

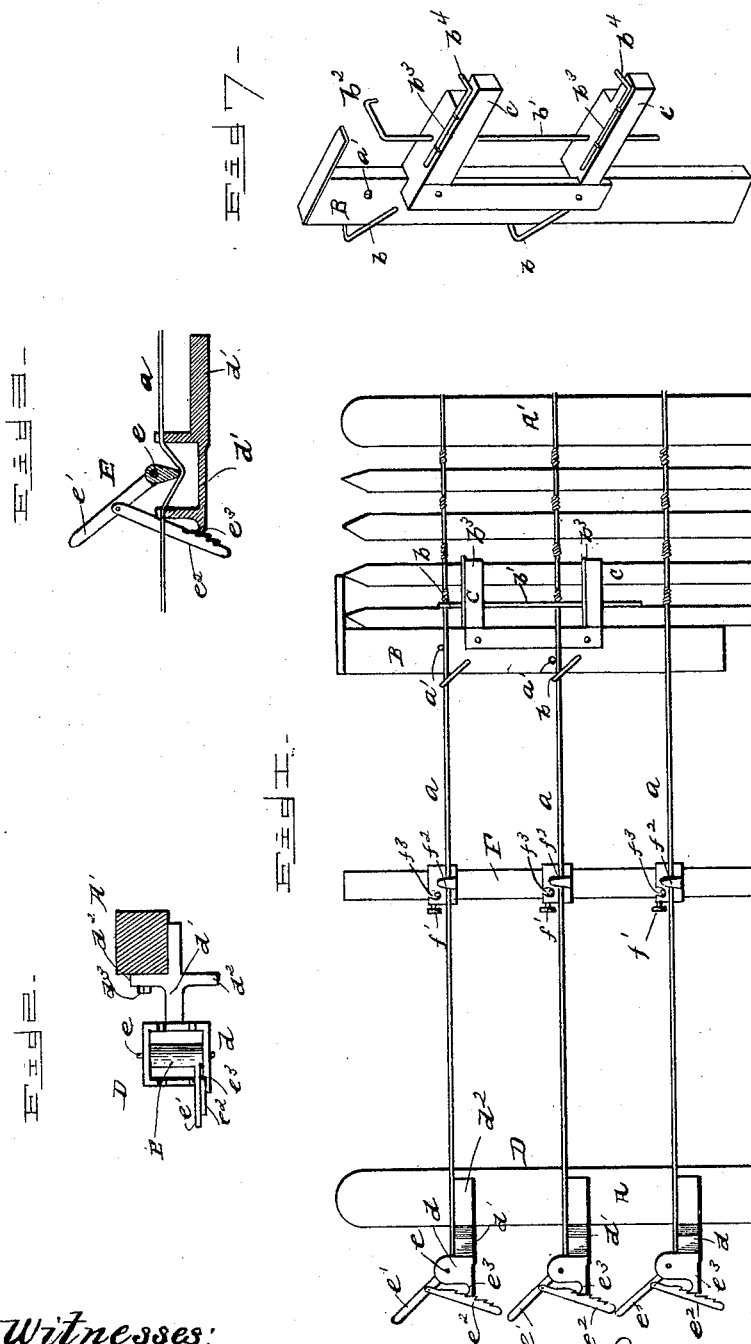
(Model.)

2 Sheets—Sheet 1.

J. C. KREMER.  
FENCE MACHINE.

No. 422,304.

Patented Feb. 25, 1890.



Witnesses:  
E. C. Duffy  
Paul W. Stevens.

Inventor:  
John C. Kremer  
per [Signature] Attorney.

