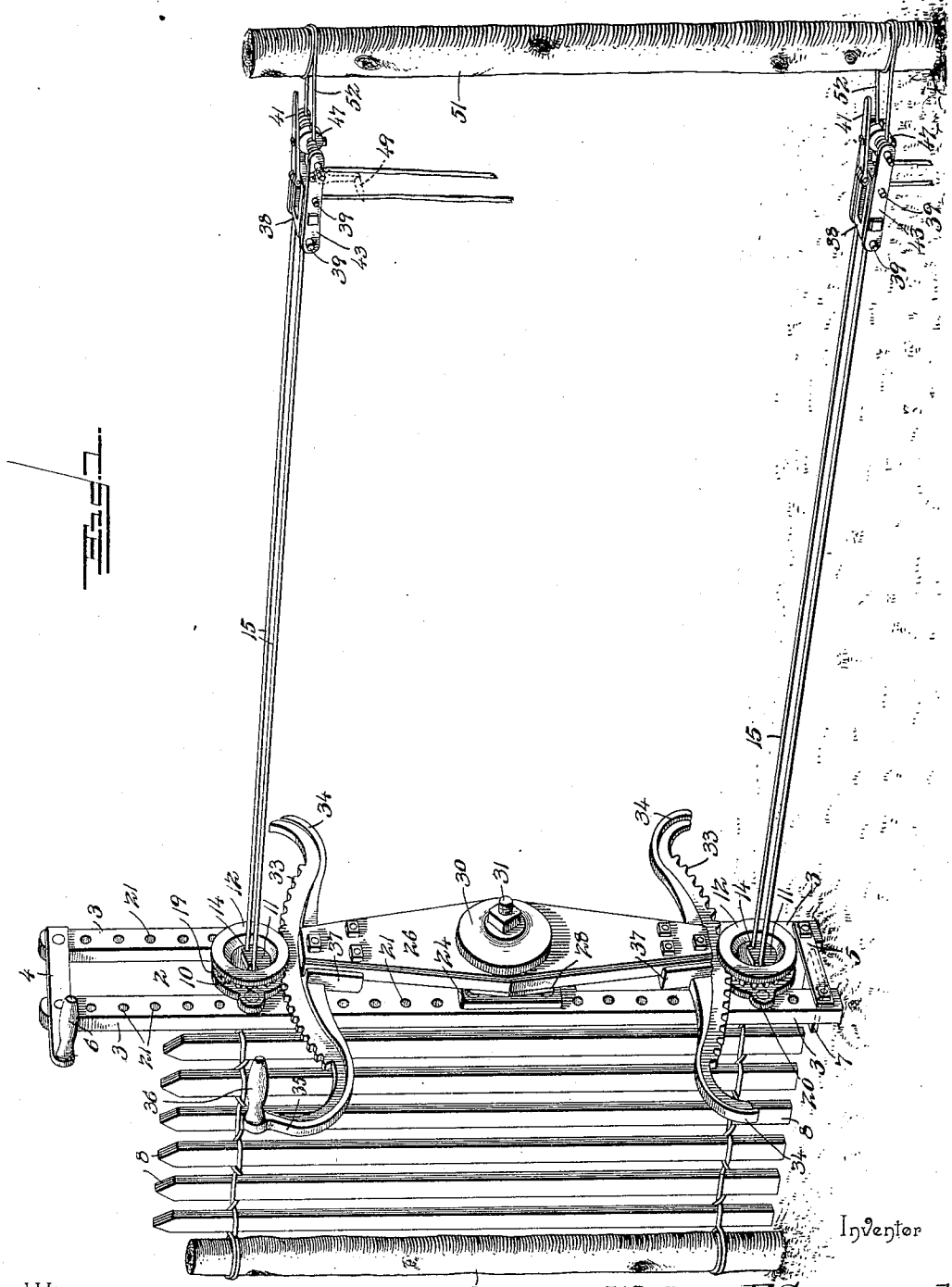
No. 611,800. Patented Oct. 4, 1898.

W. F. SEARGEANT.

FENCE MACHINE.

(Application filed July 24, 1897.)

(No Model.) 3 Sheets—Sheet 1.



