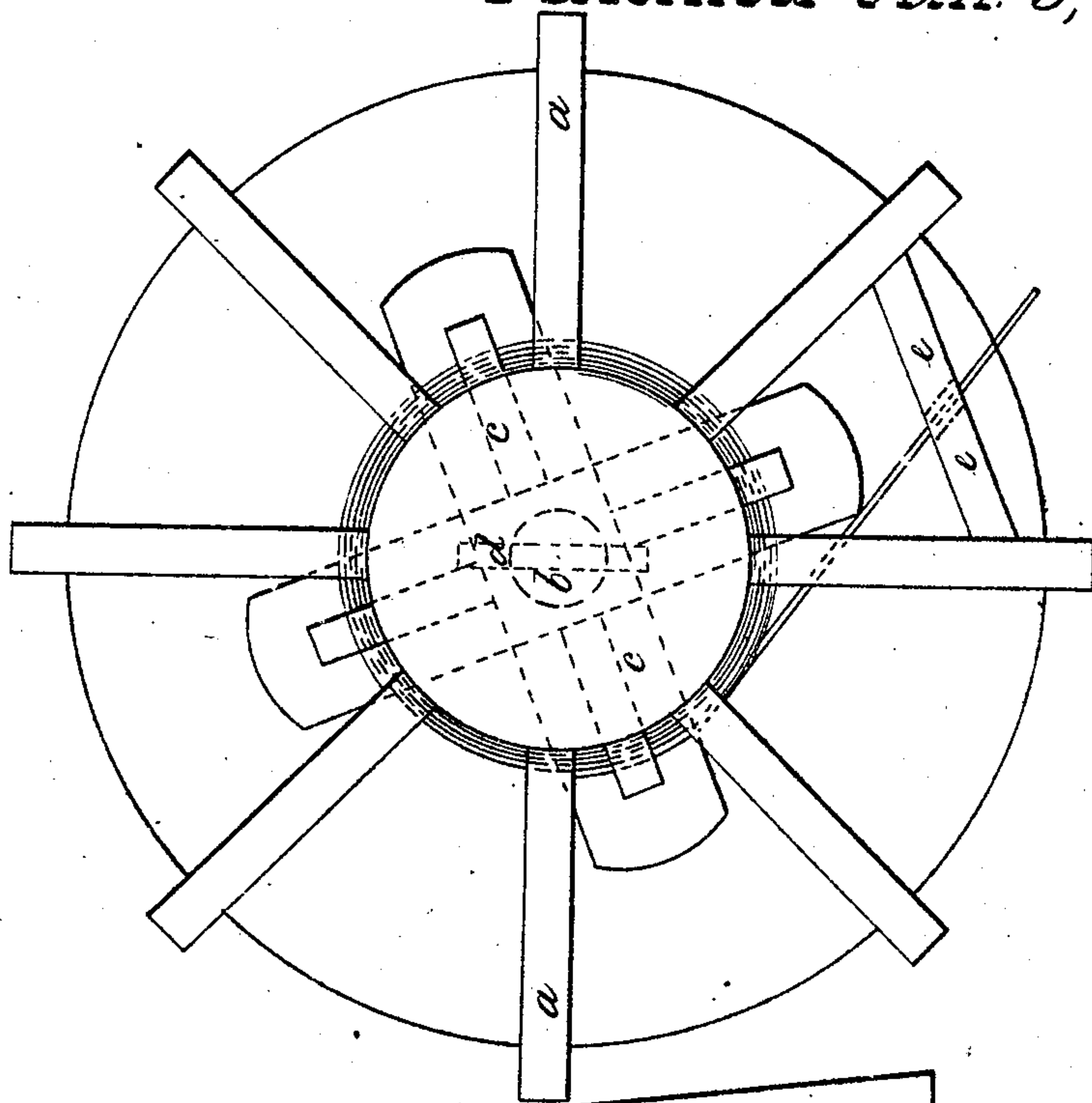
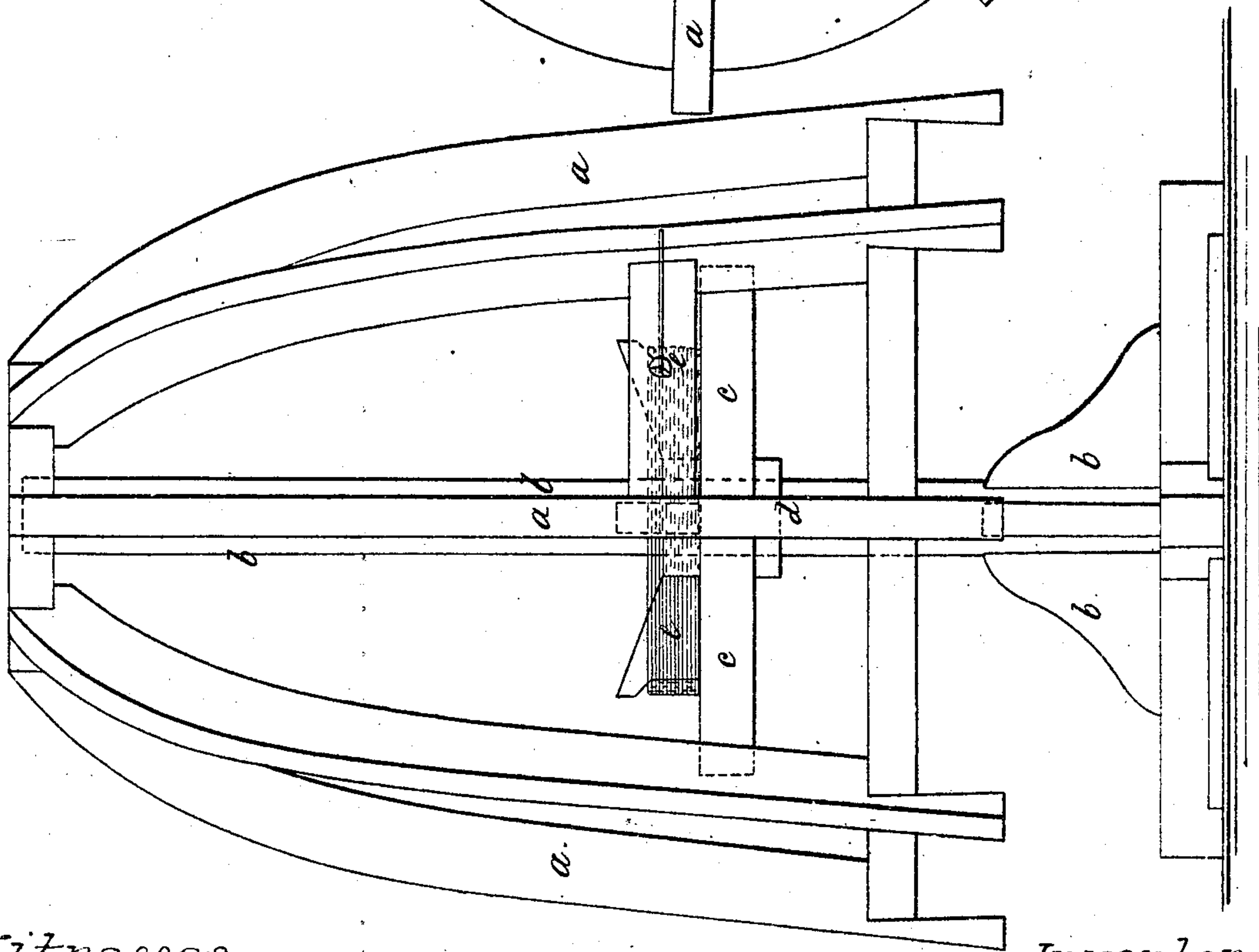


