

No. 742,521.

PATENTED OCT. 27, 1903.

J. W. TERRY.
SPRING BED.

APPLICATION FILED DEC. 12, 1901.

NO MODEL.

Fig. 1

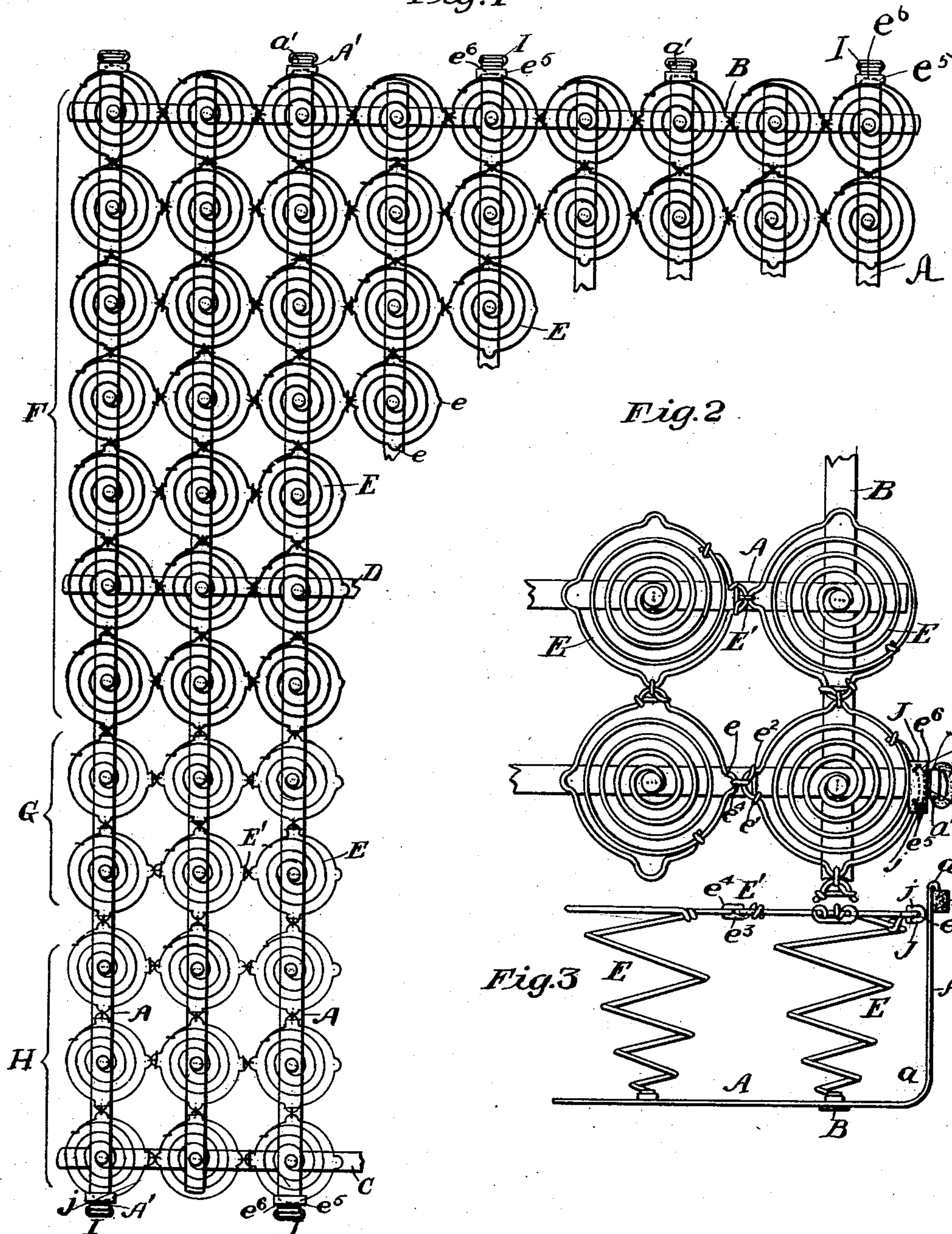


Fig. 2

