

(No Model.)

O. HOWE.
WIRE MATTRESS.

No. 396,695.

Patented Jan. 22, 1889.

Fig: 1.

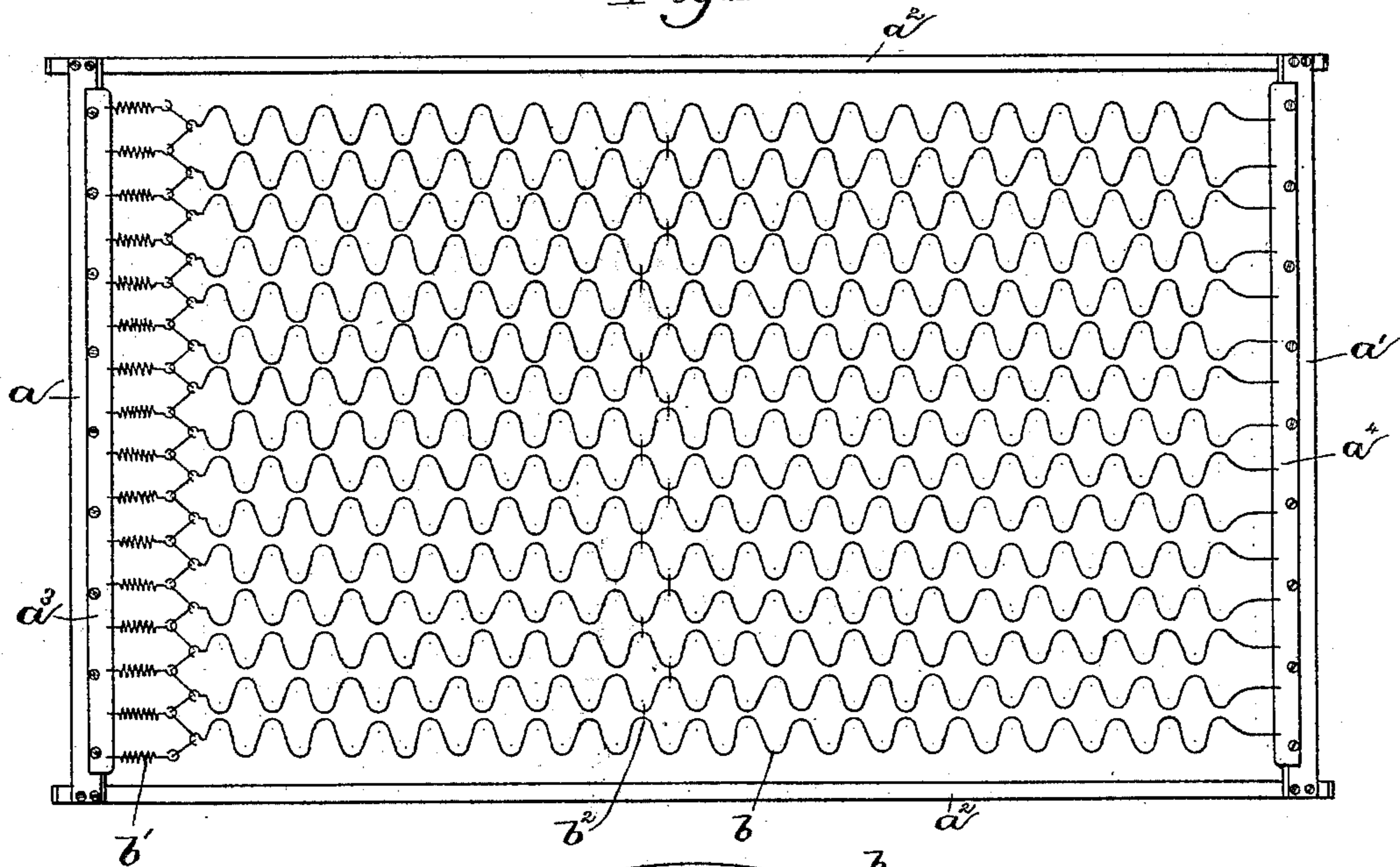


Fig: 2.

