

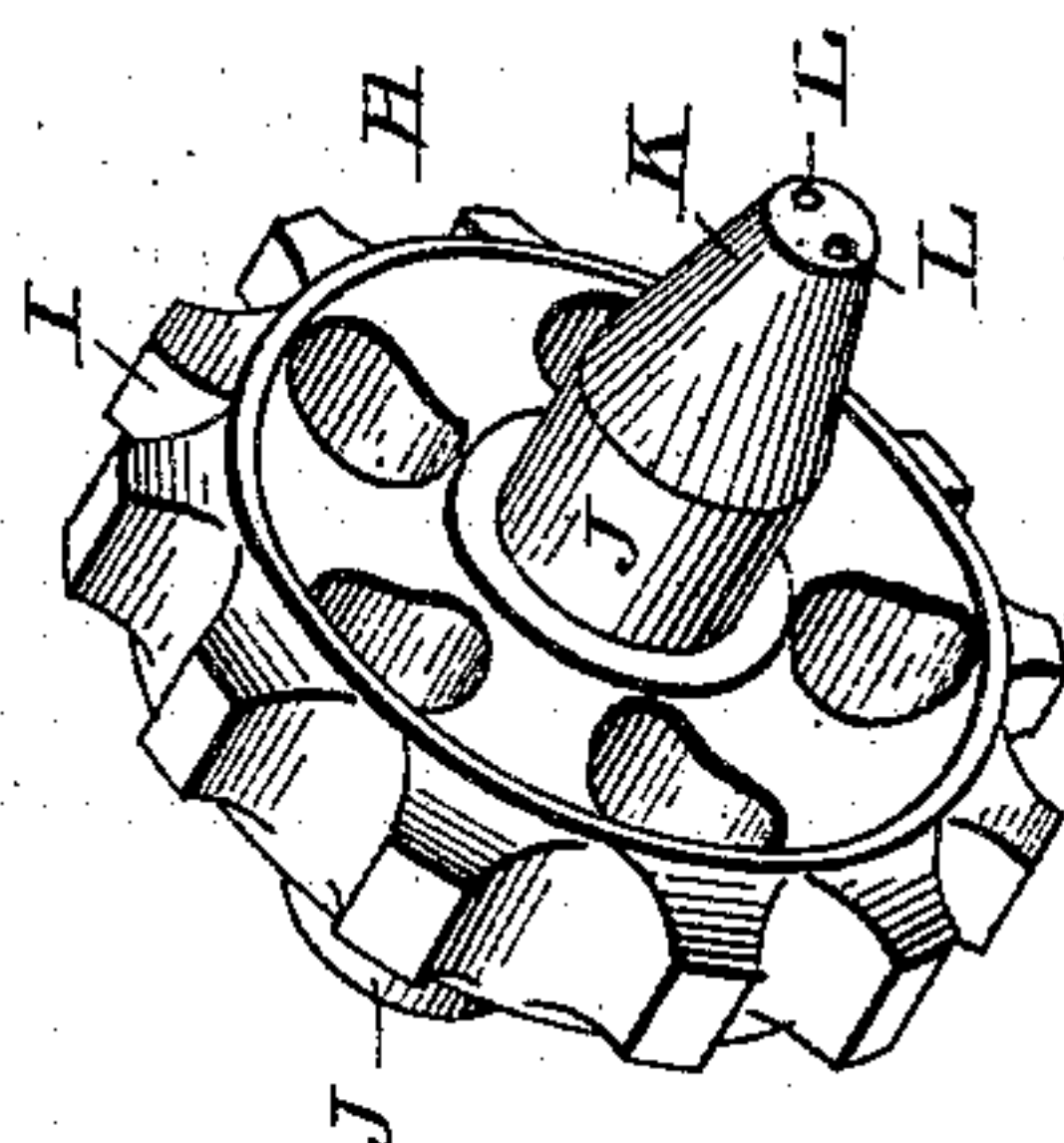
