

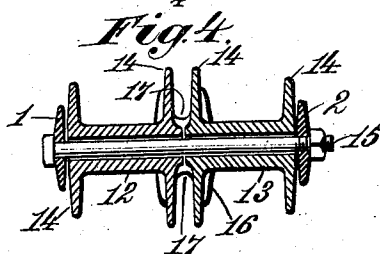
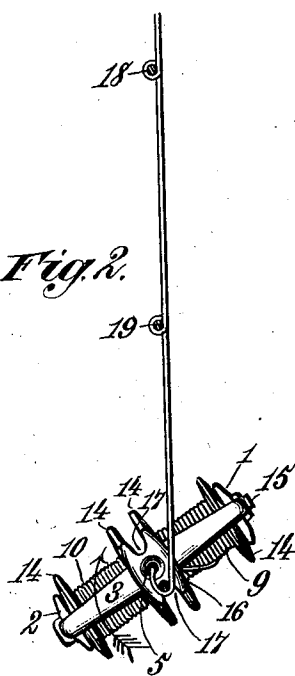
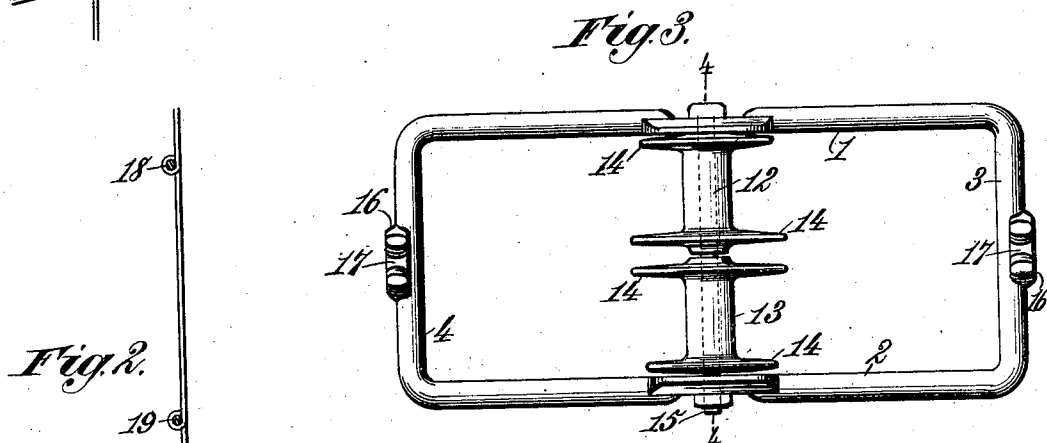
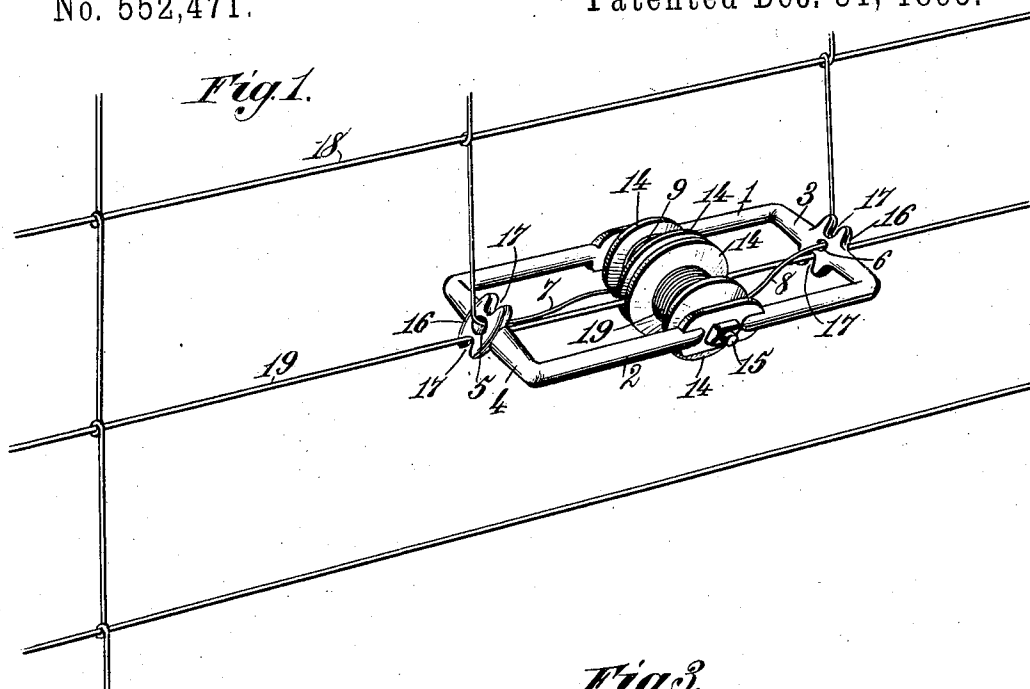
(No Model.)

