

(No Model.)

2 Sheets—Sheet 1.

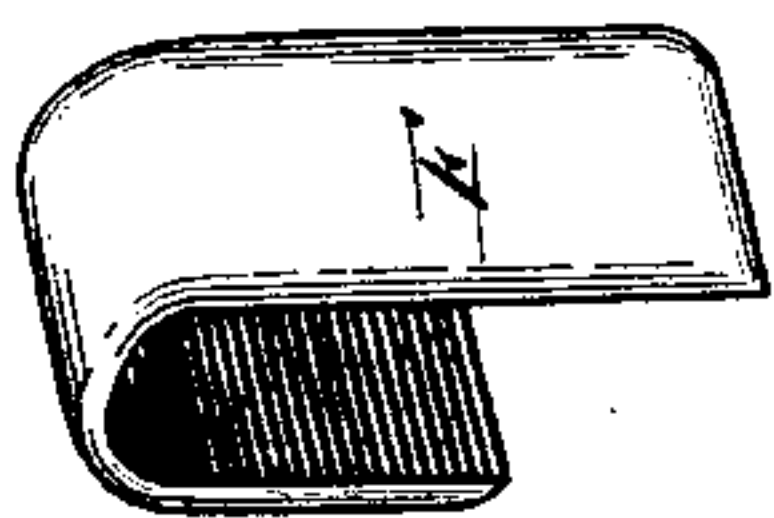
F. HAINSWORTH.

METHOD OF MAKING SCROLL WORK.

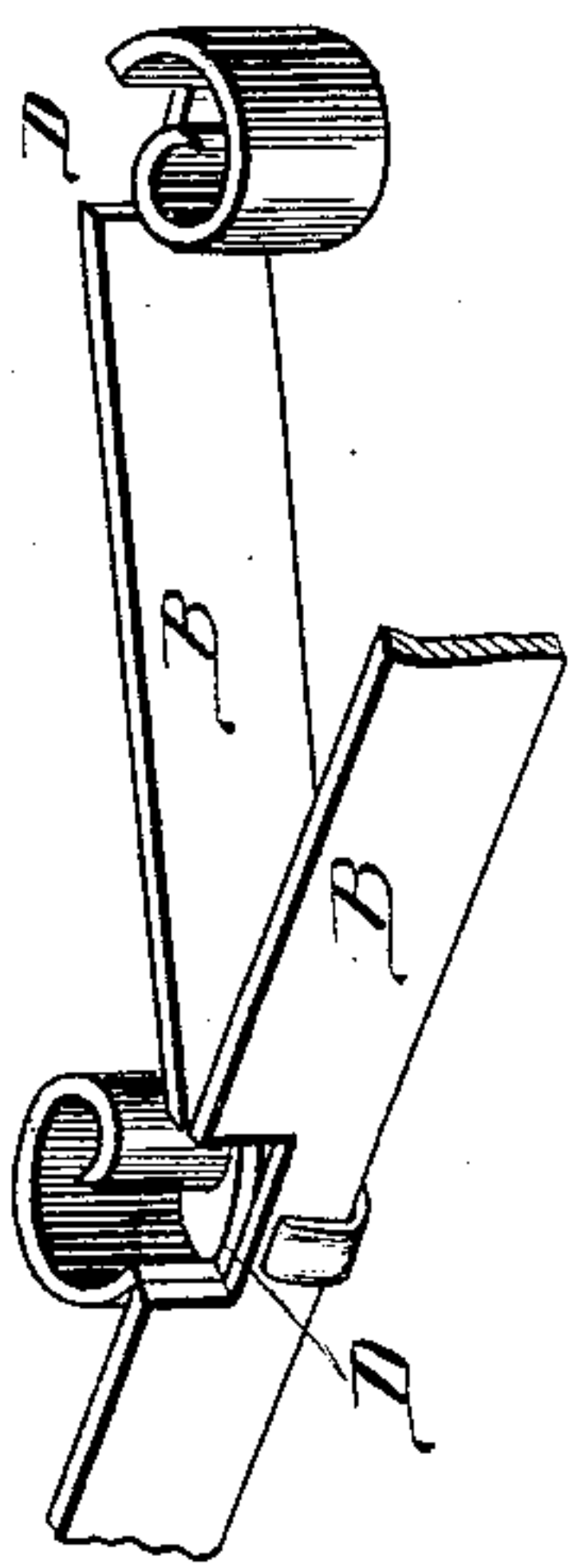
No. 351,435.

