

(No Model.)

4 Sheets—Sheet 1.

W. LIVINGSTONE.
METHOD OF MAKING METALLIC FENCES.

No. 429,095.

Patented May 27, 1890.

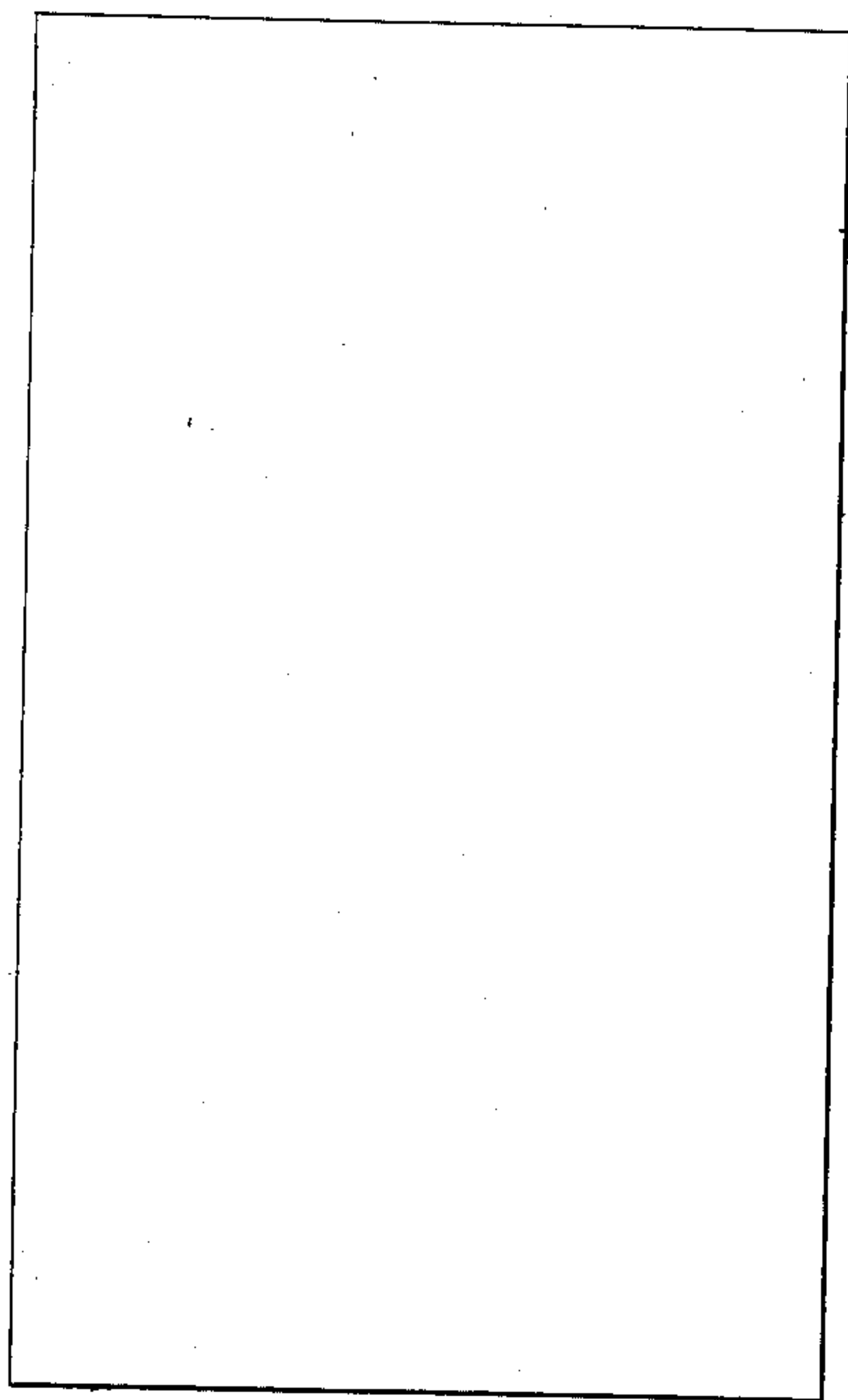


Fig. 1

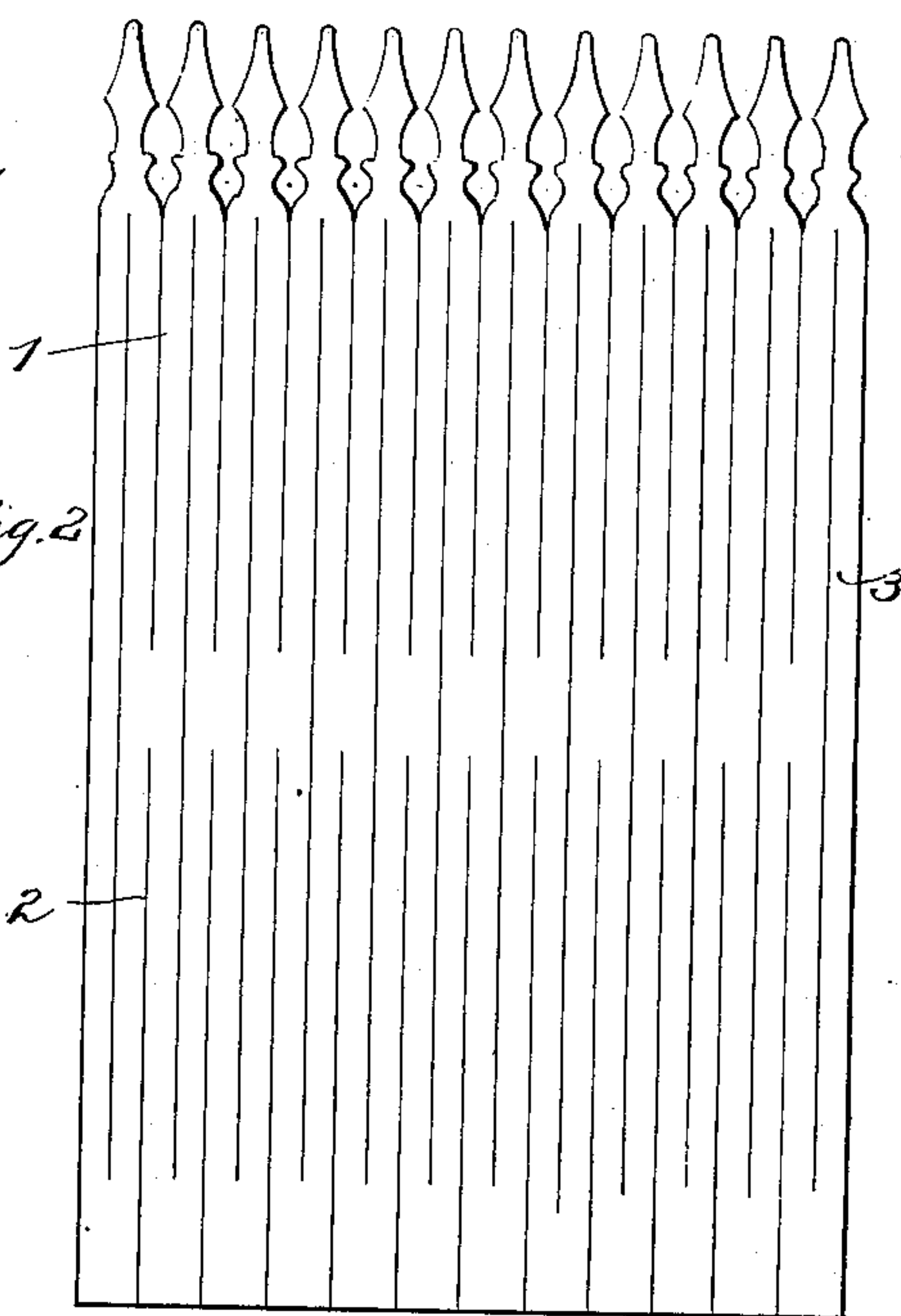
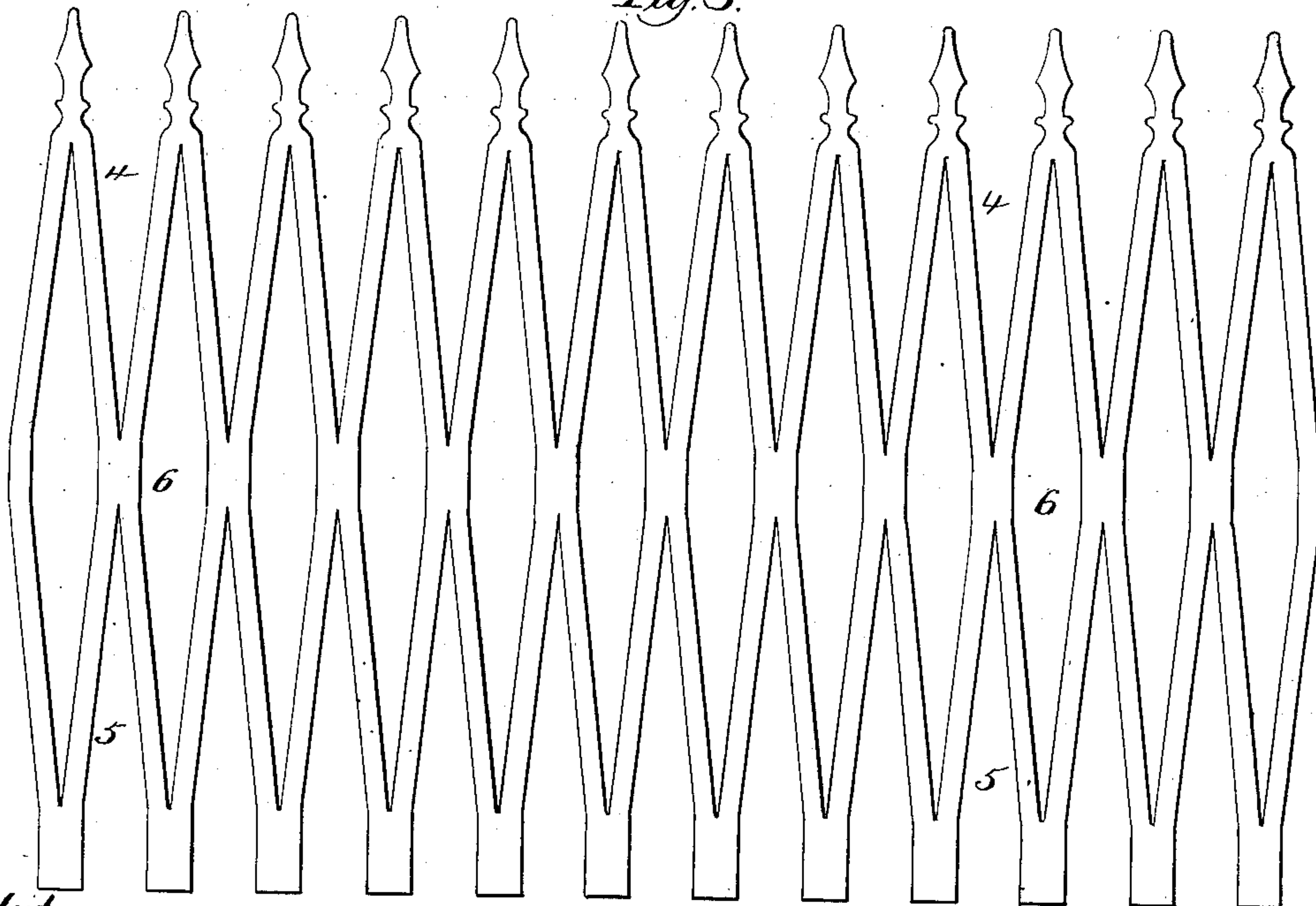


Fig. 2

Fig. 3.



