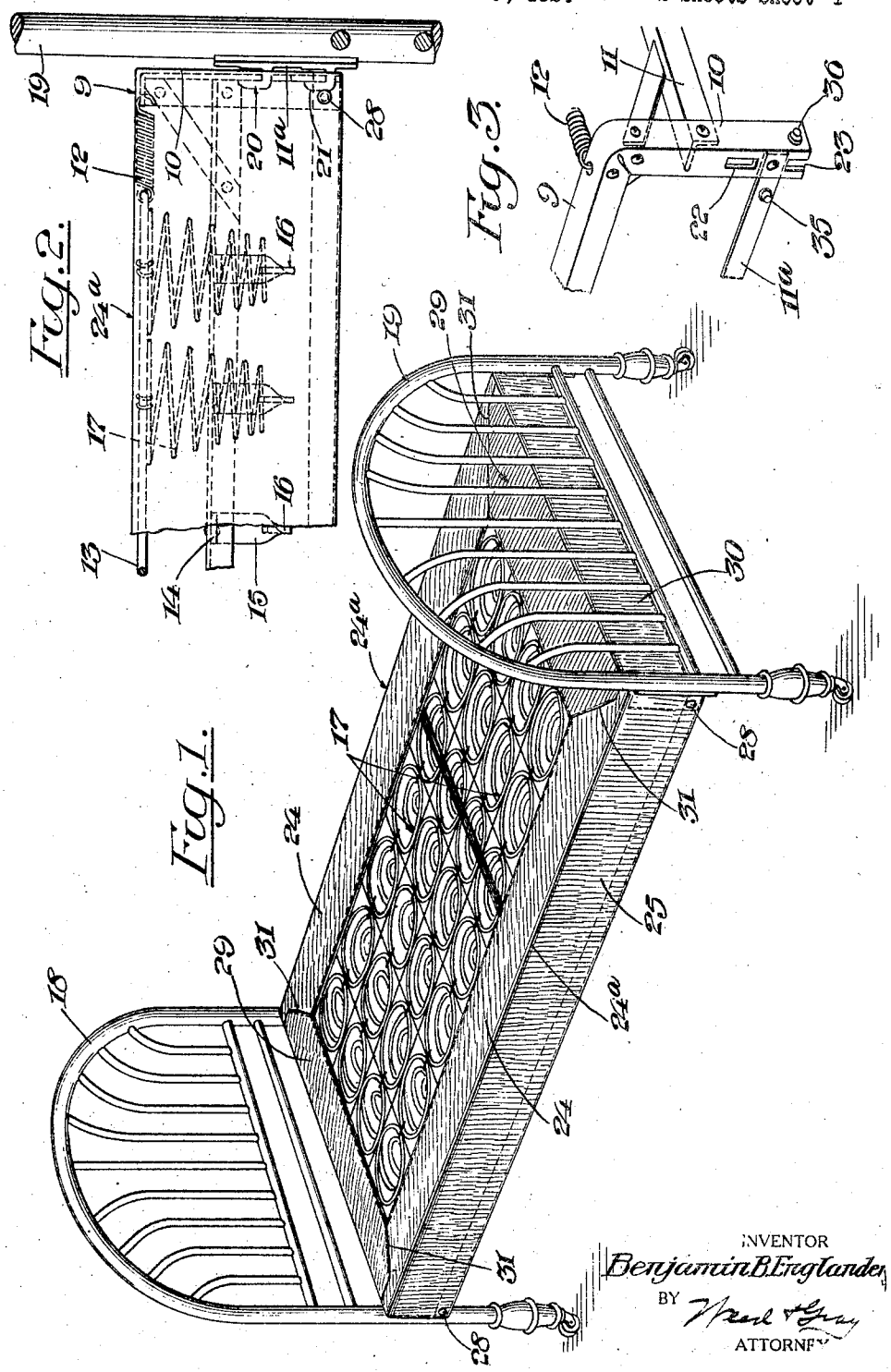
Feb. 16, 1926. 1,573,047

B. B. ENGLANDER

BOX SPRING STRUCTURE

Filed March 6, 1924 2 Sheets-Sheet 1



