(No Model.)

S. CONRATH.

FENCE MACHINE.

No. 384,235. Patented June 12, 1888.

Fig. 1.

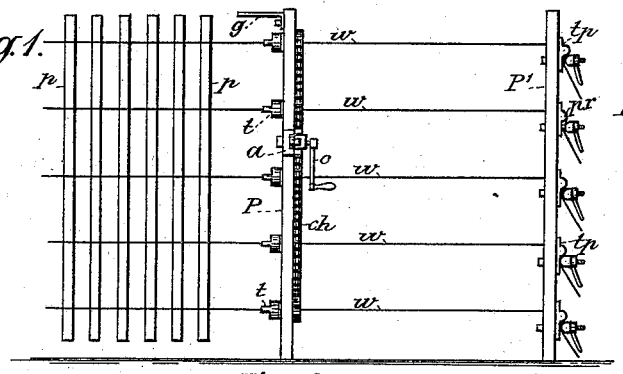


Fig. 4.

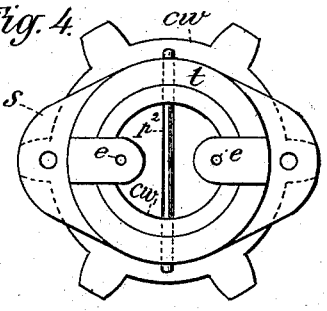


Fig. 3

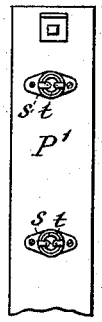


Fig. 2.

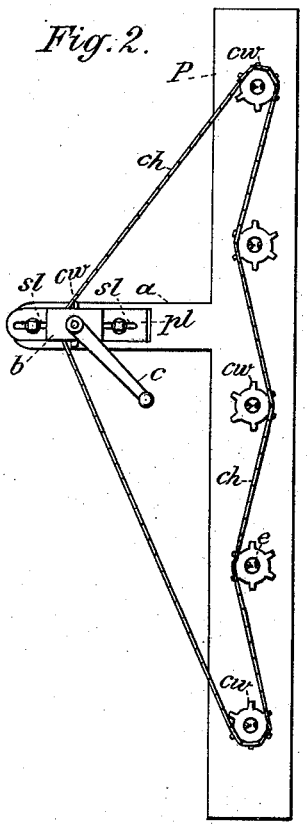


Fig. 5.

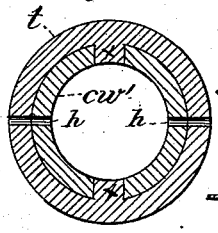


Fig. 6.

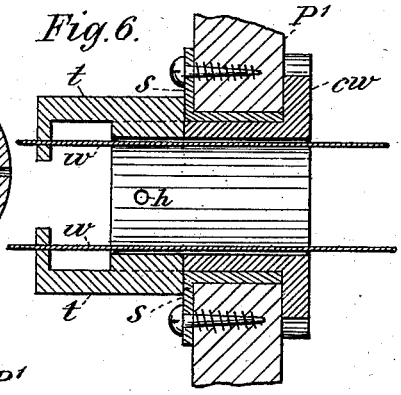


Fig. 8.

Fig. 7.

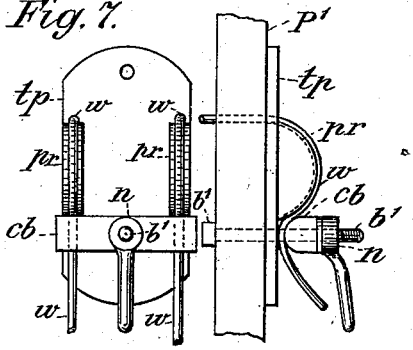
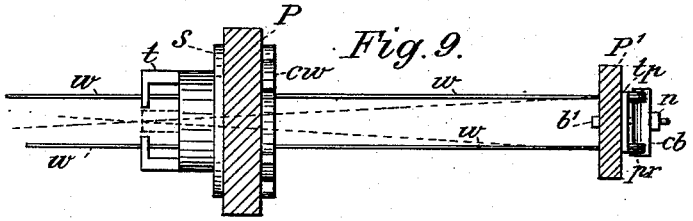


Fig. 9.



WITNESSES.

Gustav Bohn.

E. B. Griffith.

INVENTOR.

Solomon Conrath.

By C. P. Jacobs.

Atty.

UNITED STATES PATENT OFFICE.

SOLOMON CONRATH, OF COOKPORT, PENNSYLVANIA.

FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 384,235, dated June 12, 1888.

Application filed February 29, 1888. Serial No. 265,771. (No model.)

To all whom it may concern:

Be it known that I, SOLOMON CONRATH, of Cookport, county of Indiana, and State of Pennsylvania, have invented certain new and useful Improvements in Fence-Machines; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, in which like letters refer to like parts.

My invention relates to the construction of wire-fence machines, and will be understood from the following description.