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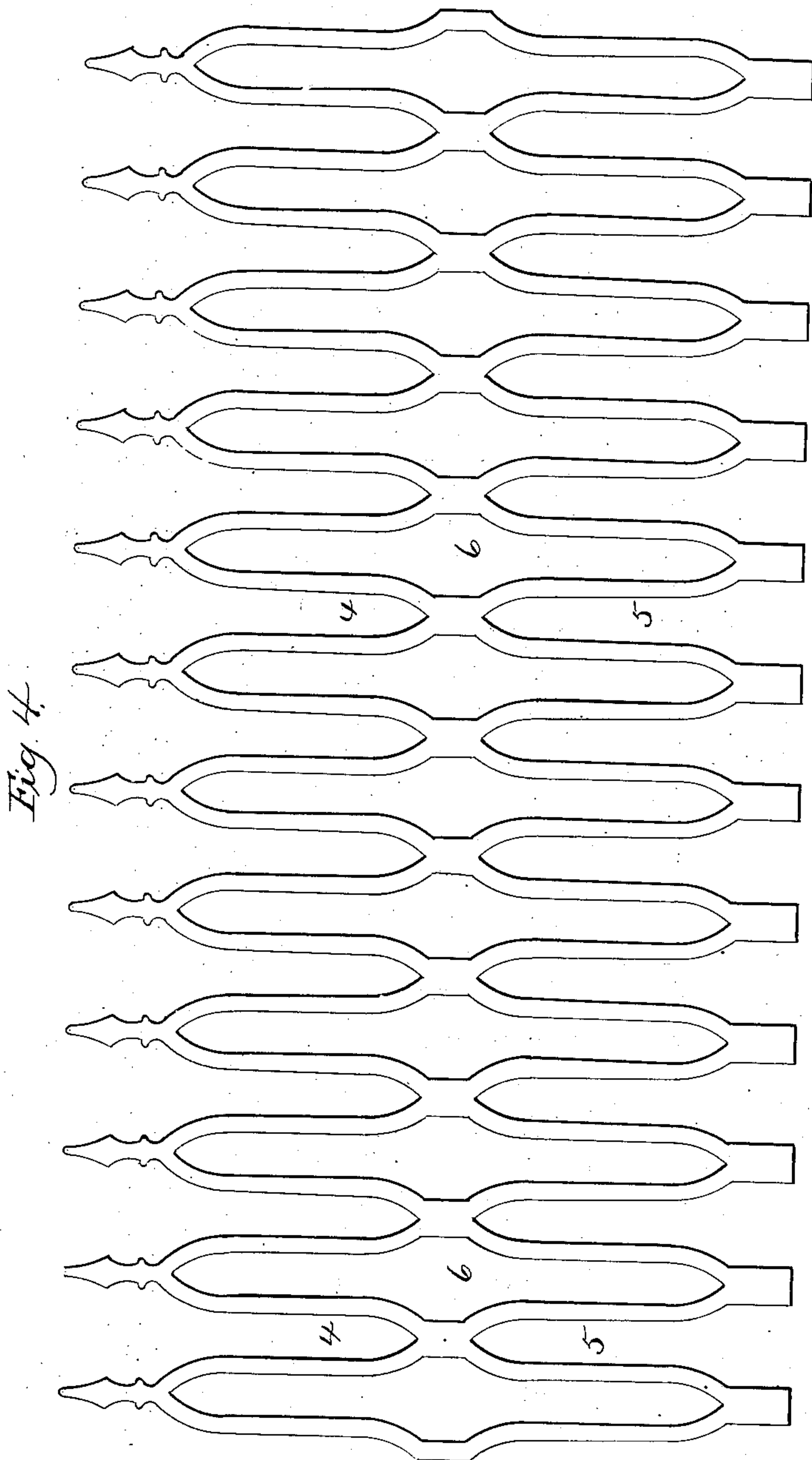
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4 Sheets—Sheet 3.

