

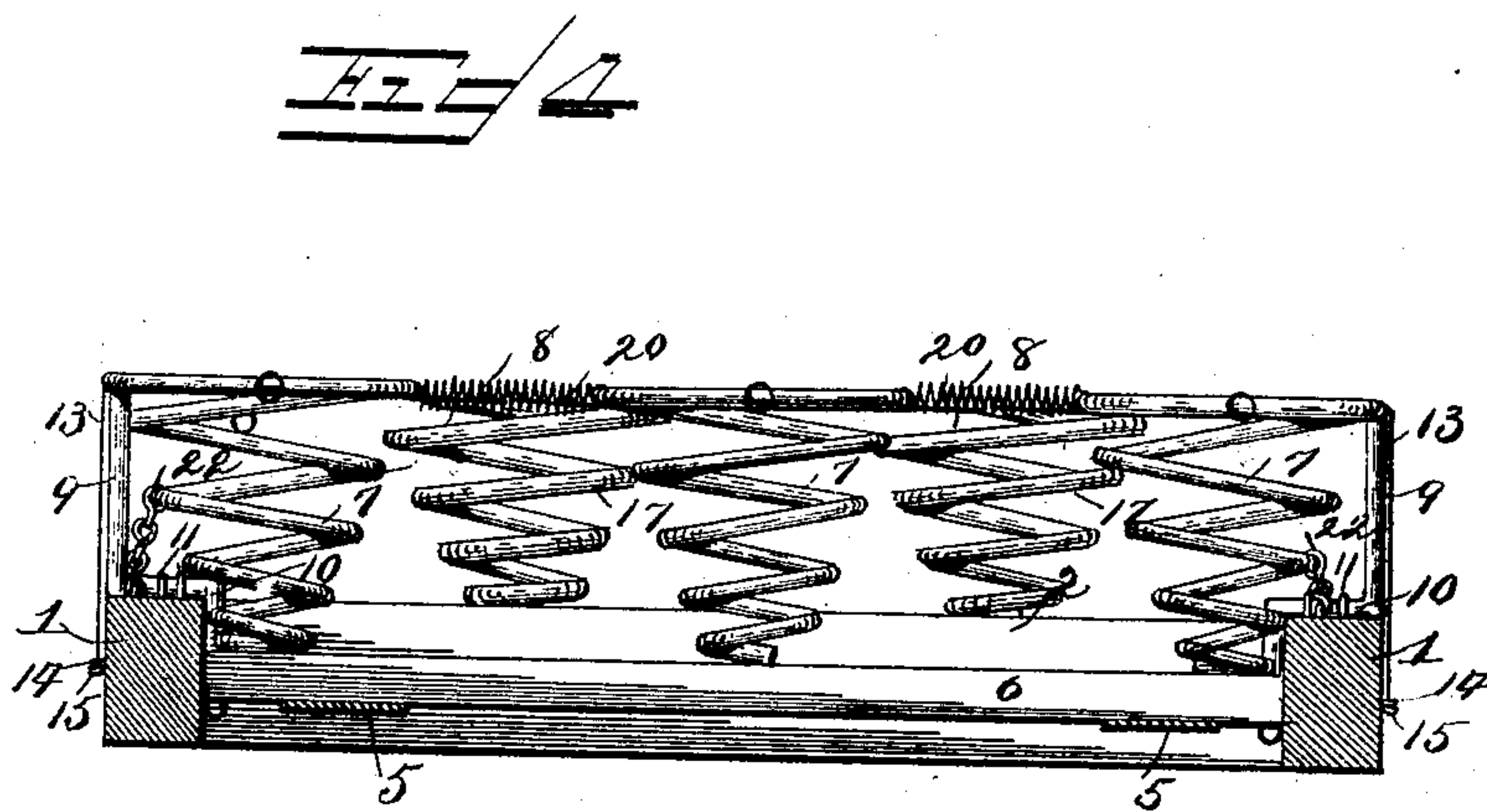