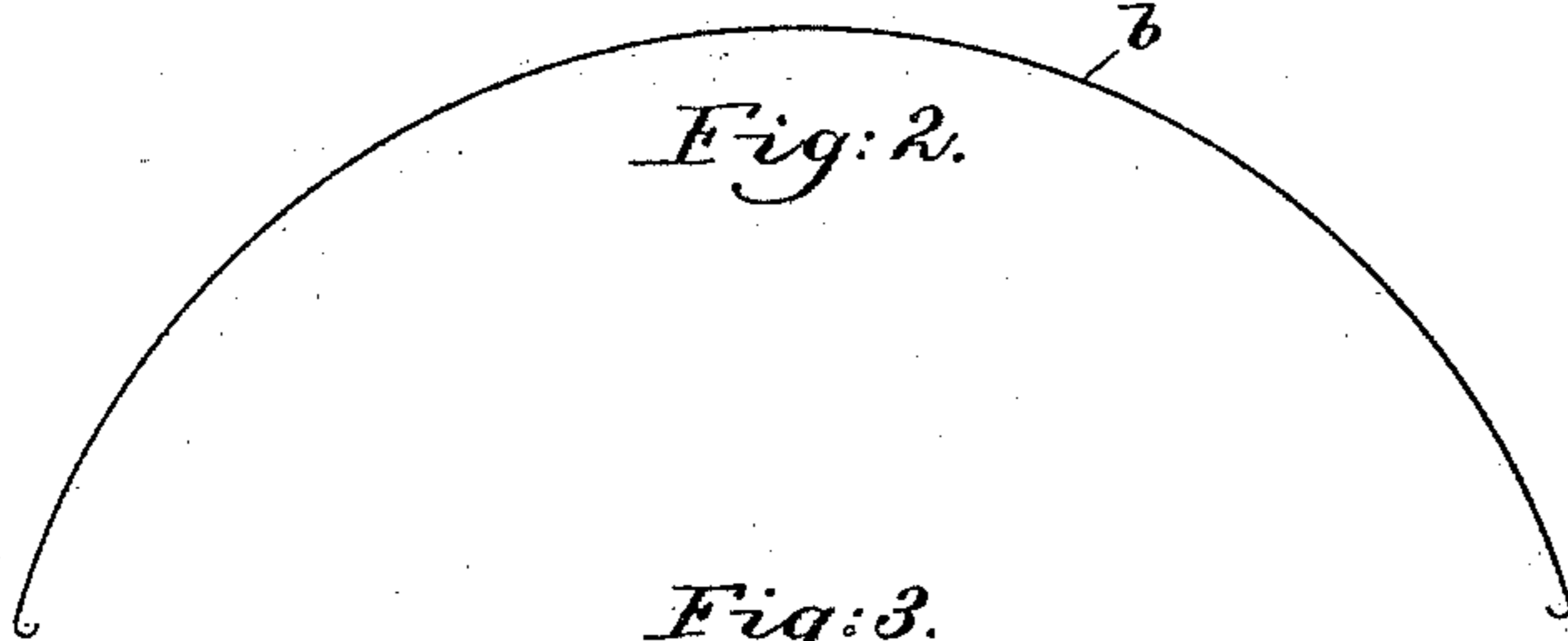


Fig: 3.