Patented Oct. 26, 1886.

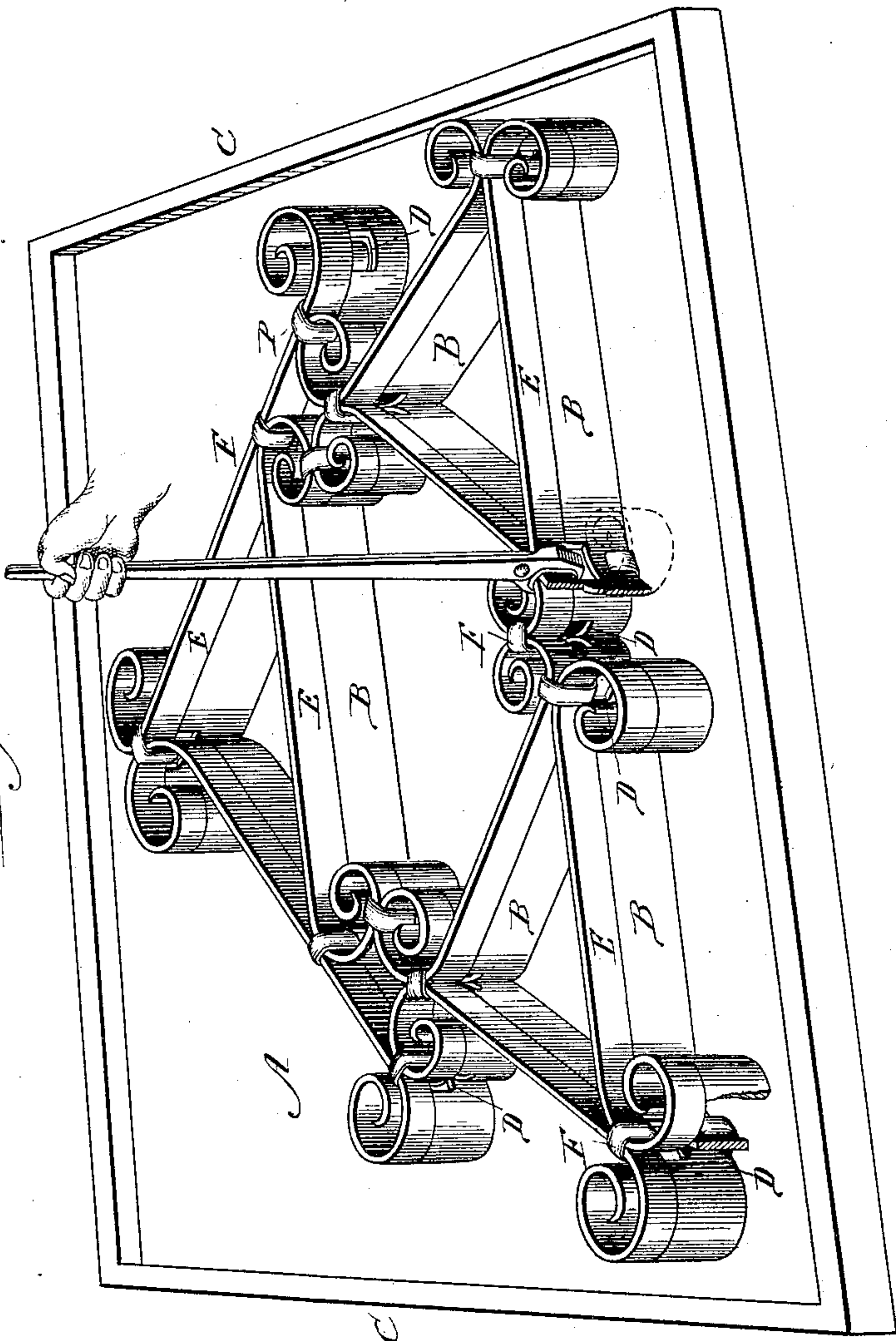
*Fig. 3.*



*Fig. 2.*



*Fig. 1.*



Witnesses,  
E. A. Fay.  
J. J. Griffen

Inventor:  
F. Hainsworth

By Jas. Bowles  
Atty.

(No Model.)