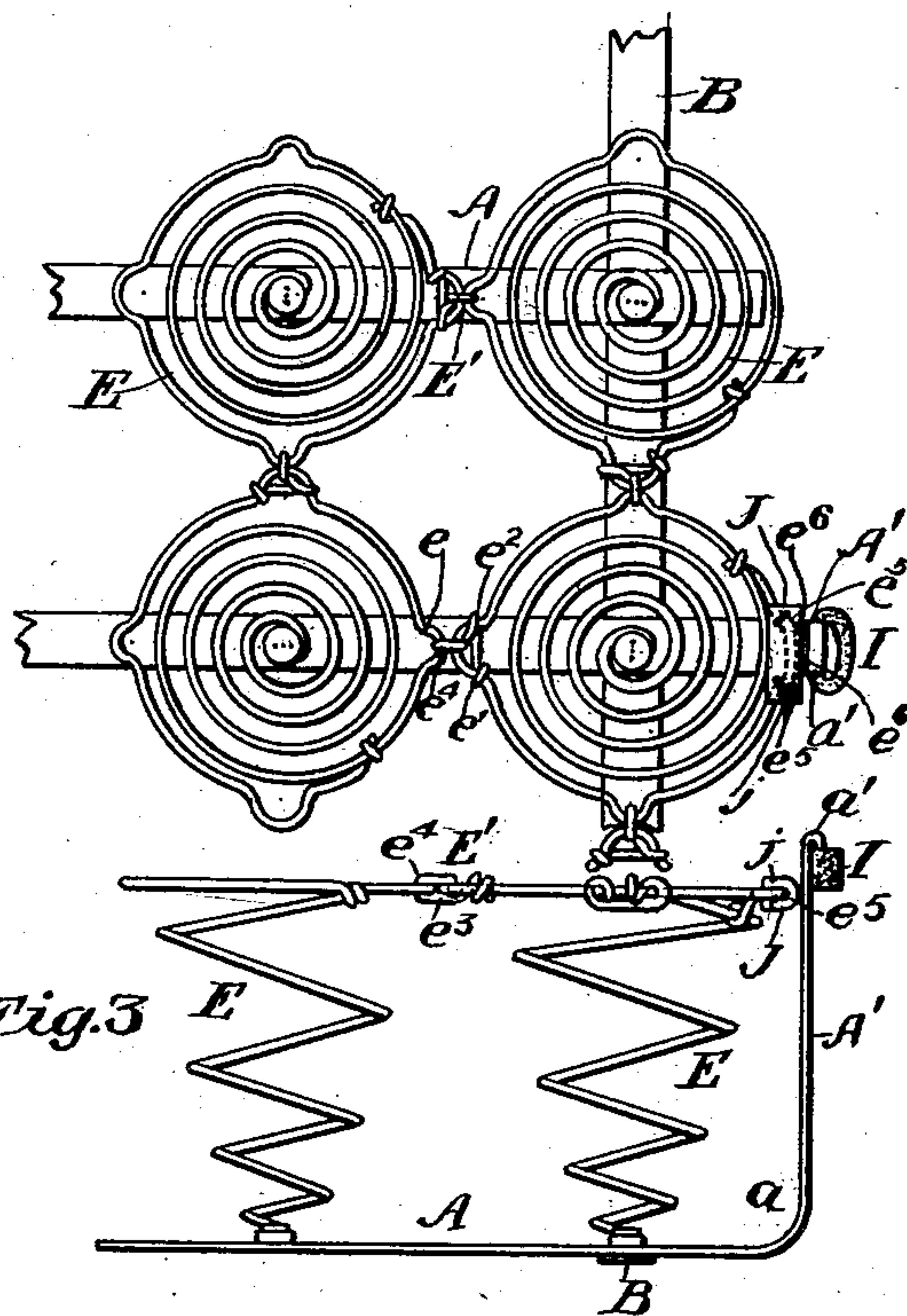
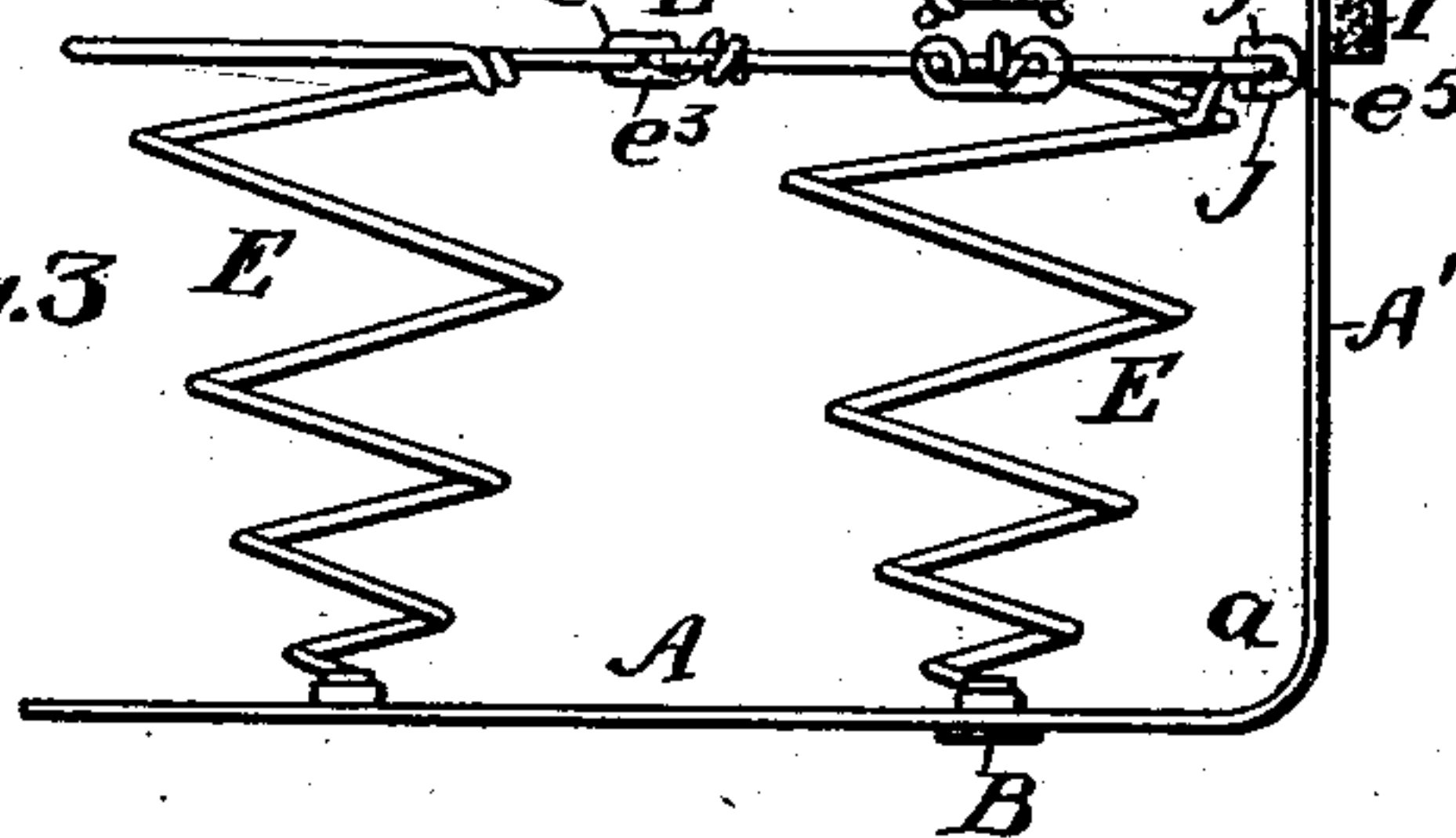