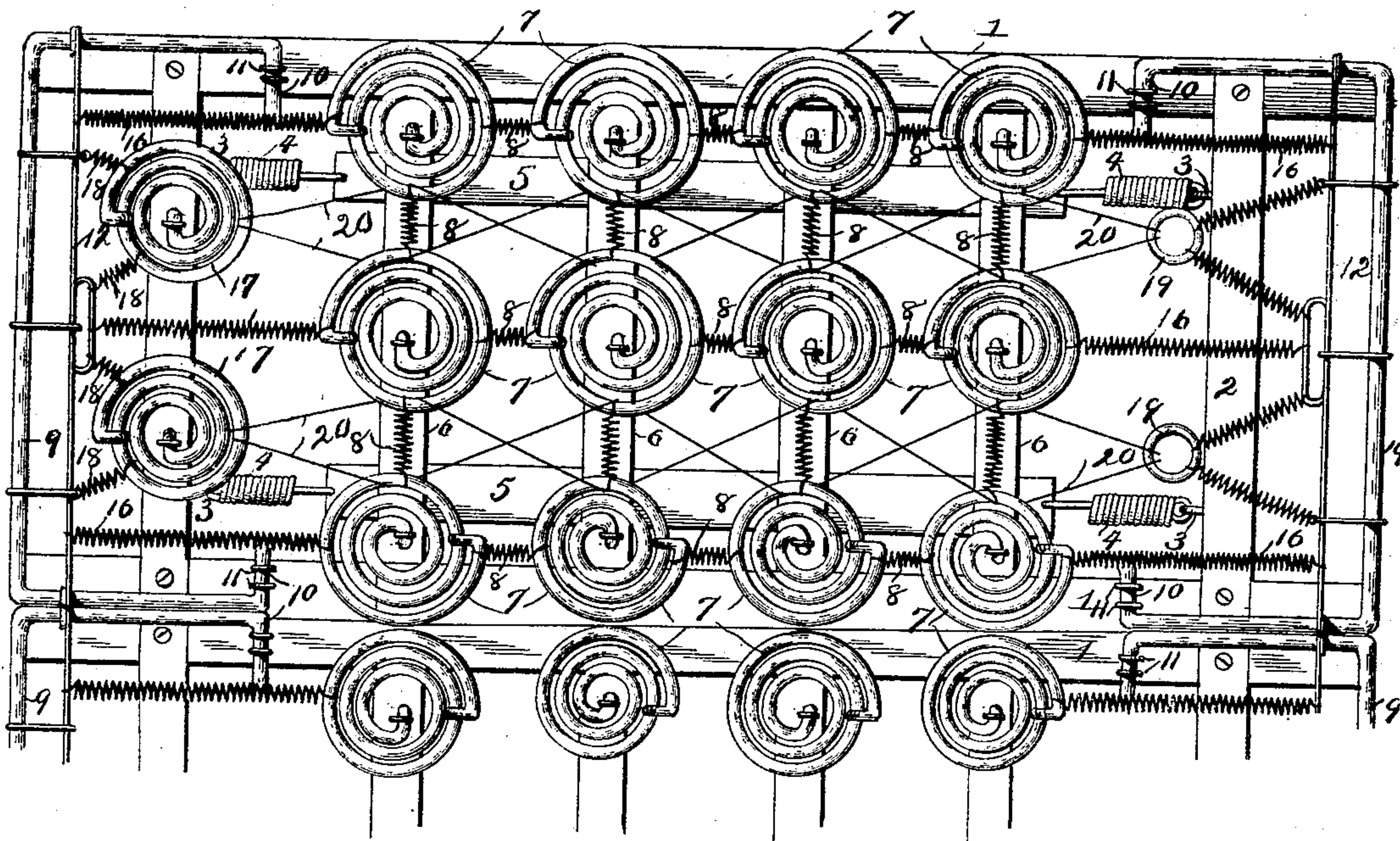
(No Model.)