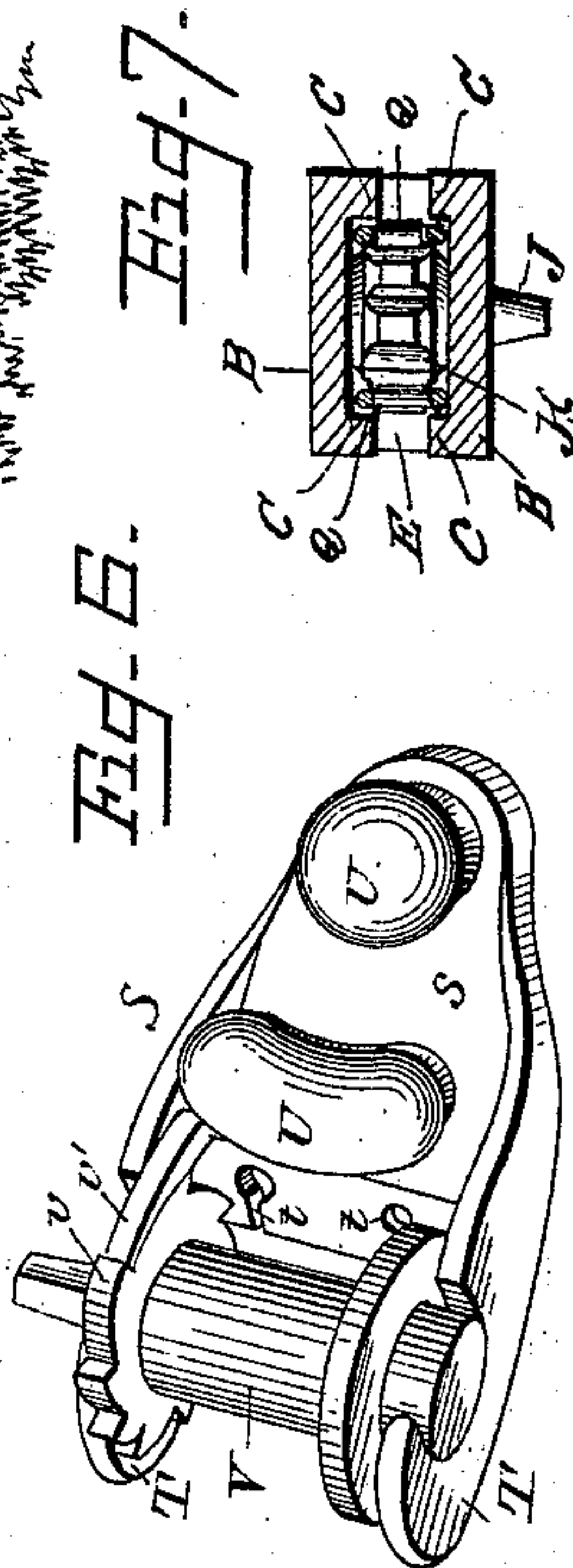