Fig. 3



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JOHN W. TERRY, OF NEW HAVEN, CONNECTICUT.

SPRING-BED.

SPECIFICATION forming part of Letters Patent No. 742,521, dated October 27, 1903.

Application filed December 12, 1901. Serial No. 85,613. (No model.)

To all whom it may concern:

Be it known that I, JOHN W. TERRY, a citizen of the United States, and a resident of New Haven, county of New Haven, and State of Connecticut, have invented certain new and useful Improvements in Spring-Beds, of which the following is a specification, reference being had to the accompanying drawings, forming a part thereof, in which similar letters of reference indicate corresponding parts.

The present invention relates to spring-beds, and contemplates principally a plurality of groups of spiral springs, each group extending transversely across the bed, one of said groups extending from the head of the bed to a transverse point some distance therefrom to appreciably sustain the body-weight of the occupant and embodying springs of such relatively uniform strength that they will all correspondingly support a greater load than those of the contiguous transverse group. As disclosed herein the top coil of each spring has a novel arrangement of clip rigidly connected thereto and in pivotal engagement with the corresponding coil of a spring immediately adjacent to afford a hinge connection between the two. The vertical end portions of the bottom strips, which constitute guards for the head and foot springs, are equipped with improved fenders to prevent noise and scratching that might otherwise result from contact with the head and foot boards, the head and foot springs themselves being also provided with fenders to permit free action of said springs relative to the guards unaccompanied by noise.

There are other novel features and details which are also more clearly set forth herein-after.

In the accompanying drawings, forming part of this specification, Figure 1 is a plan view of so much of a spring bed-bottom as will suffice to show certain features of my invention. Fig. 2 is another plan view showing, on a larger scale, a fragment of the head portion of the improved bottom. Fig. 3 is a side elevation of the parts illustrated in Fig. 2.

The framing of the improved bed-bottom is presented by the parallel longitudinal bottom strips A, connected and relatively held by transverse end and intermediate braces B,

C, and D. The end portions of the strips A are upwardly turned to form guards A' at the head and foot.

Mounted and secured on the framing are spiral springs E, preferably of the familiar inverted-cone shape, the upper coils of which, however, are peculiarly bent, as will be presently more fully explained. These springs E are disposed in both longitudinal and transverse rows, as customary.

As illustrated in Fig. 1, the springs are divided into three transverse series or groups, the several series or groups being defined by the brace-lines F, G, and H appearing to one side of the figure. It will be observed that the group within the zone indicated by the brace F extends from the head to a point beyond the transverse center of the bed, while the group defined by the brace G is intermediately located, the third group extending from the intermediate one to the foot. As the area occupied by the springs of the series first mentioned is that which ordinarily incurs the greatest load—the body of the occupant or occupants—said springs are made of a coarser gage wire than those of the other two series in order to render them relatively stronger in supporting the greater weight imposed. The springs of the intermediate series, which are ordinarily subjected to a considerably less weight, are made of a somewhat smaller gage wire, while the foot series, which is usually required to support an inconsiderable weight, has its springs of a still smaller gage wire.

By the arrangement of the groups or series of springs described sagging of the bed-bottom is avoided, an approximate level of the spring-surface is assured, and a comfortable yield of the bottom provided at the several points proportionate with the weight thereon.

The upper coils of the springs E, except those of the marginal end and side rows, are bent to present four equidistant lateral offsets *e*, the offsets of each spring extending close to the contiguous offsets of the nearest springs. Each companion pair of offsets is pivotally connected by a clip E', made from a short length of wire, bent so that an end loop *e'* tightly embraces one side of one of the offsets at its juncture with the main portion of the coil, the clip then extending across the

lower side of the offset and turned over the other juncture of the offset, as indicated by e^2 , next led within the offset for a short distance, then formed into a slightly-depressed radial extension e^3 , extending beneath the outer rounded portions of the offset and its companion, and further bent to constitute a vertical eye e^4 , permanently but pivotally connecting said offsets together. The loop-and-bend engagement $e' e^2$ of each clip secures a rigid connection therefor with one of its offsets, so that while there is no undesirable looseness or play of the clip relative to the offsets a hinge connection is provided for the springs that will permit free individual movement when necessary, but normally maintain the same in their proper relative positions.

It will be noted that the clips are of such shape and disposition that the major portion of each of the same lies practically below the offsets, thereby rendering the upper spring-surface practically uniform.

The end portions of the strips A at the head and foot are upwardly turned with a rounded bend a and constitute vertical guards A', which when the bottom is in position are located adjacent to the inner sides of the head and foot boards, respectively, the guards at the upper end preventing the head-springs when depressed from working under the lower edge of an ordinary headboard.

