

Feb. 22, 1938.

F. C. ELDER

2,108,917

BUTTON FORMER

Filed Feb. 11, 1937

2 Sheets-Sheet 1

FIG. 1.

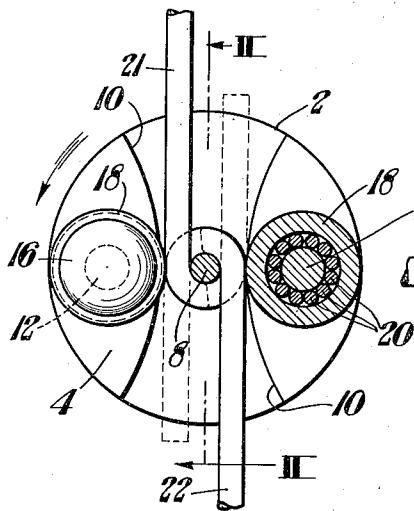


FIG. 2.

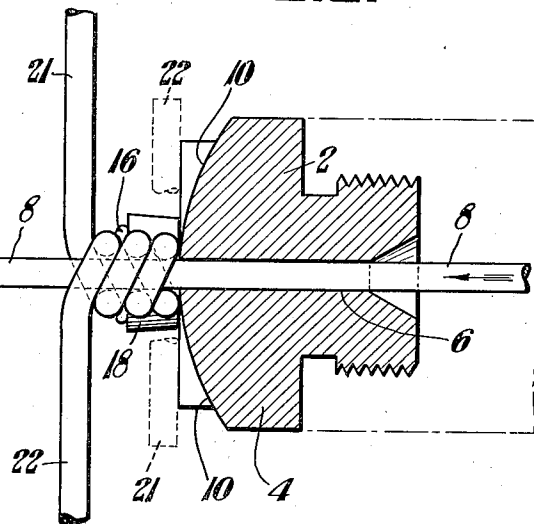


FIG. 4.

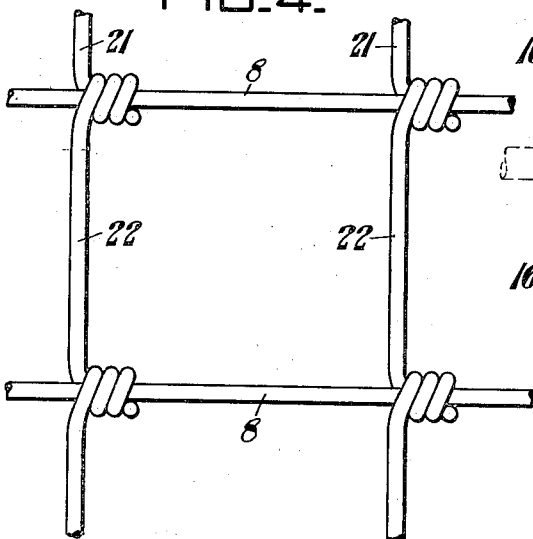
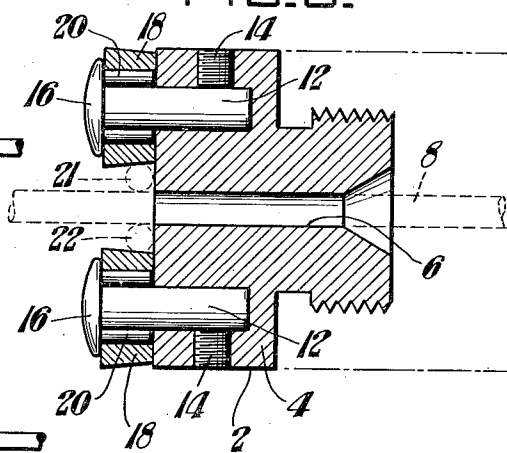


FIG. 3.



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FIG. 5.

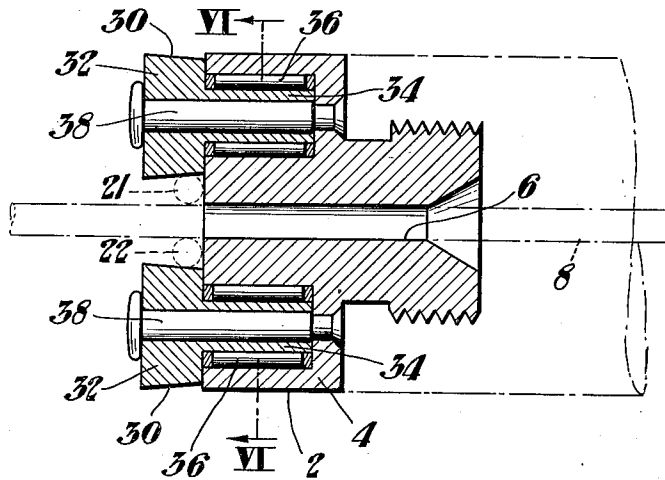
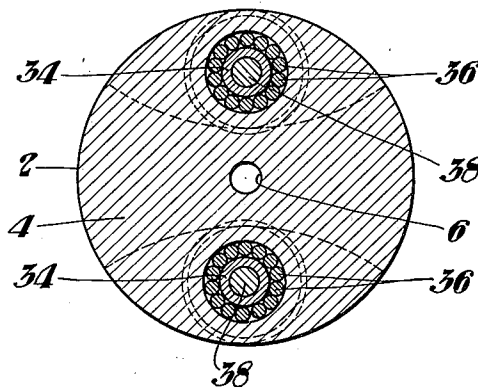


FIG. 6.



