

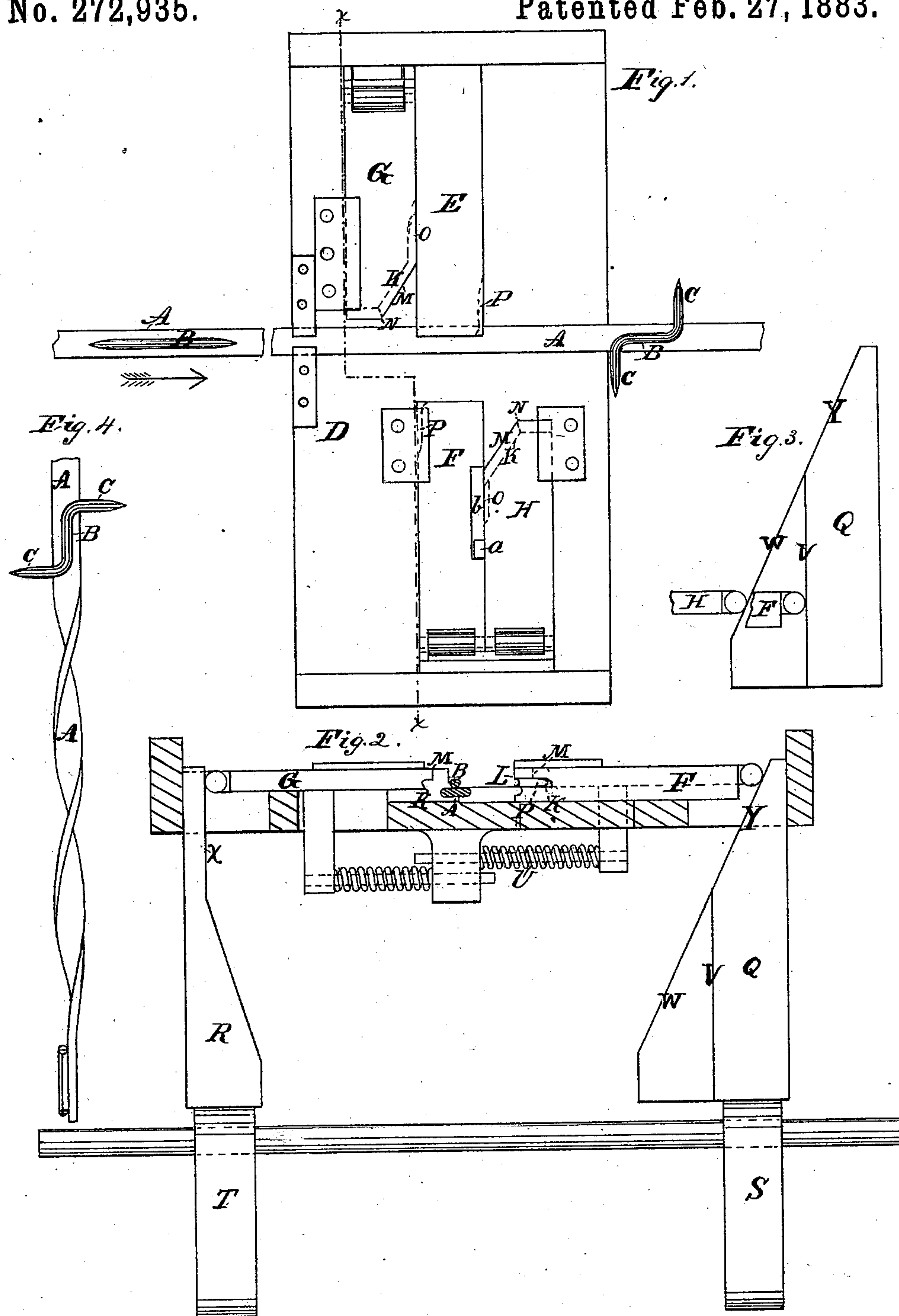
(No Model.)

T. V. ALLIS.

MANUFACTURE OF BARBED METALLIC FENCING.

No. 272,935.

Patented Feb. 27, 1883.



Witnesses:

Ch. J. Morgan
S. H. Morgan

INVENTOR

Thomas V. Allis

UNITED STATES PATENT OFFICE.

THOMAS V. ALLIS, OF NEW YORK, N. Y.

MANUFACTURE OF BARBED METALLIC FENCING.

SPECIFICATION forming part of Letters Patent No. 272,935, dated February 27, 1883.

Application filed August 23, 1881. Renewed September 21, 1882. (No model.)

To all whom it may concern:

Be it known that I, THOMAS V. ALLIS, of the city, county, and State of New York, have invented new and useful Improvements in Manufacture of Barbed Metallic Fencing, of which the following is a specification.

The subject of this invention is an improved method of cutting and bending longitudinal ribs on the sides of ribbed metallic strips for making barbs for barbed fencing, and in machinery for effecting the same, as hereinafter described, reference being had to the accompanying drawings, in which—

Figure 1 is a plan view of the machine for cutting and bending the ribs, also a top view of the ribbed strip as before and also as after the cutting and bending of the barbs. Fig. 2 is a transverse sectional elevation of the machine, also a transverse section of the ribbed strip on which the barbs are to be formed. Fig. 3 is a detail of the devices employed to work one of the cutting and bending dies and the movable holding-die. Fig. 4 is a side view of the barbed strip as finished for market.

