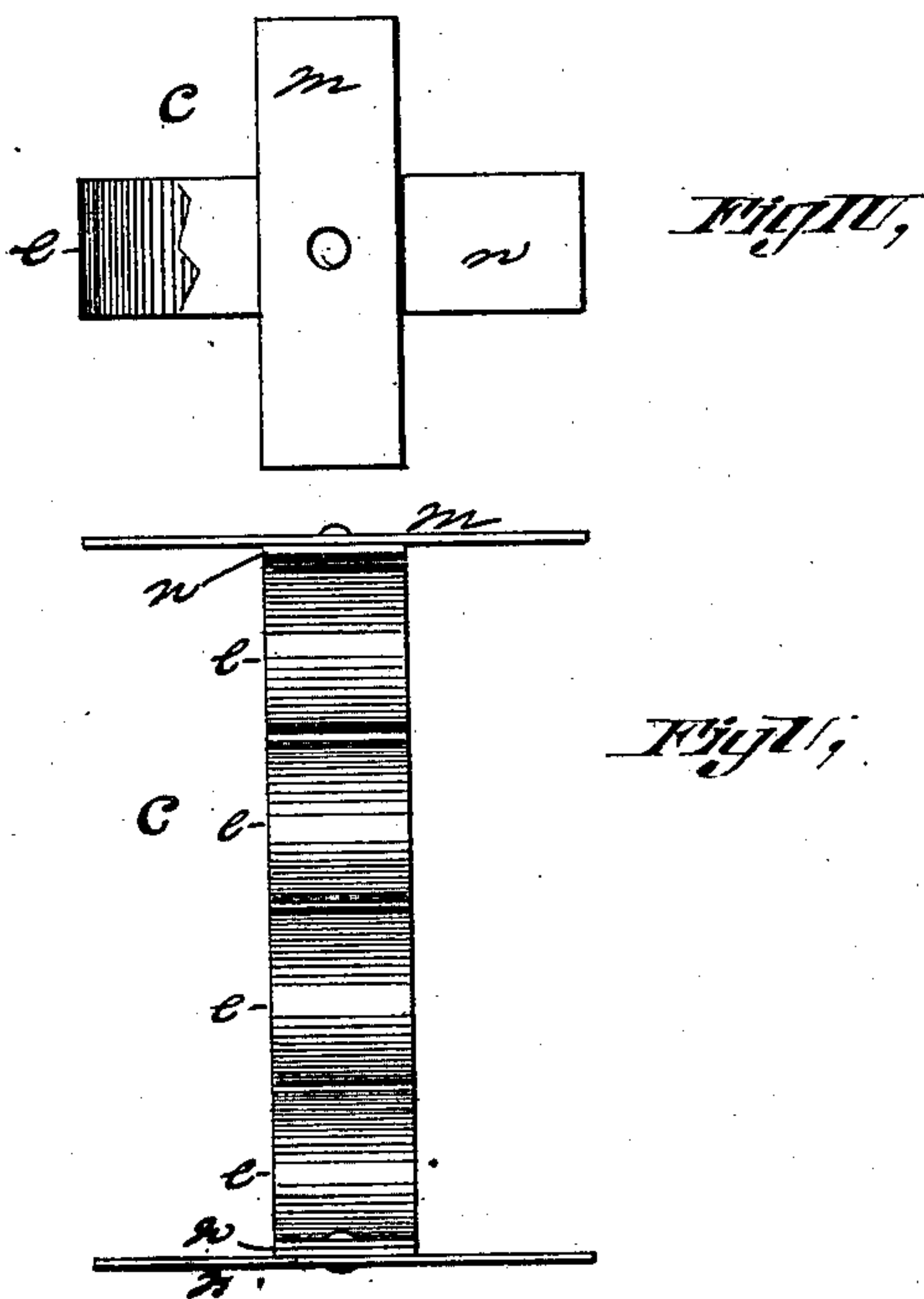
