

(No Model.)

E. JORDAN.

DIE FOR USE IN MAKING BARBED FENCING.

No. 450,079.

Patented Apr. 7, 1891.

Fig. 1.

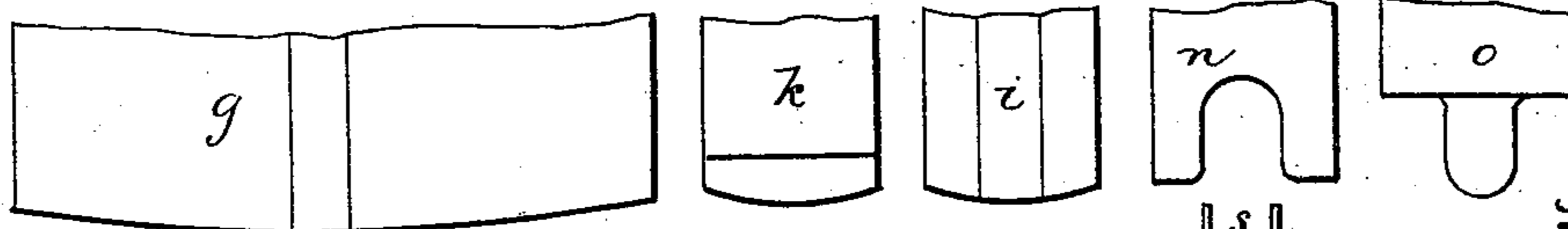
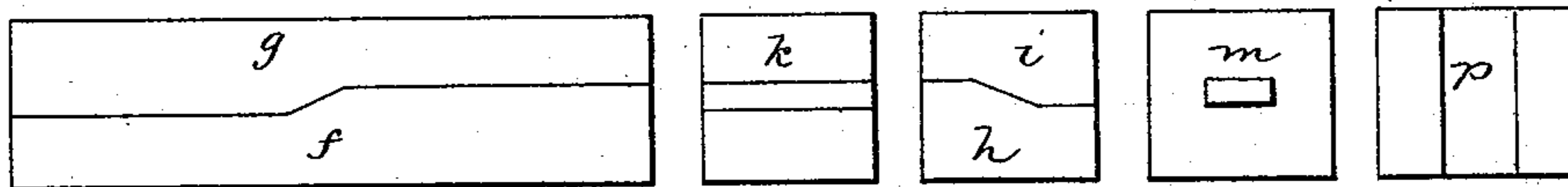


Fig. 2.

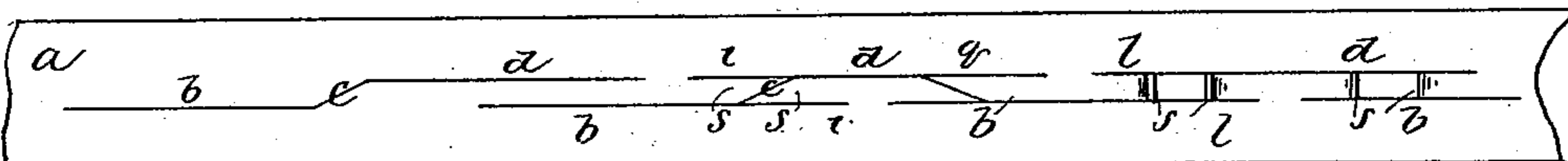
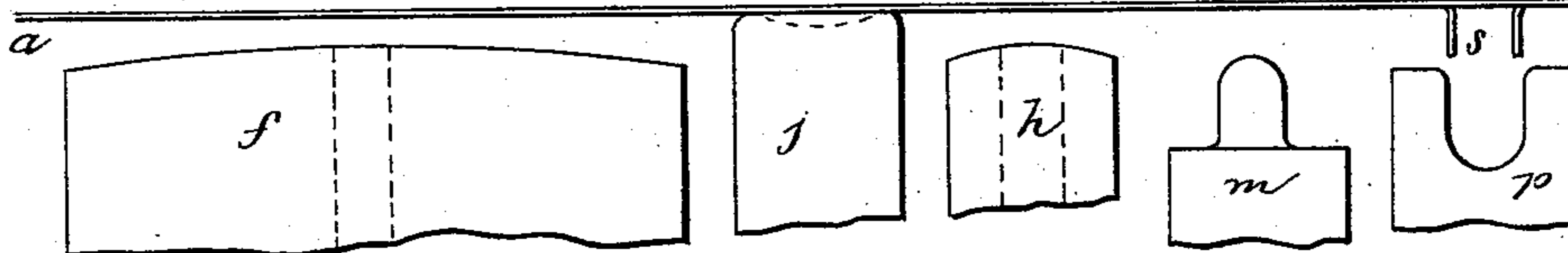


Fig. 3.

