No. 649,555. Patented May 15, 1900.

W. F. SEARGEANT.

SLAT AND WIRE FENCE MACHINE.

(Application filed Aug. 12, 1899.)

(No Model.) 3 Sheets—Sheet 1.

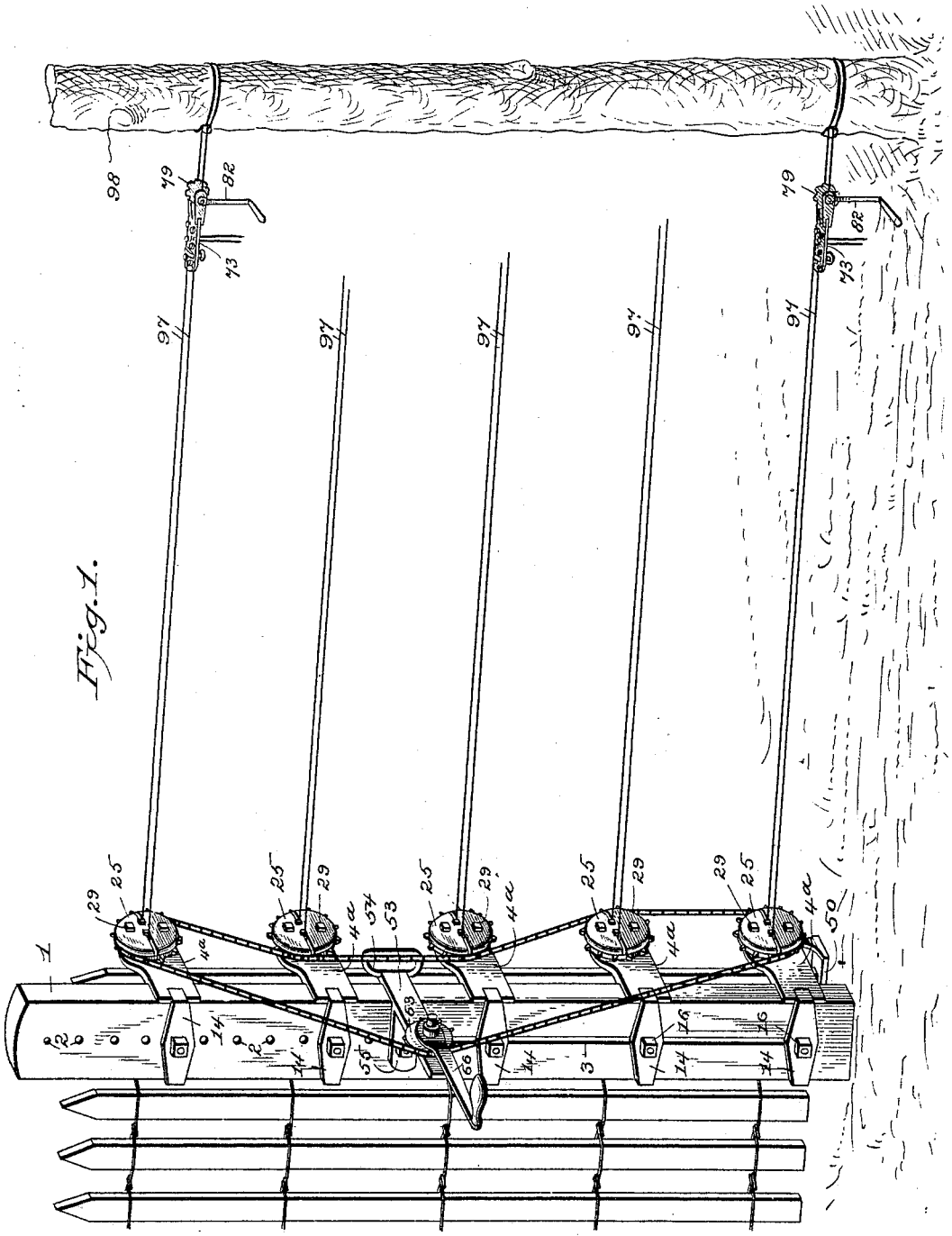

Fig. 1.

WITNESSES

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Fig. 4.

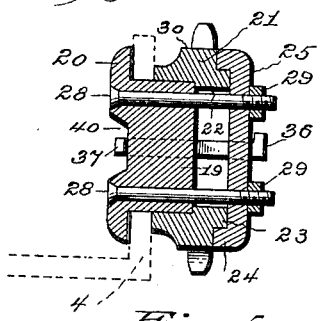


Fig. 5.

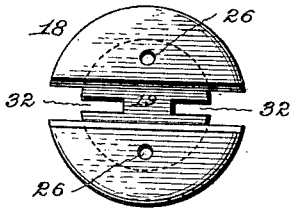


Fig. 6

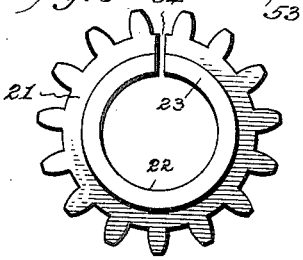


Fig. 7.