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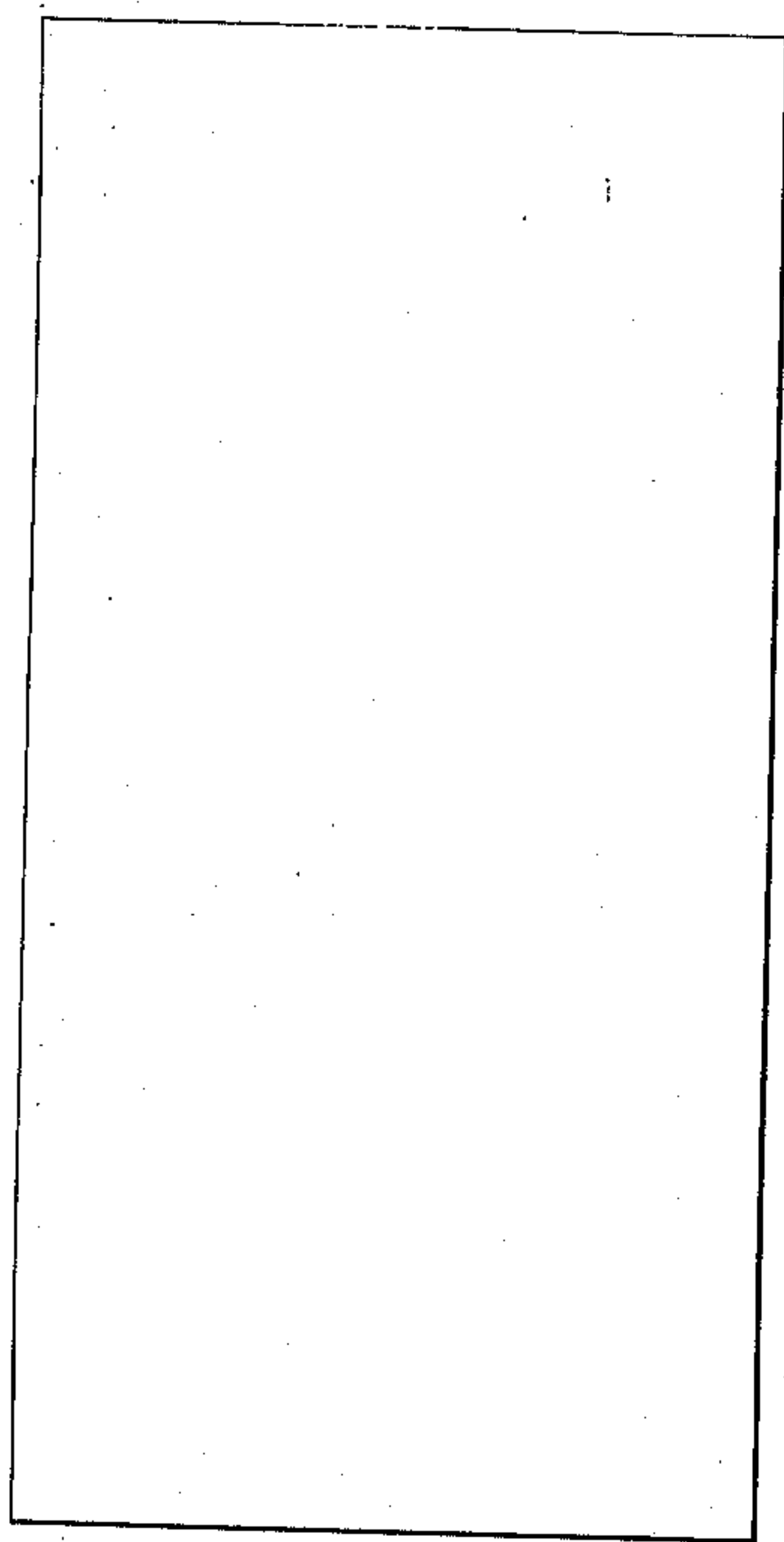