Inventor

William F. Seargeant

Witnesses

E. M. Stewart.

U. B. Hillyard.

By Wis Attorneys,

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 611,800. Patented Oct. 4, 1898.

W. F. SEARGEANT.

FENCE MACHINE.

(Application filed July 24, 1897.)

(No Model.) 3 Sheets—Sheet 2.

Fig. 2.

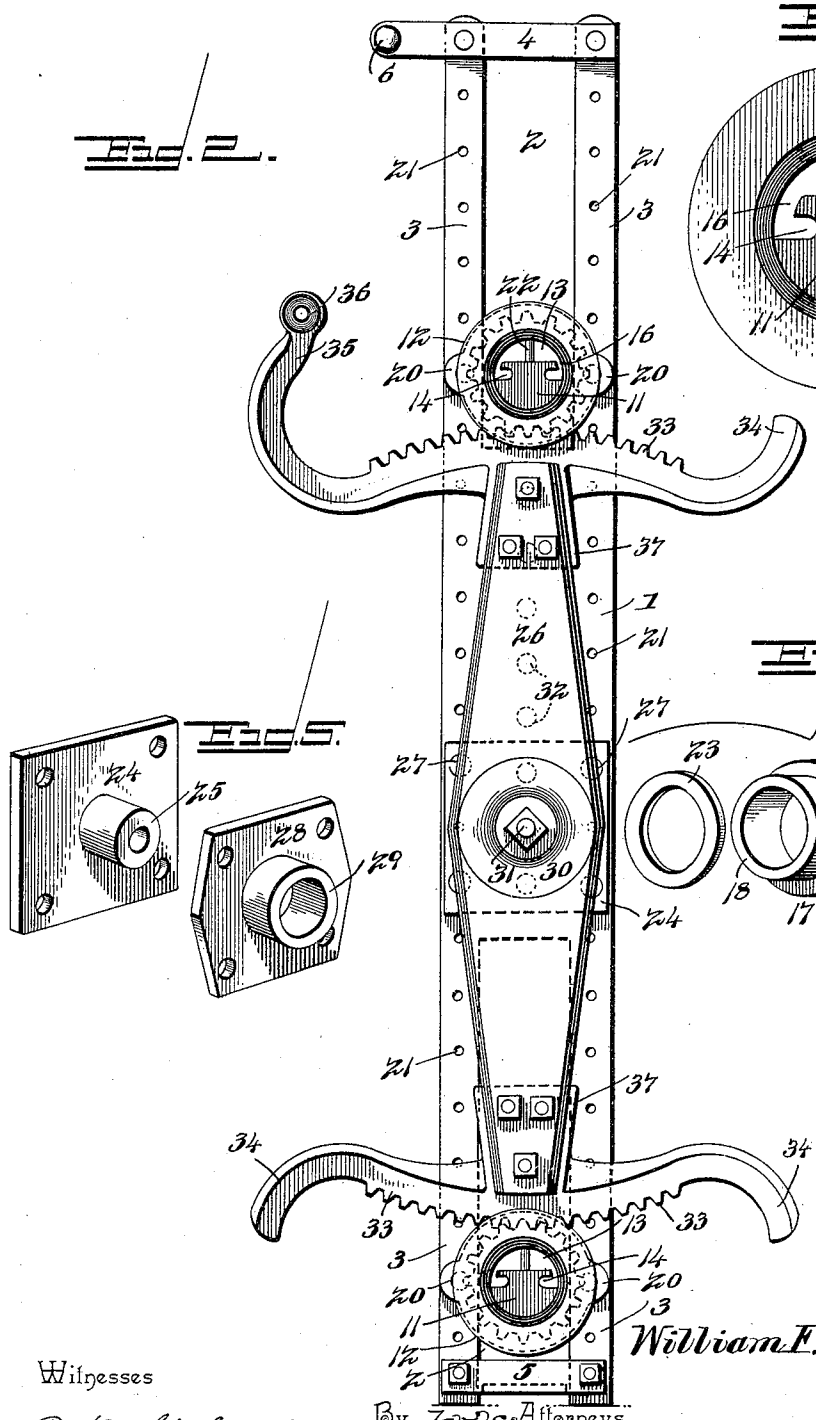


Fig. 6.