2 Sheets—Sheet 1.

G. E. MILLER.
SPRING BED.

No. 506,246.

Patented Oct. 10, 1893.



Witnesses

W. C. Schneider
John H. Diggers.

By his Attorneys,

C. A. Snow & Co.

Inventor
G. E. Miller.

(No Model.)

2 Sheets—Sheet 2.

G. E. MILLER.
SPRING BED.

No. 506,246.

Patented Oct. 10, 1893.

Fig. 3.

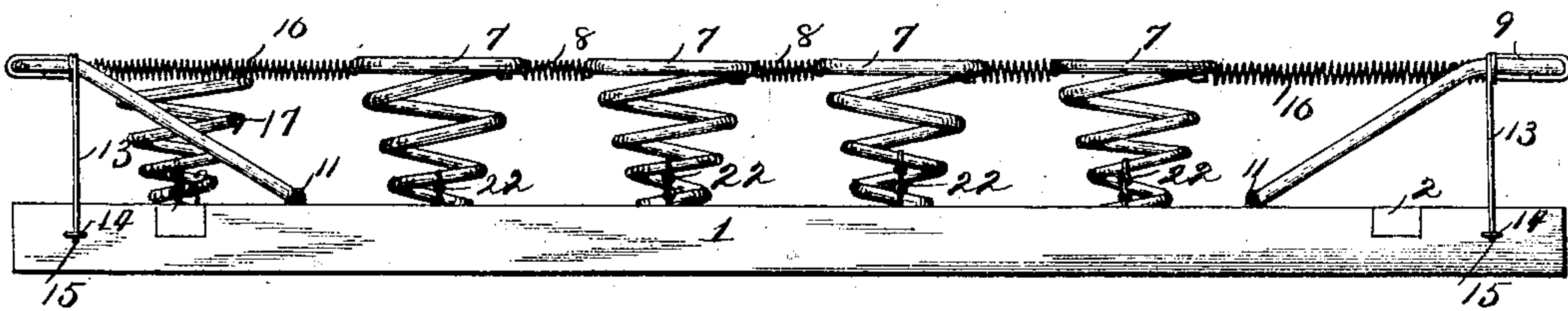


Fig. 2.

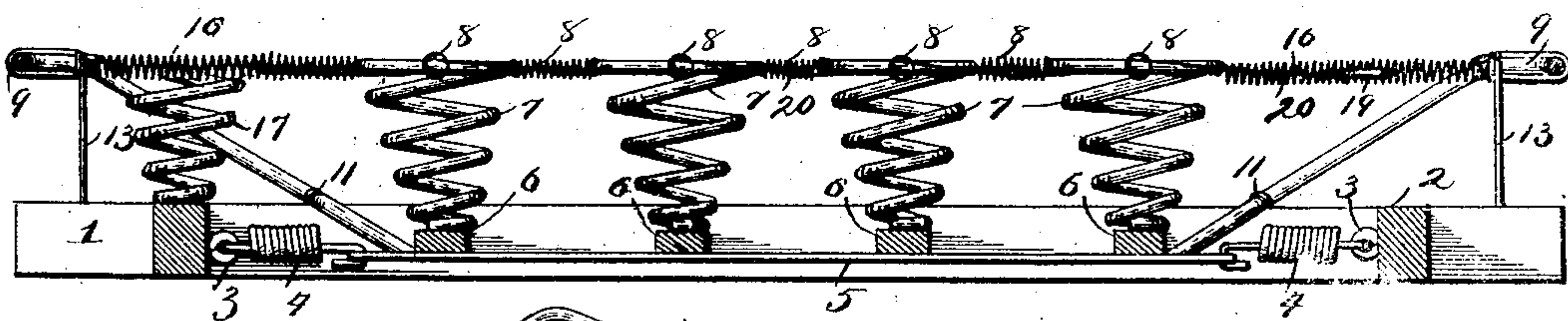
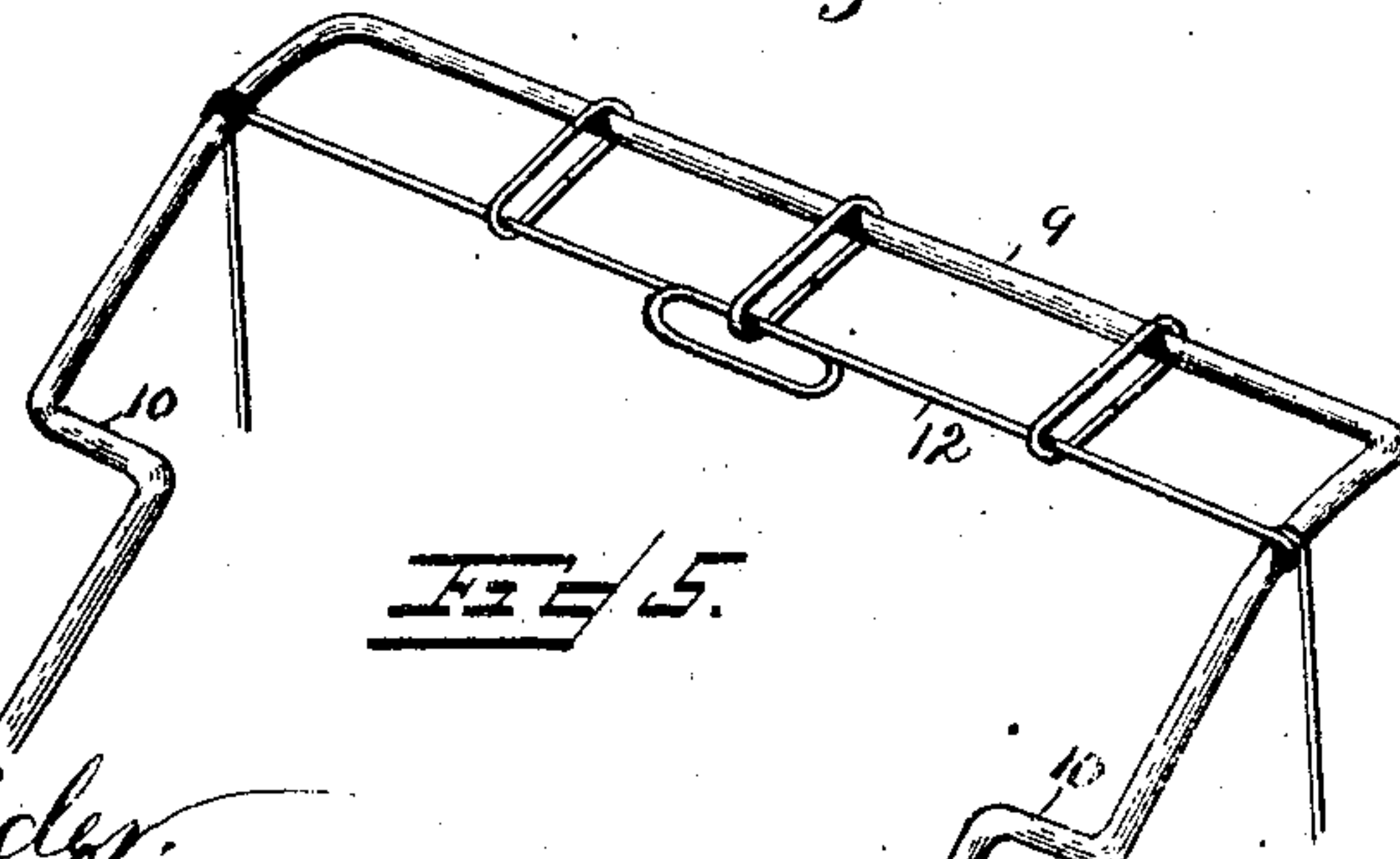


