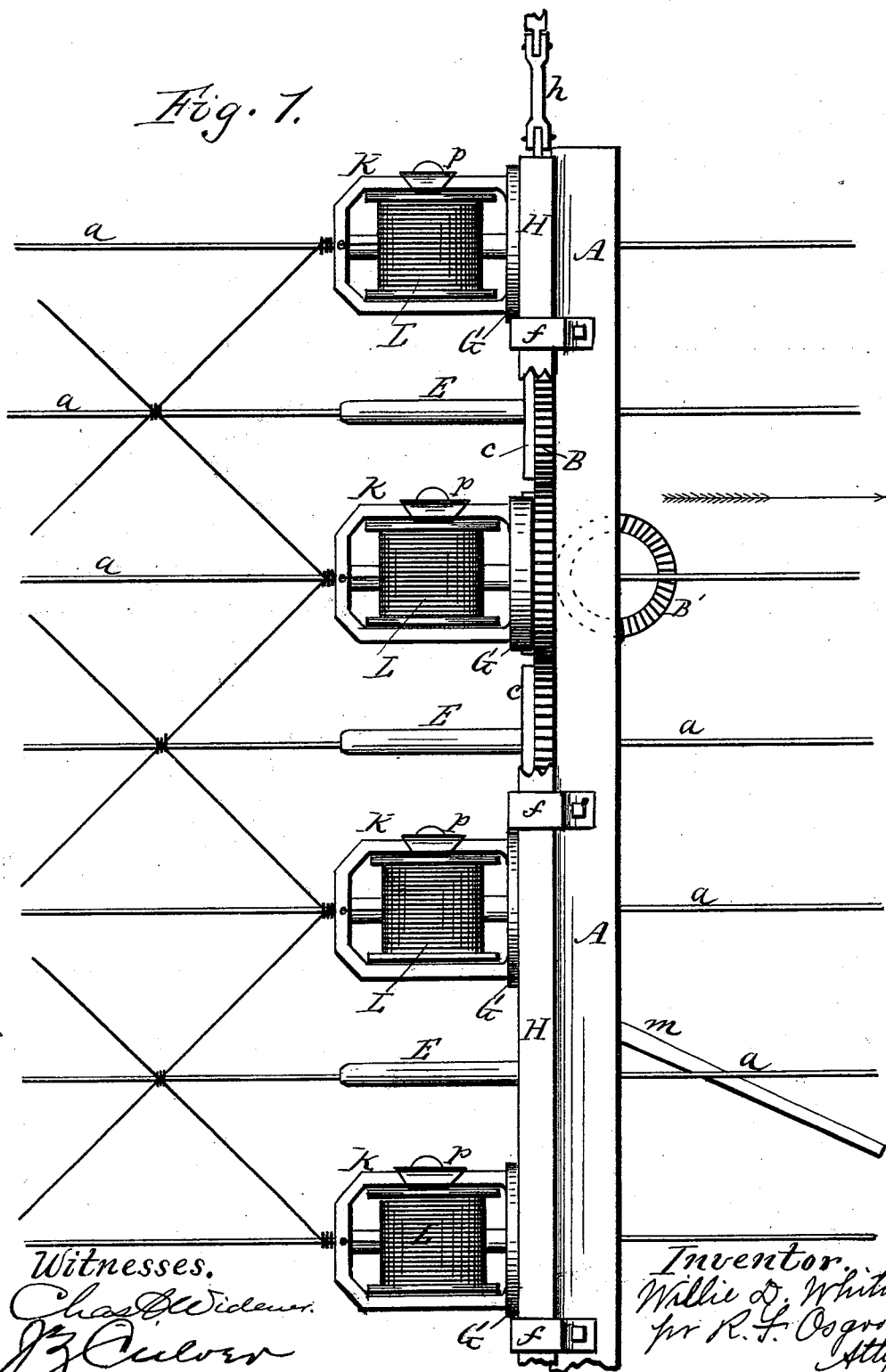


W. D. WHITNEY.
WIRE FENCE MACHINE.

No. 505,890.

Patented Oct. 3, 1893.