Fig. 5

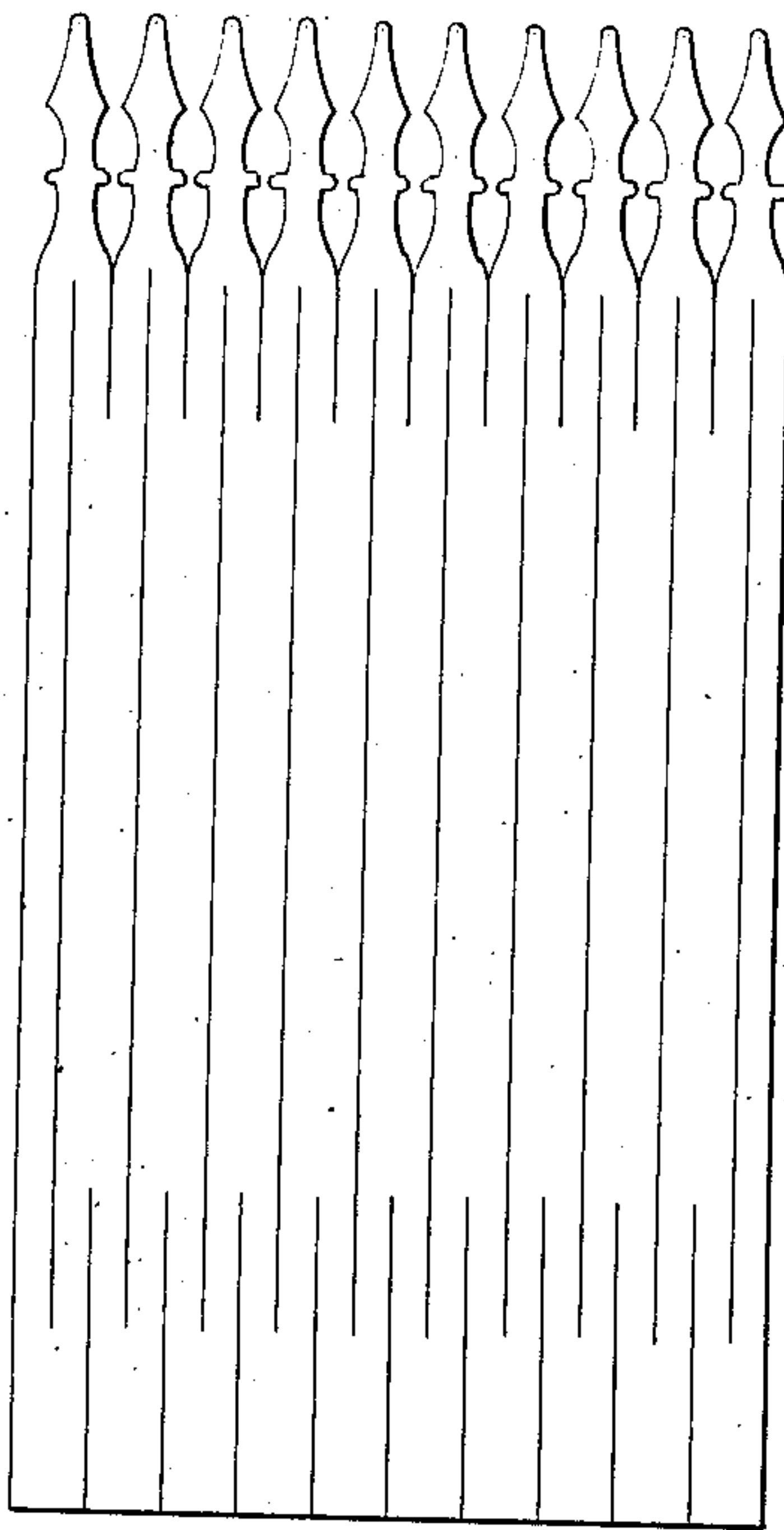
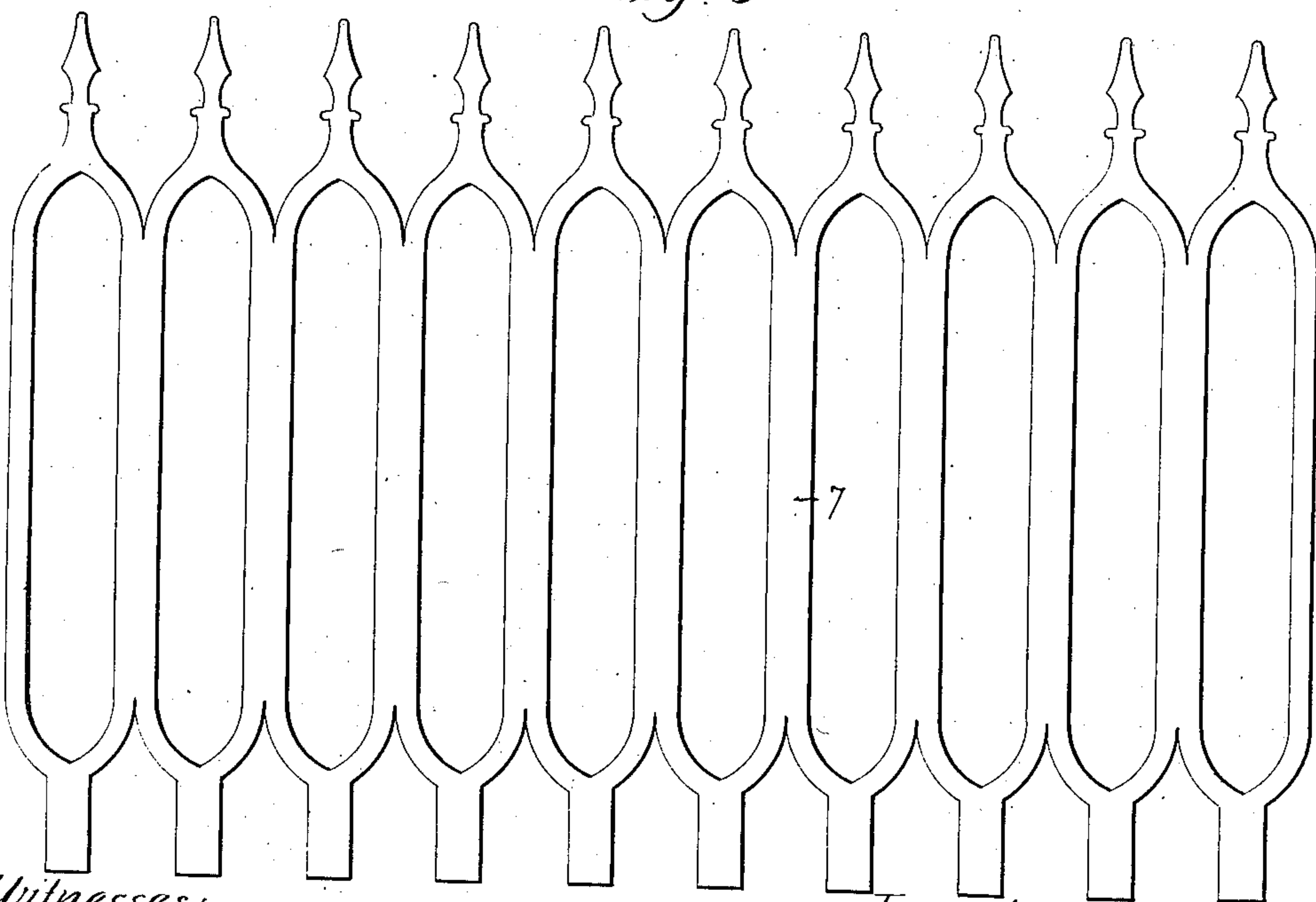


Fig. 6



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4 Sheets—Sheet 4.