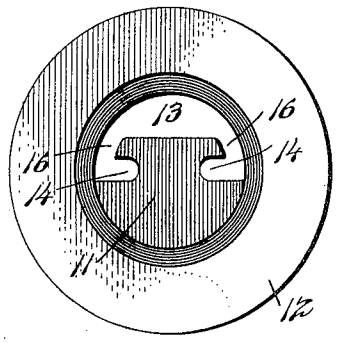
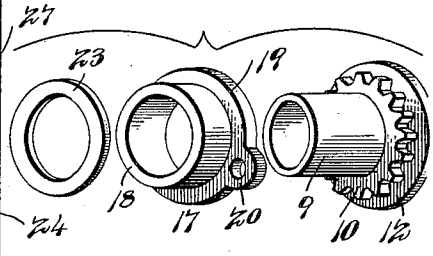


Fig. 5.

Fig. 9.



Witnesses

E. E. Stewart.

C. B. Hillyard.

Inventor

William F. Seargeant

By Its Attorneys,

C. A. Snow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 611,800. Patented Oct. 4, 1898.

W. F. SEARGEANT.

FENCE MACHINE.

(Application filed July 24, 1897.)

(No Model.) 3 Sheets—Sheet 3.

Fig. 6.

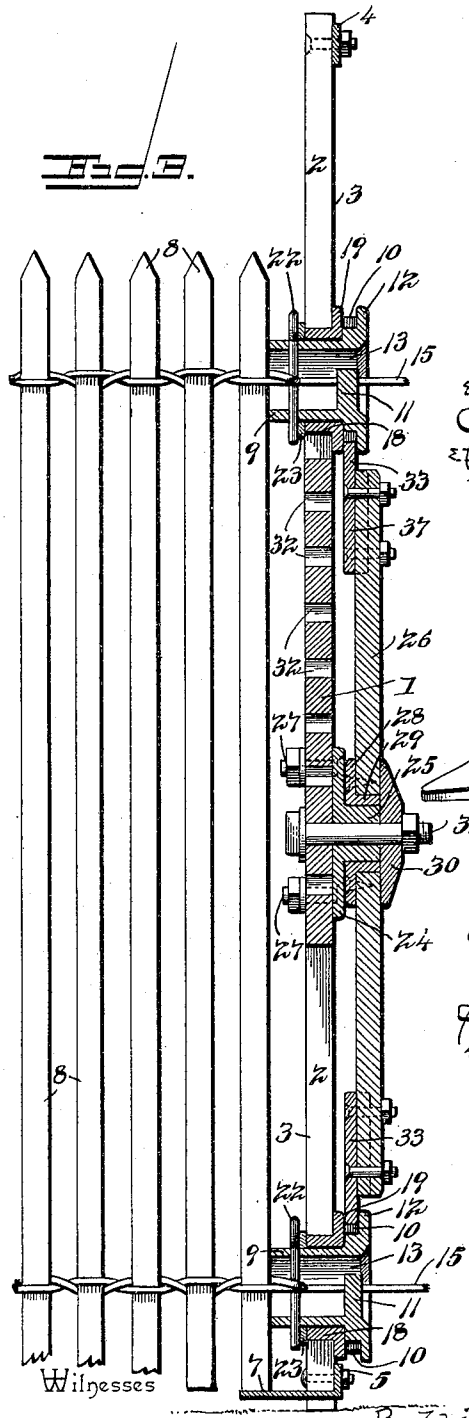


Fig. 7.

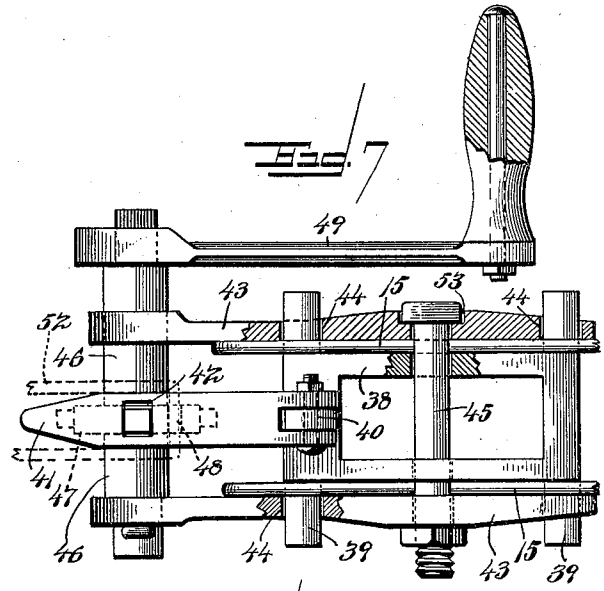


Fig. 8.

