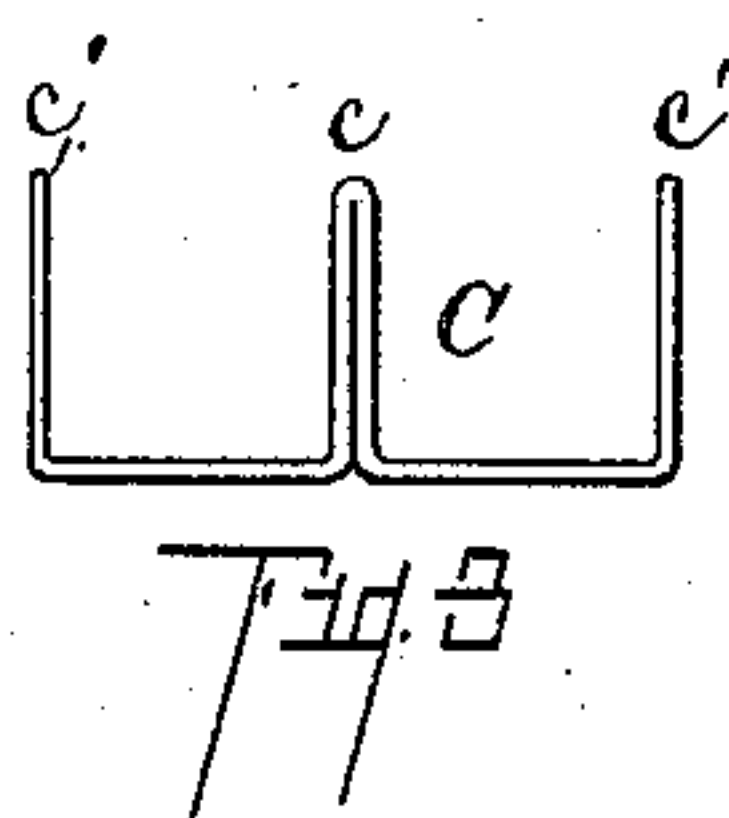
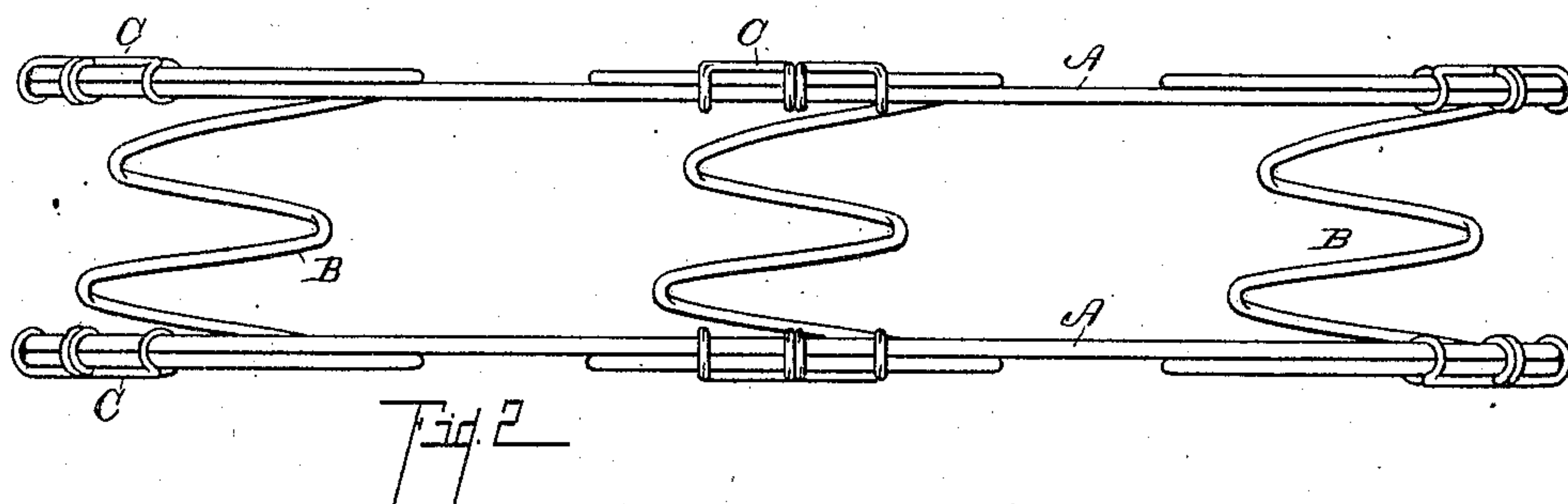