A represents the strip, which is flat, with rounded or oval edges in cross-section, and B the ribs made on one of the flat sides, at suitable distances apart, and of sufficient length for two barbs, C, besides a short uncut portion remaining attached to the strip between the barbs, for the connection of the barbs thereto. This strip is to be fed intermittently by any suitable feeding mechanism along a groove corresponding in form to its cross-section, as seen in Fig. 2, across the upper surface of the table D, between the holding-dies E and F, the first stationary and the latter movable, also between the cutting and bending dies G H, both of which are movable. The strip stops in feeding with one of the ribs B between the holding-dies E F. The latter then close on it, pressing it against the former with sufficient power to hold it firmly, while the dies G H, which act immediately thereafter, close on the rib and cut the end portions free from the strip and bend them, as shown at the right hand of Fig. 1, by turning them around the corners of dies E F against their sides. The faces of dies E F, one of which is outlined in Fig. 2 at L, embrace both the strip and the rib; but the dies G H have the cutting-edges K level with

the top of the strip and base of the rib. They also have the overhanging guard M level with and passing over the top of the rib, said guards being to insure the bending of the barbs directly outward in the plane of the cuts by preventing the cutters from thrusting them upward. These cutting-edges are, and guards are also, but may be or not, inclined backward obliquely from the ends of the dies G and H, at points N along the sides of the dies E and F, about the distance that the barbs project after bending, the said points N being also distant from dies E and F about the length of the barbs, so that cutters K first act upon the ribs at the ends, then shear them back to the sides of the dies E F, and at the same time bend the sheared portions around against the sides of said dies, thus forming the barbs. Back of the bevel portions of cutters K the dies G H are recessed at O about the length of the barbs, over which recesses guards M are continued, and likewise dies E and F are recessed at P, where the barbs are bent around them to form space in which said barbs are confined and finally "set" when completed. When the forming of the barbs is completed, the dies G H go back from over the strip, and dies F and H also recede sufficiently from the side of the strip to allow the barb that was bent around die F to pass them. Die F is therefore movable the length of a barb, while die E is stationary, and die H moves about twice the distance that die G does. The means for working these dies may be chosen from any of the well-known contrivances for such purposes. For example, inclines or wedges Q R, raised by cams S T and allowed to fall by gravitation, may be used to press them forward, and springs U to retract them, the wedge Q acting on both the dies F H, and having double the throw in the part for H that it has for F, also double that of wedge R for die G, and also having a vertical face, V, acting behind die F to hold it against the strip while part W continues the movement of die H, and wedge R having a vertical part, x, which allows die G to rest until die H is brought up to the strip by part y of wedge Q. The withdrawal of die F may be accomplished by the same spring that actuates die H, by means of a pin, a, in the side of one acting in a slot, b, in the side of the other. By this method of

cutting and bending the barbs from both ends of the ribs and in opposite directions at the same time, the strains upon the strip are counteracted largely, so that the liability of its distortion in the holding devices is less than if the barbs were cut singly. There is also less wear upon the holding devices, less power is required, and the work is expedited.

A single cutting and bending die, G or H, may be used with a pair of holding-dies, E F, to cut and bend a single barb from one end only of the ribs, if desired, in which case only one of the dies E F will be recessed at P. Both of the holding-dies E F may be arranged to move to and from the strip, if desired.

Having thus described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The improvement in forming barbs upon ribbed metallic strips for fencing by cutting portions of said ribs from the strips and bending them laterally therefrom, which consists of simultaneously shear-cutting from the strip portions of the ribs from both ends of the same, and from opposite sides of and along the strip, and at the same time bending the cut portions, said ribs being formed in short sections projecting at intervals along the strip, substantially as described.

2. The combination of a table, D, having a transverse guiding-groove adapted for the ribbed strip A B, the holding dies E F, and

the cutting and bending dies G H, substantially as described.

3. The combination of the stationary holding-die E, movable holding-die F, and the movable cutting and bending dies G H, substantially as described.

4. In a machine for cutting barbs from short ribs projecting from the strip at intervals along the same and bending the cut portions laterally from said rib around the corners of the holding-dies, as described, the holding-die F and cutting and bending die G, arranged and provided with means for withdrawing the length of a barb from the strip-groove after each operation to allow the barb bent inwardly around the holding-dies to pass when the strip is advanced for successive operations.

5. The combination, with holding-dies E F, of one or more cutting and bending dies, G H, having cutting-edges K, inclined to the said dies E F, and guard M, substantially as described.

6. The combination of one or more cutting and bending dies G H, having cutting-edges K, guard M, and recess O, with holding-dies E F, one or both having a recess, P, substantially as described.

THOMAS V. ALLIS.

Witnesses:

W. J. MORGAN,
S. H. MORGAN.