Fig. 5.



Witnesses

W. C. Schneider.

John H. Siggers.

By his Attorneys,

C. A. Snow & Co.

Inventor
G. E. Miller.

UNITED STATES PATENT OFFICE.

GEORGE E. MILLER, OF ST. LOUIS, MICHIGAN, ASSIGNOR OF TWO-THIRDS TO
FRANK G. KNEELAND AND JOHN R. KNIGHT, OF SAME PLACE.

SPRING-BED.

SPECIFICATION forming part of Letters Patent No. 506,246, dated October 10, 1893.

Application filed October 26, 1892. Serial No. 450,011. (No model.)

To all whom it may concern:

Be it known that I, GEORGE E. MILLER, a citizen of the United States, residing at St. Louis, in the county of Gratiot and State of Michigan, have invented a new and useful Spring-Bed, of which the following is a specification.

My invention relates to improvements in spring-beds; the objects in view being to provide a spring-bed that may be conveniently handled, and which shall possess durability as well as simplicity and cheapness, and will be so constructed as to give perfect ease and comfort to the occupant.

With these general objects in view the invention consists in certain features of construction hereinafter specified, and particularly pointed out in the claims.

Referring to the drawings—Figure 1 is a plan view of a spring-bed embodying my invention. Fig. 2 is a longitudinal sectional view through one of the bed-sections. Fig. 3 is a side elevation. Fig. 4 is a transverse section. Fig. 5 is a detail view of the U-shaped bail and the transverse wire.

Like numerals indicate like parts in all the figures of the drawings.

In practicing my invention, I prefer to form the bed-bottom in two sections, which if desired, may be hinged together and adapted to fold one upon the other, though they may be independent if preferred. Each section consists of a pair of opposite longitudinal side bars 1, which are connected adjacent to their ends by transverse foot and head bars 2, whose ends are let into the side-bars, thus forming two rigid oblong frames. To each of the transverse bars near the ends thereof there is secured a pair of eye-bolts 3, that may be adjustable, and each pair of eye-bolts is loosely connected to a pair of coiled springs 4. These pairs of springs have their inner ends connected to perforations formed in the ends of longitudinally-disposed spring strips 5, preferably formed of metal, but which may be formed of wood if desired. These strips extend parallel to each other and in a longitudinal direction. They are surmounted at intervals by intermediate transverse-bars 6, whose ends project beyond the strips but do

not quite contact with the inner surface of the side-bars 1. Surmounting these bars 6 is a series of convoluted springs 7, and each of these springs is connected at its upper end to the adjacent springs by means of short coils 55 of wire 8.