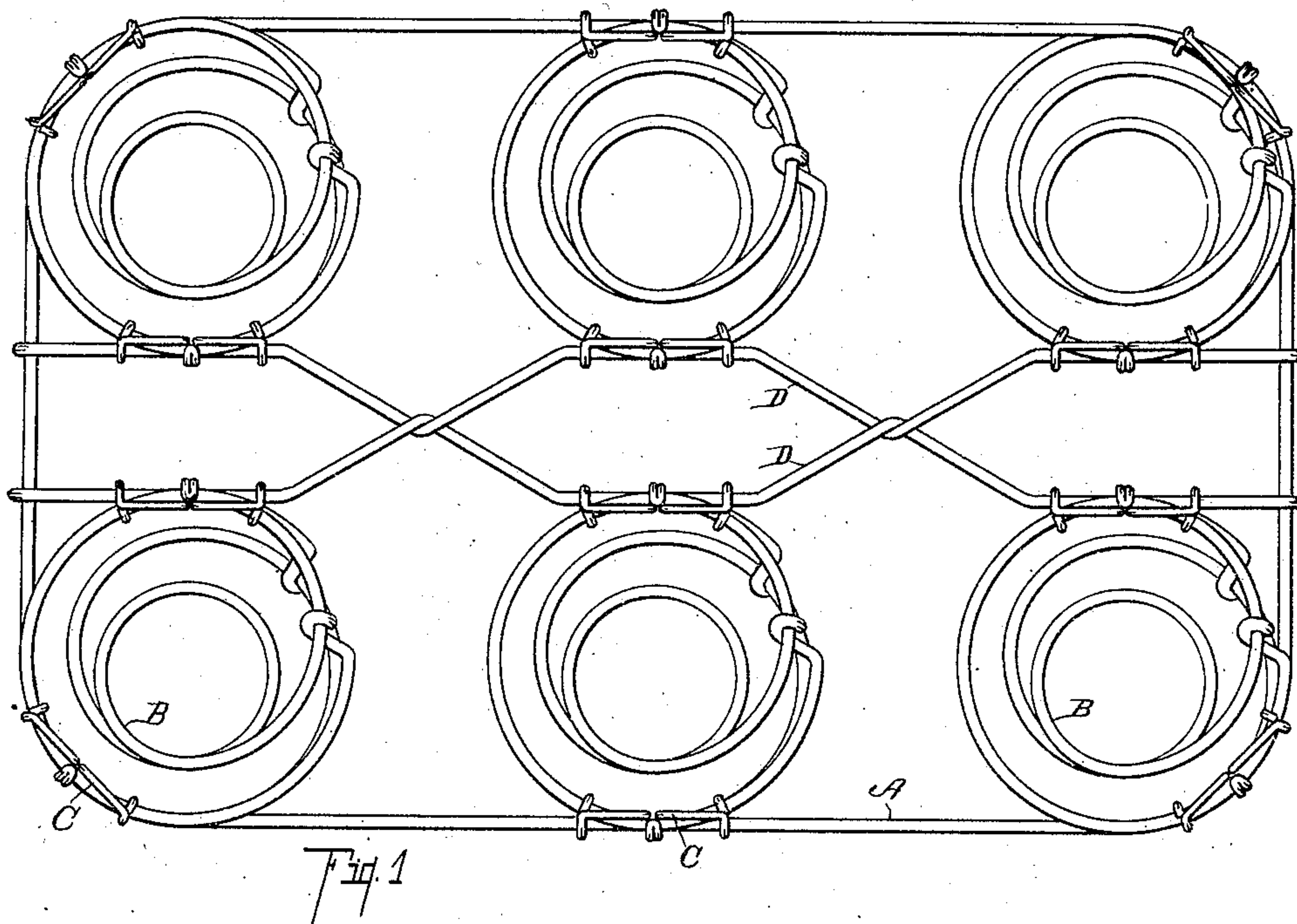


