W. SCHNEIDER.

APPARATUS FOR MAKING WOVEN WIRE FABRICS.

APPLICATION FILED MAY 31, 1917.

1,306,859. Patented June 17, 1919.

Fig. 1.

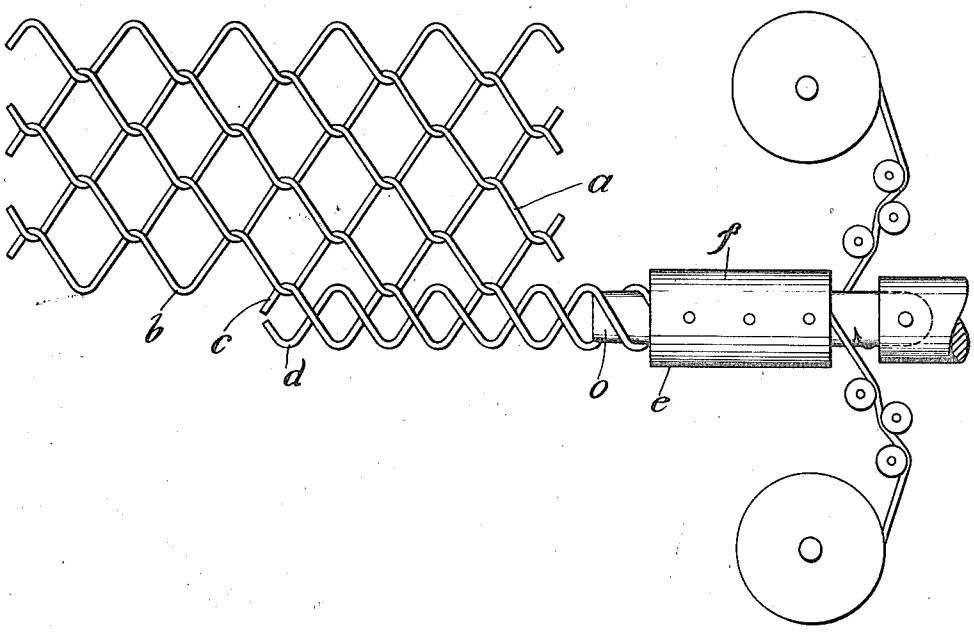


Fig. 2.

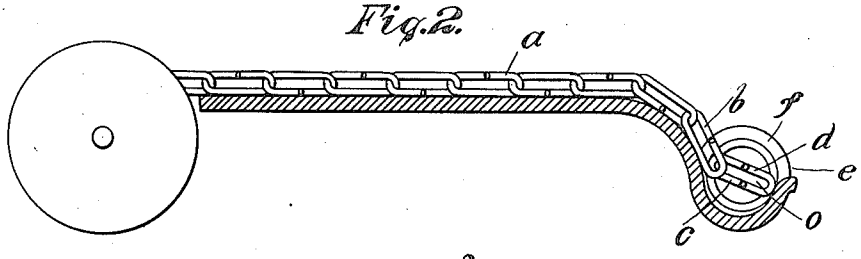


Fig. 3.

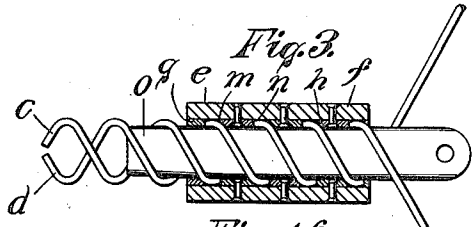


Fig. 4.

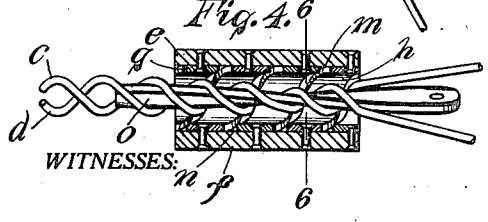


Fig. 5.

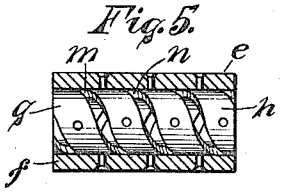


Fig. 6.



WITNESSES:

INVENTOR.
William Schneider:

BY

Hr Hart
his ATTORNEY.

UNITED STATES PATENT OFFICE.

WILLIAM SCHNEIDER, OF ROCKVILLE, CONNECTICUT, ASSIGNOR TO ALFRED SCHNEIDER, OF ROCKVILLE, CONNECTICUT.

