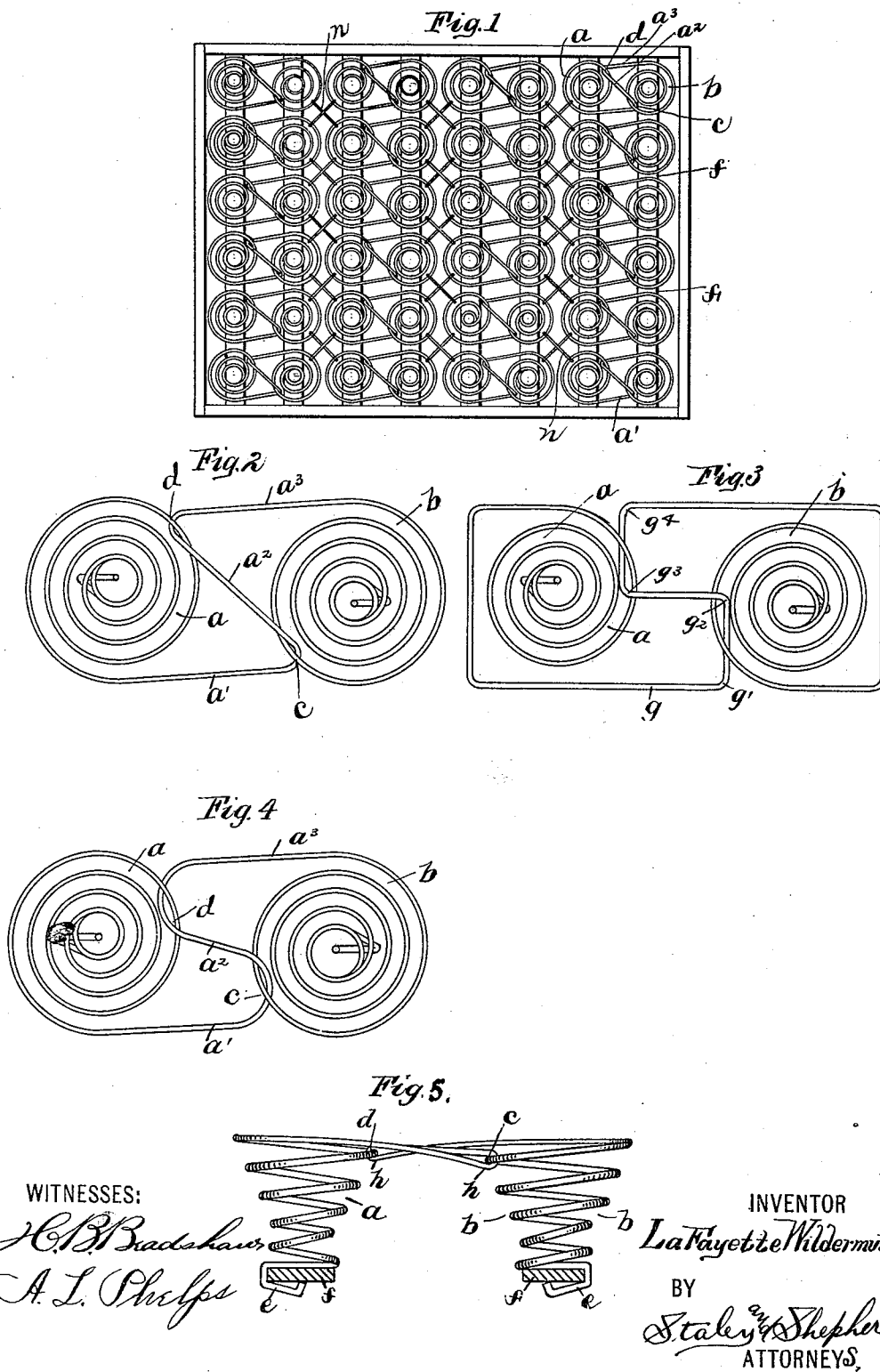


(No Model.)

LA FAYETTE WILDERMUTH.
BED SPRING.

No. 520,383.

Patented May 22, 1894.



UNITED STATES PATENT OFFICE.

LA FAYETTE WILDERMUTH, OF COLUMBUS, OHIO.

BED-SPRING.

SPECIFICATION forming part of Letters Patent No. 520,383, dated May 22, 1894.

Application filed February 23, 1894. Serial No. 501,079. (No model.)

To all whom it may concern:

Be it known that I, LA FAYETTE WILDERMUTH, a citizen of the United States, residing at Columbus, in the county of Franklin and State of Ohio, have invented a certain new and useful Improvement in Bed-Springs, of which the following is a specification.

My invention relates to the improvement of bed springs and has particular relation to the construction of what are known as double springs.

The objects of my invention are to produce springs of this class of superior construction and arrangement of parts; to construct double or twin springs of single pieces of wire and to provide a novel means of bridging or connecting the tops of the springs of each pair, which means will afford throughout said spring tops and bridge portion a substantially uniform resistance and resilience; to construct my improved springs in a simple, reliable and inexpensive manner and to produce other improvements which will be more fully pointed out hereinafter. These objects I accomplish in the manner illustrated in the accompanying drawings, in which—

Figure 1 is a plan view of a bed bottom showing my improved springs thereon. Fig. 2 is a detail plan view of one of said springs and Figs. 3, and 4 are similar detail views illustrating slight modifications in the form of the bridges or spring top connections and Fig. 5 is a side elevation of a pair of my improved springs.

