

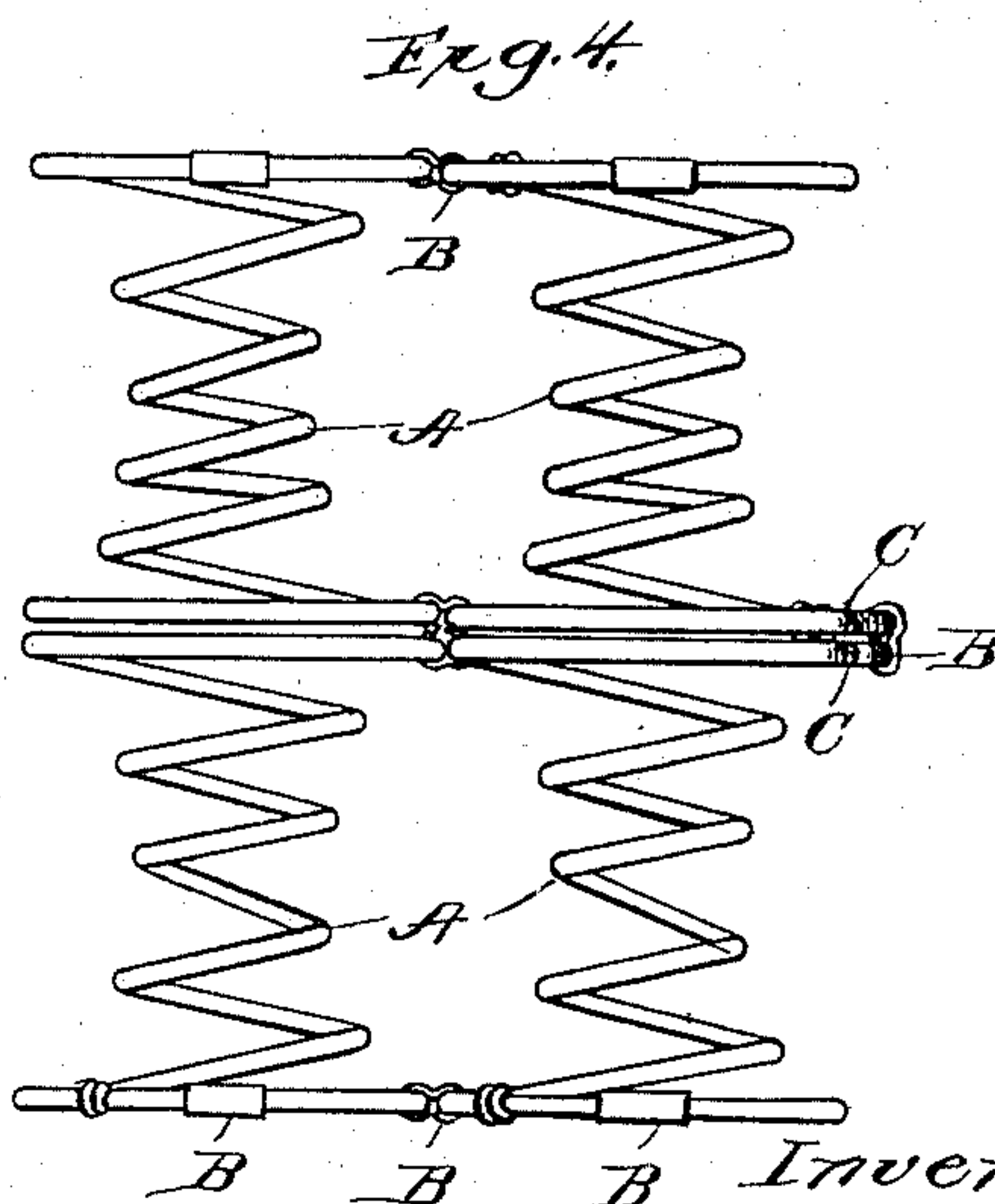