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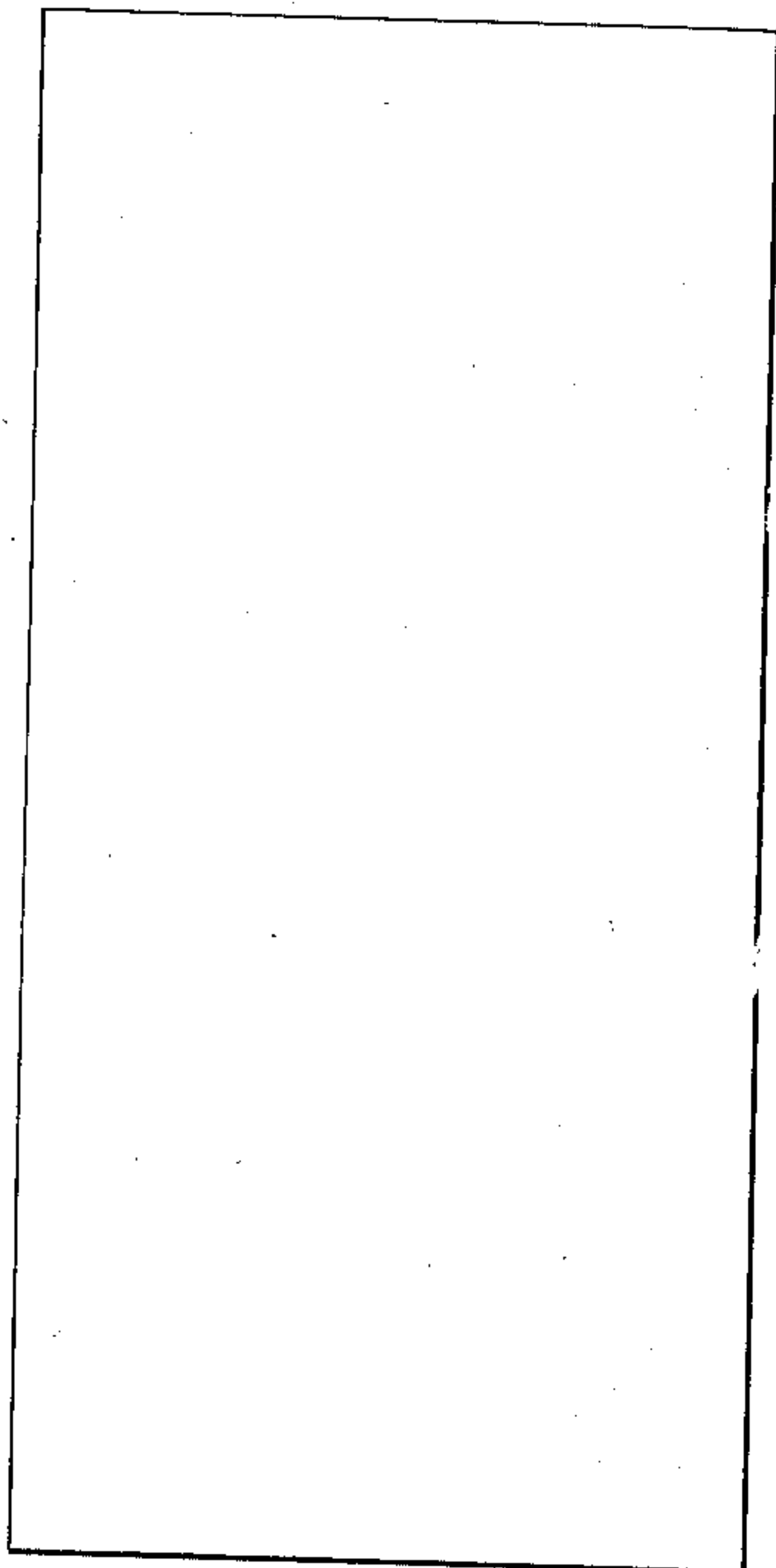


Fig. 7.