E. F. GROOM.

DEVICE FOR APPLYING STAY WIRES TO WIRE FENCES.

No. 552,471.

Patented Dec. 31, 1895.



Witnesses.

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Thos. A. Green

Inventor.

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By James L. Norris.
Atty.

UNITED STATES PATENT OFFICE.

EDWARD F. GROOM, OF GALLATIN, MISSOURI, ASSIGNOR, BY DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO MILT EWING, ELWOOD D. MANN, FRANK A. WOODRUFF, AND JOHN W. WOODRUFF, OF SAME PLACE.

DEVICE FOR APPLYING STAY-WIRES TO WIRE FENCES.

SPECIFICATION forming part of Letters Patent No. 552,471, dated December 31, 1895.

Application filed October 10, 1895. Serial No. 565,265. (No model.)

To all whom it may concern:

Be it known that I, EDWARD F. GROOM, a citizen of the United States, residing at Gallatin, in the county of Daviess and State of Missouri, have invented new and useful Improvements in Devices for Applying Stay Strands or Wires, &c., of which the following is a specification.

This invention has for its object to provide a novel, simple, efficient, and economical duplex spool-carrier particularly designed for conveniently and rapidly applying vertical stay-wires to the longitudinal strands of wire fencing, but useful for other purposes—such as making bird-nets, lawn-tennis nets, and animal-cages or other structures wherein longitudinal strands of wire or other material are connected by transverse stays of similar material which is adapted to be rolled on reels or spools and be unwound therefrom as the transverse strands are applied in the manufacture or production of the fencing or other structure.

To accomplish this object my invention consists essentially in a device for manufacturing a wire fencing, or other structure, composed of an open frame having duplex-forked rests and wire-delivery eyes at its ends approximately coincident with the longitudinal axis of the frame, a single spool-carrying axle or shaft mounted approximately central in the open frame, and a pair of spools mounted on the said single axle or shaft, and adapted to carry two independent wire rolls, the ends of which are led in opposite directions from the spools through the wire-delivery eyes at the ends of the frame.

The specific construction of the device, and the manner of operating the same in applying the stay-wires, will be fully hereinafter described in detail, reference being made to the accompanying drawings, in which—

Figure 1 is a perspective view showing several longitudinal strands or wires with my improved device in position for applying and securing the transverse stay-wire thereto, the parts being in the position they occupy before the device is rotated around the longitudinal wire upon which the device rests. Fig. 2 is

an end elevation showing the position of the parts after the stay-wires have been wound around one of the longitudinal wires and the device has been lowered against and is being rotated around another longitudinal wire for a repetition of the operation. Fig. 3 is a plan view on a larger scale of the improved device for applying the stay strands or wires to fencing or other structures, and Fig. 4 is a sectional view taken on the line 4 4 of Fig. 3.

In order to enable those skilled in the art to make and use my invention, I will now describe the same in detail, referring to the drawings, wherein it will be seen that the open frame of the device comprises substantially parallel side bars or members 1 and 2, connected by end cross bars or members 3 and 4, all of which parts are preferably composed of sufficiently strong wire, or wire rods suitably bent into the form shown.

The cross-bars 3 and 4 are provided at their centers with wire-delivery eyes 5 and 6, between which the strands or wires 7 and 8 are extended from the rolls 9 and 10, carried by spools 12 and 13. The spools are rotatably mounted upon an axle or shaft 15, preferably composed of a detachable bolt extending through the side bars or members 1 and 2 centrally between the ends thereof, so that the two spools can be mounted end to end upon the same axle or shaft. The spools are each composed of a cylindrical body portion and two disk-heads 14, for the purpose of enabling the wire to be wound thereupon and to retain the wire in position for its subsequent delivery in the manufacture of wire fencing or other structures.