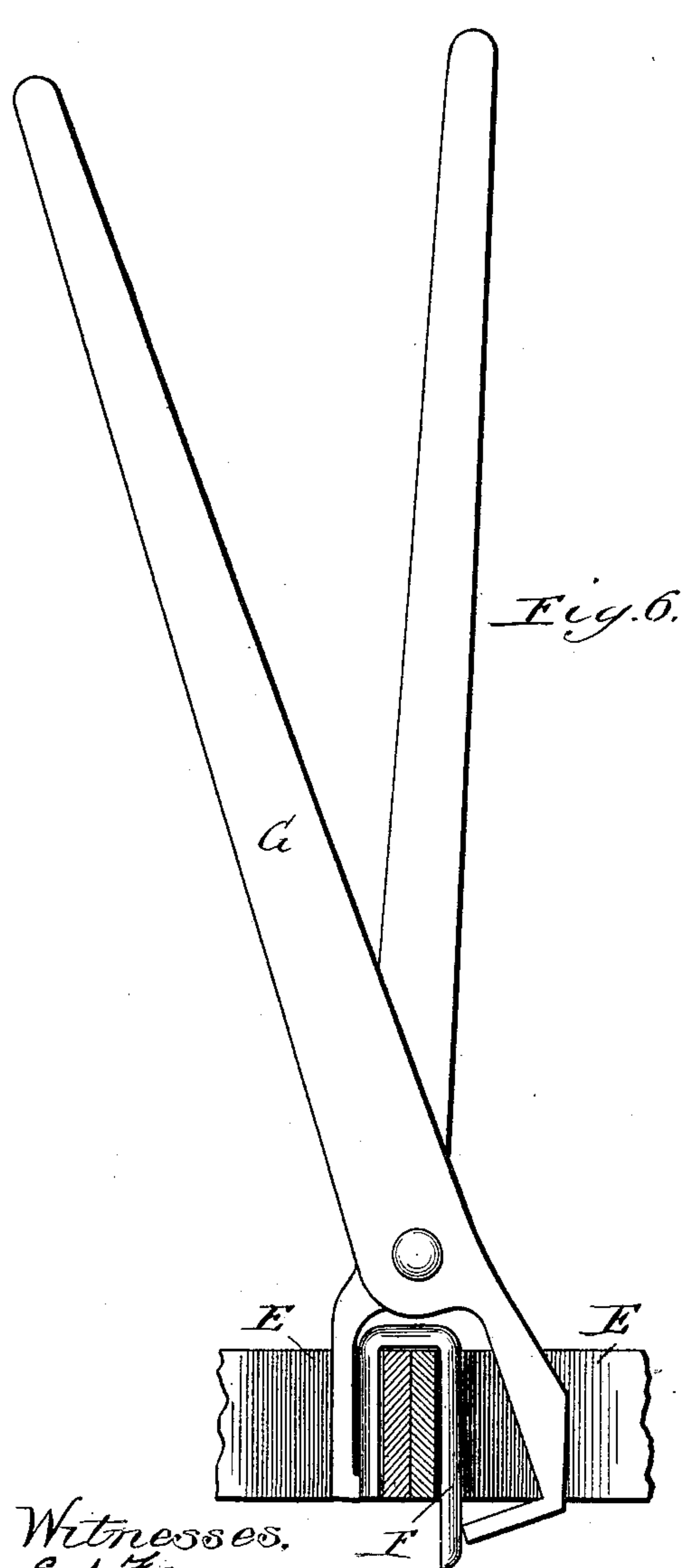