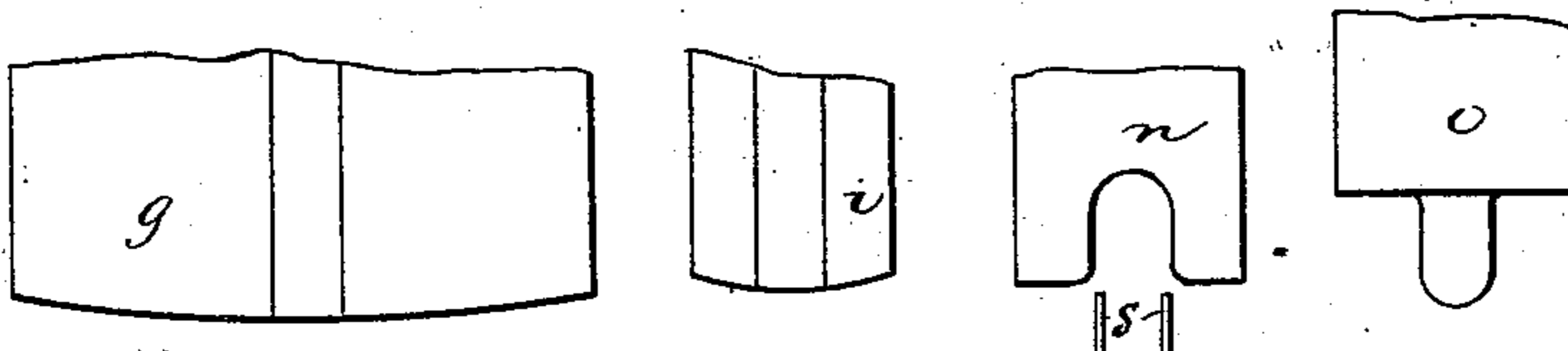


Fig. 4.

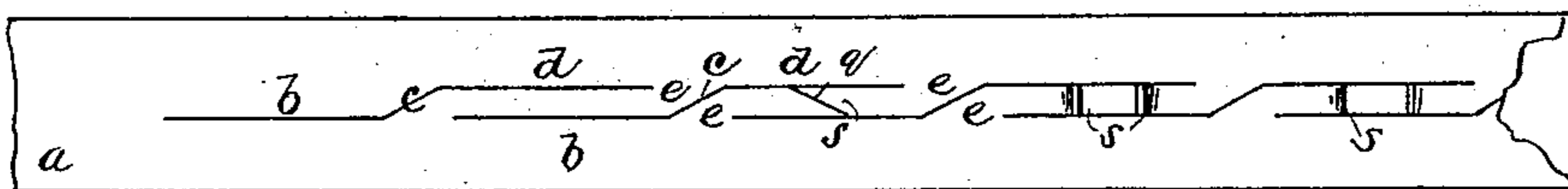
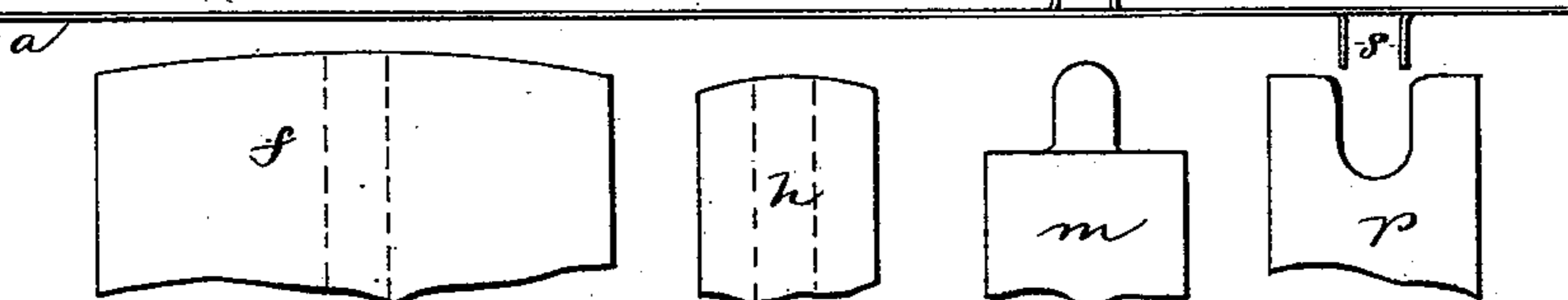


Fig. 5.