In the drawings, Figure 1 represents a view of the machine set up in the field for work. Fig. 2 is a side view of the machine itself, showing the arrangement of the mechanism that revolves the twisters. Fig. 3 is an opposite side view of a part of the machine, showing the twisters in position. Fig. 4 is an end view of the twister. Fig. 5 is a cross section on the line of the holes *h* through the twister, showing the interior arrangement of the parts. Fig. 6 is a longitudinal section of the entire twisting mechanism. Fig. 7 a is front view of the tension device. Fig. 8 is a side view of the same attached to the tension-post. Fig. 9 is a top view of the tension device and the twisters arranged in position for use. Fig. 1 is drawn upon a smaller scale than the other figures.

In detail, P is the post or frame which carries the twisting mechanism, and at its top is attached a gage, *g*, for fixing the height of the pickets as they are secured between the wires. Holes are made in the post at suitable distances to receive the twisting mechanism. This consists of a chain-wheel, *cw*, formed integral with a cylindrical shank, *cw'*, which passes through the post P, and is recessed out upon opposite sides, as shown in Fig. 5. This shank revolves in the sleeve *s*, which has flanges provided with holes to admit the screws that secure it to the post, as shown in Fig. 6. The twister *t* is mounted on the projecting end of the cylindrical shank *cw'* inside the frame, and upon the inside it has projections *x*, which enter the recesses of the cylindrical shank *cw'*, as shown in Fig. 5. Ears *e* are formed upon arms that project from the body of the twister, having small openings through which the fence-wires *w* are passed, as shown in Fig. 6. These wires coming from the tension-post pass through the central opening in the cylindrical shank before they pass through the holes in the ears of the twister, and from thence they pass onward to another fixed post for forming the line of fence. The cylindrical shank *cw'* has small holes *h*, corresponding with similar holes in the body of the twister, and the pin p^2 passing through these secures the twister firmly to this shank *cw'*. The sleeve *s*, being secured to the post by screws, as shown in Fig. 6, cannot revolve, and the movement of the sprocket-chain therefore upon the chain-wheel will cause such wheel with its shank and the attached twister to revolve with it when operated by the movement of the chain through its crank. Usually five of these twisters are used in a machine, as shown in the drawings, and the twisters are simultaneously revolved by means of a sprocket-chain, *ch*, which passes about them, the openings in the links of the chain engaging with the teeth of the twisters, and also with a similar wheel having bearings in a boxing, *b*, adjustably secured to the arm *a*, connected with the machine by means of a plate, *pl*, having slots *sl*, through which pass bolts secured upon one side by nuts, as shown. Hence, if for any reason the chain becomes slack and the motion loose, by adjusting this boxing *b* the chain can be made taut and all lost motion be taken up.

c is a crank connected with the axle, having bearings in the boxing *b*, and by revolving this crank the chain-wheels are all set in motion operating the twisters.

tp is a tension-post which is set up at any suitable distance at one side of the machine, usually at the right hand, and to this is fixed the tension device for keeping the wires taut while weaving the fence. This tension device consists of a tension-plate, *tp*, bolted to the post P'. Upon each side of this plate are formed semicircular projections *pr*, having a groove in their faces. The wires pass through holes in the tension-plate just above these projections, and then over and around in the grooves, thence under a clamping-block, *cb*, which is rounded on the inner side and held in place by a bolt, *b'*, passing through the post, its outer end threaded, and the nut *n*, having a handle for convenience of operation, is

screwed down upon this bolt, the block clamped against the wire, and the tension may be adjusted to any degree desired.

Having described the machine, it is only necessary to say that it is operated in the ordinary manner.

Fig. 1 represents the device set up in the field, the machine itself being of course between the tension-post and the woven slats. As fast as one slat is secured, another is set in place between the wires. The twisters are revolved by means of the crank *c* as far as necessary to produce the kind of twist required, and when it reaches this point another slat is set in place, the operation of the twister is reversed, and so on until the fence is finished.

The gage *g* is simply a plate bolted to the top of the frame to gage the height of the pickets, so as to make them uniformly level with each other.

I am aware that it is common to operate the twisters of fence-machines by means of sprocket-chains, and do not broadly claim the same as my invention; but

What I do claim as my invention, and desire to secure by Letters Patent, is the following, viz:

1. In a wire-fence machine, the twisting mechanism herein described, comprising the chain-wheel *cw*, having the cylindrical shank *cw'*, revolving in sleeve *s*, the sleeve *s*, secured to the frame, the twister *t*, mounted on said shank, engaging and revolving with it, and having ears *e*, with openings for the fence-wires, substantially as shown and described.

2. The tension device combining the plate *tp* and its grooved semicircular pieces *pr*, the clamp-block *cb*, held to the post by a bolt, and the lever-nut *n*, for tightening the grip of the clamp upon the fence-wire, substantially as shown and described.

3. In combination, in a wire-fence machine, a frame, P, carrying twisters *t*, with ears *e*, rotating within sleeves *s*, secured in the frame, operated by chain-wheels *cw*, connected to the twisters by means as described, and driven by the chain *ch* through crank *c*, substantially as shown and described.

In witness whereof I have hereunto set my hand this 31st day of January, 1888.

SOLOMON CONRATH.

Witnesses:
H. S. THOMPSON,
C. A. BUCHANAN.