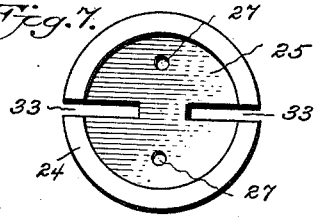


Fig. 8.

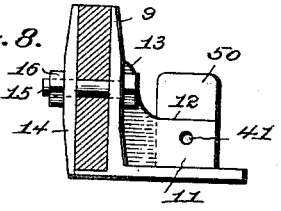


Fig. 2.

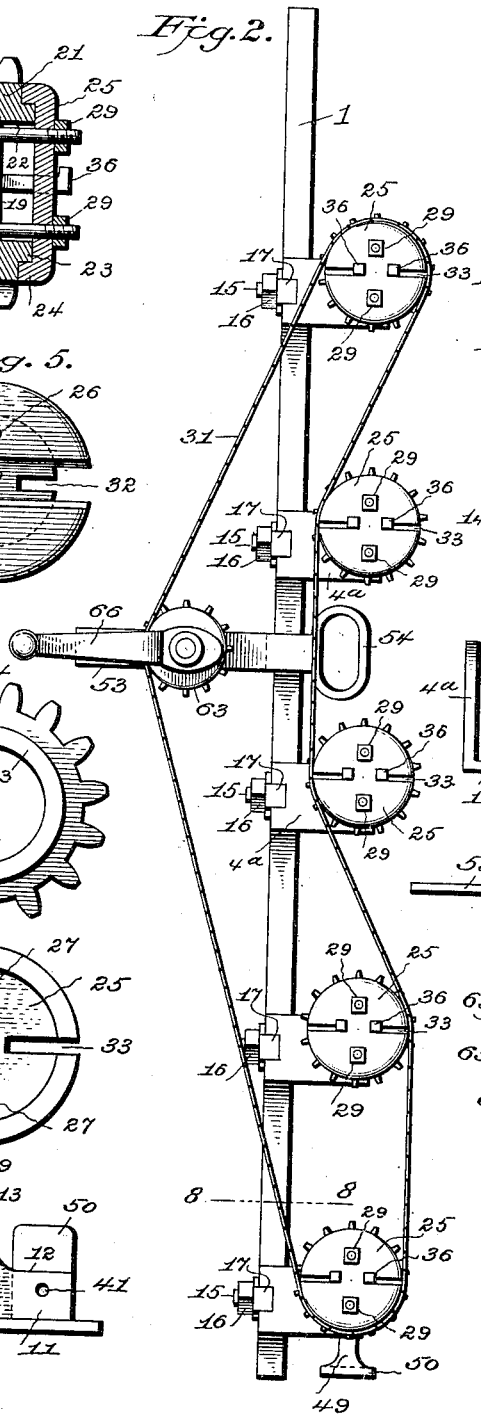


Fig. 9.

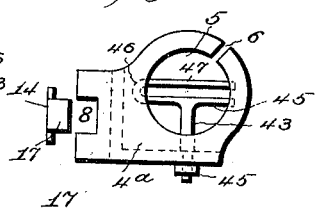


Fig. 10.

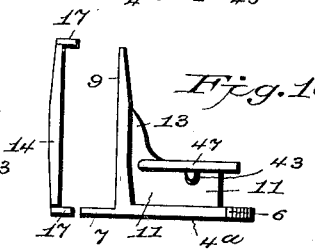
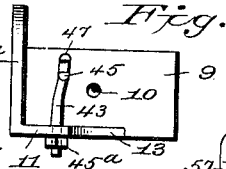


Fig. 11.



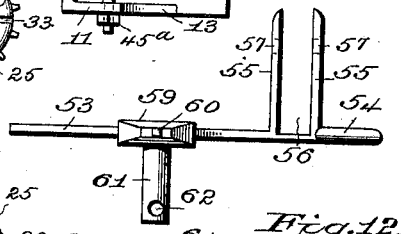
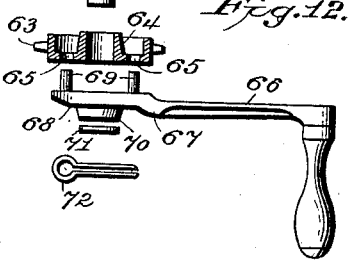


Fig. 12.



Witnesses

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W. F. SEARGEANT.

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(Application filed Aug. 12, 1899.)

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Fig. 13.