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UNITED STATES PATENT OFFICE

2,108,917

BUTTON FORMER

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Application February 11, 1937, Serial No. 125,323

5 Claims. (Cl. 140—13)

This invention particularly relates to button formers for wire fence machines.

The buttons or knots formed by the apparatus of this invention are formed from the wires of a woven fence and serve to secure the line and stay-wires of the fence together in predetermined relation to each other.

One of the objects of this invention is the provision apparatus for forming buttons or knots in wire fence without injuring the surfaces of the wire forming the button or knot.

Another object of this invention is to facilitate rapid formation of the buttons or knots in wire fences.

The above and further objects will become apparent by reference to the following description and the accompanying drawings, in which:

Figure 1 is an elevation of one embodiment of my novel button former;

Figure 2 is a longitudinal sectional elevation taken on line II—II of Figure 1;

Figure 3 is a longitudinal sectional elevation taken at an angle of 90 degrees to line II—II of Figure 1; and

Figure 4 is an elevation of a portion of a wire fence made with my novel button formers.

Figure 5 is a longitudinal sectional elevation of a modification of my novel button former.

Figure 6 is a transverse sectional elevation on line VI—VI of Figure 5.

Referring more particularly to the drawings, the numeral 2 indicates generally a button former for wire fence machines. The button former 2 includes a cylindrical body-member 4 having an axial hole 6 which is adapted to receive a line wire 8 for a wire fence. One end of the body-member 4 may have a diametrically extending recess 10 therein, while the other end should be adapted to engage with means for controlling the movement of the button former 2. The recess 10 has outwardly flared ends and a convex bottom surface.

The recessed end of the body-member 4 is provided with two diametrically opposed apertures in which pins 12 are received. Means, such as set-screws 14, are engaged with the body-member 4 to bear upon and positively position the pins 12. The pins 12 should have relatively large heads 16 which normally are spaced from the body-member 4. Collars 18 are carried by the pins 12 and loosely held against the body-member 4 by the heads 16.

In order to rotatively mount the collars 18 on the pins 12, bearing means, such as a plurality of cylindrical pins 20 are placed between the pins

12 and the collars 18. The collars 18 must be positioned so that they are easily rotated on the pins 12. The button formers 2 are constructed and arranged to position stay-wires 21 and 22 between the line wire 8 and the collars 18. The stay-wires 21 and 22 may be directed to their desired positions by any suitable means (not shown). As the stay wires 21 and 22 should, ordinarily, be held against the end of the body-member 4, the outer surfaces of the collars 18 taper inwardly toward the body-member 4 to aid in positioning the stay-wires thereagainst. The recess 10 aids in properly positioning the stay-wires 21 and 22.

One end of each of the stay-wires 21 and 22 extends only a short distance beyond, and in opposite directions from, the collars 18. Then, by rotating the button former 2 in the proper direction, the ends of the stay-wires 21 and 22 are bent around the line wire 8 and formed into a button or knot. The collars 18 are adapted to rotatively bear upon the stay-wires when the button former 2 is rotated. The rolling contact between the collars 18 and the stay-wires permits the button former to be rapidly rotated without injuring the surface coatings of the stay-wires.

In Figures 5 and 6 of the drawings, I have shown a modification of my novel button former. Trunnions 30 having heads 32 and shafts 34 are journaled in the diametrically opposed recesses of the body-member 4 by roller bearings 36, or similar devices. The heads 32 extend beyond the body-member 4 but taper inwardly toward the body-member.

Retaining pins 38 hold the trunnions 30 in the body-member. The heads 32 are adapted to engage with the stay wires 21 and 22, and function in a manner similar to that of the collars 18. By forming the heads 32 integral with the shafts 34, a stronger construction is made possible.

In some cases it may be necessary to provide means for moving the button former longitudinally while it is rotating, however, such means is common in the art and forms no part of this invention.

While I have shown and described two specific embodiments of my invention, it will be understood that I do not wish to be limited exactly thereto, since various modifications may be made without departing from the scope of the invention as defined in the following claims.

I claim:

1. A button or knot former for wire fence ma-

chines including a body-member, at least one pin carried by and extending from said body-member, a collar carried by said pin and loosely held against said body-member, said collar having an outer surface that tapers inwardly toward said body-member, and bearings rotatively mounting said collar on said pin.

2. A button or knot former for wire fence machines including a body-member, diametrically opposed pins carried by and extending from said body-member, said pins being provided with relatively large heads, a collar carried by each of said pins and loosely held against said body-member by said heads, said collars having outer surfaces that taper inwardly toward said body-member, and a plurality of cylindrical pins rotatively mounting said collars on said pins.

3. In a wire fabricating machine, means for twisting a wire about another comprising a rotary head, a wire passage coincident with the rotational axis of said head, diametrically opposed pins carried by one end of said head, a collar having a tapered periphery rotatably mounted on each of said pins, and means carried by the op-

posite end of said head for attaching the same to said machine.

4. In a wire fence machine, means for twisting a pair of wires about another comprising a rotary head, a wire passage coincident with the rotational axis of said head, a pair of pins carried by one end of said head in offset relation to said axis, rotatable means loosely mounted on said pins, means for positively holding said pins in position on said head, and means on the opposite end of said head for attaching the same to said machine.

5. In a wire fence machine, means for twisting a pair of wires about another comprising a rotary head, a wire passage coincident with the rotational axis of said head, a pair of diametrically opposed removable pins carried by one end of said head, a collar having a tapered periphery rotatably mounted on each of said pins, a set-screw disposed in each side of said head adjacent said pins for securely holding the same in position therein, and a reduced threaded portion on the opposite end of said head for attaching the same to said machine.

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