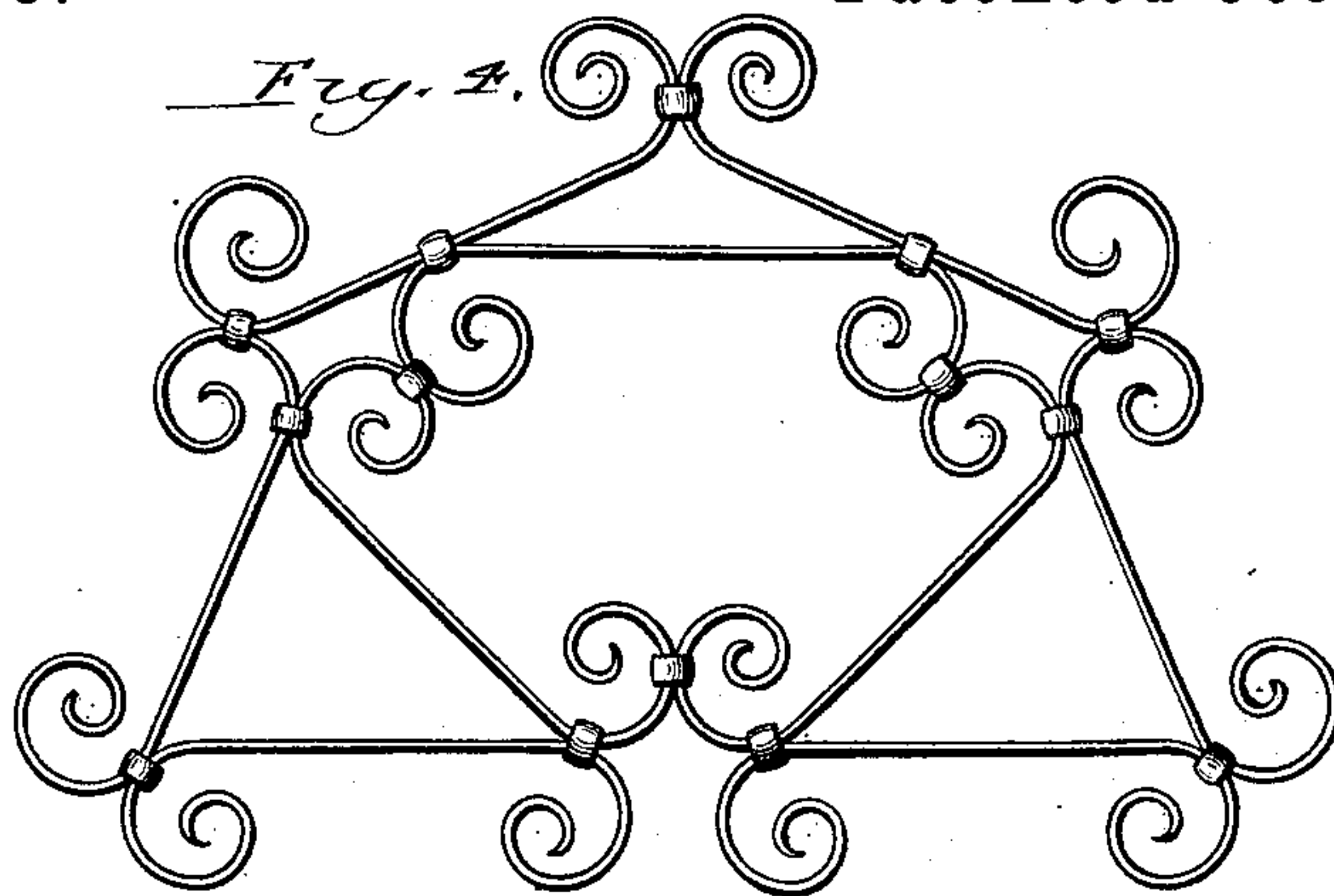
2 Sheets—Sheet 2.