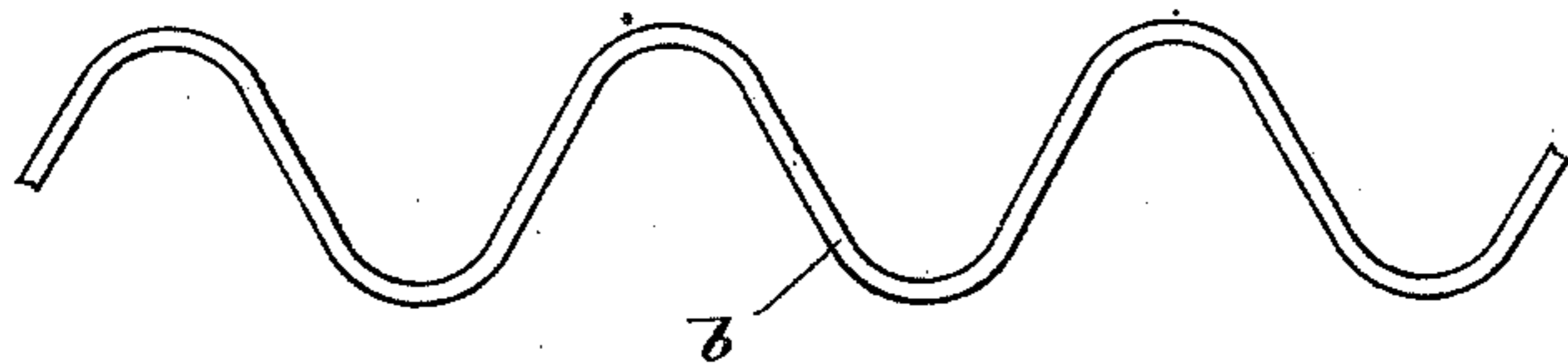
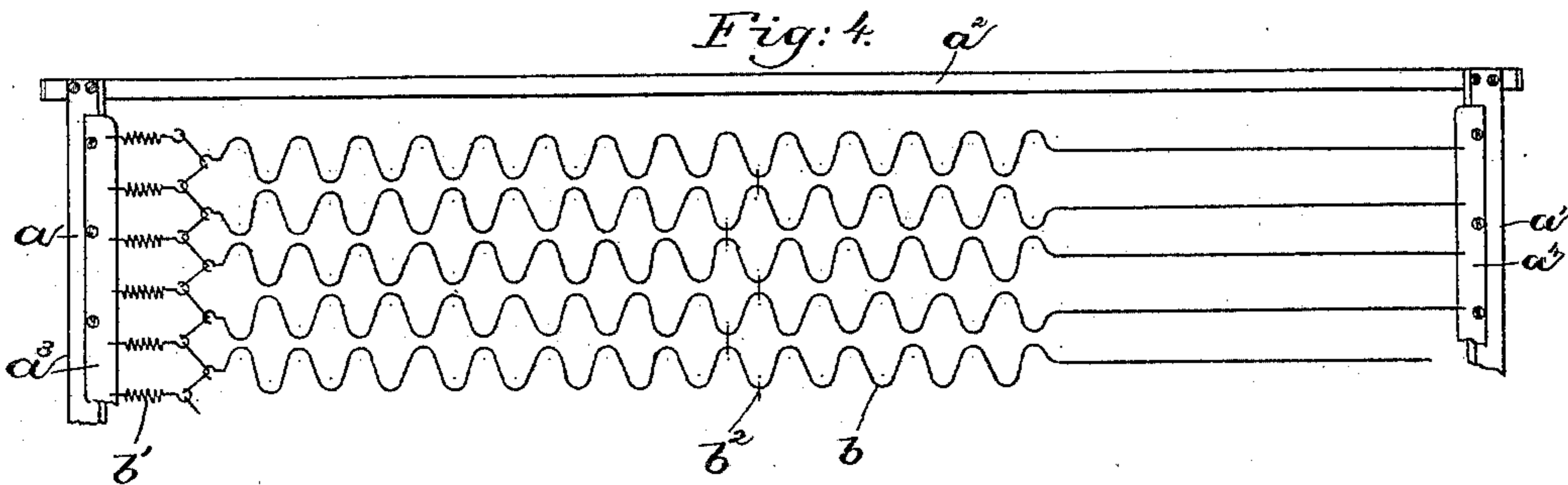


Fig: 4.



Witnesses.

Howard F. Eaton.

Fred. S. Greenleaf

Inventor.

Otis Howe.

by Leroy & Gregory
Attys.

UNITED STATES PATENT OFFICE.

OTIS HOWE, OF CAMBRIDGEPORT, MASSACHUSETTS.

WIRE MATTRESS.

SPECIFICATION forming part of Letters Patent No. 396,695, dated January 22, 1889.

Application filed February 14, 1888. Serial No. 263,961. (No model.)

To all whom it may concern:

Be it known that I, OTIS HOWE, of Cambridgeport, county of Middlesex, and State of Massachusetts, have invented an Improvement in Wire Mattresses, of which the following description, in connection with the accompanying drawings, is a specification, like letters on the drawings representing like parts.

10 This invention relates to wire mattresses, and has for its object to construct a wire mattress, as will be described, by which "sagging" or permanent distortion is obviated and a substantially-level support is afforded for
15 the hair or other mattress thereon.

Prior to my invention mattresses have been made of wire bent or coiled to form springs. Mattresses formed of spiral springs alone are too elastic and "sag" after considerable use,
20 and when stiffened or supported by braces—such as strips or bands to prevent sagging—the mattress loses a very considerable part of its elasticity or capability of yielding to weight.