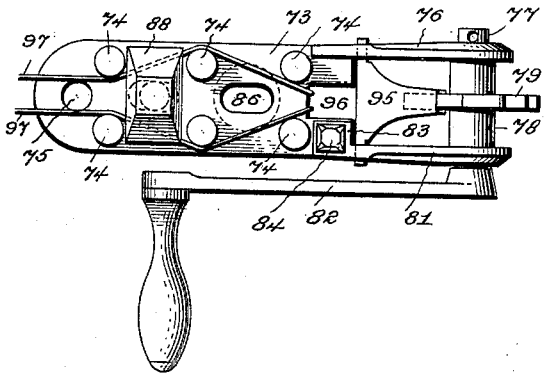


Fig. 14.

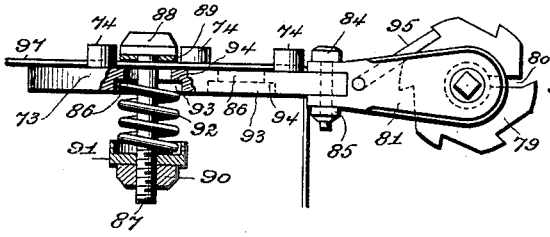


Fig. 15.

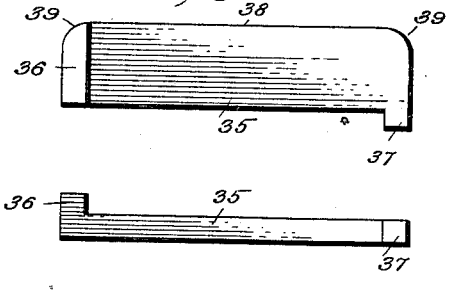


Fig. 16.

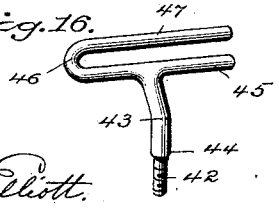
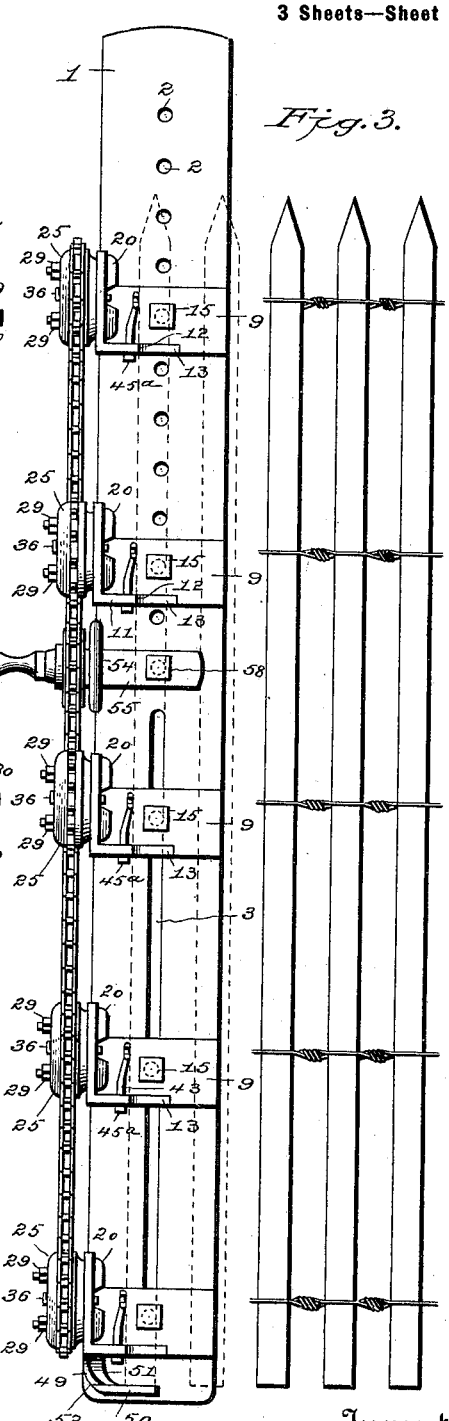


Fig. 3.



Witnesses
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UNITED STATES PATENT OFFICE.

WILLIAM F. SEARGEANT, OF MARSHALL, MISSOURI.

SLAT-AND-WIRE-FENCE MACHINE.

SPECIFICATION forming part of Letters Patent No. 649,555, dated May 15, 1900.

Application filed August 12, 1899. Serial No. 727,042. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM F. SEARGEANT, a citizen of the United States, residing at Marshall, in the county of Saline and State of Missouri, have invented certain new and useful Improvements in Machines for Making Fences and Cribs; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to a machine for making fences and cribs.

It is one object of my invention to provide an improved machine for wiring together the pickets of a fence, and which machine may also be readily adapted to making what is known as "crib-stuff"—that is, relatively-long pieces or sticks of timber arranged in spaced parallel relation and bound together, as by wire—a given length or section of this material being designed to have its opposite ends united in a manner to form a circular inclosure or corn-crib.