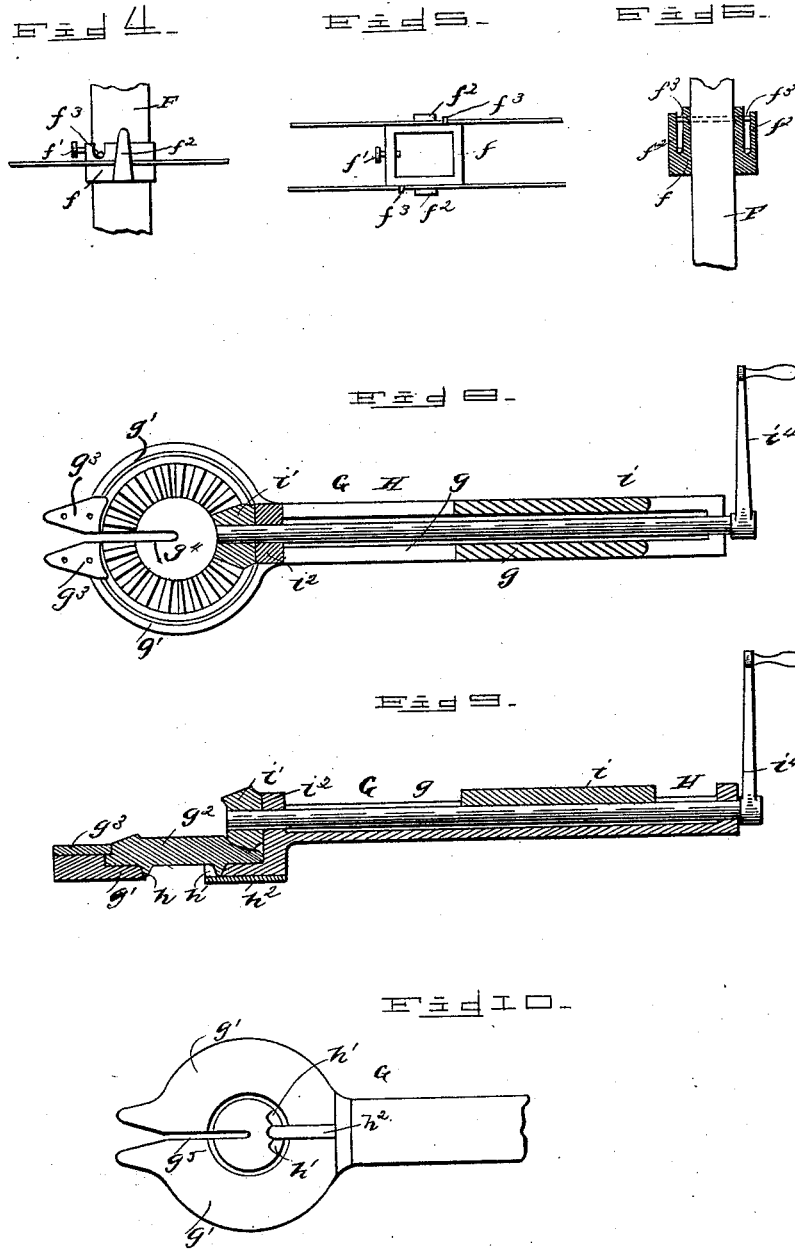
(Model.)

2 Sheets—Sheet 2.

J. C. KREMER.  
FENCE MACHINE.

No. 422,304.

Patented Feb. 25, 1890.



Witnesses:

E. C. Duff

P. W. Stevens

Inventor:  
John C. Kremer  
per *[Signature]*  
Attorney

# UNITED STATES PATENT OFFICE.

JOHN C. KREMER, OF WADSWORTH, OHIO.

## FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 422,304, dated February 25, 1890.

Application filed July 13, 1888. Serial No. 279,802. (Model.)

*To all whom it may concern:*

Be it known that I, JOHN C. KREMER, a citizen of the United States of America, residing at Wadsworth, in the county of Medina and State of Ohio, have invented certain new and useful Improvements in Fence-Machines, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention pertains to certain new and useful improvements in fence-making machines; and the invention comprises a new and improved tension device, a guiding-post having adjustable sleeves, an adjustable gaging-post, and a simple and highly efficient wire-twister, substantially as hereinafter fully set forth, and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a view in side elevation showing a section of a fence in the course of construction and with my invention applied thereto. Fig. 2 is a plan view, and Fig. 3 is a vertical sectional view, of the improved clamping device. Figs. 4, 5, and 6 are respectively side, plan, and sectional detail views of the guide-sleeves. Fig. 7 is a detail view of the gaging-post. Fig. 8 is a plan view of the improved wire-twister. Fig. 9 is a central longitudinal sectional view thereof. Fig. 10 is a detail bottom plan view of the twisting-head.

In carrying out my invention the fence-posts A are first secured in position at suitable distances apart, and to the posts A are secured, by staples or otherwise, the ends of a series of parallel wire strands *a a*, as shown.

B is the gage post or bar, which is passed up between the strands *a a*, and from it project transverse pins *a' a'*, which rest upon said strands. To this post are pivotally secured two approximately U-shaped clamping-rods *b b*, which, when raised, firmly clamp or hold the wire strands against the side of said post or bar.

*c c* are two spacing-arms secured to the gaging-post B, and they are connected together by a vertical rod *b'*, having an upper bent end *b²*, which rests on the topmost strands of wire. To these arms *c c* are connected, preferably by staples, rods *b³ b³*, having outer bent ends *b⁴*, designed to bear against the picket last inserted. The spac-

ing-arms *c* are reduced at their ends, and within these reductions the panels are designed to fit when being inserted in place.