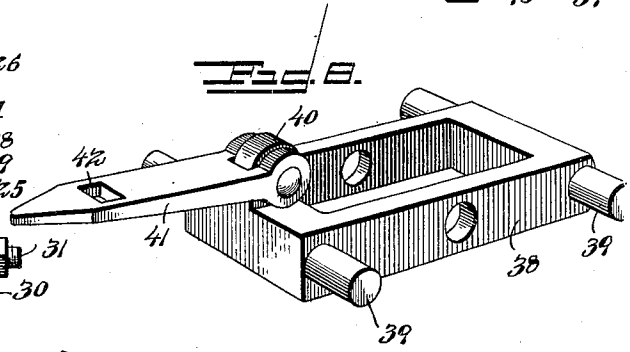
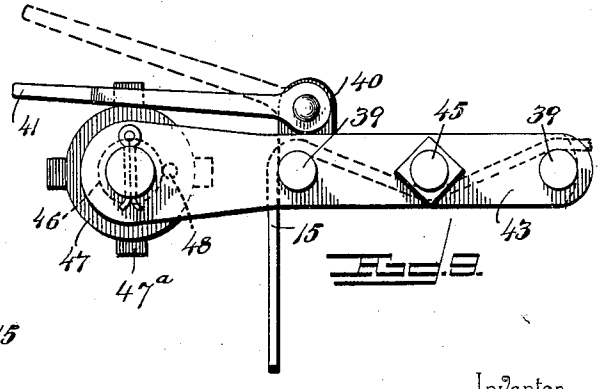


Fig. 9.



Witnesses

E. K. Stewart.

V. B. Hillyard.

Inventor

William F. Seargeant

By Foos Attorneys,

Cashow & Co.

THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

UNITED STATES PATENT OFFICE.

WILLIAM FONTAINE SEARGEANT, OF MARSHALL, MISSOURI.

FENCE-MACHINE.

SPECIFICATION forming part of Letters Patent No. 611,800, dated October 4, 1898.

Application filed July 24, 1897. Serial No. 645,848. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM FONTAINE SEARGEANT, a citizen of the United States, residing at Marshall, in the county of Saline and State of Missouri, have invented a new and useful Fence-Machine, of which the following is a specification.

This invention relates to fence-machines for constructing wire-and-picket fencing in the field and successively twisting the strands or companion wires about the pickets as the latter are placed between them in the formation of the fencing.

One of the chief objects of the invention is to devise a novel mechanism for actuating the wire-twisters and to construct and combine the parts so that they may be readily adjusted to change the position of the cables with reference to the length of the pickets and height of fencing.

Another important feature resides in the peculiar construction of the tension device, whereby the strands or companion wires are maintained under a uniform tension, which is essential to the formation of fencing free from buckling, and presenting a regular and uniform appearance.

For a full understanding of the merits and advantages of the invention reference is to be had to the accompanying drawings and the following description.

The improvement is susceptible of various changes in the form, proportion, and the minor details of construction without departing from the principle or sacrificing any of the advantages thereof, and to a full disclosure of the invention an adaptation thereof is shown in the accompanying drawings, in which—

Figure 1 is a perspective view showing the machine as it will appear when in active operation. Fig. 2 is a rear view thereof. Fig. 3 is a vertical central section thereof. Fig. 4 is a detail view of a wire-twister and its bearing, the parts being separated and disposed in a group. Fig. 5 is a detail view of the parts constituting the bearing for the oscillating lever. Fig. 6 is a view in elevation of a wire-twister on a larger scale. Fig. 7 is a top plan view of a tension device, parts being broken away. Fig. 8 is a detail view in perspective of the body or frame portion of the tension device. Fig. 9 is a side elevation of the tension device, the latch being shown disengaged from the ratchet of the windlass by dotted lines.