F. HAINSWORTH.

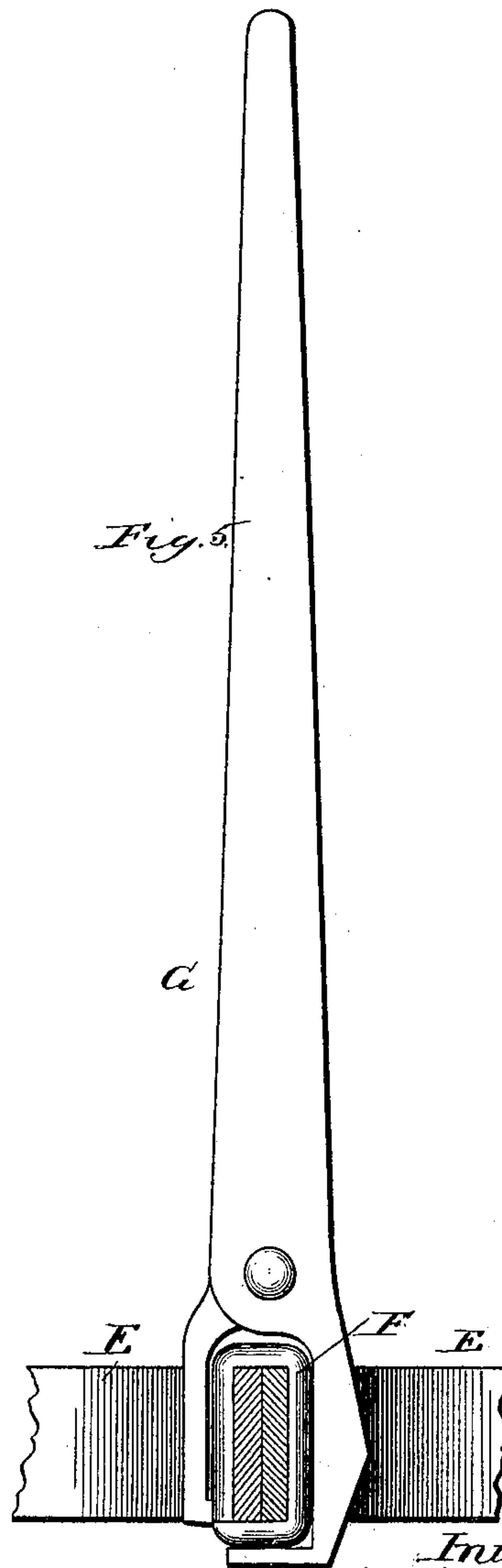
METHOD OF MAKING SCROLL WORK.

No. 351,435.

Patented Oct. 26, 1886.



Witnesses,  
E. A. Hay.  
J. J. Griffin



Inventor:  
F. Hainsworth  
By, Jas A Cowles  
Atty.



# UNITED STATES PATENT OFFICE.

FREDERICK HAINSWORTH, OF CHICAGO, ILLINOIS.

## METHOD OF MAKING SCROLL-WORK.

SPECIFICATION forming part of Letters Patent No. 351,435, dated October 26, 1886.

Application filed April 24, 1886. Serial No. 200,009. (No model.)

*To all whom it may concern:*

Be it known that I, FREDERICK HAINSWORTH, a citizen of the United States, residing in Chicago, in the State of Illinois, have invented a new and useful Improvement in the Method of Making Scroll-Work, of which the following is a specification.