Feb. 16, 1926. 1,573,047

B. B. ENGLANDER

BOX SPRING STRUCTURE

Filed March 6, 1924 2 Sheets-Sheet 2

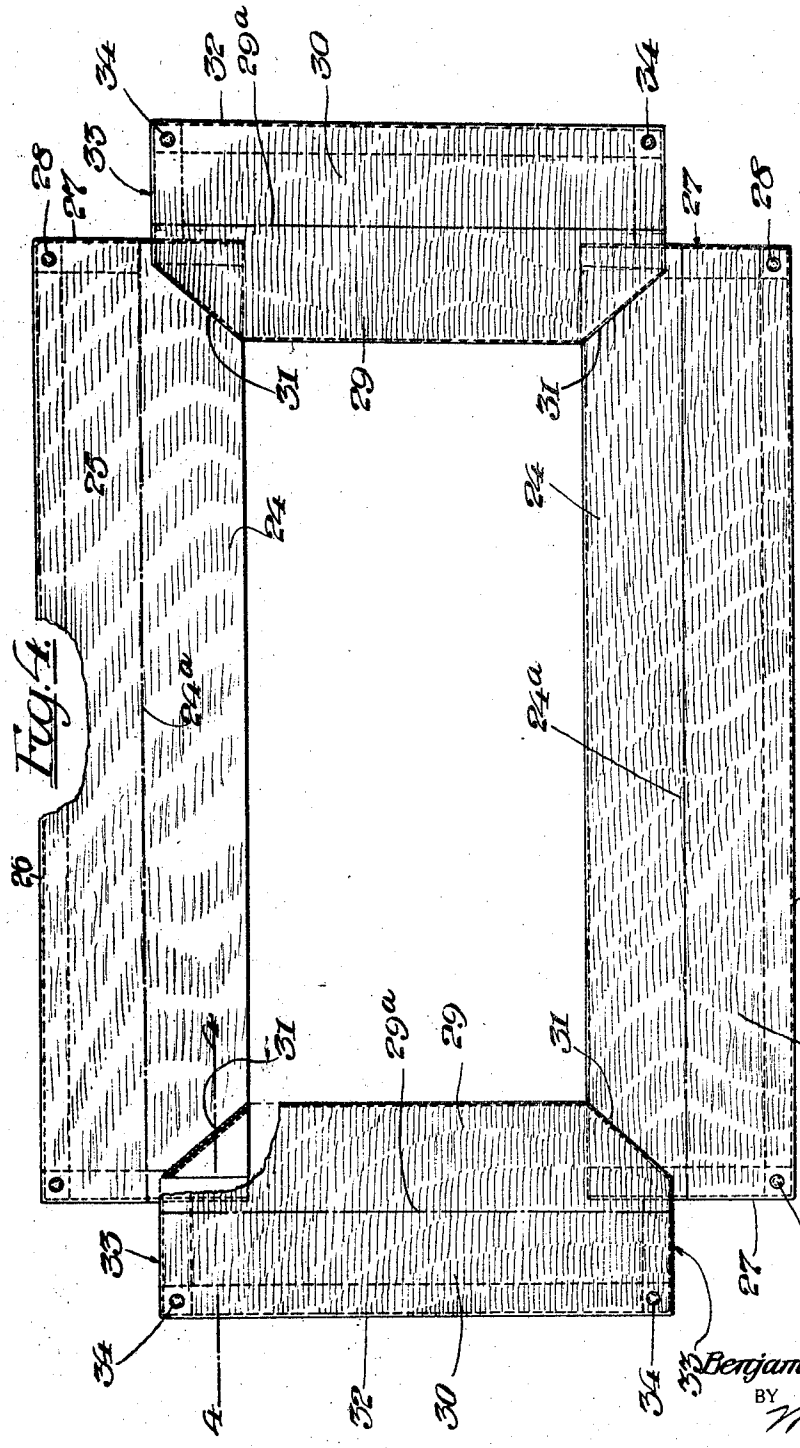


Fig. 4.