The wire-delivery eyes are so relatively disposed that they will properly deliver the wire whichever side of the open frame is uppermost, as is necessary in the manipulation of the device, as will hereinafter appear. The wire-delivery eyes are arranged approximately coincident with the major axis of the open frame, so that the two wires are delivered coincident with the major axis, or approximately so.

The cross-bars 3 and 4 of the open frame are provided with duplex-forked bearings or

rests 16, each composed of a vertical cross-arm having its ends bifurcated or forked, as at 17, so that either fork can straddle a longitudinal fence-wire. The forks 17 constitute bearings which facilitate the rotation of the spool-carrying frame in a circular path around the fence-wire, as will be obvious from an inspection of Fig. 2 of the drawings. The forks 17 lie coincident with the space between the inner contiguous ends of the cylindrical bodies of the spools 12 and 13, so that when two of the forks 17 straddle a fence-wire the latter lies in the space between the disk-heads 14 on the inner ends of the spool-bodies.

The disk-heads on the inner ends of the spool-bodies are held separated by placing them at some little distance from the extremities of the cylindrical bodies of the spools, so that although the inner ends of the cylindrical bodies of the spools are contiguous the disk-heads at the inner end portions of the cylindrical bodies are somewhat widely separated for the purpose of providing the necessary space to receive the longitudinal fence-wire.

In the practical use of the device, the ends of the two strands or wires 7 and 8 are fastened to the upper longitudinal strand or wire 18 of the fencing, which can be readily effected by lapping the ends of the wire around the longitudinal strand. It will of course be understood that the longitudinal wires are first stretched in proper position. The open frame is then pressed downward by the operator until two of the forks 17 straddle and rest upon the second longitudinal strand 19, as will be understood by reference to Fig. 1. The frame is then rotated in a vertical plane once or twice around the wire 19, leaving the frame on the under side of the wire, after which the operation above specified is repeated until the transverse or vertical stay-wires are all applied to the longitudinal wires.

The chief advantages of my invention reside in its simplicity of construction and the facility with which it can be economically manufactured and operated in actual use, due largely to mounting both spools on the single axle or shaft 15. The device is efficient in rapidly applying vertical or transverse stay-wires to wire fences; but it will be found useful for many purposes—such, for example, as making bird-nets, lawn-tennis nets, animal-cages, or any other structure wherein longitudinal strands of any material are connected

by transverse stays of material which can be wound on reels or spools and unwound therefrom during the application of the transverse stay-strands.

In the practical use of my invention the frame may be guided vertically through the medium of parallel uprights, as is usual in devices of a similar character for applying transverse stay-wires to the longitudinal wires of a fence.

The duplex-forked cross-arms, mounted on the cross-bars of the open frame in a plane coincident with the major axis of the frame, are important features, in that they enable the frame to be accurately rotated on a longitudinal wire and avoid the necessity of journaling the open frame between uprights, as heretofore.

Having thus described my invention, what I claim is—

1. A device for manufacturing wire fencing, consisting of an open frame having its ends provided with wire-delivery eyes and duplex forked bearings located above and below said eyes for the purpose of straddling a longitudinal wire whichever side of the frame is uppermost, a single spool-holding shaft mounted centrally in said frame, and a pair of wire-carrying spools both mounted on said shaft, substantially as described.

2. A device for manufacturing wire fencing, consisting of an open frame comprising parallel side bars and transverse end bars, each end bar having a cross-arm forked at its extremities and between which forks the wire-delivery eye is located, said eye and said duplex forked cross-arm of each transverse bar lying approximately coincident with the major axis of the frame, a single spool-holding shaft mounted in the open frame, and a pair of spools mounted on said shaft and having disk-heads at their ends, the disk-heads at the inner ends of the spools being held separated to provide an intervening space for the reception of the longitudinal wire when the forked cross-arms straddle said wire, substantially as described.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

EDWARD F. GROOM.

Witnesses:

JOHN W. MEADE,

C. A. NETHERTON.