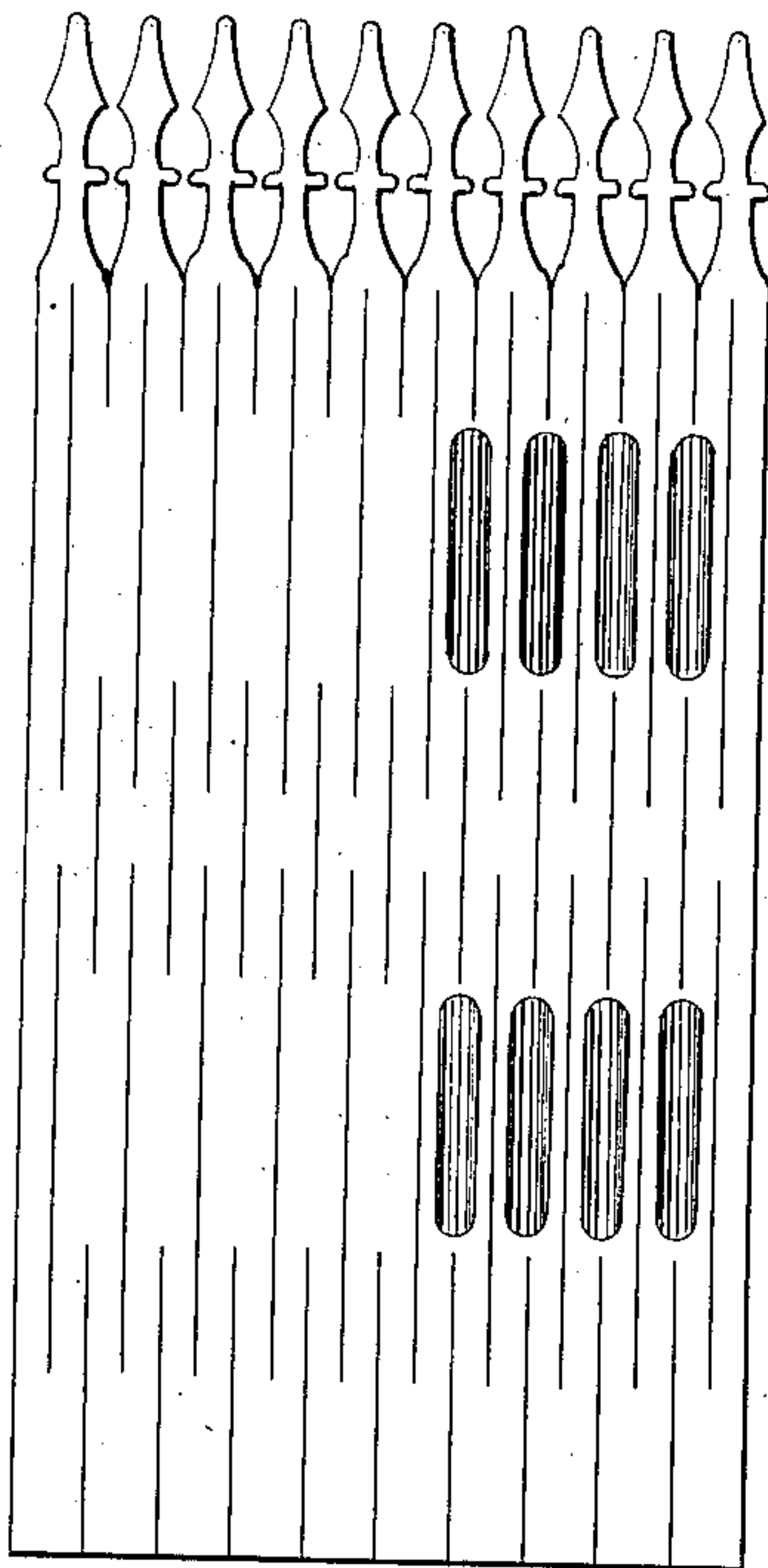
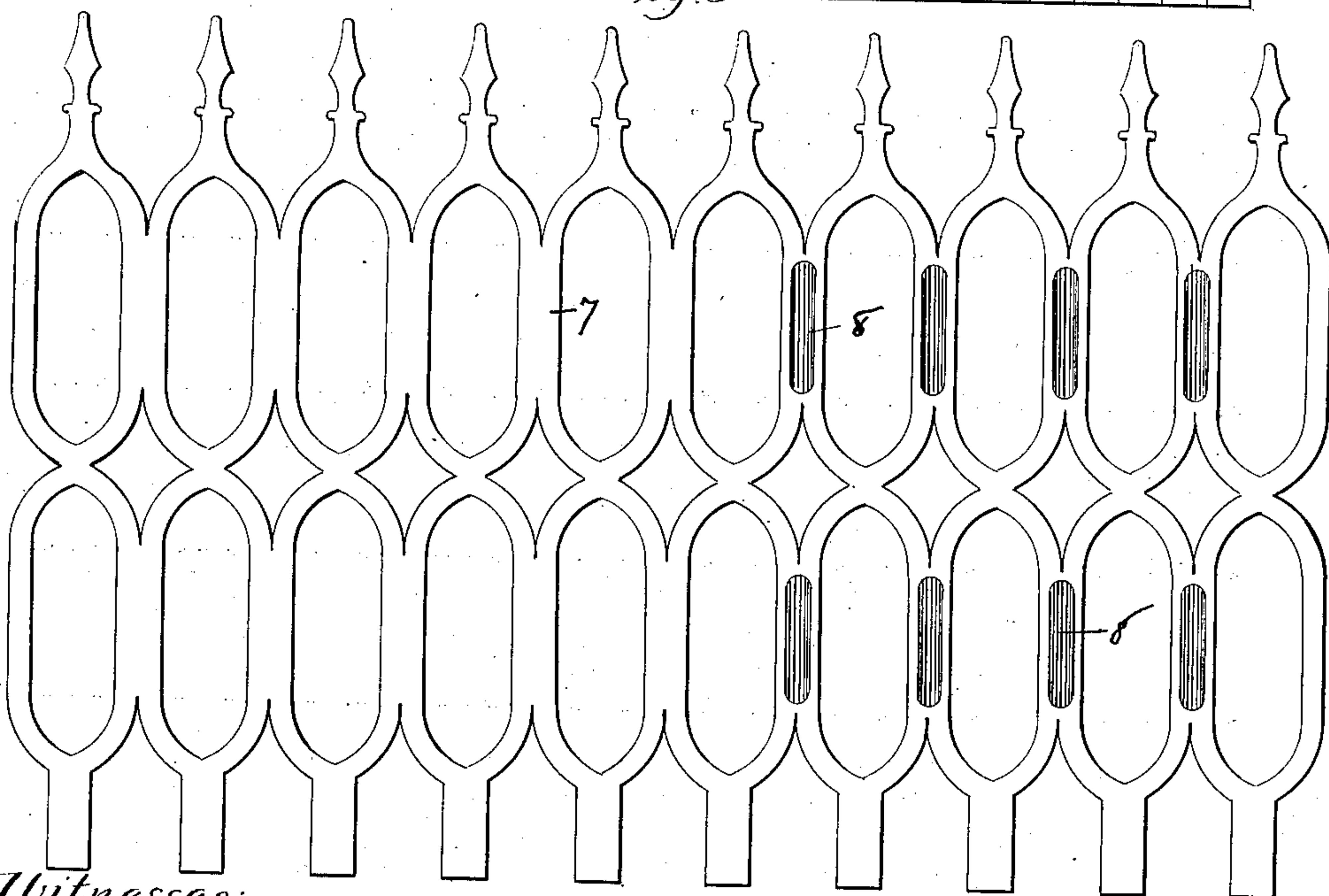


Fig. 8.