A further object of the invention is to provide a machine of the character indicated with a series of separable and vertically-adjustable twisters for twisting the wires upon the pickets, whereby the machine may be applied to the wires at any point along their length after they have been stretched and whereby the wires may be twisted about the pickets at greater or less distances apart, as circumstances may require.

A further object of the invention relates to improvements in the construction of parts for operating the twisters.

A further object of the invention relates to improvements in the construction of the twister proper and in combining therewith certain parts for respectively forcing the pickets to proper position and securing a uniform and firm twist of the wires about the same.

A further object of the invention relates to an improved device for maintaining a yielding tension upon the wires to be twisted about the pickets.

Still further objects of the invention may be stated to reside in certain features of construction, which will more clearly appear from the detailed description hereinafter given.

I have illustrated my invention in the accompanying drawings, in which—

Figure 1 is a perspective view showing my machine in operative position with respect to a series of wires under tension and to be twisted about the pickets. Fig. 2 is a front elevation of my improved device. Fig. 3 is a side elevation of the same. Fig. 4 is a sectional view through one of my improved twisters and the journal plate or bracket in which it is mounted. Fig. 5 is a face view of the journal-head of the twister. Fig. 6 is a view in elevation of the sprocket-gear which is mounted on said journal-head. Fig. 7 is a view in elevation of an annular cap for retaining the sprocket-gear upon the journal-head. Fig. 8 is a sectional view through the upright of the machine, taken on the line 8 8 of Fig. 2 and showing the lower journal plate or bracket in plan, the twister being removed. Fig. 9 is a view in front elevation of one of the journal plates or brackets, showing a wire-holder applied thereto and also showing a detached view of a clamping-plate. Fig. 10 is a plan view of the parts shown in Fig. 9. Fig. 11 is a side view of one of the journal plates or brackets with the wire-holder applied thereto. Fig. 12 represents detached views, partly in plan and partly in section, of the sprocket-chain-operating mechanism and the support therefor. Fig. 13 is a plan view of my improved tension device. Fig. 14 is a side elevation, partly in section, of the same. Fig. 15 represents plan and edge views, respectively, of one of my improved spacing-jaws; and Fig. 16 is a detail perspective view, enlarged, of a wire-holder.

Referring to the drawings, the reference-numeral 1 indicates the upright of the machine, which in its upper portion is provided with a series of equidistant apertures 2 and in its lower portion with a longitudinally-extending slot 3.

The numeral 4 indicates one of my improved journal-brackets, a number of which are removably secured to the upright 1 in a manner to be presently described. Each of these journal-brackets comprises a flat plate 4^a, having formed therein a circular opening 5, affording a journal-bearing, and the outer rim of this bearing is cut transversely to

afford a slot 6, as shown in Fig. 9, for the passage therethrough of the wires. At one side of the journal-bearing 5 the plate 4^a is provided with a flanged extension 7, centrally of which is provided a rectangular recess 8, for a purpose to be presently described. Formed integral with the plate 4^a and extending inward at right angles thereto is a bracket-plate 9, having an aperture 10, and connecting the bracket-arm 9 and the bottom of the plate 4^a is a web 11, these parts being cast as an integral structure. The web 11 is provided with a straight edge 12 (shown in Fig. 8) for engagement with the edge of a picket and with a portion (indicated by 13) extending well out on the bracket-plate 9 to thoroughly brace the journal-bracket. In applying the journal-brackets to the upright 1 the flange 7 rests against the edge of said upright and the bracket-plate 9 bears flush against the inner side thereof. A clamping-plate 14 is then applied to the opposite side of the upright, and a bolt 15 is then passed through the aperture 10 in the bracket-plate 9, aperture 2, or slot 3 in the upright and through a suitable bolt-hole in the clamping-plate 14, and a nut 16 is then applied to the bolt 15 to clamp the journal-bracket securely on the upright. The clamping-plates 14 are tapered from their center to their opposite outer ends, which ends are bent inward at right angles to the plate to form rectangular flanges 17, one of which flanges on each plate clasps the edge of the upright, while the opposite flange fits snugly in the recess 8 of the extension 7 of plate 4^a. This construction prevents the clamping-plate 14 from turning when the nut 16 is being screwed home, and also aids in securing a rigid connection of the journal-bracket to the upright. In the circular aperture or journal-bearing 5 of each journal-bracket is mounted one of my improved twisters, a sectional view of one of which is shown in Fig. 4, and the construction of which will now be described.