D is the wire-clamp or tension-regulator, and it consists of a square-shaped box *d*, from which projects a bar *d'*, and from this bar extend two lateral arms *d² d²*, through either one of which works a retaining-screw *d³*. By means of this construction the clamp or tension-regulator can be secured so as to make the wires pass on either side of the post A', the screw *d³* being designed for holding the clamp to said post. In the box *d* is removably secured by a pin *e* a cam E, having an arm *e'*, with which is pivotally connected a pawl-like arm *e²*, having teeth engaging a lug *e³* of the box *d*. To insert the strands of wire, the cam E is removed and said strands are caused to rest in grooves in the ends of the box *d*, and the cam is then replaced and secured at the desired point by the pawl-like arm *e²*.

F is the guide-post, upon which are secured sleeves *f f*, in an aperture in the front of each of which works a set-screw *f'* for holding each sleeve at the desired point. From the side of these sleeves project ears *f² f²*, forming U-shaped grooves, wherein the wire strands are placed. These strands are prevented from running out of said grooves by means of transverse cross-pins *f³*, inserted through the sleeves and through coincident apertures in the post F.

The wire-twister G comprises a handle-bar *g*, having circular jaws *g' g'* at one end, and upon these jaws is secured a twisting-head consisting of a beveled wheel *g²*, the same being retained thereon by two beveled plates *g³ g³*, secured to said jaws, the inner ends of said plates overlapping a lower flange of said wheel. In this twisting-head wheel is formed a slot *g⁴*, which coincides with a slot *g⁵*, formed between the jaws *g'*.

From the under side of the twisting-head wheel projects a flange *h*, which bears against the inner surface of the jaws, and from this wheel also project two lugs or ears *h' h'*, between which is designed to project the rounded end of a spring-plate *h²*, secured to the under side of the bar *g*. This spring enters between said lugs or ears when the slots *g⁴* and *g⁵* are coincident with each other.

H is a rod or shaft secured upon the handle-bar *g* by an overlapping plate *i*, which is generally grasped by the operator, and upon the inner end of this rod or shaft is secured a beveled pinion *i'*, gearing or intermeshing with the twisting-head wheel *g'*, said shaft at this end being projected through a ring or apertured lug *i''* of said handle-bar. Upon the outer end of this rod or shaft H is secured a crank-handle *i'*. Inserting the strands of wire through the slot *g''* between the jaws into the slot *g'*, the operator by grasping the crank-handle *i'* and turning the shaft H will effect the revolution of the twisting-head wheel, and hence the twisting of the strands of wire.

In practice the wire is generally twisted between the two panels last inserted between the parallel strands.

The operation of my invention is as follows: The wires after being secured to the post A are passed through the clamps or tension-regulators secured to the post A', and also through the grooves of the sleeves of the guide-post. The gaging-bar is then inserted between the wire strands to keep the panels even at their upper ends, and the panel is properly placed by the spacing-arms, after which the wire-twister is applied and the wire strands twisted the desired extent.

It will be seen that by means of the tension-regulators the wire strands are held under proper tension and that said strands are guided by the guide-post.

I claim as my invention—

1. As an improvement in fence-making machines, the gaging post or bar having the

transverse pins and the U-shaped clamping-rods, substantially as shown and described.

2. As an improvement in fence-making machines, the guide-post having the series of sleeves provided with grooved sides, substantially as shown and described.

3. As an improvement in fence-making machines, the guide-post having the adjustable sleeves, the ears or lugs projecting from the sides of said sleeves, the cross-pins, and the set-screws, substantially as shown and described.

4. As an improvement in fence-making machines, the clamps or tension-regulators having the cams provided with arms and the arms having ratchet-teeth pivoted to said former arms, and lugs engaging these teeth, substantially as shown and described.

5. The clamp or tension-regulator comprising the box, the cam removably secured therein, having an arm, and the arm having teeth pivotally secured thereto and engaging a lug of said box, substantially as shown and described.

6. As an improvement in fence-making machines, the twister having the jaws, the slotted twisting-head wheel, the base-plate *g'*, having an open bearing, the flange *h*, rising above said flange, the lugs *h'*, and the spring secured to the base-plate and fitting between the lugs *h'*, substantially as set forth.

In testimony whereof I affix my signature in presence of two witnesses.

JOHN C. KREMER.

Witnesses:

W. H. HANSON,  
F. W. KREMER.