No. 785,410.

PATENTED MAR. 21, 1905.

F. P. D'ARCY.  
SPRING.

APPLICATION FILED FEB. 24, 1902.



Witnesses:

*N. E. Wood.*

*Otto B. Earl*

Inventor,

*Frank P. D'Arcy*



# UNITED STATES PATENT OFFICE.

FRANK P. D'ARCY, OF KALAMAZOO, MICHIGAN.

## SPRING.

SPECIFICATION forming part of Letters Patent No. 785,410, dated March 21, 1905.

Application filed February 24, 1902. Serial No. 95,326.

*To all whom it may concern:*

Be it known that I, FRANK P. D'ARCY, a citizen of the United States, residing at the city of Kalamazoo, in the county of Kalamazoo and State of Michigan, have invented certain new and useful Improvements in Springs, of which the following is a specification.

This invention relates to improvements in springs for cushions or beds and the like.

Much difficulty has been experienced in springs of this class where a series of spiral springs are used in maintaining them in proper relation to each other and keeping them in an upright position and in properly distributing the pressure so that it will be borne by several or all of the springs.

The object of this invention is to provide an improved cushion or bed spring or the like wherein the parts are securely retained together in a simple and efficient manner.

Another object is to provide an improved spring of the class described wherein the pressure is effectually distributed to several or all of the individual spiral springs.

A further object is to provide improved means of attaching the springs to a framework.

Further objects will definitely appear in the detailed description to follow.

I accomplish the objects of my invention by the devices and means described in the following specification.

The invention is clearly defined, and pointed out in the claims.

A structure embodying the features of my invention is fully illustrated in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is a plan view of a structure embodying the features of my invention. Fig. 2 is a side elevation view of the structure appearing in Fig. 1. Fig. 3 is a plan view of the fastening device C.

In the drawings similar letters of reference refer to the similar parts throughout the several views.

Referring to the lettered parts of the drawings, A represents the outer rail of the springs.

B represents spiral springs of the usual construction. Cross or binding rods D D are provided, and these are preferably looped to-

gether in pairs, as clearly appears in Fig. 1. The several parts are secured together by the fastening device C, preferably made of wire formed in a double loop, as clearly appears in Fig. 3. The parts are placed together in proper relation and the fastener C clamped upon the same by bending the central arm *c* and the end arms *c' c'* about the parts to be united. This fastening arranged in this way prevents any rolling action between the parts and holds them securely in position.

I am aware that parts in springs have been united by a wire fastener having two arms, as *c' c'*; but such structures have proved unsatisfactory in that the parts slip and roll upon each other and the spring when used soon gets out of shape. My improved structure, however, by making use of three or more connected wires unites the parts securely, and they may be subjected to the most severe usage without displacing the parts.

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

1. In a spring structure, the combination of a wire frame; spiral springs arranged in said frame, so that portions thereof and portions of said frame overlap, and fasteners for securing said springs in position in said frame consisting of pieces of wire formed into double loops having comparatively wide bases, the central and outer arms of said fasteners being clamped about the overlapped portions of said frame and springs in opposite directions, for the purpose specified.

2. In a spring structure, the combination of a wire frame; spiral springs arranged in said frame, so that portions thereof and portions of said frame overlap; and fasteners for securing said springs in position in said frame consisting of pieces of wire formed into double loops having comparatively wide bases, the arms of said fasteners being clamped about the frame and springs, for the purpose specified.

In witness whereof I have hereunto set my hand and seal in the presence of two witnesses.

FRANK P. D'ARCY. [L. S.]

Witnesses:

EMMA E. ADAMS,  
OTIS A. EARL.