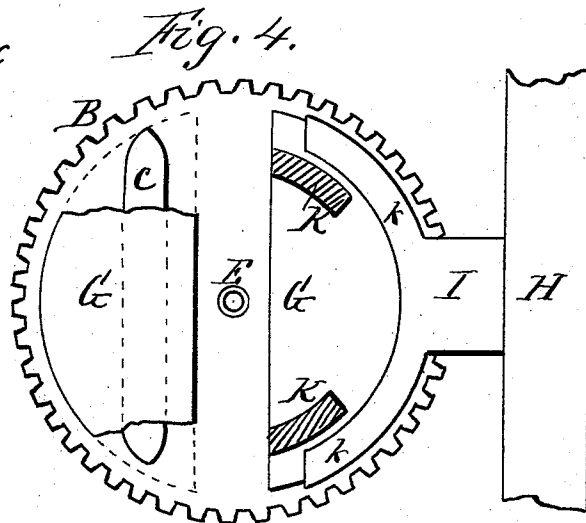
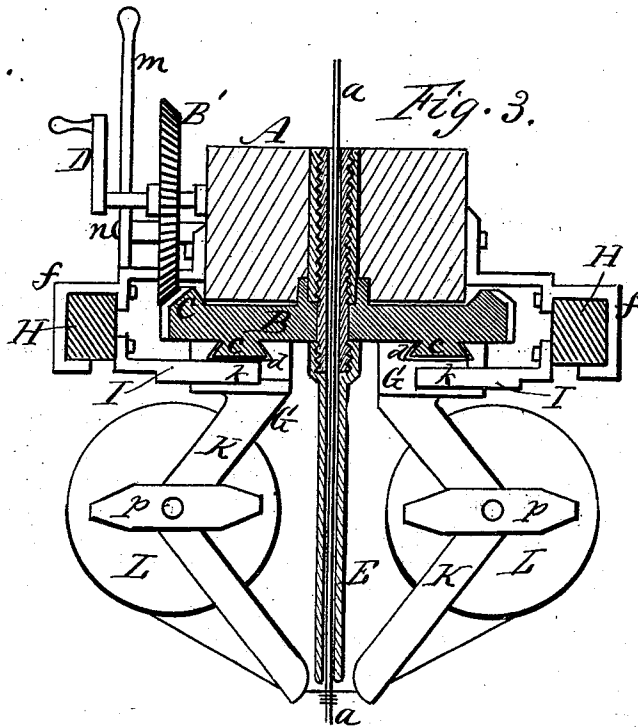
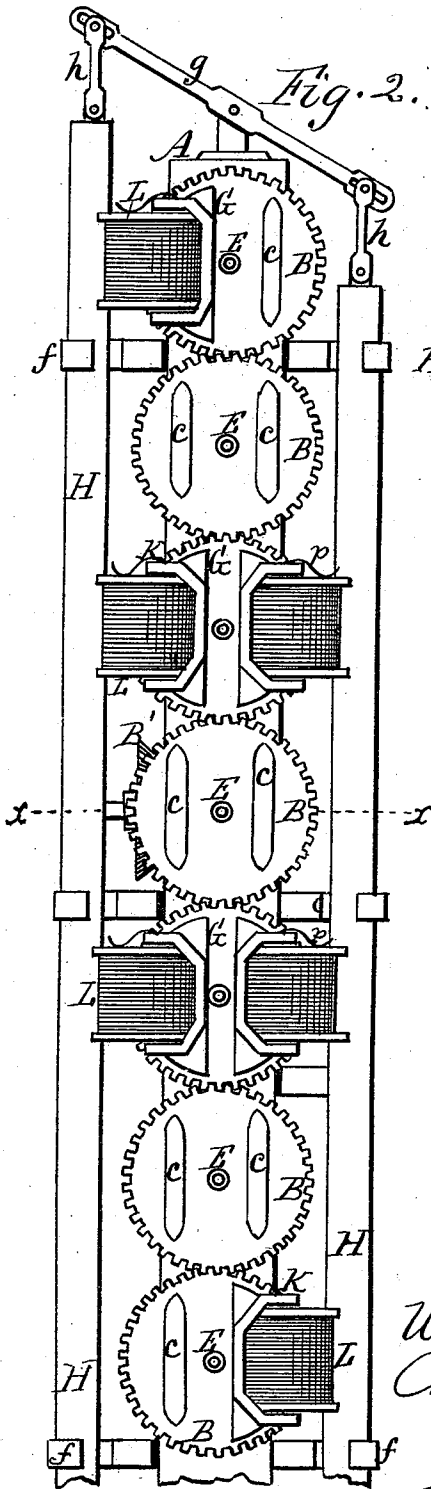
Fig. 1.



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Witnesses. *Inventor.*
Charles W. ... Willie D. Whitney,
per R. F. Osgood,
Atty.
S. A. Hutchinson.

UNITED STATES PATENT OFFICE.

WILLIE D. WHITNEY, OF CLARENDON, NEW YORK.

WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 505,890, dated October 3, 1893.

Application filed April 14, 1893. Serial No. 470,342. (No model.)