The numeral 18 indicates a journal-head, the body portion of which is formed cylindrical to afford a journal 19, at one end of which is an integral annular flange 20. The journal 19 is designed to fit snugly in the journal-bearing 5 and to project beyond the inner face of the plate 4^a. On said projecting portion is mounted the sprocket-gear 21, which around its inner surface is provided with an annular offset 22, which bears against the flat face of the cylindrical portion 19. On the outer face of the sprocket-gear 21 is formed an integral annular offset or flange 23, which is adapted to receive the annular flange 24 of a retaining cap or disk 25. The journal-head 18 and the cap or disk 25 are provided with coincident apertures denoted, respectively, by the numerals 26 and 27, through which bolts 28 may be passed and by means of nuts 29, engaging the screw-threaded ends of said bolts, secure the journal-head 18, sprocket-gear 21, and cap 25 in firm fixed relation to each other and so that the twister as a whole can revolve in the journal-bearing 5 of the journal-bracket. The sprocket-gear is provided with an annular shoulder 30 on the inner side of its teeth, and the flange 24 of the cap 25 is arranged, as shown in Fig. 4, to form a continuation of this shoulder on the opposite side of the teeth of the sprocket-gear, the purpose of this construction, as will be understood, being to afford the proper support for the links of the sprocket-chain 31. The journal-head is provided on opposite sides with a rectangular slot 32, which extends inward for a considerable distance toward the center of said journal-head and which slots correspond to and are designed to coincide with similar slots 33, formed, respectively, on opposite sides of the retaining cap or disk 25. These slots are designed to receive the wires which are to be twisted by the revolution of the twister about the pickets and to enable the wires to be inserted in said slots. The sprocket-gear 21 is provided with a transverse slot or passage 34, which by loosening the nuts 29 and revolving the sprocket-gear upon the journal 19 may be brought to aline in succession with the coinciding slots 32 and 33 and also with the slots 6 in the plate 4^a of the journal-bracket.

In order to provide for twisting the wires about pickets of different sizes, I contemplate the employment, in connection with the twister, of a series of spacing-jaws 35 of different widths, one of which is illustrated in plan and edge view, respectively, in Fig. 15. These jaws are designed to be seated in opposite sides of the twister in the slots 32 and 33. Each jaw comprises an oblong flat metal plate which at one end is bent at right angles to itself to form a flange 36 and at its opposite end and at the rear side is provided with an integral lug 37, lying in the same plane as the body of the plate or jaw and extending at right angles to said rear side. The front side of the jaw, or that indicated by the numeral 38, is the side against which the wire bears, and to prevent abrasion of the wire I preferably round the corners of the plate on this side, as indicated at 39. When a given pair of jaws has been inserted in the twister and the wires have been passed into their slots, as before described, it will be understood that the pressure of the wires on the respective sides 38 of these jaws will hold them in position transversely, while longitudinal movement of the jaws will be prevented by the engagement of the lug 37 with the outer face of the journal-head and of the flange 36 with the outer face of the cap or disk 25. In order that the ends of the jaws having the lug 37 may not protrude beyond the twister, I provide the outer side of the journal-head with a recess 40, against the bottom of which the lugs 37 seat, so that the end of the jaw lies flush with the outer face of the journal-head, as clearly shown in Fig. 4.

A prominent feature of the present inven-

tion relates to the provision of means for holding the two wires to be twisted about the picket in proper horizontal position in relation thereto, so that the wires may be twisted uniformly and securely about the successive pickets. To this end I provide the web 11, adjacent to the straight edge 12, with an aperture 41, through which passes the screw-threaded end 42 of a post 43, said post being formed with a shoulder 44, which rests on the upper surface of the web 11. A nut 45ª, passed on said screw-threaded end and engaging the under side of said web, operates to hold the post in a firm upright position with respect to said web. Formed integral with the post 43 and connected therewith centrally of its length is a practically-rigid arm 45, which at one end is curved upon itself at 46 to provide a spring-arm 47, which extends parallel with the arm 45. The space between the two arms 45 47 is sufficient to permit two wires to pass each other in the operation of twisting. The outer sides of the arms 45 47, or the sides farthest removed from the plate 4ª, are designed to be in the same vertical plane with the straight edge 12 and with said straight edge to bear flush against the side of the picket. In order to secure this position of the arms, I bend or curve the post 43 outward or away from the plate 4ª, as clearly shown in Fig. 11. In addition to the construction described the journal-bracket at the bottom of the upright is provided with means for supporting the picket being wired. To this end the plate 4ª of the lower journal-bracket has an integral depending arm 49, which at its lower end is broadened and integrally connected to a plate 50, which extends at right angles to said arm outward beyond the straight edge 12 a sufficient distance to afford a rest for the bottom of a picket and parallel with the web 11, as shown in Figs. 3 and 8. A web 51, located centrally of and formed integral with the arm 49 and extending well out on the web 11 and the plate 50, with which parts it is also integrally connected at opposite ends, serves to brace this picket-support. The lower front end of this support is rounded, as indicated at 52, to facilitate its passage over obstacles, such as mounds or clods of earth.

