

(No Model.)

A. P. THAYER.

DIE FOR MAKING METALLIC FENCE BARBS.

No. 315,086.

Patented Apr. 7, 1885.

Fig. 1.

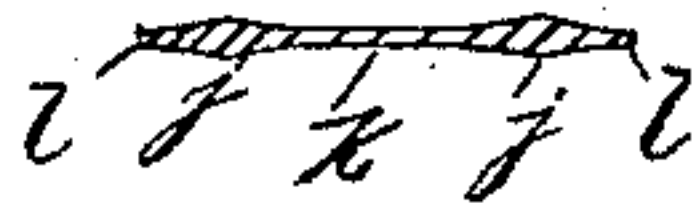


Fig. 2.

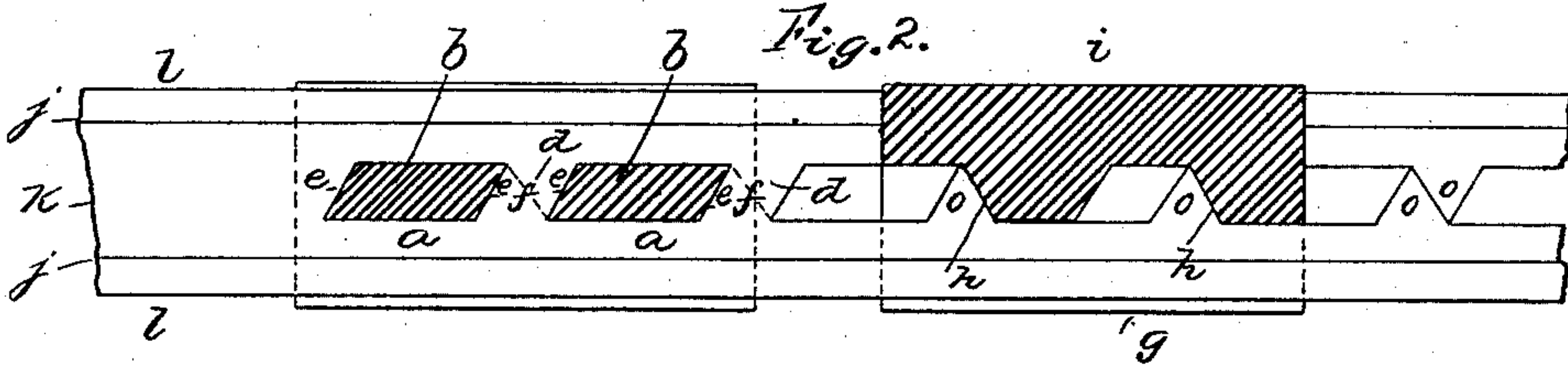


Fig. 3.

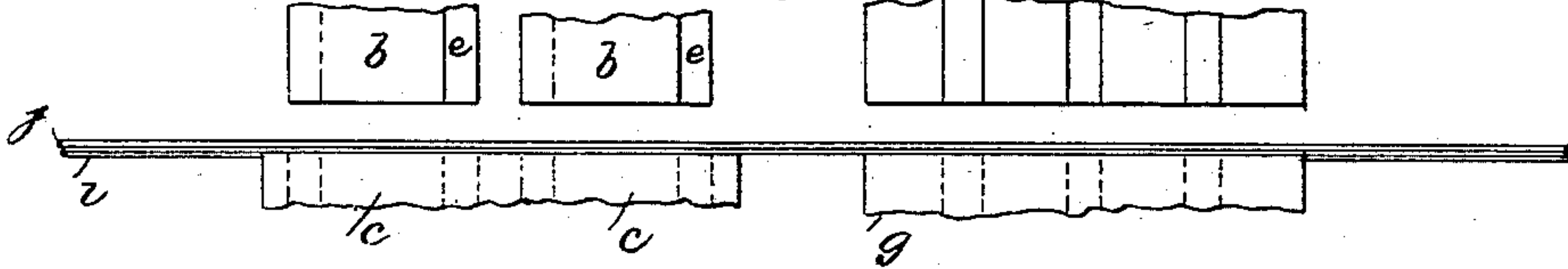


Fig. 4.