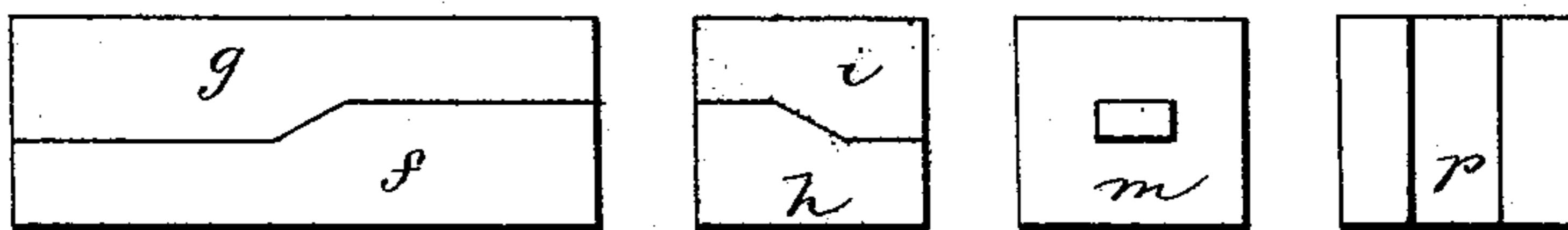


Fig. 6.

WITNESSES:

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EDMUND JORDAN, OF BROOKLYN, ASSIGNOR, BY MESNE ASSIGNMENTS, TO
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DIE FOR USE IN MAKING BARBED FENCING.

SPECIFICATION forming part of Letters Patent No. 450,079, dated April 7, 1891.

Application filed July 28, 1888. Serial No. 281,313. (No model.)

To all whom it may concern:

Be it known that I, EDMUND JORDAN, a citizen of the United States, and resident of Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in a Combination of Dies for Use in a Machine for Making Barbed Strips, of which the following is a specification.

10 This invention consists of improved contrivances of dies for producing two barbed strips from one blank strip by slitting a plain flat blank strip of metal which is equal in
15 breadth of the barbs by intermittent slits which offset in an oblique line from one plane to another and so overlap that the offset line of each slit crosses from the plane of one part of the slit to that of the other between and in
20 close proximity to the ends of the next slits each way, by which bars from which to form barbs are separated along their edges from the two strips, which are also nearly separated by the same means from each other; but said
25 bars remain connected at the ends to the respective strips and are subsequently separated obliquely at the middle to point them and effect the complete separation of the strips, and then the barbs so formed are bent
30 laterally to the strips for causing them to project as required, thus making one laterally-projecting barb alternately on each strip; but for making two similarly-projecting barbs together on each strip alternately, which is
35 the preferable way, the said overlapping slits are made longer, with greater distance between the offset lines and the ends of the next slits each way, and other slits are made in prolongation of the parallel portions of said slits
40 each way across the offset line, so that two barbs are made thereat besides the two others from the bars subsequently separated, and thus two barbs are formed together on each strip intermediately, and they are likewise
45 bent for lateral projection, as hereinafter fully described.

In the drawings, Figure 1 represents face views of said slitting and bar-cutting dies and of one each of two pairs of bending-dies for
50 bending the barbs. Fig. 2 represents a side elevation of the dies for slitting the blank

strip and cutting the bars to make two barbs alternately on each strip, together with the bending-dies and a blank strip between the dies. Fig. 3 is a diagram of the blank strip, 55 showing the action of the dies of Figs. 1 and 2 on it. Fig. 4 is a side elevation of the dies for making single barbs on each strip alternately. Fig. 5 is a diagram of the blank strip, showing the action of the dies of Figs. 4 and 60 6 on it. Fig. 6 represents face views of the slitting and bar-cutting dies and of one each of the bending-dies, as in Fig. 4.