The numeral 53 indicates a flat metal arm, formed integral with which at one end is a handle 54. Adjacent to said handle and extending at right angles to the side of said arm are two parallel flat metal arms 55 55, which are formed integral with the arm 53 and afford between them a rectangular recess or socket 56, which is of a width to snugly receive the upright 1 edgewise. Coincident apertures 57 57 in the arms 55 55 enable the arm 53 to be firmly clamped in position on the upright 1 by means of a bolt 58 passing through said apertures and the upright and clamped by a nut. Slidably supported on the arm 53 is a bearing-block 59, which may be held in adjusted positions on said arm by means of a set-screw 60. Formed integral with said bearing-block and extending at right angles thereto in an opposite direction to the arms 55 55 is a journal 61, having at its outer end a transverse aperture 62.

The numeral 63 indicates a sprocket-gear having a hub 64, which projects slightly beyond the inner edge of the rim of the sprocket-gear in order that when the sprocket-gear is inserted on the journal 61 the end of the hub only will be in contact with the side of the bearing-block 59, to the end that in the revolution of the sprocket-gear the friction may be reduced to the minimum. Further, by this construction the sprocket-gear is held a sufficient distance from the face of the bearing-block to prevent the sprocket-chain 31 from engaging the same in the operation of the machine. In the web of the sprocket-gear 63 and on opposite sides of the hub 64, respectively, are two apertures, each of which is indicated by the numeral 65.

The numeral 66 indicates a crank-arm offset at 67, so that it may not strike against the sprocket-chain, and having a suitably-enlarged head 68, from the inner face of which project two studs 69 69, which respectively engage in the apertures 65 of the sprocket-gear. An aperture 70 extends through the head of the crank-arm 66 of a size to receive the journal 61. The sprocket-gear and crank-arm are assembled on the journal 61 in the order indicated in Fig. 12 and are held thereon and in engagement with each other by means of a washer 71 and a spring-keeper 72, the latter being inserted in the aperture 66.

The machine in its entirety being organized in the manner shown in Figs. 1 and 2 and the sprocket-chain 31 being passed around or in engagement with the various sprocket-gears 21 and the sprocket-gear 63 it will be seen that all of the twisters may be simultaneously revolved by revolving the sprocket-gear 63 through the medium of crank-arm 66. By securing the bearing-block 59 in the desired adjusted position on the arm 53 the requisite tension can be given the chain 31. Further, it is evident that by loosening the set-screw 60 and moving the bearing inward on the arm 53 the sprocket-chain may be readily removed from the machine or its arrangement relative to the twisters be changed to vary the direction of rotation of the latter. This construction possesses the further advantage that it permits the machine to be readily connected with the wires at any point in their length, as the twisters being removable they may be readily placed on the wires and then secured in the proper adjusted position on the upright, after which the sprocket-chain may be placed in position on the sprocket-gears and the proper tension given thereto by means of the adjustable bearing-block 59.

It is frequently desirable that the wires near the bottom of a fence be arranged relatively close together—as, for instance, to prevent fowls from passing through the fence. The longitudinal slot 3 in the upright permits this

to be readily done with my device, as thereby the twisters or the journal-brackets carrying the twisters at the lower part of the upright may, by simply loosening the nuts 16, be moved to the required positions on the upright and then secured in place by tightening said nuts.

It will be seen that my machine may be operated with a greater or less number of twisters, as the circumstances of the case may require.

I have herein shown my invention as applied to wiring pickets in making fences. As previously stated, however, I contemplate the application of my device to the manufacture of crib-stuff. No illustration of such application is deemed necessary, however, as the organization of the parts and the operation of the machine are the same as in wiring pickets, the only difference being that in wiring crib-stuff a longer upright is required than is the case when wiring pickets, the former operation requiring an upright of from ten to twelve or fifteen feet in height.