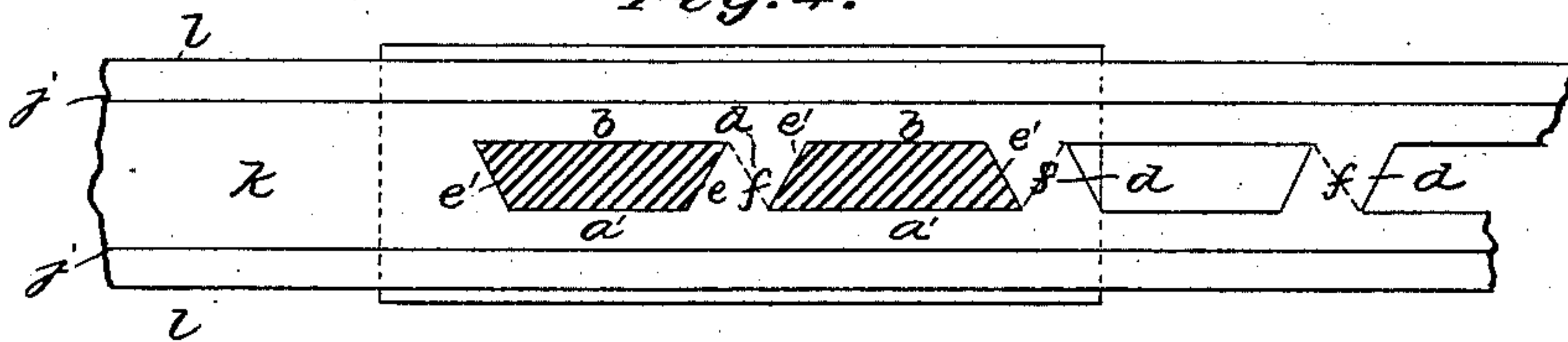


Fig. 5.

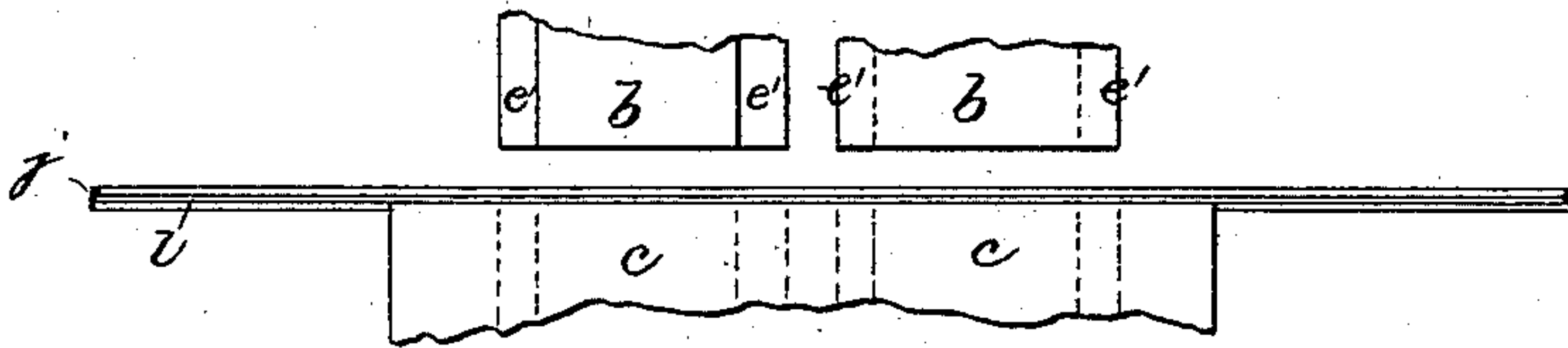


Fig. 6.