*F. S. Otis.*  
*Hoop Skirt Machine.*  
*Nº 28598*      *Patented Jun. 5, 1860.*

*Fig. 2.*



*Fig. 1.*



*Witnesses*  
*Samuel W. Serrell*  
*Chas. H. Smith,*

*Inventor*  
*F. S. Otis*

# UNITED STATES PATENT OFFICE.

FREDERICK S. OTIS, OF BROOKLYN, NEW YORK.

## DEVICE FOR MANUFACTURING SKELETON SKIRTS.

Specification of Letters Patent No. 28,598, dated June 5, 1860.

*To all whom it may concern:*

Be it known that I, FREDERICK S. OTIS, of Brooklyn, in the county of Kings and State of New York, have invented and made  
5 a certain new and useful Improvement in Means for Making Skeleton Skirts; and I do hereby declare that the following is a full, clear, and exact description of the construction and operation of my said invention,  
10 reference being had to the annexed drawing, making part of this specification, wherein—

Figure 1, is a side elevation of my former and Fig. 2, is a plan of the same.

15 Similar marks of reference indicate the same parts.

In forming skeleton skirts it is usual to cut off the springs in various lengths according to the number of hoops to be formed  
20 in a skirt and according to the position each hoop was to occupy in the skirt. These have usually been laid away in ranges of boxes or racks, and when a skirt was to be formed one hoop of each box was taken and brought  
25 to the girl who puts the skirt together on the former. These operations required so much handling that it became necessary to dip the ends of said springs in glue or size in order that the fibrous covering might  
30 not have an opportunity to work back from the point at which said hoop was cut off; besides this the bundles of springs are usually laid on the floor in order that the operatives may sort them out and take up the springs  
35 in the order of their lengths and introduce them into the skirt. This operation often soils the fibrous covering of the springs and under all circumstances the springs have to be left rather longer than required in order  
40 that the ends may be lapped over each other a given distance and then the surplus length cut off before putting on the clasp. My said invention dispenses with all the previous operations of cutting, storing, selecting, and  
45 sorting, and obviates all the inconvenience and trouble attendant thereon.

My invention consists in the combination of a reel containing covered wire or spring for forming the hoops, with a former upon

which the skirt is put together in the proper  
50 shape, whereby the operator draws off from said reel the length of wire required for each hoop as she successively measures the same cuts it off, inserts it through the bands,  
55 puts on the clasps and then proceeds to the next hoop. By this operation there is no waste, there is no loss of room for storing boxes, no loss of time in selecting or assorting the lengths of spring and no risk of soiling the covering of the spring.  
60

In the drawing *a*, is the former for the skeleton skirt of the desired size and shape, the same being set to revolve upon the vertical standard *b*, as usual. *c*, is a reel slipped  
65 onto said standard and resting on a cross pin *d*, through the same. *e*, is a guide between two of the former ribs (*a*,) and through this the covered spring or wire passes from the reel *c*.

The vertical tapes for the skirt are to be  
70 applied on the former in the usual manner and the operative draws off the length of covered spring or wire necessary, measures the same around the former and cuts off the  
75 length. The spring hoop is either inserted through openings in the galloons or secured to them by any usual means, and the ends are connected together by the clasps.

By leading the wire as shown in Fig. 2, the revolution of the former, which usually  
80 is from left to right will tend to wind up the covered spring on the reel and keep the same from unwinding.

The benefits resulting from my said invention need not be recapitulated, they will  
85 be evident from the foregoing.

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

The combined reel and former constructed substantially as and for the purposes specified.  
90

In witness whereof I have hereunto set my signature this sixteenth day of May 1860.

F. S. OTIS.

Witnesses:

LEMUEL W. SERRELL,  
CHAS. H. SMITH.