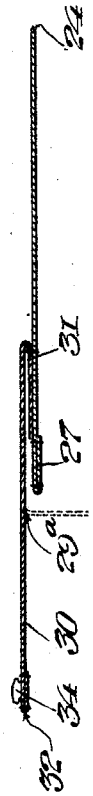


Fig. 5.

INVENTOR
Benjamin B. Englander
BY
ATTORNEY

Patented Feb. 16, 1926. 1,573,047

UNITED STATES PATENT OFFICE.

BENJAMIN B. ENGLANDER, OF BROOKLYN, NEW YORK, ASSIGNOR TO ENGLANDER SPRING BED COMPANY, OF BROOKLYN, NEW YORK, A CORPORATION OF NEW YORK.

BOX-SPRING STRUCTURE.

Application filed March 6, 1924. Serial No. 697,187.

To all whom it may concern:

Be it known that I, BENJAMIN B. ENGLANDER, a citizen of the United States, residing at Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Box-Spring Structures, of which the following is a specification.

This invention relates to beds, the object of the invention being to provide a bed and improved spring in which will form the sole connecting means between the heads of the bed, and thus do away with the use of side bars.

A further object of the invention is to provide a spring mattress structure having the appearance and all the advantages of a box spring without its disadvantages, and which can be manufactured at much less cost than the ordinary box spring.

A further object of the invention is the provision of an improved covering for the spring mattress whereby the mattress may be readily converted into a box spring, thereby providing a structure having a desirable and attractive appearance and the advantages of a box spring but at a considerable saving in cost and whereby also the structure may be much more sanitary than the ordinary box spring.

A further object of the invention is the provision of a spring mattress covering so constructed as to provide a rectangular edge covering for the top of the spring mattress and having at its ends and sides flap extensions adapted to cover such ends and sides and be detachably connected thereto to form a box-like housing concealing the spring mattress structure and forming a protecting medium for the bed clothes and for the spring structure against dust and dirt.

Other objects of this invention will appear in the following description and appended claims, reference being had to the accompanying drawings forming a part of this specification, wherein like reference characters indicate corresponding parts in the several views, and wherein Fig. 1 is a perspective view illustrating a bed having a spring structure constructed in accordance with this invention; Fig. 2 is a fragmentary side view of one end of the bed; Fig. 3 is a fragmentary perspective view illustrating one corner of the spring mattress frame; Fig. 4 is a top plan view, partly broken away showing the fabric cover for the spring mattress; and Fig. 5 is an enlarged section taken substantially on line 4—4 of Fig. 4.

Before explaining in detail the present improvement and mode of operation thereof, I desire to have it understood that the invention is not limited to the details of construction and arrangement of parts which are illustrated in the accompanying drawings, since the invention is capable of other embodiments, and that the phraseology which I employ is for the purpose of description and not of limitation.

As is well known, the ordinary box spring or box mattress, as it is sometimes called, is made up of spiral springs and a suitable supporting frame in the form of a box and completely covered by ticking or other suitable fabric permanently secured in position so as to completely cover the framework and the springs, and in the more expensive forms of box springs the top of the springs is first covered with a layer of cotton or hair. Consequently when dust and dirt penetrate through the covering into the box it is practically impossible to remove it, so that in a comparatively short time the box becomes more or less unsanitary and if for any reason vermin or disease germs should get into the box it is not possible to discover this or remove it without dismantling the entire structure. It is for this reason that box springs are practically unsalable as second-hand structures.