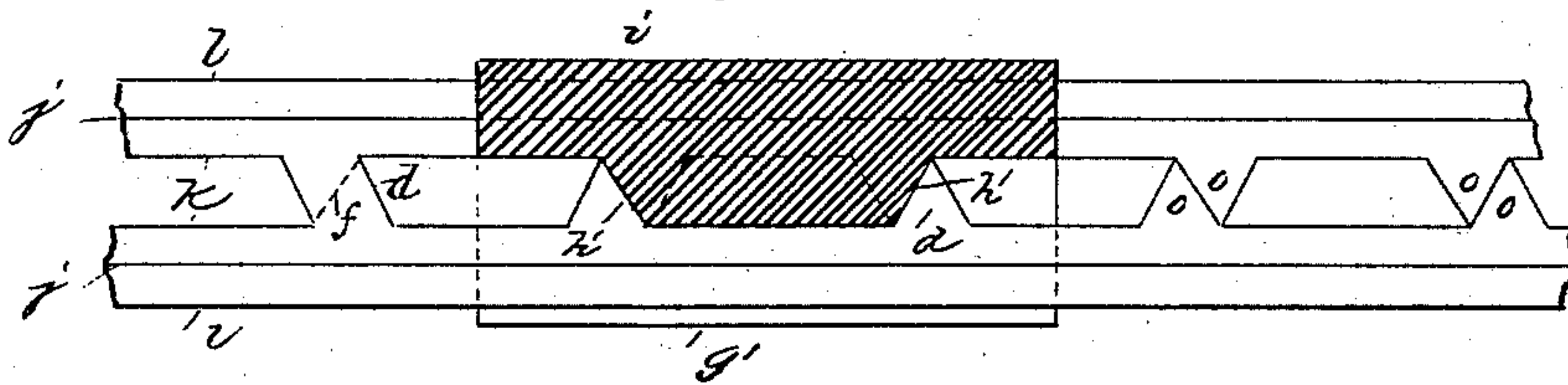
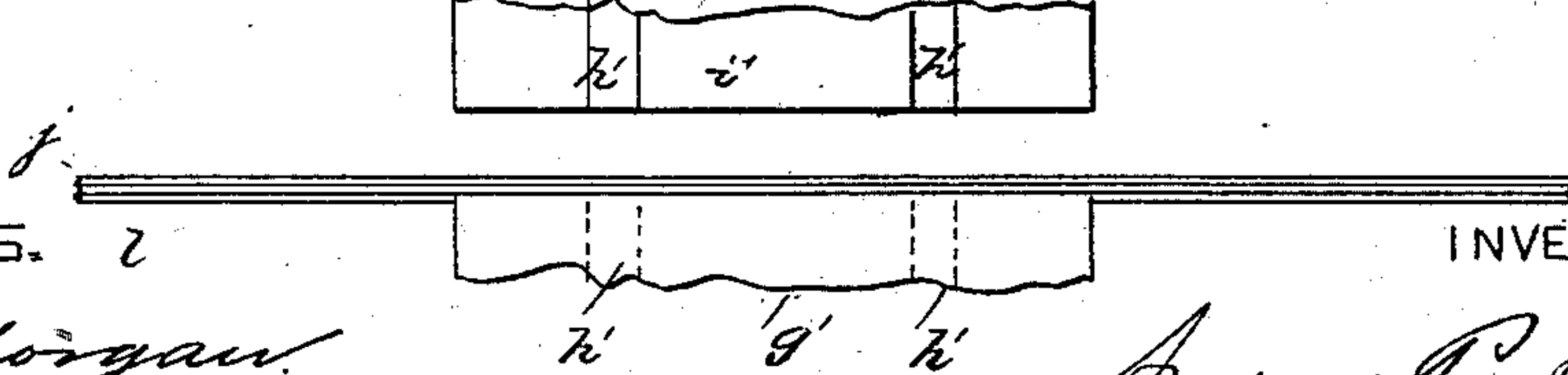


Fig. 7.



WITNESSES.

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DIE FOR MAKING METALLIC FENCE-BARBS.

SPECIFICATION forming part of Letters Patent No. 315,086, dated April 7, 1885.

Application filed March 2, 1885. (No model.)

To all whom it may concern:

Be it known that I, ANSON P. THAYER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented new and useful Improvements in Dies for Making Barbed Metallic Fencing, of which the following is a specification.

This invention relates to dies for separating a double blank strip and forming barbs on the rods produced therefrom, the said strip consisting of two parallel cores and a connecting-web, which strip is to be sheared apart along the web, and part of the web is to be cut away in waste pieces to form the barbs.

The method of operation consists of, first, punching out the waste portions of the web to be removed from between the barbs and forming diagonal cross-bars of the remaining portions, which are to constitute the barbs; and, second, shearing said cross-webs apart diagonally, and thereby completing the barbs, and also completing the separation of the strips.