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UNITED STATES PATENT OFFICE.

WILLIAM LIVINGSTONE, OF JERSEY CITY, NEW JERSEY, ASSIGNOR OF
ONE-HALF TO JOHN COOPER, OF NEW YORK, N. Y.

METHOD OF MAKING METALLIC FENCES.

SPECIFICATION forming part of Letters Patent No. 429,095, dated May 27, 1890.

Application filed December 2, 1889. Serial No. 332,318. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM LIVINGSTONE, of Jersey City, in the county of Hudson and State of New Jersey, have invented certain new and useful Improvements in Metallic Fences; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

My invention relates to an improvement in the manufacture of metallic fences and similar structures, and has for its object to produce a fence made in sections of single pieces of sheet metal stamped, drawn, and formed to produce the desired configuration.

With this object in view my invention consists in certain steps in the process of producing a fence from sheet metal and in the product produced by such method.

In the accompanying drawings, Figure 1 is a view of a sheet-metal blank of which a section of the fence is to be made. Fig. 2 is a view of the same after it has been cut and slitted. Fig. 3 is a view of a complete section of fence. Fig. 4 represents a section of fence formed from a blank cut and slitted the same as shown in Fig. 2, but with different forming-dies. Figs. 5, 6, 7, and 8 are views illustrating modifications.

In carrying my invention into effect a suitable machine will be provided with cutting and slitting dies and the sheet-metal blank, Fig. 1, subjected thereto.

It is obvious that the cutting-dies by means of which the picket-heads are produced may be of a form to produce any desired design, and that the dies which produce the slits that are afterward opened to produce ornamentations in the body of the fence may be differently arranged, as may suit the fancy of the manufacturer, to effect different designs; but for convenience of illustration reference will be first had to the form or design illustrated in Figs. 2 and 3.

The sheet-metal blank A is inserted into the machine and the cutting-dies operated upon it to produce the picket-heads B. Simultaneously with this operation, or by a separate operation of the machine, the slit-

ting-dies are brought down upon the blank and slits 1 2 3 produced. The slits 1 are located centrally between the picket-heads and, starting from the base of said heads, terminate at points just above the center of the blank. The slits 2, beginning at points just below the horizontal center of the blank and in the same vertical plane with the slits 1, extend to the lower edge of the blank. The slits 3, Fig. 2, begin at points near the base of the heads of the pickets and extend to points somewhat above the lower edge of the blank. The blank thus cut and slitted is next drawn out, the slits 1, 2, and 3 being opened to produce openings 4, 5, and 6. When the blank is thus drawn out, the structure will have assumed irregular form at certain places, as the metal is apt to pucker more or less at the ends of the opening 6, and to correct this and make the structure perfectly flat and regular it is subjected to a series of forming-dies, which, entering the spaces 4 5 6, force the metal into symmetrical forms, and all irregularities in the metal pressed out by the forming-dies.

The forms of the invention shown in Figs. 5 and 6 are similar to that above described, except that slits 1 2 are made shorter, and forming or finishing dies of different form are used for completing the structure.

Still another form is shown in Figs. 7 and 8, this variation being produced by varying the lengths and positions of the slits. Thus it will be seen that numerous designs may be produced by simply varying the lengths and positions of the slits and employing forming or finishing dies of varying forms.

In such forms of fence as illustrated in Figs. 6 and 8, and in many other forms which might be devised where comparatively wide spaces of metal, as 7, Figs. 6 and 8, are left, such spaces are provided with depressions 8 by means of suitable dies, such depressions serving to strengthen the structure as well as to add to its ornamental appearance. These depressions 8 may be made semicircular in cross-section or of any other desired form, and where it is desired to produce a structure of more than usual stability two sections of fence, such as shown in Fig. 8, may be se-

cured together, in which case the concave or semicircular depressions of one section of the fence will register with those of the other section and produce in effect a round hollow bar.

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

1. The herein-described process of making sheet-metal fencing, consisting in first cutting the blank to produce picket-heads and slitting the body of the blank, next drawing out the blank thus cut and slitted, and then subjecting the structure to forming or finishing dies, substantially as set forth.

2. The herein-described process of making sheet-metal fencing, consisting in first cutting the blank to produce picket-heads; second, producing slits in the body of the blank; third, drawing out the blank thus cut and slit, and, fourth, subjecting the structure to forming or finishing dies, substantially as set forth.

3. The herein-described process of making sheet-metal fencing, consisting in first cutting the blank to produce picket-heads and producing slits in the body of the blank, then producing depressions in the material of the structure, drawing out the blank thus cut and slitted, and, finally, subjecting the structure to forming and finishing dies, substantially as set forth.

4. A sheet-metal blank from which a section of fence is to be made, said blank being cut at its top to produce picket-heads and having in its body a series of slits adapted to produce open spaces when the blank shall have been drawn out, substantially as set forth.

In testimony whereof I have signed this specification in the presence of two subscribing witnesses.

WILLIAM LIVINGSTONE.

Witnesses:

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J. E. VAN WINKLE.