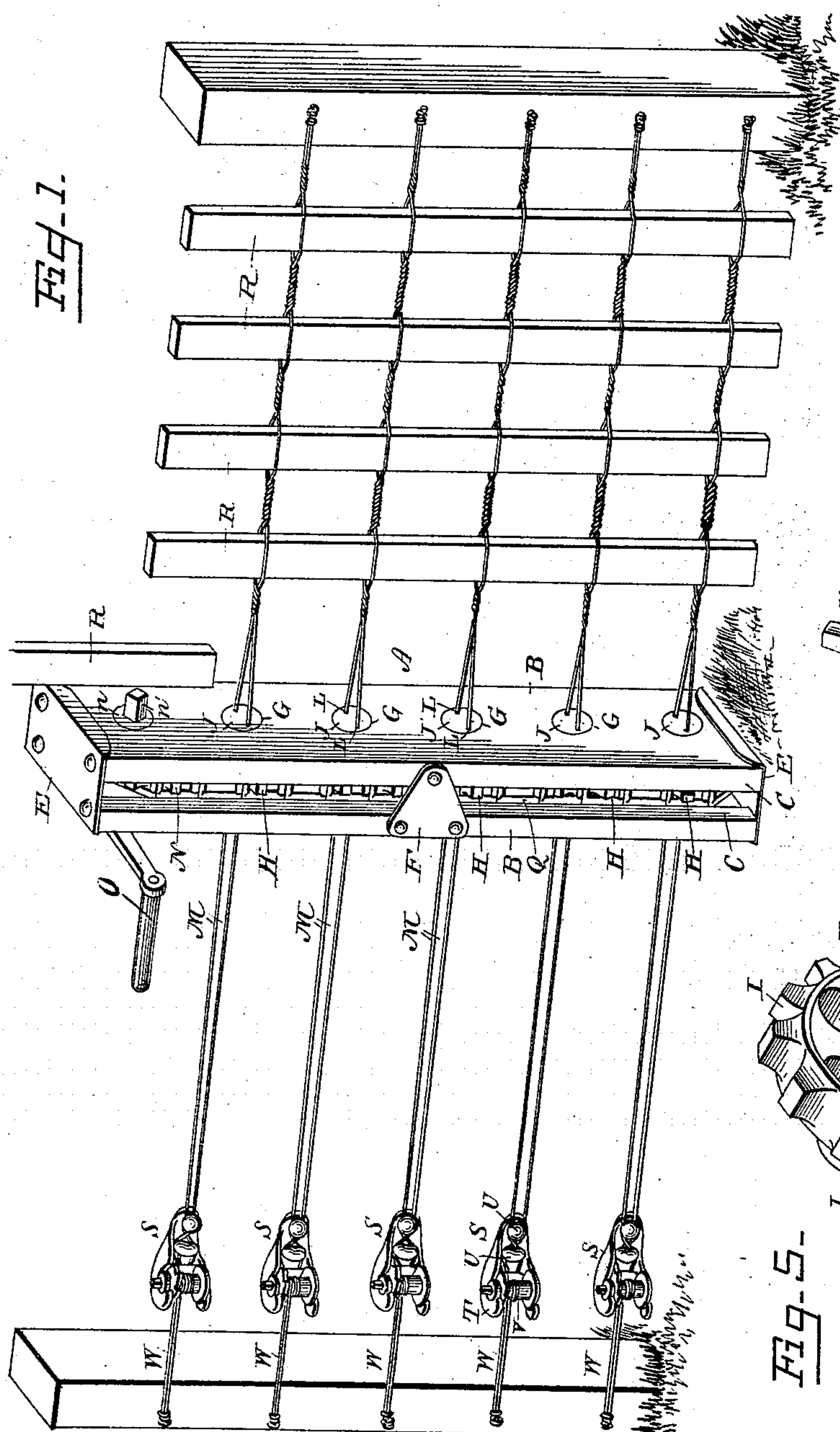
(No Model.)