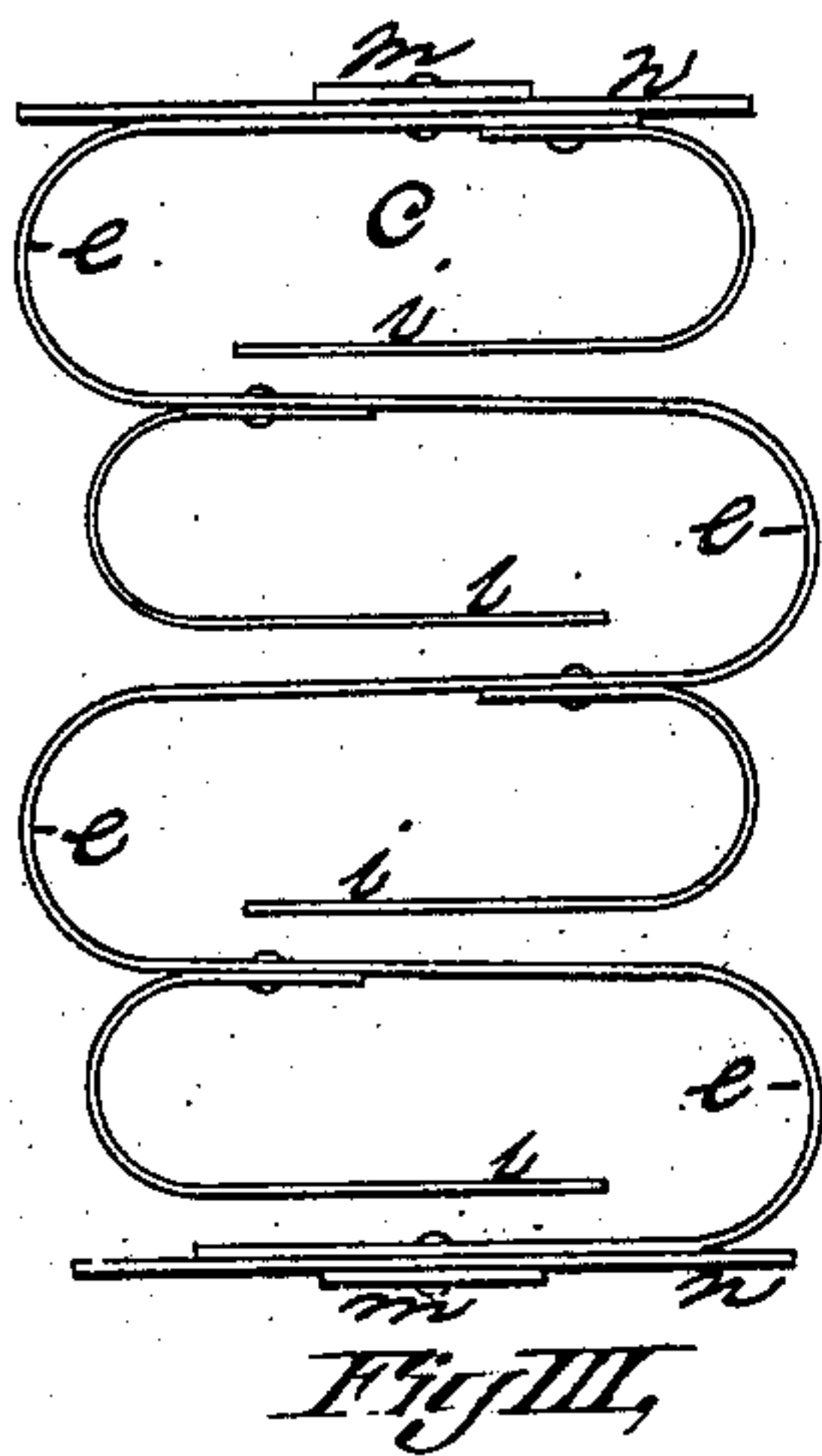
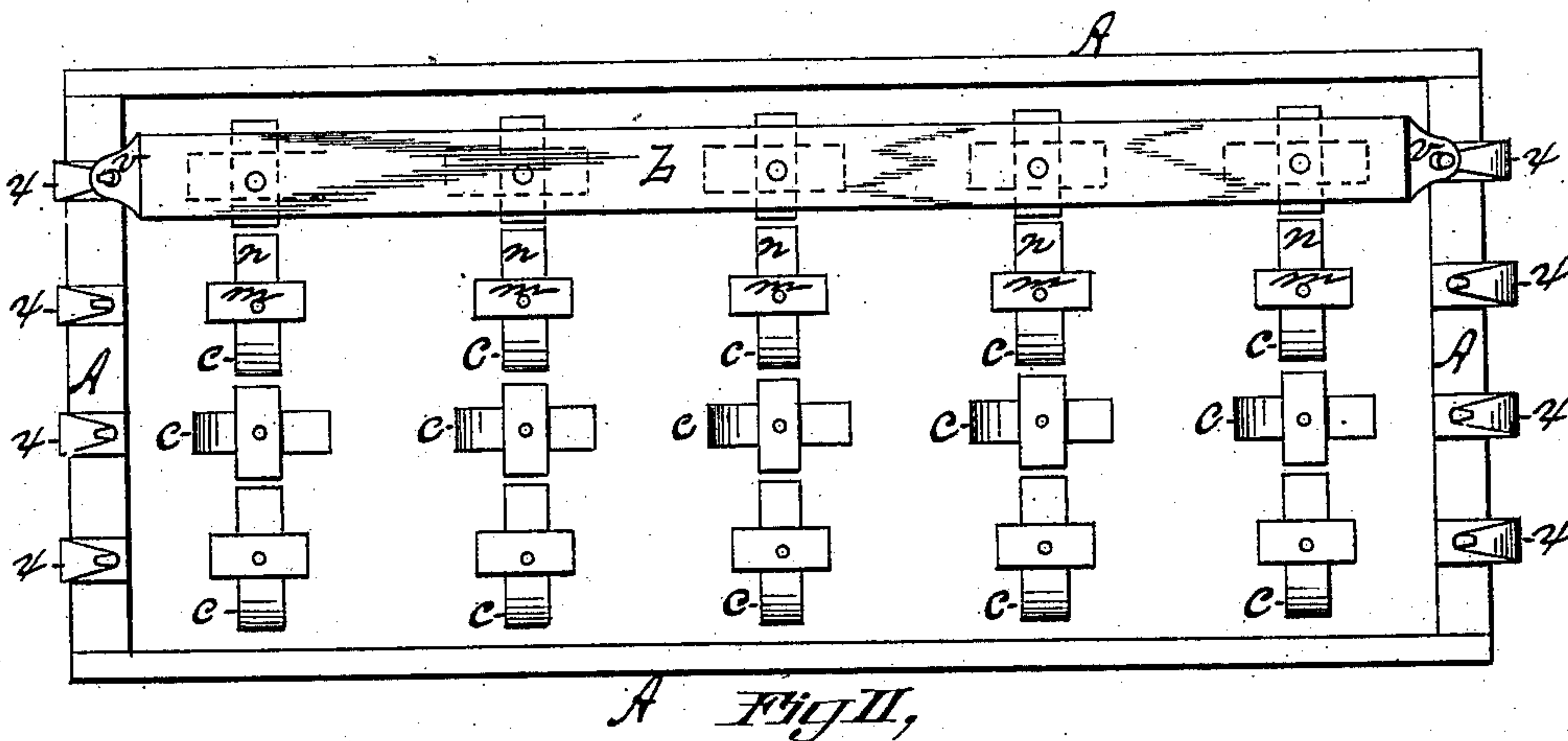