I make slitting-dies *f g*, as shown, to make interval slits *b c d* in the blank strip *a*, the part 65 *c* being an oblique offset from *b* to *d*, which are in different parallel planes as wide apart as the desired width of the barbs and being at the middle of the slit. When the barbs are to be in the single order along the strips, 70 the slits are advanced along the strip a distance equal to the distance the barbs are to be apart on the finished strips, as in Fig. 5, and the length of the slits is in this case such that being so advanced the distance from offset 75 *c* of one slit to the beginning of the next slit is the length of metal left at *e* connecting the barbs at the base with the strips, which may be more or less, as preferred, being varied as the slits are made longer or shorter; 80 but it is designed to have ample metal thereat to form substantial connection of the barbs. The length of the barbs is governed by the length of the slits, the slits being made longer for longer barbs or shorter for shorter ones; 85 but where two barbs are to be formed together on each strip intermediately the slits *b c d* are made longer and are also advanced along the strip relatively to each other the length of a barb more than in the other case, as represented in Fig. 3. For making these slits dies 90 *f g* are employed, which are alike in form for both cases, but differ in length, and the strip is to be fed the length of two barbs in one case and of four in the other. It proceeds in 95 the former case to the bar-cutting dies *h i*, by which the bars made between parts *b* and *d* of the successive slits are cut apart at *q*, and barbs *s* are formed; but in the latter case it is next presented to the parallel-edged slitting- 100 dies *j k*, whereby the slits *l* are made in prolongation of lines *b d* across offset line *c*, making

two barbs thereat, and also to the bar-cutters *h i*, which at the same time cut apart the bar made between the slits and form two other barbs. From the bar-cutters the next feed-shift presents the barbs ready for bending to the bending-dies *m n* and *o p*, arranged in two pairs for bending the barbs laterally to the strips and alternately in opposite directions, said dies consisting of male and female members suitably contrived for so bending the barbs, as clearly represented in the drawings. In the making of four barbs to one feed-shift, as in Figs. 1, 2, and 3, both pairs of these bending-dies will operate contemporaneously with the rest; but in the other arrangement for making only two barbs to one feed-shift these dies will only act with each alternate operation of the rest. One pair would be sufficient in this case if the barbs were all to be bent one way; but two pairs are required to bend in opposite directions, and as they together bend four barbs at one operation they must rest during one operation of the other dies, making only two barbs at a time.

So far as the dies for making the overlapping interval slits for separating the double blank and cutting the barbs from the edges of the strips are concerned they are substantially the same as in the method which is the subject of the patent granted to me March 17, 1885, No. 314,183, and are not broadly claimed herein, in which I have contrived to utilize that plan of cutting together with the cutting of the bars to separate and point the barbs and with bending devices which make laterally-projecting barbs, all operative together with the cutting-dies to complete the cutting, separating, and bending in one operation. Suitable guides will be provided for preventing the cut parts of the blank from spreading under the influence of the dies.

The method herein described is reserved for a separate application for a patent.

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

1. The combination of dies, as *f g*, having the cutting-edge offset in an oblique line at the middle, or thereabout, and arranged for making interval offset overlapping slits, and the diagonal bar-cutting dies, as *h i*, arranged

with said slitting-dies for successively cutting the bars made by them, substantially as described.

2. The combination of dies, as *f g*, having the cutting-edge offset in an oblique line at the middle, or thereabout, and arranged for making interval offset overlapping slits, the diagonal bar-cutting dies, as *h i*, arranged with said slitting-dies for successively cutting the bars made by them, and the barb-bending dies, as *m n* and *o p*, arranged with said slitting and bar-cutting dies for successively bending the barbs cut by them laterally to the strips, substantially as described.

3. The combination of dies, as *f g*, having the cutting-edge offset in an oblique line at the middle, or thereabout, and arranged for making interval offset overlapping slits, also the parallel-edged slitting-dies, as *j k*, arranged with said offset slitting-dies for successively cutting other slits each way from the diagonal cuts in prolongation of the parallel portions of the offset slits, and also the diagonal bar-cutting dies, as *h i*, arranged for successively cutting the bars formed by the offset slitting-dies, substantially as described.

4. The combination of dies, as *f g*, having the cutting-edge offset in an oblique line at the middle, or thereabout, and arranged for making interval offset overlapping slits, also the parallel-edged slitting-dies, as *j k*, arranged with said offset slitting-dies for successively cutting other slits each way from the diagonal cuts in prolongation of the parallel portions of the offset slits, also the diagonal bar-cutting dies *h i*, arranged for successively cutting the bars formed by the offset slitting-dies, and also the barb-bending dies, as *m n* and *o p*, arranged with said slitting and bar-cutting dies for successively bending the barbs cut by them laterally to the strip, substantially as described.

Signed at New York city, in the county and State of New York, this 7th day of May, A. D. 1888.

EDMUND JORDAN.

Witnesses:

W. J. MORGAN,
GEO. T. JAMISON.