2 Sheets—Sheet 1.

O. P. PIERSON.
FENCE MACHINE.

No. 540,027.

Patented May 28, 1895.



Inventor

Witnesses

Chas H. Curand
S. P. Schaupler

By *his* Attorneys.

Ole P. Pierson

C. Snow & Co.

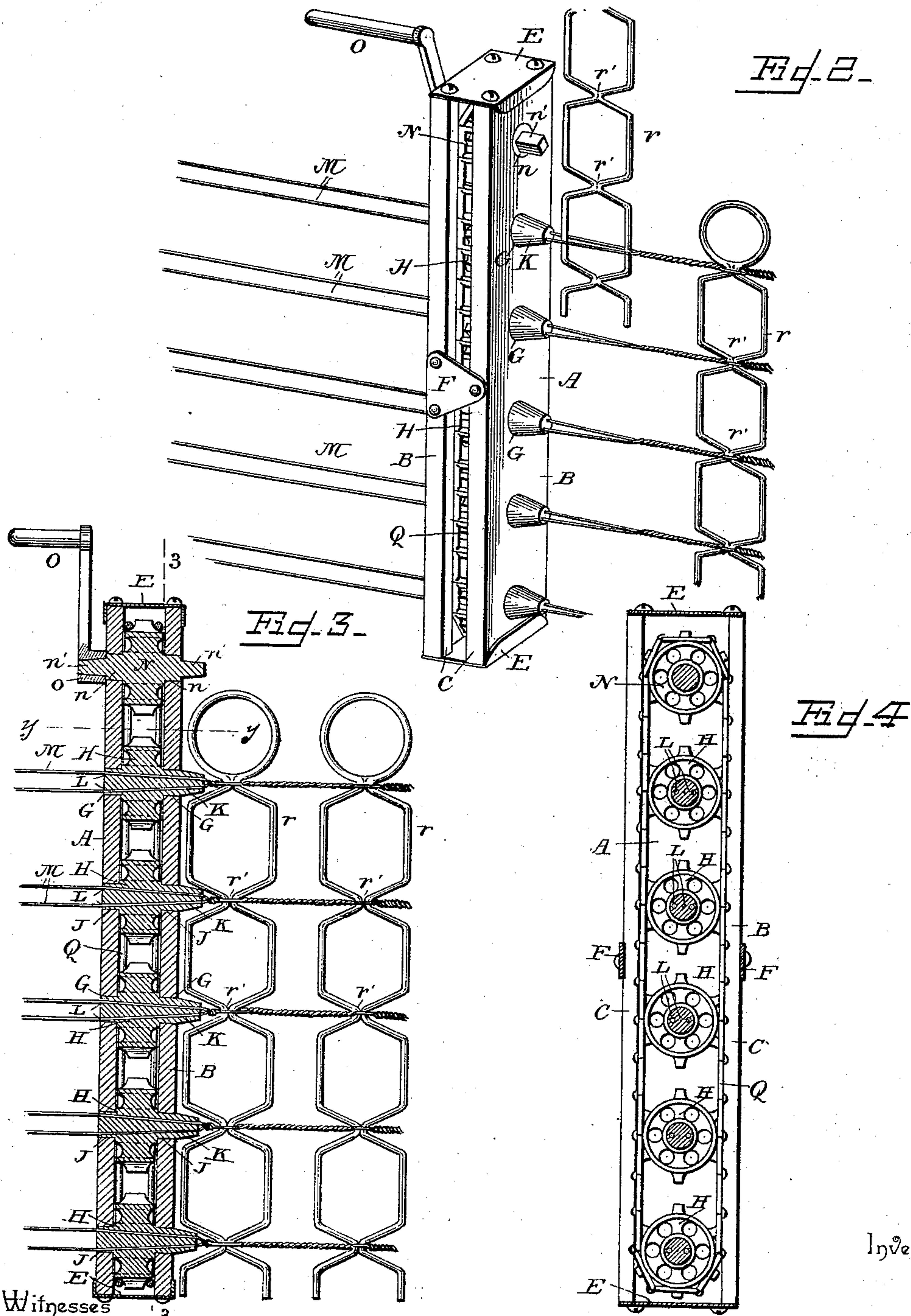
(No Model.)

2 Sheets—Sheet 2.

O. P. PIERSON.
FENCE MACHINE.

No. 540,027.

Patented May 28, 1895.



Inventor

Witnesses
Chas. H. Curand
S. P. Schaeffer

By his Attorneys.

O. P. Pierson

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

OLE P. PIERSON, OF SIOUX FALLS, SOUTH DAKOTA.

FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 540,027, dated May 28, 1895.

Application filed April 30, 1894. Serial No. 509,546. (No model.)

To all whom it may concern:

Be it known that I, OLE P. PIERSON, a citizen of the United States, residing at Sioux Falls, in the county of Minnehaha and State of South Dakota, have invented a new and useful Fence-Machine, of which the following is a specification.

