(No Model.) 2 Sheets—Sheet 1.

J. H. TEMPLIN.

DIE FOR USE IN MAKING BARBED FENCING.

No. 457,941. Patented Aug. 18, 1891.

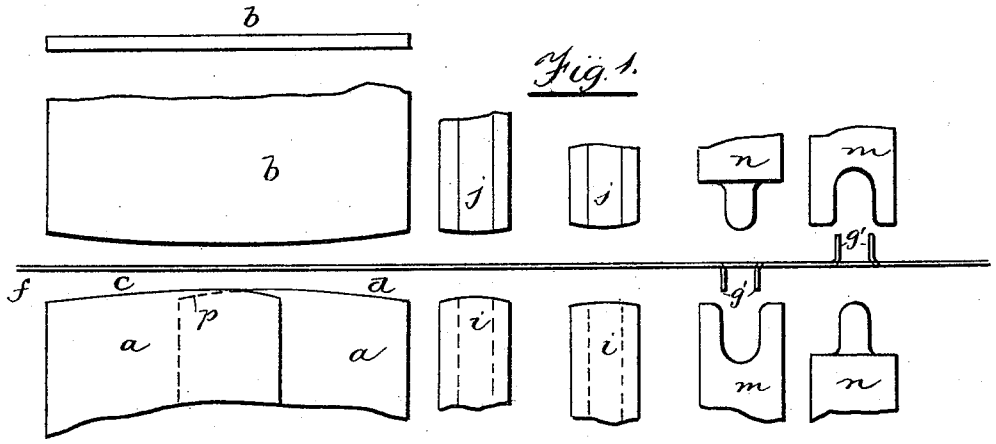


Fig. 1.

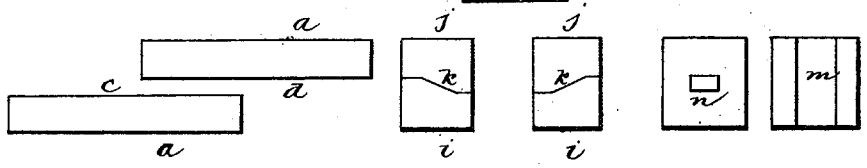


Fig. 2.

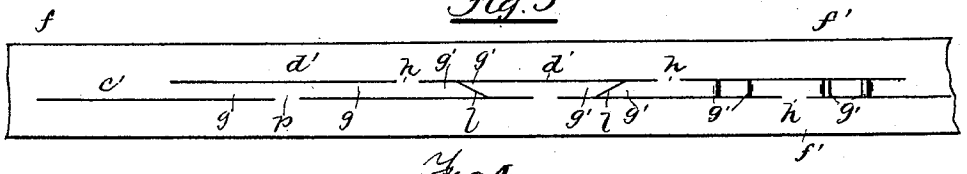


Fig. 3.

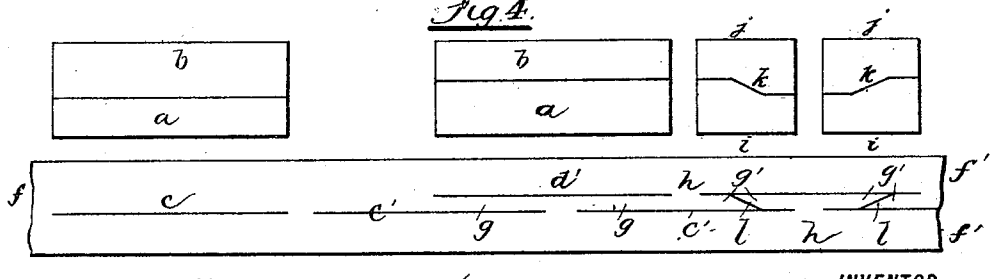


Fig. 4.

Fig. 5.

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(No Model.) 2 Sheets—Sheet 2.

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Fig. 6.