Corresponding and like parts are referred to in the following description and indicated in all the views of the drawings by the same reference characters.

The frame of the machine to which the operating parts are attached is substantially of H form, being constructed of a plate 1, having slots 2 at its ends, in which slots the wire-twisters are adjustably mounted. The arms 3, bordering upon the slots 2, are connected at their outer ends by bars 4 and 5, the bar 4 being extended and provided with a handle 6, by means of which the machine is steadied and manipulated when in service. The bar 5 has a plate 7 projecting about at right angles therefrom and forming a rest or support for the pickets 8 when the latter are placed in position between the strands or companion wires of the cables, thereby insuring uniformity in the position of the pickets in the construction of the fencing. The cross-bar 5 is capable of vertical adjustment by reason of the series of openings provided in the lower set of arms, the fastenings being removable, so as to admit of the cross-bar and picket rest or stop being shifted to the required elevation.

The wire-twisters are of like construction and comprise a journal 9, a toothed head 10, a web or diaphragm portion 11, and a flange 12, exterior to the toothed head 10. These parts are integrally formed, although they may be constructed separately and united in any manner, if so desired. The web or diaphragm 11 is cut away at one side, forming a space 13, and is provided at diametrically opposite points with notches 14, which receive the strands or companion wires 15, passages 16 connecting the notches 14 with the space 13 to admit of the strands or wires being removed from the notches 14 and passed into the space 13 or carried from the latter into the said notches. By this construction it is not necessary to separately thread the strands or companion wires through individual passages, as is generally required, thereby enabling the machine to be quickly placed in position for active operation. The bearings 17 for the wire-twisters are adjustable in the slots 2 and between the arms 3 and consti-

tute braces for the said arms and comprise a ring 18 and a flange 19 at one end of the ring, said flange having apertured ears 20 at diametrically opposite points, which overlap the arms 3 and receive the fastenings, by means of which the bearing has adjustable connection therewith. In order to provide for the vertical adjustment of the bearings and the wire-twisters, the arms 3 have a series of openings 21 at intervals in their length and the fastenings for the bearings pass through corresponding openings 21 and the openings of the ears 20, as will be readily understood.

The wire-twisters are held in place in their respective bearings by keys 22, passing through openings in their journals 9, washers 23 being interposed between the pins and the adjacent ends of the bearings.

A plate 24 has adjustable connection with the middle portion of the frame 1 and is provided with a stud 25, forming a journal, upon which an oscillating lever 26 is mounted. This plate is secured to the frame by bolts or fastenings 27, passing through openings near the edges of the frame 1 and corresponding openings in the plate 24. A companion plate 28 is bolted or otherwise fastened to the lever 26 and is formed with a boss 29, which receives the journal 25, whereby an extended bearing is had for the said lever. A washer 30 is mounted upon an end of a bolt 31 and overlaps the boss 29 and contiguous portion of the lever 26 and holds the latter in place upon the journal 25. The bolt 31 is adjustable with the plate 24, and the frame 1 is formed with a series of openings 32 intermediate of its edges to receive the said bolt when changing the relative elevation of the oscillating lever.

The oscillating lever 26 is provided at its ends with transversely-disposed toothed segments 33, which intermesh with the toothed heads 10 of the wire-twisters, whereby the latter are rotated upon operating the lever 26. The toothed segments 33 are provided at their ends with oppositely-curved extensions 34, forming stops, which limit the throw of the lever in each direction and prevent it leaving the wire-twisters. The upper toothed segment has one of its curved ends 34 extended, as shown at 35, and provided with a handle 36, which latter is grasped when it is required to oscillate the lever upon its support when the machine is in operation to effect a twisting of the strands or wires about the pickets. The toothed segments are separable from the lever 26 and are provided intermediate of their ends with longitudinally-flanged tangs 37, which are bolted or otherwise secured to the end portions of the lever 26. By this construction the toothed segments may be replaced at a nominal cost in the event of the teeth becoming worn or the segments disabled or otherwise rendered unfit for effective service.