This invention relates to fence machines; and it has for its object to provide a hand machine of that character adapted for wiring the pickets of a picket wire fence.

To this end the main and primary object of the present invention is to provide an improved fence wiring machine which shall be of a reversible character whereby the fence wires can be twisted tightly about thin wire or metal pickets as well as about wider wooden pickets, and to combine this reversibility with several other features of novelty to complete an effectively operating fence wiring machine.

With these and other objects in view, which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination, and arrangement of parts hereinafter more fully described, illustrated, and claimed.

In the accompanying drawings, Figure 1 is a perspective view of a hand fence-machine constructed in accordance with this invention, shown in operative position for wiring wooden pickets. Fig. 2 is a similar view showing the machine wiring wire or thin metal pickets. Fig. 3 is a central vertical sectional view of the machine shown in connection with a specific form of wire picket with which the machine is designed to be used. Fig. 4 is a vertical sectional view on the line *xx* of Fig. 3. Fig. 5 is a detail in perspective of one of the twister-wheels. Fig. 6 is a similar view of the stretcher and tension used in connection with the machine. Fig. 7 is a detail sectional view on the line *yy* of Fig. 3.

Referring to the accompanying drawings, A represents the vertical machine frame or casing adapted to support the twisting devices of the machine which is moved along by hand as the wiring of the pickets proceeds.

The machine frame A, comprises the opposite parallel frame sides or plates B, which plates are provided at their opposite inner ad-

jacent edges with the intumed or inwardly disposed guide and retaining flanges C, for the purpose to be presently referred to, and the upper and lower ends of the frame sides or plates B, are connected firmly together by the flanged cap plates E, while at an intermediate point between the top and bottom of the frame, the said opposite frame sides or plates are firmly braced or connected together by the intermediate brace plates F, thus completing a machine frame possessing considerable strength and durability.

The opposite frame plates B, are provided with a vertical series of aligned circular bearing openings G, which support and form bearings for the vertical series of twister wheels H, mounted inside of the frame A, between the opposite side plates thereof. The several twister wheels H, while in vertical alignment with each other, are separated so as to have an independent though simultaneous movement, and such wheels are preferably of an integral construction having central cog portions or sprocket wheels, I, and oppositely projected hub portions J, which register and turn in the aligned bearing openings G, in the opposite frame sides.

The oppositely projected hub portions J, of the cogged or sprocket wheeled twisters, which turn in the aligned bearing openings of the frame sides, serve to hold the twisters steady in their rotation while at the same time forming a support therefor, and one of the hub portions J of each wheel is provided with a tapered extremity K, which projects beyond one of the frame sides of the frame for the purpose to be presently referred to.

Running through the entire length of the hub, including both oppositely projected portions thereof, are the wire openings L, which accommodate the fence wires M, which wires are arranged in pairs so as to be twisted around the fence picket in the ordinary manner.

The longitudinal wire openings L, of each twister wheel are arranged in oblique planes so as to be convergently disposed toward the tapered extremities of the hubs to bring the wires near together at that end, while with respect to the other plain ends of the hub

which lie flush in the bearing openings therefor, the said wire openings are divergently disposed so as to separate the wires sufficiently apart at that end of the hub to admit of wider pickets therebetween.

Mounted within the top of the machine frame A, above the upper one of the twister wheels is the drive sprocket wheel N, which is provided with the projected hub portion *n*, journaled in the upper bearing openings of the frame sides, and is further provided at the extremity of each hub portion with the squared crank stems *n'*, adapted to receive the socket end *o*, of an ordinary operating crank handle O, which is used on either side of the machine frame according to the character of the pickets around which the wires are being twisted. A single drive sprocket chain Q, is arranged to engage the teeth of the upper drive sprocket wheel and the central sprocket wheels of the several aligned twisters, so as to simultaneously communicate motion to the several twisters by rotating the upper drive sprocket wheel, and the opposite side edges of the sprocket chain are overlapped by the inner guide and retaining flanges C, of the frame sides so as to hold such sprocket chain to its work inside of the machine frame.