The dies consist of punches which first punch out waste portions of the web and partly separate the blank strip, leaving cross-webs for the barbs, and shearing-dies which separate the cross-webs diagonally and form two barbs out of each cross-web, and at the same time complete the separation of the blank strip, as hereinafter described, reference being made to the accompanying drawings, in which—

Figure 1 is a cross-section of the blank strip to be separated and barbed. Fig. 2 is a plan view of the bed-die and horizontal section of punches for punching out the waste pieces, also a diagram of the horizontal form of shearing-dies for shearing the cross-webs or barbs apart, and also a plan of a portion of a blank strip being cut. Fig. 3 is a side elevation of the devices represented in Fig. 2. Fig. 4 is a plan of the bed-die and a portion of the strip, also a horizontal section of punches of a modified form for punching out the waste material from between the barbs and for partly separating the blank strip. Fig. 5 is a side elevation of the punches, die, and blank strip represented in Fig. 4. Fig. 6 is a plan view of the bed-die and horizontal section of the movable die, to be used in connection with the

punches of Figs. 4 and 5, for shearing apart the cross-webs and completing the barbs and the separation of the strip, with a portion of the strip between the dies, as when being separated by them; and Fig. 7 is a side elevation of the dies of Fig. 6 and the blank strip thereon.

First, I propose to punch out the waste material, as at *a* or *a'*, so as to leave diagonal cross-webs *d*, to form the barbs *o*, using ordinary punches, *b*, and dies *c*, which may either have parallel diagonal edges *e*, as in Figs. 2 and 3, or converse diagonal edges *e'*, as in Figs. 4 and 5; and I then shear apart the diagonal cross-webs diagonally across them, as indicated by the dotted lines *f*, which completes the separation of the strips and also completes the barbs. For shearing the cross-webs apart I use a bed-die, *g*, and a corresponding movable die, *i*, having one or more diagonal cutting-edges, *h*, when the punches and dies having parallel edges are used to punch out the waste; but when the punches and dies of Figs. 4 and 5 are used I employ a bed-die, *g'*, and movable die *i'*, having two or more diagonal cutting-edges, *h'*.

In the first arrangement of dies, having parallel diagonal edges *e*, the cross-webs left between the waste portions punched out are inclined in the same direction, and are parallel, and one punch and die may be employed for punching out all the waste pieces in succession, also shearing-dies having only one pair of cutting-edges, *h*; but the punches and the shearing-cutters may be increased in number at will. But with the arrangement of punches having converse inclined edges *e'*, Fig. 4, two punches and dies, arranged conversely as to the edges *e'*, have to be used, which makes the cross-webs alternately converse to each other, and the shearing-dies *g'* and *i'* must have two converse cutters, *h'*, to correspond with the converse inclinations of the said cross-webs. These punches and shearing-dies may be increased in number by twos as desired, and in both arrangements the punches and shearing-dies may be arranged in one press, so that the strips to be cut will be punched and separated at once; or the punches and dies of both arrangements may be mounted and worked separately.

With the punches and dies of Fig. 2 the barbs will all be formed the same distance apart; but with the arrangement of Fig. 4 the barbs will be different distances apart alternately. When only one punch and one pair of shearing-dies are used, the strips will be fed along the distance of one barb from another apart; but as the number of punches and dies is increased the length of the feed movements will be correspondingly increased.

The blank strip to be cut and barbed consists of the two parallel cores *j*, connecting-web *k*, and the outer thin edges, *l*.

The method of separating and barbing the separate strips herein described constitutes the subject-matter of a separate application for a patent, and is not claimed in this case.

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

1. The combination of punches and dies adapted to punch out holes at intervals along a blank strip and form diagonal cross-bars separating said holes, with shearing - dies adapted to shear said cross-bars apart diagonally, and thereby form pointed barbs, substantially as described.

2. The combination of punching-dies *b c*, having parallel diagonal edges *e*, and shearing-dies *g i*, having diagonal cutting-edges *h*, substantially as described.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

ANSON P. THAYER.

Witnesses:

W. J. MORGAN,

F. A. THAYER.