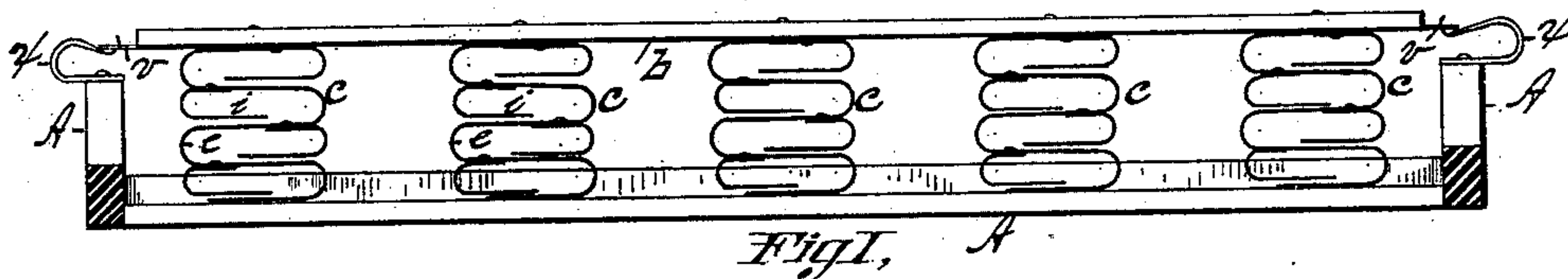