APPARATUS FOR MAKING WOVEN-WIRE FABRICS.

1,306,859. Specification of Letters Patent. Patented June 17, 1919.

Application filed May 31, 1917. Serial No. 171,834.

To all whom it may concern:

Be it known that I, WILLIAM SCHNEIDER, a citizen of the United States, and a resident of Rockville, county of Tolland, State of Connecticut, have invented certain new and useful Improvements in an Apparatus for Making Woven-Wire Fabrics, of which the following is a specification.

The object of this invention is to provide improved means for forming woven wire fabrics. The invention is designed for use in the manufacture of woven wire fabrics used for fencing purposes, each strand of the fabric being in the form of a partially flattened helix interwoven with an adjacent helix.

In accordance with my invention I take two strands which have been interwoven with one another and interweave one of these strands with the end strand of the fabric, which may be considered as the receiving strand, and this is done in a manner which prevents any relative longitudinal displacement between the two original strands.

Further than this my invention contemplates the weaving together of two strands and simultaneously interweaving one of these strands with the receiving strand at the end of the fabric. In other words, by my invention I can add to the fabric, with a single operation, twice as much material as has heretofore been possible, the practice heretofore having been to form a strand of wire into a partially flattened helix and interweave that strand with a receiving strand at the end of the fabric, repeating the operation until the proper length of fabric had been built up.

The mechanism by which this result is accomplished comprises a cylindrical die having two spiral grooves. This die is stationary and has rotating within it an arbor which, for the purpose of making a partially flattened helix is in the form of a flat blade. The wire is conveniently fed into one end of the die from opposite sides, enters the grooves and is twisted onto the arbor. The spiral grooves constantly push the completed helices off the end of the arbor and draw in new wire. As a result of drawing two pieces of wire on to the same arbor at the same time the two helices are interwoven, and as they leave the end of the arbor they are always driven rotarily by the arbor. The delivery end of the die is positioned near to the edge of the fabric which is being woven, and as the helices emerge from the die one of them is interwoven with the receiving strand for the full width of the fabric. The other helix does not interweave with the receiving strand, in fact but one of them can do so at one time. When the single helix is interwoven for the full width of the fabric both of the helices are cut off. The fabric is fed ahead and the second strand drops down into the normal extended position and becomes the end receiving strand of the fabric and the operation is repeated.

In the drawings:—

Figure 1 represents a view of a part of the woven fabric showing the weaving-in operation of two strands partially completed.

Fig. 2 is an edge view of a complete fabric and showing the weaving in operation proceeding.

Fig. 3 is a sectional view through the die.

Fig. 4 is a view similar to Fig. 3 but with the blade at right angles to the position shown in Fig. 3.

Fig. 5 is a side view of the die with the sleeve shown in section.

Fig. 6 is a sectional view on the line 6, 6 of Fig. 4.

Referring to the drawings, *a* denotes a portion of the completed fabric, *b* the end, or receiving strand with which a new strand is to be inter-woven, *c*, *d* two strands which are being woven together in the die and one of which is being inter-woven with the receiving strand of the fabric, *e* denotes the stationary die comprising a sleeve *f* and two spirally formed members *g*, *h* which are fitted in and secured to the sleeve with their edges spaced apart so as to produce two spiral grooves *m*, *n*. *o* is a flat blade or mandrel fitting closely within the die and supported and rotarily driven in any suitable manner.

Where it is desired to reinforce the fabric one of a single pair of interwoven strands can be woven into the same strand of the fabric which would have the effect in the finished fabric of two adjacent strands each made up of a group of two wires. Obviously this could be repeated within reason to still further increase the number of wires in the group.

Also it is obvious that while there has been shown and described the weaving together of two strands and the interweaving of one strand with the fabric, each of these strands might be composed of a group of wires, two, three or more in number, in which case we would have two groups of wires being woven together and a group simultaneously being interwoven with the fabric.

In other words the word strand, as here used, is to be understood as meaning either a single wire or a group of wires.

In the case where one strand is comprised of two or more wires the die would probably need to be equipped with a lead groove for each wire of the strand.

I claim as my invention:—

A die for use in the manufacture of woven wire fabric comprising a pair of helically formed strips interfitted with their edges spaced apart to form a pair of disconnected helical spaces therebetween, a cylindrical sleeve against the inner face of which said strips are closely fitted to and within which said strips are rigidly secured, and a flat rotatable mandrel of a width to closely fit within said strips.

WILLIAM SCHNEIDER.