To all whom it may concern:

Be it known that I, WILLIE D. WHITNEY, of Clarendon, in the county of Orleans 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 application.

My improvement relates to machines for making a wire fence in the field.

It also relates to that class in which the twister heads are alternately moved from one gear to another by means of alternately moving slides.

The invention consists in the construction hereinafter described and claimed.

In the drawings Figure 1 is a side elevation of the machine. Fig. 2 is a front elevation looking at right angles to Fig. 1. Fig. 3 is an enlarged cross section of the same on line *x* *x* of Fig. 2. Fig. 4 is an enlarged elevation of one of the gear wheels, two of the segmental twister heads connected therewith, and a portion of one of the operating slides.

A indicates the support, consisting of an upright wooden post, to which are attached the operating parts.

B B B are a set of spur gears attached to said support and intermeshing, as shown. One of these gears has a bevel cog rim C, with which engages a bevel gear B' operated by a hand crank D. By this means all the gears have a simultaneous and equal rotation.

E E E are a set of hollow spindles fixed in the support A, through which spindles the longitudinal wires *a a* of the fence pass, and on which the gear wheels turn freely. For convenience of attachment and disconnection said spindles are preferably made each in two parts screwed together, and that part which enters the support also screws into a separate tube driven tightly into the support. This is clearly shown in the cross section, Fig. 3. By this means the gears and connecting parts can be readily removed from place.

G G are the twister heads, consisting of segmental heads sliding up and down on the faces of the gears, and shifting position from one gear to another. These twisters are used in pairs, except at the top and bottom where only a single twister is used, as shown in Fig.

2. The pairs also alternate with the gears as shown, so that when engaged with one gear the next one is free. The twisters are connected with the faces of the gears by means of dovetailed ribs *c c* on the faces of the gears and corresponding dovetailed slots *d d* in the twisters. By this means the twisters are held firmly in place and there is no tendency to separate by reason of the great strain that occurs in the twisting of the wires. The ends of the ribs *c c* are rounded or made pointed to facilitate the sliding of the twisters from one gear to another.

H H are the slides by which the twisters are operated. They consist of two upright strips of wood mounted in bearings *f f* attached fast to the support A, and moving freely up and down in said bearings. At the top they are connected with a rock arm *g* and connecting rods *h h*, so that a reverse action takes place, one slide moving down as the other moves up.

I I are bearings attached to the slides, said bearings extending inward and having segmental heads *k k* which embrace the outer segmental edges of the twister heads. By this means they hold the twisters and cause them to move up and down with the movement of the slides so as to be changed from one gear wheel to another, and they also allow the necessary rotary movement of the twisters to twist the wires. The segmental or circular form of the twister heads is a necessity to allow this action to take place. The slides are operated by means of a lever *m*, pivoted at one end to one of the slides and having its fulcrum at *n*, on a bearing of the machine.

K K are V-shaped brackets forming a part of the twister heads, the same projecting outward as shown in the plan view Fig. 3, their outer ends converging close to the spindle through which the fence wire passes.

L L are the bobbins of filling wires pivoted in these brackets. The ends of the filling wires pass through holes in the ends of the brackets and are there twisted onto the main wires of the fence. Tension is applied by means of flat springs *p p* which bear on the spools as shown.

It will be seen that the two twister heads, being of segment form so as to turn freely in the bearings that connect them with the

slides are embraced and held in said bearings so that the slides cannot be raised or lowered without carrying the twister heads with them. Hence at every movement of the slides the
5 twister heads are changed from one gear to another, after which two or three rotations twist the wires sufficiently, and then another change is made carrying the twister heads back again. In this respect the action is similar to that in other machines of the kind. But
10 it is a peculiarity in this invention that the twister heads are flat disks resting in close contact with the face of the gears, and are not extended forward away from the gears as
15 in other machines, and also that in this invention such flat segmental twister heads are held in close contact with the face of the gears by the dovetail connections, whereby they can resist the strong lateral strain produced
20 in twisting, without being drawn out of place.

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

1. The combination, with the gear wheels,

of the flat segmental twister heads resting in 25 close contact with the faces of the gears and connected therewith by dovetailed connections that allow said twister heads to shift from one gear to another by sliding along the dovetails, as herein shown and described. 30

2. The combination of a set of flat-faced gear wheels, a set of flat segmental twister heads resting in close contact therewith and connected thereto by dovetailed ribs, a set of brackets connected therewith holding the 35 spools of filling wire, a pair of slides arranged to move in reverse directions, and bearings of the slides embracing the segmental heads, as shown and described and for the purpose specified. 40

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

W. D. WHITNEY.

Witnesses:

R. F. OSGOOD,
A. W. WILBUR.