In Figs. 13 and 14 I have illustrated an improved straining device for straining the wires to be twisted about the pickets. Referring to these figures, the numeral 73 indicates a flat metal plate, formed integral with which and projecting from one side thereof, near its opposite edges, are a series of posts 74. Near one end and centrally of the plate 73 is an aperture 75. From the opposite end of the plate and at one side thereof projects an integral arm 76, suitably enlarged or widened at its outer end to have formed therein a circular opening designed to receive a reduced end or journal 77 of a shaft 78, secured on which is a ratchet 79, having a slot 80. The opposite reduced end of the shaft 78 is mounted in an arm 81 and has a squared end without said arm, on which is mounted a crank 82. The arm 81 is removably mounted on the plate 73, and to this end its inner end is bifurcated to embrace the plate 73 and enlarged laterally, as indicated at 83. The plate 73 is apertured at this point, and the enlargements 83 are also apertured, whereby a tension-bolt 84 may be passed through these apertures and by means of a nut 85, screwed on its lower end, hold the arm 81 securely in place. Extending through the plate 73 at the points indicated are two elongated apertures, each of which is indicated by the numeral 86 and through either one of which may be passed a bolt 87, having an elongated head 88, between which and the plate 73 is located a washer 89. On the lower screw-threaded end of bolt 87 is a nut 90, resting on which and sliding on the bolt 87 is a socket-plate 91, in the socket of which is located the lower end of a coiled spring 92. Said spring encircles the bolt 87, and its opposite end is seated in a circular recess 93, one of such recesses being provided on the under side of plate 73 to surround each aperture 86 in a manner to afford an annular shoulder 94 for the spring to bear against, as will be understood. Pivotally mounted in corresponding apertures in the arms 76 and 81 is a pawl 95, engaging at its outer end the teeth of the ratchet 79. In the forward end of plate 73 is provided a recess 96, through which the wires 97 97 pass, as shown. The operation of the device is as follows: The wires 97 being passed up from beneath through the recess 96 are passed around the posts 74 in any preferred manner, according to the tension required. They are then passed beneath the head 88 of bolt 87 and between the two end posts 74, which hold the wires under the said head. The wires are then secured to a fence-post. A looped wire is inserted in the slot 80 and secured to a suitable anchor or post 98, as shown in Fig. 1, whereby by turning the ratchet 79 said wire will be wound about the shaft 78 and the desired strain imparted to the wires 97. As these wires are twisted about the pickets they are drawn through the straining device more or less readily, according to the pressure thereon of the head 88 of the yielding tension device and the manner of passing said wires about the posts 74. The washer 89 is employed to prevent the wires from cutting the under side of the head 88. It is obvious that by screwing up the nut 90 the pressure of the head 88 on the wires may be increased at will. At the same time said head will yield to permit a knot, splice, or other enlargement in the wires to pass beneath the same.

By locating the yielding tension device in one or the other of the apertures 86 and passing the wires 97 about the posts 74 in any one of several ways which will readily suggest themselves, the readiness with which the wires 97 will pass through the straining device may be varied to suit the requirements of the case, independently of the yielding tension device, the pressure exerted by which must never be so great as to prevent the head 88 yielding readily to any inequalities in the wires.

By removing the arm 81 and the ratchet 95 it will readily be seen that the straining device may be applied to the wires at any point intermediate their length. Of course as many straining devices will be employed as there are pairs of wires to be twisted about the pickets, as shown in Fig. 1.

The general operation of the machine shown in Figs. 1, 2, and 3 will have been gathered from the detailed description thereof and need not be recited at length. It need only be stated that each picket to be wired is placed between the various pairs of wires and supported on the picket-rest 50. The machine is then pushed toward the picket, so that by the engagement therewith of the straight edges 12 of the webs 11 it is forced into the proper position relative to the picket that has previously been wired. In this position the wire-holders bear against the edge of the picket and their arms 45 47 serve to hold the wires in proper horizontal position and insure the

wires being twisted uniformly thereon in the revolutions of the twisters, the spring-arm 47 of each wire-holder yielding, if necessary, to permit the wires to pass each other in the twisting operation.

Having thus described my invention, what I claim is—

1. In a machine of the class described, the combination with an upright having a series of apertures, of a series of journal-brackets mounted thereon, each of said brackets comprising a flat metal plate 4^a having a circular opening and affording a flanged extension designed to abut against the edge of said upright and having a rectangular recess in its edge, an apertured bracket-plate extending at right angles to the plate 4^a and designed to bear against the inner face of said upright, an apertured clamping-plate fitted against the opposite side of the upright and having end flanges embracing opposite edges thereof one of said flanges fitting snugly in said recess, a bolt passed through the aperture in said bracket-plate, upright and clamping-plate and having a nut, a wire-twister revolubly mounted in the circular opening of each plate 4^a, and means for revolving said twisters, substantially as described.

2. In a machine of the class described, the combination with an upright, of a series of journal-brackets secured thereon, each of said brackets comprising a flat metal plate 4^a having a circular opening, a bracket-plate extending at right angles to the plate 4^a, a web formed integral with the plate 4^a and said bracket-plate and having a straight edge extending parallel with said plate 4^a, a wire-twister revolubly mounted in the circular opening of each of said plates 4^a, and means for revolving said twisters, the combination operating as set forth.

3. In a machine of the class described, the combination with an upright, of a series of journal-brackets secured thereon, each of said brackets comprising two metal plates formed integral and extending at right angles to each other, a web formed integral with and extending in a plane at right angles to said plates and having an aperture, a wire-holder comprising a post secured at one end in said aperture and carrying at its outer end two parallel spaced arms connected at one end and one of said arms being integrally connected with said post, a wire-twister revolubly mounted in each of said journal-brackets, and means for revolving said twisters, the combination operating as set forth.

4. In a machine of the class described, the combination with an upright, of a series of journal-brackets secured thereon, each of said brackets comprising two metal plates formed integral and extending at right angles to each other, a web formed integral with and extending in a plane at right angles to said plates and having an aperture and provided with a straight edge, a wire-holder comprising a post secured at one end in said aperture and carrying at its outer end two parallel spaced arms the outer sides of which are in the same vertical plane as said straight edge, a wire-twister revolubly mounted in each of said journal-brackets, and means for revolving said twisters, the combination operating as set forth.