Obviously therefore it is a very great advantage to provide a spring that will have the appearance of a box spring and none of its disadvantages, and which can be manufactured at much less cost, and this is one of the objects of the present improvement. Furthermore it has been the practice to connect the heads or the head and foot by suitable side bars to support the box spring, but in the present improvement these side bars are entirely done away with and the box spring so constructed that it can be connected directly to the head and foot and form the sole supporting means between such head and foot.

In the drawings I have illustrated a present preferred form of my invention, in which the spring frame comprises a pair of similar end frames which are suitably connected together and provided with means for supporting a spring structure therebetween.

Each end frame comprises a transverse angle bar 9 preferably bent at opposite ends thereof to provide depending members 10. The depending members 10 of the end frames are of considerable length and at each side of the bed are connected together by means of a lengthwise extending angle bar 11 and by means of a transversely extending bar 11a. A suitable spring structure is supported by means of this framework, and in the present instance comprises spiral springs 17 suitably tied together, those at the outer sides by lengthwise extending wires 13, and coiled springs 12 connected to the end frames. A series of transverse straps 14 are bolted to the side bars 11 of the frame and are spaced apart lengthwise of the spring mattress. Each of these straps 14 is bent downwardly as at 15 adjacent to the side bars and twisted to extend edgewise across the bottom of the spring mattress, and the compression or spiral springs 17 are seated in notches formed in the upper edges of the straps 14 and the outer ones are also connected to the wires 13. The spring mattress is supported by means of head or head and foot members 18 and 19 respectively. Each of these members has its legs provided with a pair of hooks 20 and 21 located one above the other and each depending member 10 of the end frames is provided with a pair of slots 22—23 for the reception of the hooks.

Thus, by means of these detachable hook connections it will be readily seen that the spring mattress may be detachably connected to the head and foot members merely by inserting the hooks 20 and 21 into the slots 22 and 23 in the end frames.

The spring mattress is provided with a fabric cover which is so constructed that it may be readily applied in position and attached so as to provide a bed spring having a box-like appearance, thereby combining not only the advantages and appearance of a box mattress but also the advantage of permitting the removal of the cover whenever desired.

In the present instance, the fabric cover comprises a pair of lengthwise extending side portions 24 and a pair of transversely extending end portions 29, these being connected together to form a rectangular top edge covering for the spring structure. The side portions 24 are each provided with a flap extension 25, and the end portions 29 are each provided with a flap extension 30. The construction of these parts is such that when the fabric is placed upon the top of the spring structure the flap extensions will fold over the edges of the framework along the dotted lines 24a and 29a Fig. 4 and will extend downwardly so as to form a box-like housing for the spring structure.

In constructing the fabric cover, each side portion is hemmed along its outer edges 26 and 27 and is provided at the outer corners thereof with suitable fastening devices 28. Each end portion 29 has each inner corner thereof folded under at 31 and stitched across the corner of one of the side portions 24.

Each end portion 29 is hemmed along its outer edges 32 and 33 and at each outer corner thereof is provided with a fastening device 34. In this manner it will be seen that a rectangular or skeleton top cover is provided, shown by the dotted lines 24a and 29a, see Fig. 4 and this skeleton or rectangular cover is provided with four flap extensions 25 and 30, which when the cover is placed in position as shown in Fig. 1 will extend downwardly over the several sides of the spring structure and effectively conceal the same.

Each depending member 10 of the end frames is provided adjacent the lower end thereof with a fastening device 36 adapted to cooperate with a fastening device 28 on the flap extension 25, and each cross bar 11a of the end frames is provided adjacent the depending members 10 with a pair of similar fastening devices 35 adapted to cooperate with a fastening device 34 and flap extensions 30. When therefore, the fabric cover is applied in position as shown in Fig. 1 the cooperating fastening devices carried by the flap extensions and the framework are connected together and it will be noted that the fastening members carried by the framework are in such position that the flap extensions when secured in position will be stretched over the sides of the spring mattress structure, thus giving a box-like and permanent appearance to the mattress.