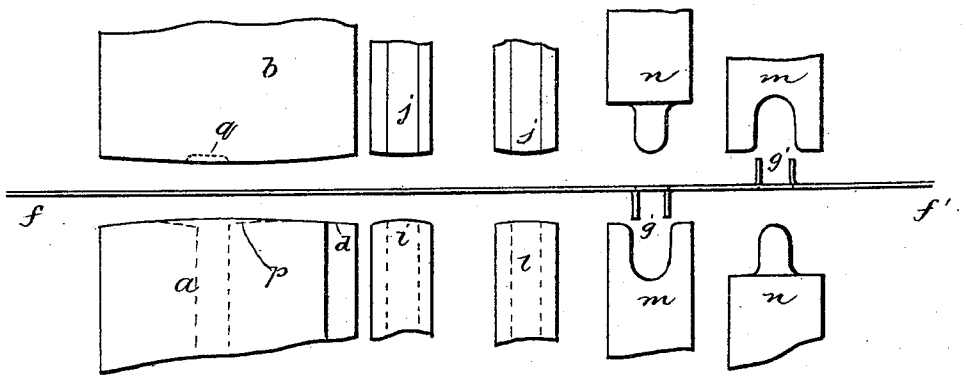


Fig. 7.

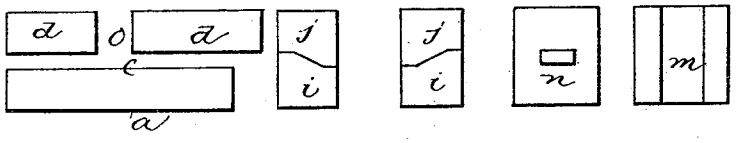
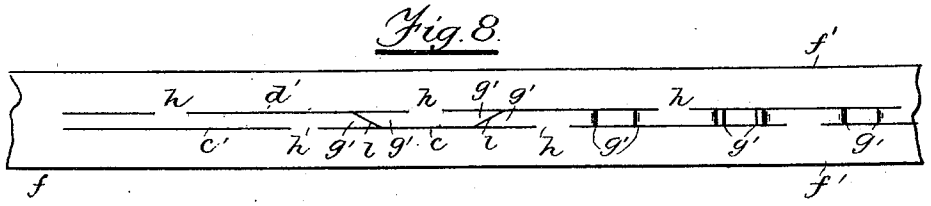


Fig. 8.



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DIE FOR USE IN MAKING BARBED FENCING.

SPECIFICATION forming part of Letters Patent No. 457,941, dated August 18, 1891.

Application filed June 8, 1888. Serial No. 276,523. (No model.)

To all whom it may concern:

Be it known that I, JOSEPH H. TEMPLIN, a citizen of the United States, and a resident of Reading, in the county of Berks and State of Pennsylvania, have invented certain new and useful Improvements in Apparatus for Making Barbed Fencing, of which the following is a specification.

This invention consists of improved contrivances of dies for producing two barbed strips from one double blank by first slitting a plain flat blank strip of metal which is equal in width to two barb-strips to be made plus the breadth of the barbs by two lines of parallel slits side by side and distant apart the width of the barbs to form bars of which barbs are to be made and to partly separate the blank; second, separating said bars obliquely at the middle, to completely separate the blank and point the barbs, and, third, bending the barbs thus formed to project laterally from the strips, as follows, referring to the drawings, in which—

Figure 1 is a side elevation of dies as I prefer to make them in accordance with my invention, together with a face view of the upper slitting-die. Fig. 2 represents face views of some of the cutting-dies and one each of two pairs of bending-dies. Fig. 3 is a diagram of the blank strip, showing the action of the dies of Figs. 1 and 2 on it. Fig. 4 represents face views of slitting-dies as they may be arranged. Fig. 5 is a diagram showing the action of the slitting-dies of Fig. 4. Figs. 6, 7, and 8 are side view, face view, and diagram representing other different forms of slitting-dies adapted for accomplishing the same results by the same method of operations.

In the most preferable arrangement of the dies I provide a pair of slitting-dies *a b*, of which *a* has two cutting-edges *c d* of equal length, distant apart the width of the barbs to be made, and one in advance of the other, so that they overlap each other nearly half their length, and *b* may consist of a thin plate or blade as wide as the edges *c d* are distant apart, and as long as *c d* together, which together cut the parallel overlapping slits *c' d'* in the blank strip *f*, which, being successively repeated as the strip *f* feeds along after each operation a little more than the length of one slit so made, makes two bars *g* at each operation, which remain connected at the ends with the barb-strips *f'*, respectively. Next after the dies *a b*, and in due relation thereto along the range the blank traverses, I arrange the cutters *i j*, having cutting-edges *k* oblique to the slits *c' d'* and so as to simultaneously cut two bars *g* apart diagonally on the line *l* and produce two pointed barbs *g'* from each bar, thus making four barbs at each operation and effecting complete separation of the barb-strips. Farther along the range I provide two pairs of benders *m n*, which bend the barbs *g'* laterally and in opposite directions alternately for the required projection, said benders being suitable punch-and-matrix contrivances for so bending them.