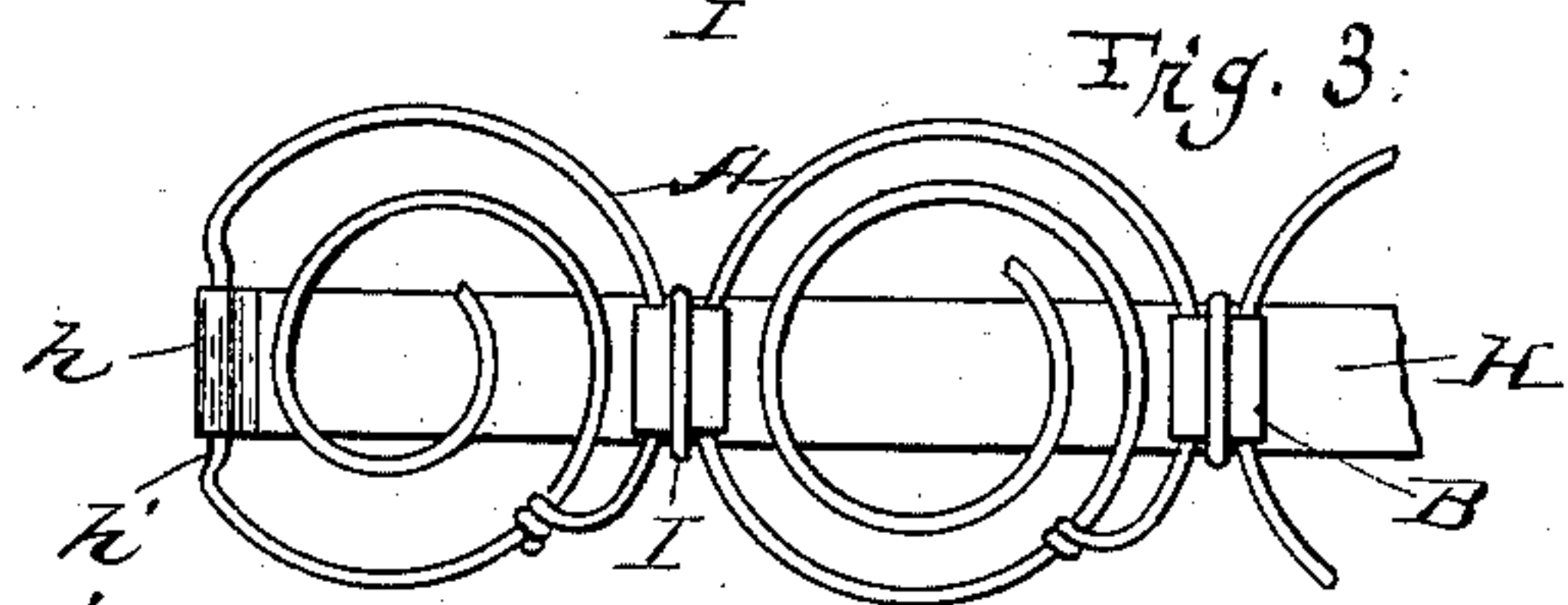
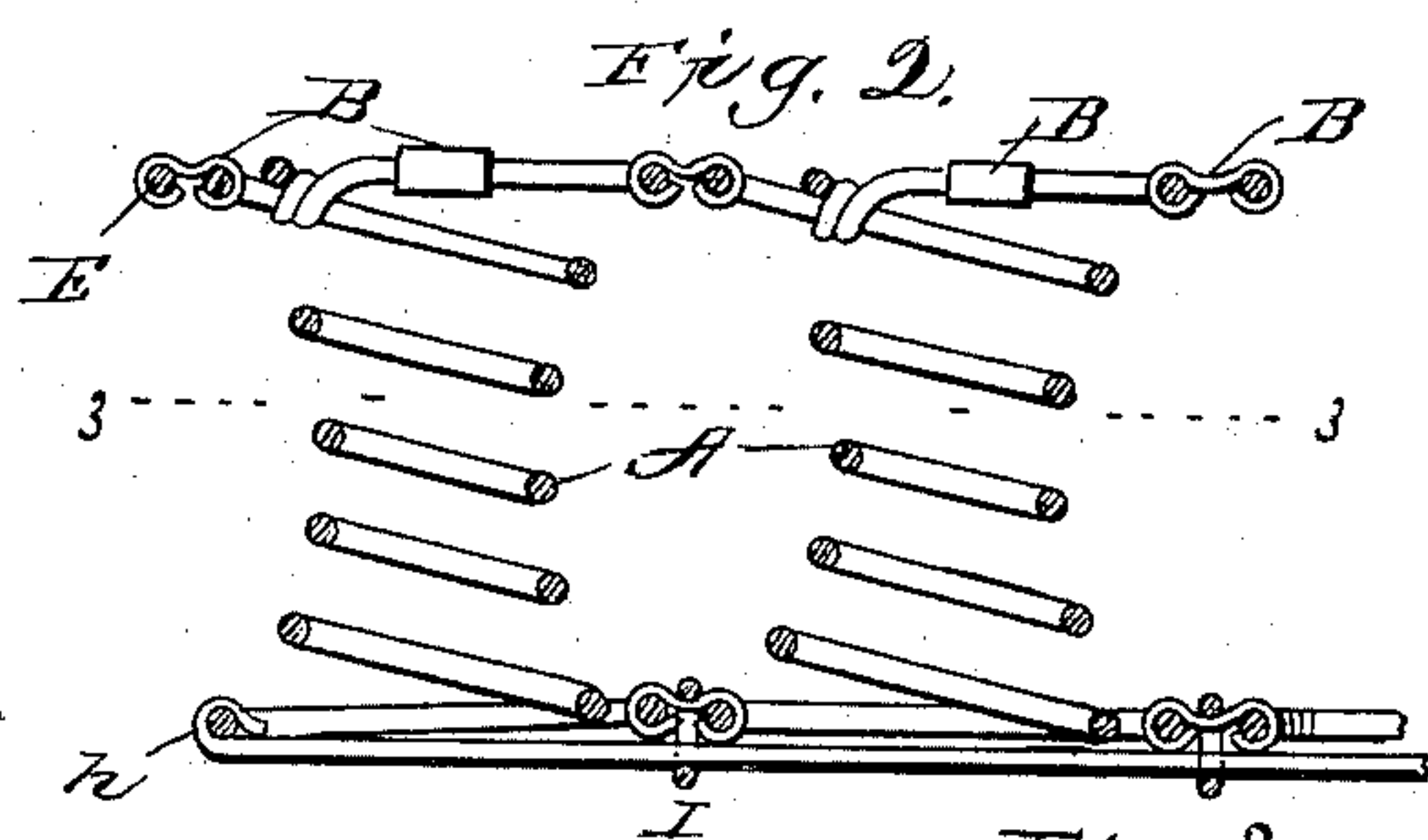