Thus, the fabric cover with the spring structure forms a box mattress wherein the springs and framework of the mattress are entirely concealed around the sides and top edges and effectually housed, and in addition when desired the fabric cover may be readily removed merely by detaching the fastening devices for the purpose of enabling the cover to be cleaned, repaired or replaced.

Thus it will be seen that this fabric cover not only gives the appearance of a box spring, but permits thorough circulation of air through the uncovered portions of the springs, and consequently prevents the permanent lodgment of dust and dirt or vermin in the springs. It also permits effective cleaning of the springs at any time either by removing the cover or without removing it, and should the cover for any reason become soiled it can be readily removed, washed and replaced.

Furthermore the covering of the springs around the top edges forms a protecting

medium to prevent wear and tear on the hair or other mattress. Thus the present improvement provides what may be called an imitation box spring having all the advantages of the ordinary box spring and none of its disadvantages, since it is more sanitary, easily cleaned and very much less expensive to manufacture.

It will furthermore be observed that by reason of the fact that the box spring has considerable depth, detachable heads can be hook-connected thereto and maintained against wobbling without the use of independent side bars connecting those heads or the head and foot, as is the usual manner of supporting the box springs. In other words, in practice it is usual to connect the heads or foot by side bars upon which the box spring usually rests. In the present improvement however, by means of the connection shown the side bars are done away with and the box spring attached directly to the head and foot without any lengthwise extending side bars, thus materially reducing the expense of the bed structures.

The direct attachment of the spiral spring mattress to the head and foot by means of the hooks projecting into the slots is permitted by reason of the fact that the end flap extensions 30 are so formed as to permit the hooks of the head and foot to project into the depending portions of the spiral spring mattress, and are shown in the present instance (see Fig. 4) of less length than the width of the top of the spring mattress, the width of which corresponds to the lines 24^{a} (Fig. 4) so that when the flaps are in their proper fastened position, the sides and ends of the spring mattress are entirely concealed, but the depending members 10 of the spring mattress carrying the slots 22 and 23 for the reception of the hooks of the head and foot are not covered. Thus the skeleton formed cover is so formed that it cannot only be readily detached without detaching the spring mattress from the head and foot, but the spring mattress can readily be removed or detached from the head and foot without detaching the cover. In short, the cover can be readily detached and replaced without dismantling the bed.

It is to be understood that by describing in detail herein any particular form, structure or arrangement, it is not intended to limit the invention beyond the terms of the several claims or the requirements of the prior art.

Having thus explained the nature of my said invention and described a way of constructing and using the same, although without attempting to set forth all of the forms in which it may be made, or all of the modes of its use, I claim:

1. A three-part spiral spring mattress bed structure comprising a head, a foot, a detachable spiral spring mattress connected to the head and foot, and forming the sole connection therebetween, said head and foot and the mattress having connecting means extending therebetween at the ends of the mattress, and a detachable cover for said mattress having depending flap extensions at all sides thereof, the said extensions being detachably connected to said spring mattress to permit the detachment of said cover without separation of the mattress from the head and foot, and the depending end flap extensions having less length than the width of the spring mattress top, thereby to permit the connection means to project therethrough at the ends of said flap extensions and the free removal of the cover.

2. A three-part spiral spring mattress bed structure comprising a head, a foot, a detachable spiral spring mattress connected to the head and foot, and forming the sole connection therebetween, said head and foot and the mattress having connecting means extending therebetween at the ends of the mattress, and a detachable cover for said mattress having depending flap extensions at all sides thereof, the said extensions being detachably connected to said spring mattress to permit the detachment of said cover without separation of the mattress from the head and foot, and the depending end flap extensions having less length adjacent their connected edges for a substantial distance along their ends than the width of the spring mattress top, thereby to permit the connection means to project therethrough at the ends of said flap extensions and the free removal of the cover.

Signed at Brooklyn, New York, this 1st day of March, 1924.

BENJAMIN B. ENGLANDER.