In Figs. 1 and 2 the edge *d* of the die *a* is represented as advanced half its length and the length of an uncut web *h* beyond edge *c*, so that by the feeding of the blank-strip the length of such web more than the length of one slit *c'* or *d'* a barb-retaining web *h* is left between each line of slits opposite the middle of the slits of the other line.

In Figs. 6 and 7 is represented an arrangement of dies *a b*, in which edge *d* is arranged in two sections, together being the same length as edge *c* and beginning coincident with it, considering the direction in which the blank feeds, with an interval at *o* for leaving the uncut webs *h* in its line of slits and advanced as much beyond edge *c* as the length of the webs *h* to be left in its line of slits and so as to extend as much beyond edge *c* as the lengths of the webs *h* left in the line of slits *c*. In this arrangement the slits *d'* are cut in parts, the first of which is represented by the short slit at the left hand of Fig. 8 and the other by part of the succeeding slit *d'*, the whole of which is the result of the two sections *d*. Both dies *a* and *b* are considerably shortened in this plan as compared with the arrangement of Figs. 1 and 2. In the overlap of the cutters *c d*, Fig. 1, the ends of the convex spaces, being lower than the opposing edges, enable the strip to be depressed enough at the ends of the overlapping parts for the cut-

ting of the opposite slits along these points and for the ends of the convex cutters to come flush with the surface of the strip, so as not to distort the metal at the ends of the slits, terminating in solid metal, as indicated at *p*.

In Fig. 6 the ends of the edges *d* are similarly lower at the gap *o*, by reason of the convexity of each section, than the confronting cutter, as indicated by the dotted lines *p*, for the same purpose, and die *b* may be beveled on the face, as indicated by the dotted line *q*, to favor the metal and prevent cutting between the ends of sections *d* along gap *o*, where the webs *h* are to be left uncut. The slits *c' d'* may of course be made separately by a separate pair of dies *a b* for each slit, arranged at suitable distance apart for working independently of and without interference with each other, as indicated in Fig. 4; but for simpler and more compact construction it is important to contrive the dies so that they may be made with one pair suitably arranged for making both slits.

What I claim, and desire to secure by Letters Patent, is—

1. The improved dies for producing two barbed strips from a double blank strip, consisting of die *a*, having parallel confronting and overlapping edges *c d* located a distance apart corresponding to the width of the barbs to be made, and the double or parallel edged die *b*, working between and simultaneously with both edges *c d* and producing two parallel and overlapping slits with bars *g* between them, substantially as described.

2. The combination, with dies *a b*, adapted for cutting parallel overlapping slits *c' d'* and producing bars *g*, of diagonal cutters *i j*, adapted to separate said bars and form pointed barbs.

3. The combination, with dies *a b*, adapted for cutting parallel overlapping slits *c' d'* and producing bars *g*, of diagonal cutters *i j*, adapted to separate said bars and form pointed barbs, and bending-dies adapted for bending said barbs laterally to the strip, substantially as described.

4. The combination, with the improved dies for producing two barbed strips from a double blank strip, consisting of die *a*, having parallel confronting and overlapping edges *c d* located a distance apart corresponding to the width of the barbs to be made, and the double or parallel edged die *b*, working between and simultaneously with both edges *c d* and producing two parallel and overlapping slits with bars *g* between them, of the diagonal cutters adapted to separate said bars and form pointed barbs successively to the cutting of the slits, substantially as described.

5. The combination, with the improved dies for producing two barbed strips from a double blank strip, consisting of the die *a*, having parallel confronting and overlapping edges *c d* located a distance apart corresponding to the width of the barbs to be made, and the double or parallel edged die *b*, working between and simultaneously with both edges *c d* and producing two parallel and overlapping slits with bars *g* between them, of the diagonal cutters adapted to separate said bars and form pointed barbs, and bending-dies adapted for bending said barbs laterally to the strip, substantially as described.

Signed at New York city, in the county and State of New York, this 2d day of May, A. D. 1888.

JOSEPH H. TEMPLIN.

Witnesses:
W. J. MORGAN,
GEO. T. JANVRIN.