When the machine is employed for wiring wide wooden pickets R, as shown in Fig. 1 of the drawings, the plain or squared ends of the twister hubs are presented to the pickets so that the wires M, will be sufficiently wide apart to admit of the insertion of such pickets, but when wire or thin metal pickets *r*, such as shown in Figs. 2 and 3 of the drawings, are employed, the position the machine is reversed so that the tapered ends of the hubs will be disposed toward such pickets.

As illustrated, the pickets *r*, are preferably formed of wire and are provided at regularly spaced points with contracted wire necks *r'*, around which the wires M are to be twisted, and by reason of tapering one end of the hubs, such tapered ends may be shoved into the space leading up to such neck in order to insure a close twisting of the wires around the neck as will be clearly understood by those skilled in the art, thus providing a machine capable of wiring wide and thin pickets, whether of wood or metal.

The fence wires M, which are twisted around the pickets in the manner just described, are strung up at their ends in any suitable manner and to any suitable character of posts, but in the present invention, as clearly shown in Figs. 1 and 6 of the drawings, I use in connection with these wires a combined stretcher and tension S, which provides for keeping the wires M, at a proper tension as well as to stretch and take up any slack thereof.

The tension S, comprises the body *s*, having at one end the notched bearing ears T,

and at the inner ends or the base of said ears the wire notches or openings *t*, in which are twisted the free portions of the wires M, which are interlaced around the tension posts U, rising from the body *s*, of the stretcher and tension, and serving to prevent the wires M, from slipping, and permitting the same to be held at the proper tension by the ratchet drum V, journaled in the notched bearing ears T, and provided at one end with a ratchet flange *v*, engaged at one side by a check dog *v'*, pivoted on the body *s*. Supporting wires W, are attached to the drum V, at one end and at their other ends to a suitable standard or post, so that by rotating the drum the tension and stretching of the wires M, may be properly maintained.

From the foregoing it is thought that the construction, operation and many advantages of the herein described fence machine will be apparent to those skilled in the art, and I will have it understood that changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. In a fence wiring machine, an upright frame, the opposite parallel sides of which are provided with aligned bearing openings, a series of vertically aligned twisters arranged within the frame and having integral central sprocket wheels and oppositely projected hub portions journaled in the bearing openings of the frame sides, one of such hub portions lying flush in the bearing opening therefor, and the other opposite hub portion being provided with a tapered extremity K to project into the space leading to the contracted neck of a narrow picket, and all of the hubs of the twisters being provided with separate wire openings extending the entire length thereof and convergently disposed toward the tapered hub extremities, a suitably arranged drive sprocket wheel, and a sprocket chain engaging the teeth of the several sprocket wheels, substantially as set forth.

2. In a fence wiring machine, the combination of the parallel frame sides having inwardly disposed guide and retaining flanges at their opposite inner edges, the sprocket twister wheels journaled between said frame sides, and the sprocket chain having its opposite parallel portions meshing with opposite sides of the several twister wheels and adapted to have its side edges guided inside of the machine frame by said guide and retaining flanges, substantially as set forth.

3. The combination with a fence wiring machine having twister wheels provided with single pairs of wire openings; of a combined stretcher and tension device comprising a

body having notched bearing ears at one end,
wire notches or openings *t* at the inner ends or
base of said ears, and tension posts arising
from the body and adapted to receive the in-
5 terlaced fence wires, a ratchet drum jour-
naled in said bearing ears and having at one
end a ratchet flange, and a check dog adapted
to engage said ratchet flange, said wire notches
or openings *t* being adapted to receive the
10 free portions of the wires that are interlaced

around said tension posts substantially as set
forth.

In testimony that I claim the foregoing as
my own I have hereto affixed my signature in
the presence of two witnesses.

OLE P. PIERSON.

Witnesses:

O. A. CARPENTER,
W. S. JONES.