25 It is the object of this invention to provide a wire mattress which will not sag or become permanently distorted, but which will retain its elasticity, and I accomplish my object by constructing the said mattress of independent
30 wires bent into serpentine form or corrugated for the whole or a portion of their length, the said wires being secured to the head and foot of the mattress-frame, so that the resilience of the said wires will be contrary to and opposing the weight placed upon them.
35

Each serpentine or corrugated wire when detached from the mattress-frame will assume substantially the shape of a bow or semicircle, but when attached to the said frame will be
40 substantially flat or level.

The particular features of my invention will be pointed out in the claims at the end of this specification.

Figure 1 is a top or plan view of a wire mattress embodying my invention; Fig. 2, a side elevation of a single wire detached and in its normal position; Fig. 3, a detail, on an enlarged scale, of a portion of the wire; and Fig. 4, a top or plan view of part of a modified
50 form of mattress.

The mattress-frame, consisting of the top a ,

bottom or foot a' , and side boards, a^2 , is and may be of usual or well-known construction. The head a and foot-board a' are each provided with usual metal strips, a^3 a^4 , to which
55 the ends of the wires constituting the mattress are secured.

The wire mattress referred to consists of independent wires b , bent preferably into serpentine form or corrugated for the whole, as
60 shown in Fig. 1, or for a part of their length, as shown in Fig. 4.

Preferably one end of the serpentine or corrugated wires b , composing the mattress, will be attached to the end of spiral springs b' , secured to the metal strip a^3 on the head-board to
65 afford increased elasticity to the wire mattress.

In practice there will preferably be one more spiral spring than wires, so that the said springs and wires may be continuously connected together, as shown in Figs. 1 and 4. Each wire b is preferably made of hard-drawn Bessemer steel, it being bent into serpentine form or corrugated, the wires being normally of substantially bow shape, as shown by Fig. 2, when detached from the mattress-frame.
75 The serpentine or corrugated wires are attached to the mattress-frame, so that the resilience of the wire acts contrary to or so as to resist, and thereby support, the weight
80 placed upon it. The serpentine or corrugated wires when attached to the mattress-frame will preferably be connected near their center by detachable links or hooks b^2 .

A wire mattress constructed of substantially serpentine or corrugated wires, as described, affords a substantially smooth and level support for the hair or other mattress which in practice is laid thereon, and the said wire mattress, owing to the form and resilience of the wire of which it is composed, will
90 not sag or become permanently distorted when subject to weight, and yet will retain its elasticity.

I prefer to make the wires b serpentine or to corrugate them for their entire length; but good results may be obtained when the said wires are made serpentine or are corrugated for but a portion of their length, as shown in Fig. 4. By the term "serpentine" wire I
100 wish it to be understood to include a wire bent zigzag or a wire in which the bends are

at an angle to the length of the wire and are crimped or corrugated.

My improved mattress may be used in connection with any form of beds.

5 I am aware that spring bed-bottoms have been constructed of separate but not independent wires, the said wires being corrugated for a greater or lesser portion of their length.

10 I am also aware that flat strips of metal bent into bow form have been used, and also flat strips corrugated in a vertical plane, but without the general bow form at right angles thereto, and such constructions I do not claim.

I claim—

15 1. The combination, with a mattress-frame, of a wire mattress consisting of vertically-bowed independent wires *b*, corrugated or made serpentine for the whole or a portion of their length at right angles to the plane of the
20 bow, and connected to the head and foot rails of the mattress-frame to extend longitudi-

nally the length of the bed, substantially as and for the purpose specified.

2. The combination, with a mattress-frame, of a wire mattress consisting of independent 25 bow-shaped wires *b*, corrugated or made serpentine for the whole or a portion of their length at right angles of the said bow, and connected to the head and foot rails of the mattress-frame to extend longitudinally the 30 length of the bed, the said bow-shaped wires being elongated or made substantially flat by tension when secured to the mattress-frame, substantially as and for the purpose specified.

In testimony whereof I have signed my name 35 to this specification in the presence of two subscribing witnesses.

OTIS HOWE.

Witnesses:

JAS. H. CHURCHILL,
J. C. SEARS.