The tension device for each pair of strands or companion wires is composed of a rectangular frame 38, having laterally-extending studs 39 at its corners and provided at one end with a lug 40, to which is pivotally connected a latch 41, having an opening 42 near its free end. Tension-bars 43 are placed alongside of the longitudinal bars of the frame 38 and have openings 44 to receive the studs 39. A tension-bolt 45 passes through corresponding openings in the tension-bars 43 and the side bars of the frame 38, and by drawing the tension-bars together more or less the strands or wires 15 are held more or less tightly between the side bars of the frame 38 and the tension-bars 43. A windlass 46 is journaled in extensions of the tension-bars 43 and is provided at an intermediate point with a spur or ratchet wheel 47, the latter having a lateral opening 48 for the purpose presently to be described. This windlass is adapted to be turned in its bearings by a suitable tool or handle 49, fitted to an angular extension at one end thereof. The latch 41 is constructed so that its opening 42 will receive a spur or tooth 47^a of the wheel 47 and hold the latter against turning in either direction, which is essential after the wires have been subjected to a proper degree of tension.

When constructing a line of fencing, the strands or companion wires 15 are secured at one end to a terminal post 50, and their opposite ends are applied to the tension devices secured to a terminal post 51 or an intermediate support along the prescribed line of fencing. The companion strands or wires 15 are passed through the respective wire-twisters and slipped into the notches 14. The pickets 8 are slipped between the strands or wires 15 from above and are supported by the rest 7, after which the lever 26 is oscillated to turn the wire-twisters and secure the pickets in place by twisting the strands or wires in the ordinary manner, as indicated and readily comprehended.

The tension devices have the wires or strands 15 passed over the studs 39 and beneath the tension-bolt 45 and between the tension-bars 43 and the side bars of the frame 38, and by turning the nut upon the threaded end of the bolt 45 the tension-bars are drawn together, so as to grip the strands or wires with the required pressure to secure the desired resistance to their movement through the tension devices, as will be readily understood. The wires 52, by means of which the tension devices are connected to the post or support 51, are passed through the lateral opening 48 of the spur-wheel 47 and their end portions are brought together and twisted or otherwise secured to the post 51, after which the windlass 46 is turned by means of the tool or crank 49, whereby the portions of the wire are wound upon the windlass upon opposite sides of the spur or ratchet wheel until the fence-wires are drawn taut, after which the latch 41 is engaged with a spur of the

ratchet-wheel, thereby holding the windlass from turning backward and preventing the loosening or slackening of the fence-wires.

The tension-bolt 45 has its head let into a recess 53, formed in one of the tension-bars 43, so as to prevent it from turning when the fence-wires are drawn through the tension devices. Some means must be provided to prevent the turning of the tension-bolt 45. Otherwise the tension upon the fence-wires would be destroyed after the device would be in operation a short period of time. The ratchet or spur wheel 47 may be applied to the windlass 46; but in practice it is preferred to form it integral therewith, the windlass and part 47 being cast together.

Having thus described the invention, what is claimed as new is—

1. In a fence-machine, the combination of a pair of wire-twisters, and an oscillating lever fulcrumed intermediate of its ends between the wire-twisters and provided at its extremities with transversely-disposed toothed segments, intermeshing with correspondingly-toothed portions of the wire-twisters, substantially as and for the purpose set forth.

2. In a fence-machine, the combination of a pair of wire-twisters, and an oscillating lever fulcrumed between the said twisters, and having transversely-disposed toothed segments at its ends, intermeshing with toothed portions of the said wire-twisters, and having stops at the ends of the transversely-disposed toothed segments, to engage with the wire-twisters, and limit the throw of the oscillating lever in each direction, substantially as set forth.

3. In a fence-machine, the combination of a pair of wire-twisters, and an oscillating lever operating between the said wire-twisters and having toothed segments at its ends, intermeshing therewith, the terminal portions of the toothed segments being curved in opposite directions to engage with the sides of the wire-twisters and limit the movement of the lever, substantially as and for the purpose set forth.

4. In a fence-machine, the combination of a frame, wire-twisters having adjustable connection with the frame, and an oscillating lever adjustably mounted upon the frame, intermediate of the wire-twisters and movable therewith, and provided at its ends with toothed segments intermeshing with the said wire-twisters, substantially as specified.