(No Model.)

J. H. SHIELDS.  
SPRING BED AND SPRING.

No. 273,401.

Patented Mar. 6, 1883.



Witnesses,  
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Inventor,  
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Attor

# UNITED STATES PATENT OFFICE.

JAMES H. SHIELDS, OF BOSTON, ASSIGNOR OF ONE-THIRD TO EDWARD B. MARSH, OF AMHERST, MASSACHUSETTS.

## SPRING-BED AND SPRING.

SPECIFICATION forming part of Letters Patent No. 273,401, dated March 6, 1883.

Application filed January 16, 1883. (No model.)

*To all whom it may concern:*

Be it known that I, JAMES H. SHIELDS, a citizen of the United States, residing at Boston, in the county of Suffolk and State of Massachusetts, have invented new and useful Improvements in Spring-Beds and Springs therefor, and for upholstering purposes, of which the following is a specification.

This invention relates to improvements in spring-beds and springs therefor, and for upholstering purposes; and it consists in the novel manner of constructing the springs of the bed, and their combination with the mattress-supporting bars thereof, and the means for supporting the latter by the bed-frame.

In the drawings forming part of this specification, Figure I is a side elevation, partly in section, and Fig. II is a plan view, with some of the mattress-bars removed, of a bed embodying my combined improvements. Fig. III is a side elevation, and Fig. IV an end view, of my improved bed and upholstery-spring, and Fig. V is an edge view of the main part of the same.

In the drawings, A is the bed-frame. *b* indicates the mattress-bearing bars. *c* indicates the springs entire; *e*, the main part thereof; and *i* the strengthening or auxiliary blades thereof. *n m* are bearing-plates secured to each end of the springs *c*. *v* are straps on the ends of the bars *b*, and *x* are spring-hooks secured to the end rails of the bed-frame A.

The spring *c* consists of the part *e*, made from an elastic, springy, metallic band, bent into a form resembling an S, or a succession of such forms, and having the bearing-plates *n m* secured to each end thereof, (one or more,) to provide a bearing-surface of greater area than the end of the spring alone would afford. Said pieces *n m* may be replaced by one of disk form or square, as preferred. Between the folds of the said part *e* are secured the single-bend auxiliary strengthening-blades *i*, as shown, one end of which is free and adapted to come to a bearing upon the part *e* of the spring under it when the latter shall have been somewhat compressed, whereby, to a certain degree, the

resistance of the spring is made to be proportionate to the load put upon it.

The bed-frame A is made in the usual form, and provided with a suitable bottom on which to secure the lower ends of the springs *c*. Said springs are set preferably in rows in said frame, in alternating positions—that is to say, the edges of the springs in one row standing opposite the sides of those in the adjoining row, as shown in Fig. II. The end rails of the frame A are provided with metallic spring-hooks *x*, to which the bearing-bars *b* are hung by means of thin metallic or leather straps *v*, secured to each end of said bars, and the upper ends of the springs *c* are secured to the under side of said bars by screws passing through said plates *n m*, one or both.

The spring-bed, constructed as aforesaid, is one of easy elasticity, and the force of the springs *c*, under the bars *b*, is supplemented by the spring force of the hooks *x*, after a certain amount of depression has been given to the mattress-bearing bars *b*. Said springs *c*, when arranged in a similar manner in the seats of furniture, provide a desirable upholstery spring.

What I claim as my invention is—

1. The within-described improved spring-bed, consisting of the frame A, having the spring-hooks *x* thereon, the bars *b*, secured by their ends to said hooks, and the springs *c*, consisting of the part *e*, bent in a succession of S forms, and having secured between the folds thereof the auxiliary blades *i*, said springs being secured between the bottom of said frame and said bars, as set forth.

2. The within-described improved bed and upholstery-spring *c*, consisting of the main part *e*, made from an elastic metallic band bent into a succession of S forms, and having secured by one end, between its folds, the auxiliary blades *i*, and having one or more bearing-plates on each end thereof, all as set forth.

JAMES H. SHIELDS.

Witnesses:

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