In making metallic scroll-work it is quite difficult to fasten the different parts together. This arises from the fact that the points where the parts are united or joined together are in a great measure inaccessible for drilling and riveting; hence the drilling or punching has to be done by handling each piece separately previous to its being placed in position. This necessitates the handling of each piece or scroll many times, and the aggregate manipulations of the different pieces in a piece of scroll-work of ordinary size would amount to several hundred times. The riveting is also attended with many difficulties, as there is not room enough to squarely strike the rivet. To join together these different parts without repeatedly handling them, and to join them together by using a clasp ring or loop, thus making the work strong, durable, and economical, is the object of this invention.

Figure 1 is a perspective of the scroll-work placed on the table with the clamps in the immediate act of clasp ing different parts of the scrolls together. Fig. 2 is a perspective of section of frame on which the scroll-work is placed when being joined together. Fig. 3 is a perspective of clasp used in fastening the scroll-work together. Fig. 4 is a plan view of scroll-work completed by my method. Fig. 5 shows the clasp in position on the scrolls just as the open ends have been joined, and also shows the tool used for this purpose. Fig. 6 shows the tool used to close the open ends of the clasp just in the act of closing the open ends.

A is a box with elevated sides C C placed on a table, in which is placed the frame B B. This frame substantially conforms to the shape of the scroll-work to be made. In this frame, and below the places where the points of the scrolls are to be fastened together, a portion of the frame is cut away, as at D D. The different parts of the scroll-work F F are placed in po-

sition on the frame B B, with the points to be joined or fastened together immediately over the cut-away places D D of the frame. A loop, E, with one arm thereof longer than the other, is placed on the scroll-work when the parts are to be fastened together. (See Figs. 1, 5, and 6.) Before placing it in position, as last described, the loop is heated to a white heat, so as to easily bend.

The tool G, made similar to a pair of tongs, with one jaw thereof having an inwardly angular extension, is placed in position over the loop (see Fig. 6) when the jaws are closed, (see Fig. 5,) and the angular extension of the jaw closes the extended end of the loop around the scrolls, thus holding the different parts together. The cut-away places D D in the frame allow the extended end of the loop to swing around under the scrolls. The extended end of the arm is just long enough to clasp the under side of the scrolls, as shown in Fig. 5.

The frame-work B B is for the purpose of securing an elevated position on the table for the scroll-work, so the cut-away parts in the frame can be made at the proper places. The same end can be accomplished by cutting away parts in the table; also, the same can be accomplished by covering the table with narrow lengths of iron, then forming the scroll-work on the narrow lengths of iron, and then removing a length of iron under the points of the scroll-work, which leaves an open space below the points or places in the scrolls to be fastened together.

It will be observed that my improvement in making the scroll-work as herein shown consists in forming the separate scrolls, placing them in position on a table with free open spaces below the points where the different scrolls are to be fastened together, then embracing these points of the scrolls with the heated loops, and finally swinging the extended end or arm of the loop, by using the angular-jawed tongs, across the under side of the scrolls, through the open space beneath, thus clasp ing the joined parts of the scrolls with a ring, which makes the completed work very strong. This is accomplished without repeatedly handling each separate scroll, as would be the case if each were drilled or

punched before being placed in position on the table. The necessity for handling the scrolls in the act of riveting is also avoided.

I claim—

- 5 That improvement in the art of fastening together scroll-work which consists in placing the scrolls on a frame elevated above the table or support, said table having spaces immediately under the points where the scrolls are to  
10 be secured together, then passing an open-

ended loop having one arm thereof longer than the other over the scrolls at the points to be united, and then closing the open ends of the loop and tightly binding the scrolls by means of a suitable tool, all substantially as described. 15

FREDERICK HAINSWORTH.

Witnesses:

FELIX J. GRIFFEN,  
JAS. A. COWLES.