Similar letters refer to similar parts throughout the several views.

As indicated in the various figures of the drawings, the double spring above mentioned consists of two spiral springs and a bridge or top connecting portion all formed of one single piece of wire, said single spring elements being indicated at *a* and *b*. As indicated, the top coil of the spring *a* is provided with a continuation or extension *a'* which is in the same horizontal plane with said top coil and which extends in the direction of the spring *b* meeting the top coil of the latter at a point *c* which is adjacent to one of the outer sides of said coil *b*. At this point *c* the portion *a'* of said extension or bridge is looped or bent into engagement with the top coil of said spring *b* after which it extends as indicated at *a*² back

diagonally across the horizontal axis of the springs *a, b* at a point *d* adjacent to the outer side of the upper coil of the spring *a*, said portion *a*² is looped or bent into engagement with said top coil of the spring *a*. From this point *d* the bridge *a'* has, as indicated at *a*³, its portion *a*³ extended substantially in a direction parallel to the direction of the portion marked *a'*, said portion *a*³ being further continued at its termination to form the upper and thence the remaining coils of the spring *b*. As indicated at *e*, the ends of the wire which form said springs *a* and *b* are so bent as to hook or catch beneath the under sides of the ordinary bed slats *f* upon which the last coils of said springs rest.

As indicated in Fig. 1 of the drawings, the pairs of bed slats are thus connected at desirable intervals by my improved double springs, of which there may be any desired number and which may be arranged at any desirable distance one from the other.

As indicated in Fig. 3 of the drawings, the top coil of the spring *a* may be bent into a squared or rectangular form, the continuation *g* thereof which takes the place of the continuation *a'* above described, extending in a direction parallel with the horizontal axis of said springs to a point *g'* which is approximately in line with the inner side of the outer coil of the spring *b* at which point it is bent inward at right angles, passing beneath the top coil of the spring *b* and extending to a point *g*² opposite the center of the latter. From this point *g*² said bridge portion is again bent at right angles back in a line parallel with the main portion *g* to meet and pass over the center of the upper coil of the portion *a* at a point *g*³. From this point *g*³ said bridge portion is extended outward passing beneath the top coil of the spring *a* and at a point *g*⁴ again bent at right angles to form a rectangular top coil for the spring *b* as prescribed for the spring *a*.

As indicated in Fig. 4 of the drawings, the loop connection between the bridge and spring top coils may be larger and the angle on which the bridge arms run be made less without altering the principle of my invention.

The double springs herein described being arranged as above set forth so as to connect the slats *f* in pairs, I may as shown in Fig. 1

of the drawings, couple the top coils of said springs together in fours by employing between the adjacent ends of two pairs of said springs crossed wires n , the latter extending respectively between the top coil of one of said springs and the top coil of another spring which is arranged diagonally therefrom or out of horizontal alignment with said first spring. In this manner not only will the bed spring bottom present a more perfect spring bearing or net-work, but by the use of said crossed wires the spring tops will all be connected together forming thereby a substantially integral bed bottom.

15 By the construction and arrangement of parts of my improved spring, it will readily be seen that not only are the two spring elements formed of one piece of spring wire, but that the same piece of wire is employed for the purpose of bridging or connecting said springs and that the connections with the bridge portions of said wire with the top coils of said springs are so arranged with reference to each other as to provide not only the side bridge or supporting portions $a^3 a'$, but the intermediate bridge portion a^2 . In this manner the top coils of the springs are so combined and connected with the bridge portions as to impart a uniform resistance or flexibility to the entire top of the double spring. At the points of connection of the spring top coils and bridge portion, such as described at d and c , it will be observed that the bridge portion is bent or inclined downward, as indicated at h , thus preventing any undesirable elevation of the top coils at said connecting points and resulting in the top coils of said springs be-

ing maintained approximately in the same horizontal plane.

It will be observed that my improved springs may be readily and accurately constructed with proper machinery; that the wire employed therein is properly utilized throughout its length and that said spring may be produced in a neat, reliable and effective form at a reasonable cost of manufacture.

Having now fully described my invention, what I claim, and desire to secure by Letters Patent, is—

1. A double bed spring formed of a single piece of wire and consisting of two coiled springs a and b , the upper coil of the spring a being extended to and looped around and into engagement with the upper coil of the spring b , thence returned and looped around and into engagement with the upper coil of the spring a , from which point said extension is continued as described to form the coil b , substantially as specified.

2. A double bed spring formed wholly of one piece of wire and consisting of the two springs a and b and an intermediate bridge portion consisting as described of extensions of the top coils of said springs which pass back and forth between said top coils and are looped around as described at points c and d to the top coils at which points said bridge portions are bent downward substantially as and for the purpose specified.

LA FAYETTE WILDERMUTH.

In presence of—

C. C. SHEPHERD,
F. A. SIEGEL.