With a view of avoiding noise and defacement through contact of the guards with the head and foot boards short vertical tubular sections of rubber or other cushioning material are attached to the upper ends of both the head and foot guards to form fenders I for contacting with the head and foot boards. As shown, these fenders are represented as being retained in position by the bent terminals a' of the guards extending down through the vertical openings therein and finally deflected against the main parts of the guards. By reason of the liberal cross-sectional area of the openings in the fenders the latter will always possess a certain yielding capacity, even should the material of which they are made have its cushioning quality impaired.

Those of the head and foot springs which are in immediate relation to the guards have outer horizontal offsets e^5 , somewhat wider but less pronounced than the offsets e' , the outer portions e^6 of said offsets e^5 being approximately straight. A horizontally-folded section of leather or other suitable material is applied to embrace each offset e^5 , as more clearly indicated in Figs. 2 and 3, to form a fender J for the upper coil of the particular end spring, the fender being secured in position by staples j, j , each passing down through the upper thickness of leather, straddling the offset at one of its junctures with the upper coil and piercing the lower leather thickness, against the under side of which it is clenched. These fenders J permit free but noiseless contact of their springs against the guards.

The rounded bends a of the bottom strips facilitate the introduction and accommodation of the spring-bottom within the bedstead and equally convenient removal of the bottom therefrom, as the absence of angles at these points obviates corners liable to catch and jam against other parts of the bed.

From the foregoing description it will be appreciated that the improved bed-bottom embodying my invention is comparatively light, has a spring-surface possessing strength and yield at different points proportionate with the load to be supported, the springs are capable of free individual movement, while their normal relative positions are assured, and derangement, damage, and noise that might result from the movements of the head and foot springs effectively avoided.

I do not wish to be understood as limiting myself to the particular construction and arrangement of bed-bottom shown and described, as modifications and changes may be made therein without departing from the spirit of my invention.

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

1. In a spring bed-bottom, the combination with springs having contiguously-located offsets, of a clip formed of a short length of wire with one end looped to the juncture at one side of one of the offsets, extending beneath the latter and turned over the other juncture thereof, next provided with a bend extending below the outer portions of both offsets and terminating in an eye forming a pivotal engagement for both.

2. In a spring bed-bottom, the combination with the longitudinal parallel bottom strips having the integral vertical end members, of a series of vertical spiral springs mounted on the horizontal portions of said strips, the marginal transverse series of said springs being in close juxtaposition to, but disconnected from said vertical members, whereby the latter constitute end guards without limiting the vertical movements of said marginal springs.

3. In a spring bed-bottom, the combination with the longitudinally-parallel strips having the transversely-alined but relatively separated vertical end members forming an end guard, of a series of vertical spiral springs mounted on the horizontal portions of said strips, the marginal transverse series of said springs being in close juxtaposition to but disconnected from said vertical members, and a fender of yielding material secured to said guard.

4. In a spring bed-bottom the combination with the longitudinally-parallel strips having the transversely-alined but relatively separated vertical end members forming an end guard, of a series of vertical spiral springs mounted on the horizontal portions of said strips, the marginal transverse series of said springs being in close juxtaposition to but disconnected from said vertical members,

and a perforated fender of yielding material secured to said guard.

5 5. A spring bed-bottom having a vertical end guard, the upper terminal portion of which is bent, and a fender of yielding material having an opening therein of liberal area engaged by said bent terminal.

10 6. In a spring bed-bottom, the combination with a bottom strip having a vertical end portion the upper terminal part of which is bent, of a tubular fender of yielding material having an opening of liberal area engaged by said bent part.

15 7. In a spring bed-bottom, the combination with the longitudinal parallel bottom strips having the integral vertical end members, of a series of vertical spiral springs mounted on the horizontal portions of said strips, the marginal transverse series of said springs be-

ing in close juxtaposition to but disconnect- 20
ed from said vertical members, whereby the latter constitute end guards without limiting the vertical movements of said marginal springs, those springs contiguous to the vertical members having upper offsets with ap- 25
proximately outer straight edges, and fenders each comprising a folded section of yielding material embracing and secured to the offsets.

In testimony that I claim the foregoing as 30
my invention I have signed my name, in presence of two witnesses, this 2d day of December, 1901.

JOHN W. TERRY.

Witnesses:

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H. W. CRAWFORD.