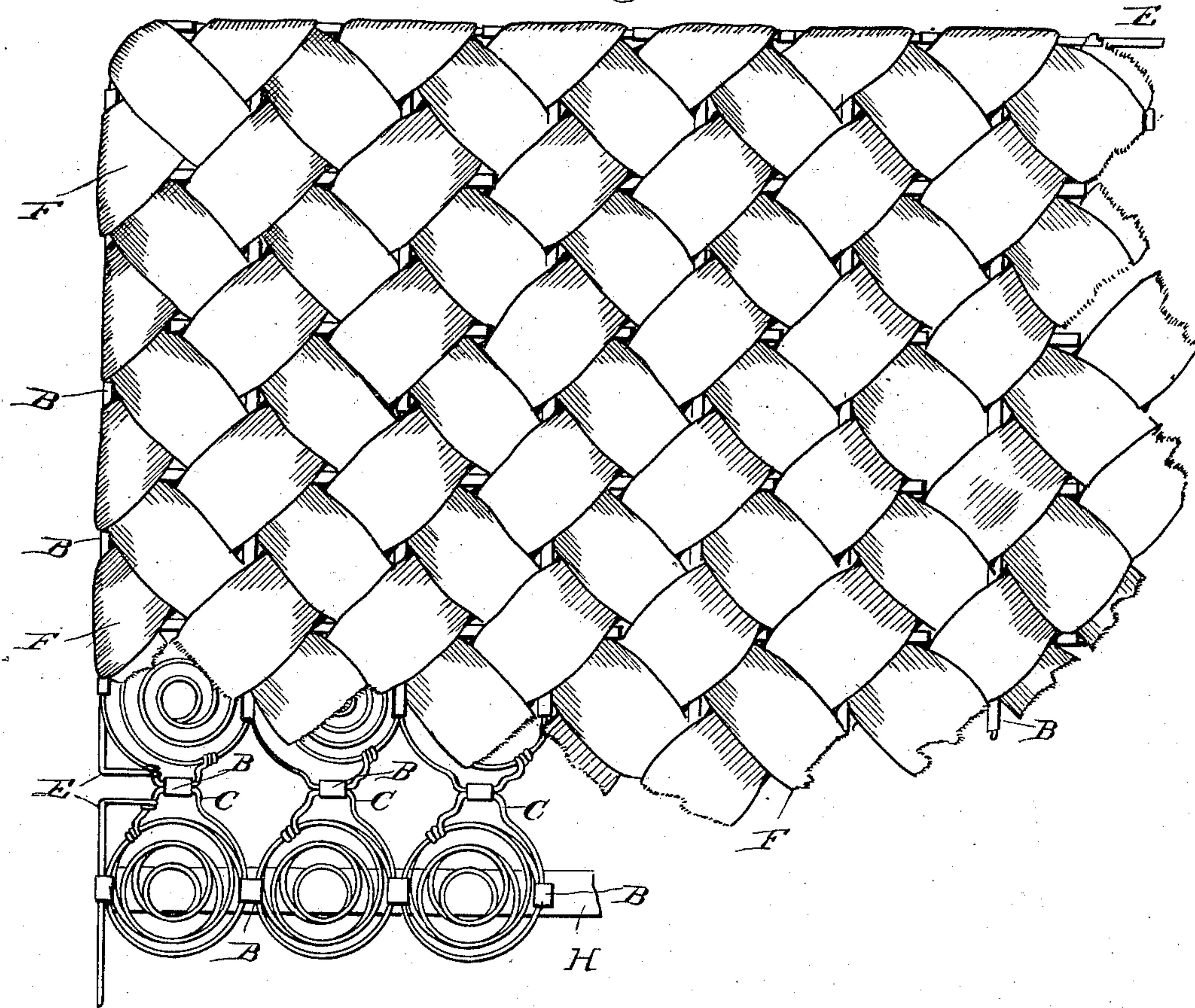
(No Model.)