At the foot and head of the bed are located U-shaped wire bails 9, and the same have their opposite terminals inwardly bent to form transversely-disposed bearing portions 60 10, that are journaled in eyes 11 located upon each of the side-bars 1. Beyond these eyes the terminals extend into the frame and downwardly and finally rest under the ends of those bars 6 that are at the ends of the series, 65 whereby the U-shaped frames are stiffened. A transverse wire 12 connects the terminals of each of the bails, and the ends of the wire, after being coiled about said terminals depend from the frames, as shown at 13, pass 70 through guide-eyes 14, and have their lower ends bent to form stops 15. As the frames rise and fall with the weight thereon, these depending portions serve as guide-rods and reciprocate through the eyes, their upward 75 movement being limited by the lower ends of the rods contacting with the eyes.

Coiled wire springs 16 connect the convolute springs 7 that are on the end bars 6 with the transverse wire of the frames, and said 80 transverse wire is in turn by links connected with the transverse portions of said frames. A pair of convolute springs 17 surmount the head cross-bar, and short sections of coiled wire 18 are connected to the links and to the 85 said pair of convolute springs. The foot section, however, in lieu of the convolute springs, preferably employ rings 19, which are connected by means of the short spring-wire sections to the links. Pairs of wire-strands 20 90 are connected to the rings, diverge, and pass round the upper coils, the convolutes of the first convoluted springs cross each other, engage with the second pair, recross and re-engage, and so on throughout the series, and 95 finally connect with those convoluted springs that support the head portion of the bed. Short limiting chains 22 are at intervals connected with the side bars of the bed-frame, and have their upper ends connected to a con- 100

venient portion of the convolute springs, thus limiting the upward movement of the latter.

This completes the construction of the bed-bottom, and it will be seen that by reason of the fact that it is formed in two sections, the same may be readily handled, that is removed and replaced upon the bedstead, is readily accessible for any purpose whatever, such as cleaning or repairing, yet in any position constitutes but a single bed. It will further be apparent that the foot and head portions are preserved against sinking or sagging, as are also the sides and other portions of the bottom, the whole being braced in all directions and combining to lend ease and comfort to the occupant.

Having described my invention, what I claim is—

1. In a bed bottom, the combination with the rigid frame, of the opposite U-shaped wire frames at the head and foot of the frame, the intermediate convolute springs, the spring suspended frame within the rigid frame and on which the convolute springs are mounted, the transverse wires 12 extending across the ends of the bed bottom, connecting the U-shaped frames and depending below the same in the form of guide wires 13 and formed with stops at their lower ends, said guide wires passing through guide eyes on the frame, the coiled wire springs 16 connecting the end convolute springs with the wires 12, a pair of springs 17 arranged at the head of the bed bottom, the rings 19 and coiled springs 16 at the foot of the bed bottom, and the pairs of wire strands connected to the rings, diverging and passing around the upper coils of the first pair of convolute springs, then crossing each other and engaging with the second pair, and so on throughout the length of the bed, the other ends of the wire strands being connected with the springs 17 at the head of the bed, all substantially as described.

2. In a bed bottom, the combination with the rigid frame, of the opposite U-shaped wire frames at the head and foot of the same, the intermediate convolute springs, the

spring suspended frame within the rigid frame and on which the convolute springs are mounted, coiled springs at each end of the bed connected to the U-shaped wire frames, and wire strands to connect the coiled springs with the convolute springs, said strands passing around the upper portions of the first pair of convolute springs, then crossing each other and engaging with the second pair of convolute springs, and so on throughout the length of the bed, all substantially as described.

3. In a bed-bottom, the combination with the oblong frame, the eye-bolts adjustably mounted in the ends of the frame, spring-coils connected to the eye-bolts, resilient strips connecting the inner ends of the coils, bars supported on the strips, the convoluted-springs mounted on the bars, and short coils of wires connecting each convolute with its neighbor, of opposite U-shaped wire-frames at the head and foot of the bed-bottom, the terminals of said wire-frames having intermediate bends or bearing-portions, eyes connecting the same loosely with the bed-bottom frame, said terminals beyond the eyes extending below the frame and engaging with the transverse convoluted spring-supporting bars and spring connections between the U-shaped frames and those convoluted springs at the foot and head of the bed, substantially as specified.

4. In a bed-bottom, the combination with the oblong bed-frame, transverse bars, and convolute springs arranged thereon, of opposite U-shaped frames pivoted to the sides of the bed-frame, and at their lower ends engaging under the transverse bars, and spring-connections between the convolute springs and said U-shaped frames, substantially as specified.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

GEORGE E. MILLER.

Witnesses:

SILAS MOODY,
JOHN L. MCCURDY.