5. In a fence-machine, the combination of a frame, wire-twisters adjustable upon the frame, a plate provided with a journal, means for adjustably connecting the plate with the frame, and an oscillating lever mounted upon the journal of the plate and provided with toothed segments at its ends, intermeshing with correspondingly-toothed portions of the wire-twisters, substantially as and for the purpose described.

6. In a fence-machine, the combination of a frame having separated parts, a bearing adjustable in the space formed between the said separated parts and comprising a ring and a flange, the latter having apertured ears, means for adjustably connecting the bearing with the separated parts of the frame, a wire-twister journaled in the said bearing and having a toothed portion and an outer flange, the toothed portion coming between the flange of the bearing and the flange of the wire-twister, and actuating means for the wire-twister operating jointly with the toothed portion thereof and between the flanges of the bearing and wire-twister, substantially as described.

7. A fence-machine, comprising a frame of substantially H form, having a series of openings along its edges, wire-twisters adjustable in the spaces or slots provided at the ends of the frame, and having positive connection with the parallel arms, a plate having adjustable connection with the middle portion of the frame and provided with a journal, an oscillating lever mounted upon the said journal, toothed segments at the ends of the oscillating lever intermeshing with toothed portions of the wire-twisters, and provided at their ends with curved terminals forming stops, and a handle applied to an extension of one of the curved stops, substantially as set forth for the purpose described.

8. In a fence-machine, a tension device for the strands or companion wires of a cable, comprising a frame having lateral extensions, tension-bars applied to the sides of the frame and adapted to grip the strands or companion wires between them and the sides of the frame, a tension-bolt for connecting the tension-bars, and means for securing the tension device to a post or support, substantially as set forth.

9. In a tension device for fence-machines, the combination of a frame, tension-bars cooperating with side bars of the frame for gripping the fence-wires, and having one end extended, a windlass journaled in the extended ends of the tension-bars, and provided with a spur-wheel at an intermediate point, and a latch having connection at one end with the frame and adapted to engage with the spurs of the spur-wheel to hold the windlass against rotation, substantially as and for the purpose set forth.

10. A tension device for wire-fence machines, comprising an approximately rectangular-shaped frame, having laterally-extending studs, tension-bars disposed at the sides of the frame and having openings to receive the said studs, a clamp-bolt for connecting the tension-bars, and causing them to grip the fence-wires with a greater or less degree of pressure, a windlass journaled in extensions of the tension-bars and provided at an intermediate point with a spur-wheel, and a latch pivoted to the frame and adapted to make positive engagement with any one of the spurs of the spur-wheel, substantially as set forth for the purpose specified.

11. In a fence-machine, a tension device for

the strands or companion wires of a cable, comprising a frame having lateral extensions, tension-bars applied to the sides of the frame and adapted to grip the strands or companion wires between them and the sides of the frame, and a tension-bolt for connecting the tension-bars and having its head countersunk in one of the tension-bars so as to prevent it from turning, substantially as and for the purpose set forth.

12. In a fence-machine, the combination with a frame, of bearing-rings seated therein, wire-twisters having cylindrical portions journaled in and extending through said bearing-rings, keys or keepers extending through openings in said cylindrical portions, and washers interposed between said keys or keepers and the ends of the bearing-rings, substantially as described.

13. In a fence-machine, the combination with a frame having its upper and lower ends bifurcated, said frame supporting wire-twisters and operating mechanism therefor, of bars connecting the arms of said bifurcations and located, respectively, at the upper and lower ends of said frame, the lower bar having a projecting plate affording a support for the bottom of the picket to be wired, substantially as described.

14. In a fence-machine, the combination with a frame having its upper and lower ends bifurcated, said frame supporting wire-twisters and operating mechanism therefor, of bars connecting the arms of said bifurcations and located, respectively, at the upper and lower ends of said frame, the upper bar having one end extended and provided with a handle, and the lower bar having a projecting plate affording a support for the bottom of the picket to be wired, substantially as described.

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

WILLIAM FONTAINE SEARGEANT.

Witnesses:
I. N. SEARGEANT,
P. C. ARMENTROUT.