P. FRASER.
MATTRESS BED SPRING.

No. 535,367.

Patented Mar. 12, 1895.

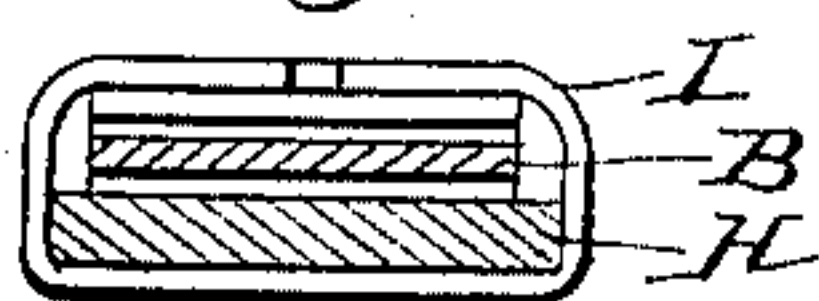
Fig. 1



Witnesses:

J. M. Fowler Jr.
Aly Stewart

Fig. 5



Inventor,
Peter Fraser,
By *Charles H. Hurd*
his Attorneys.

UNITED STATES PATENT OFFICE.

PETER FRASER, OF WHITMAN, ASSIGNOR TO THE ATLAS TACK CORPORATION, OF BOSTON, MASSACHUSETTS.

MATTRESS BED-SPRING.

SPECIFICATION forming part of Letters Patent No. 535,367, dated March 12, 1895.

Application filed May 29, 1894. Serial No. 512,875. (No model.)

To all whom it may concern:

Be it known that I, PETER FRASER, of Whitman, in the county of Plymouth and State of Massachusetts, have invented certain new and useful Improvements in Mattress Bed-Springs; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of this specification, and to the letters of reference marked thereon.

This invention relates to improvements in that class of bed bottoms employing a series of convolute springs, and more especially to that class employing double convolute springs, *i. e.*, having convolutes large at top and bottom and small at the center.