5. In a machine of the class described, the combination with an upright, of a series of journal-brackets secured thereon, a wire-twister revolubly mounted in each journal-bracket, an integral web on each journal-bracket having a straight edge designed to bear against the edge of the picket to be wired, said straight edges being in vertical alinement, and means for revolving said twisters, substantially as described.

6. In a machine of the class described, the combination with an upright, of a series of journal-brackets secured thereon, a wire-twister revolubly mounted in each journal-bracket, a web on each journal-bracket having a straight edge designed to bear against the edge of the picket to be wired, said straight edges being in vertical alinement, a wire-holder mounted on each web and comprising two parallel, spaced jaws the outer sides of which are in vertical alinement with the straight edge of the web, and means for revolving said twisters, substantially as described.

7. In a machine of the class described, the combination with an upright, of a series of wire-twisters revolubly mounted thereon, an arm mounted on said upright and extending at right angles thereto, a bearing-block adjustably mounted on said arm and carrying a journal, a driving sprocket-gear mounted on said journal and having an elongated hub bearing against the same and a web provided with oppositely-located apertures, a sprocket-chain passed around said twisters and said driving sprocket-gear, and a crank mounted on said journal and having studs engaging in the apertures of said web, substantially as described.

8. In a machine of the class described, the combination with an upright, of a series of wire-twisters revolubly mounted thereon, a driving sprocket-gear, a sprocket-chain passed around said twisters and said driving sprocket-gear, a crank engaging said driving sprocket-gear for revolving the same, and a support for said driving sprocket-gear comprising an arm 53 having at one end a handle and adjacent to said handle integral parallel arms extending at right angles to arm 53 and affording between them a recess to receive said upright edgewise, a bolt passed through said arms and the upright for securing the arm 53 in fixed relation thereto, and a bearing-block on said arm having a journal for the driving sprocket-gear, substantially as described.

9. In a machine of the class described, the combination with an upright, of a series of journal-brackets secured thereon and each of

said journal-brackets having a flat plate provided with a circular opening, and having a passage leading through said plate to said opening, a wire-twister revolubly mounted in each journal-bracket, each twister comprising a journal-head having an annular flange bearing against said plate and a journal mounted in said circular opening and provided on opposite sides with a slot for the wires to be twisted, a sprocket-gear mounted on said journal and having an opening extending through its rim, said rim bearing against the opposite side of said plate, a cap mounted on said sprocket-gear and having on opposite sides a slot corresponding with the slots of the journal-head, and bolts passing through said journal-head and cap, and means for revolving said twisters, the combination being and operating substantially as and in the manner set forth.

10. In a machine of the class described, a wire-twister comprising a head having an annular flange and a journal, a sprocket-gear mounted on said journal and having an inner annular shoulder abutting against the rear end thereof, an annular flange on the outer side of said sprocket-gear, a cap seated on said annular flange, bolts passing through said journal-head and cap, nuts on said bolts for clamping the parts in firm fixed relation to each other, said journal-head and said cap having on opposite sides, respectively, slots for the wires to be twisted, and said sprocket-gear having an opening to permit the passage therethrough of the wires, substantially as described.

11. In a machine of the class described, the combination with the twisters, each of which has on opposite sides a slot for the wires to be twisted, of a series of interchangeable spacing-jaws designed to be seated in said slots for the purpose described, each of said jaws comprising a flat metal plate having an upturned flange at one end to engage one face of the twister, and a lug extending from the inner side of the other end of the plate to engage the opposite face of the twister, substantially as described.

12. A straining device comprising a metal plate having one integral and one removable arm at one end thereof, a shaft journaled in said arms, a crank on said shaft, a ratchet on said shaft having a wire-slot, a pawl for said ratchet pivotally mounted in said arms, and a wire tension device located on said plate, substantially as described.

13. A straining device comprising a metal plate having a wire-winding device at one end, a series of posts projecting from one side of said plate, a bolt extending through said plate and having a clamping-head at the upper side of said plate, a nut on said bolt, a socket-plate supported on said nut, and a coiled spring interposed between said socket-plate and the under side of said metal plate, the combination operating as set forth.

14. A straining device comprising a metal plate having a wire-winding device at one end and affording a wire-passage at said end, a series of posts projecting from one side of said plate, said plate having two or more apertures therein, a bolt passed through one or the other of said apertures and having a clamping-head at the upper side of said plate, sockets formed on the under side of said plate concentric with but larger than said apertures, a nut on said bolt, a socket-plate supported on said nut, and a coiled spring seated at one end in said socket-plate and at the other end in one of the sockets on the under side of said plate, substantially as described.

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

WILLIAM F. SEARGEANT.

Witnesses:
F. C. BARNHILL,
E. W. DAWES.