The object of the invention is to form a unitary structure which, while capable of folding, will nevertheless, have all the advantages of a mattress in that it may be placed on the ordinary slats where it will hold its shape under all circumstances and may be used with but a thin top covering if so desired.

To the above ends the invention consists in certain novel details of construction and combinations and arrangements of parts, all as will be now described and pointed out particularly in the appended claims.

Referring to the accompanying drawings: Figure 1 is a detail top plan and partial section of a mattress spring embodying my present invention. Fig. 2 is a side elevation of two of the springs showing the manner of connecting the same. Fig. 3 is a section on the line 3--3, Fig. 2. Fig. 4 is a detail sectional elevation showing the manner of folding. Fig. 5 is a detail.

Similar letters of reference in the several figures indicate the same parts.

In constructing a mattress spring in accordance with the present invention, a sufficient number of double convolute springs, (by which I mean springs having the convolutions at top and bottom larger than at the center) to form a mattress of the desired size when placed side by side, are provided. Each of these springs, lettered A in the accompanying drawings, is secured to the adjacent springs at top and bottom by metallic clips B which

in effect unite the springs into an integral structure or mattress which may be readily handled and forms a united spring surface at top and bottom.

In order to make the mattress of proper size for handling and transporting, the metallic clips are preferably omitted on one side along the center line. Thus the clips on the opposite side along said line, will form hinges which will allow the two sections to fold together. With such an arrangement, however, some difficulty is experienced because of the liability of the clips to slip out of line, and with a view to overcoming this, I now form off-sets C in the top convolutes of the springs along the line of fold, as shown clearly in Figs. 1 and 4, and secure the clips B within these off-sets. Thus they will be held in place under all conditions and the two sections will always fold together smoothly and without distorting any of the springs.

Around the upper edge of the springs there is placed an edging wire E (Figs. 1 and 2) for binding the top convolutes of the springs on the outside, and also to serve as the turning bar for the webbing F, which latter is in the form of strips of such width that they will pass through the top convolutes of the springs. As shown in Fig. 1 and as preferred, the webbing runs diagonally and in one direction passes through beneath the top convolute of each spring except at the edge, and the webbing running at right angles thereto passes over the said convolutes but beneath the other webbing within each spring. The effect of such weaving is to form a practically integral surface upon which it is unnecessary to put more than a thin hair or fiber covering in order to form a most comfortable bed.

Spring mattresses of this kind are adapted to be placed and supported upon the ordinary slats of the bedstead, and although each spring is secured on four sides at the bottom, still in practice, it is found that a certain amount of sagging will take place between the slats. This I now overcome by placing along the bottom of the lines of springs transversely of the slats, thin strips H preferably of strip or band metal. The strips are secured in place by staples or equivalent fastening devices I passing around the clips between the springs,

thereby not only preventing sagging, but incidentally holding the clips in place and preserving the shape of the bottom of the springs where they are liable to be distorted by contact with the bed slats.

Where metal strips are used as shown, they may be secured at the ends by being bent up around the bottom convolute of the last spring as at *h* and further, if desired, the spring may be given an in-set *h'* at this point to prevent any lateral movement of the strip.

The webbing is interwoven with the top convolutes of the springs over the whole surface, it being found that it will not interfere with the folding in the least and hence no ridges or unevenness of any kind exists in the top surface of the mattress.

Having thus described my invention, what I claim as new is—

1. In a mattress spring, the combination with the series of convolute springs placed in juxtaposition and united to each other to form a unitary structure, of strips of webbing

passed diagonally across the spring, turned at the sides of the spring and passed across diagonally at a different angle, whereby long lengths of webbing may be employed, the strips being interwoven with each other and one of them interlaced through the top convolutes of the springs; substantially as described.

2. In a mattress spring, the combination with the series of convolute springs placed in juxtaposition and united to each other to form a unitary structure and an edge wire secured to the top convolutes of the edge springs, of strips of webbing passed diagonally across the springs, the strips being interwoven with each other and one of them interlaced through the top convolutes of the springs; substantially as described.

Dated May 23, 1894.

PETER FRASER.

Witnesses:

W. L. PUTNAM,
A. E. WALKER.