

943,442.

Patented Dec. 14, 1909.

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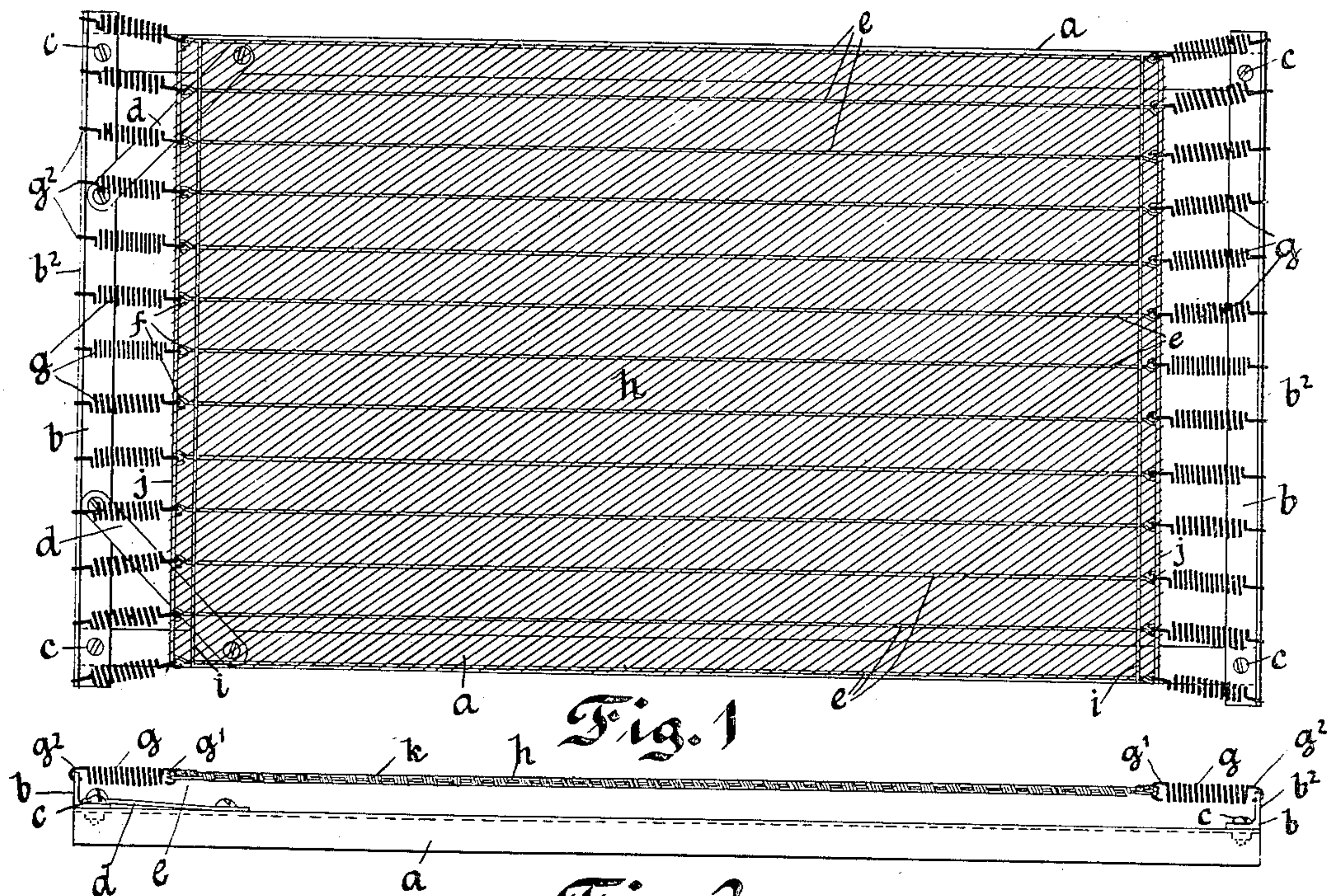


Fig. 2

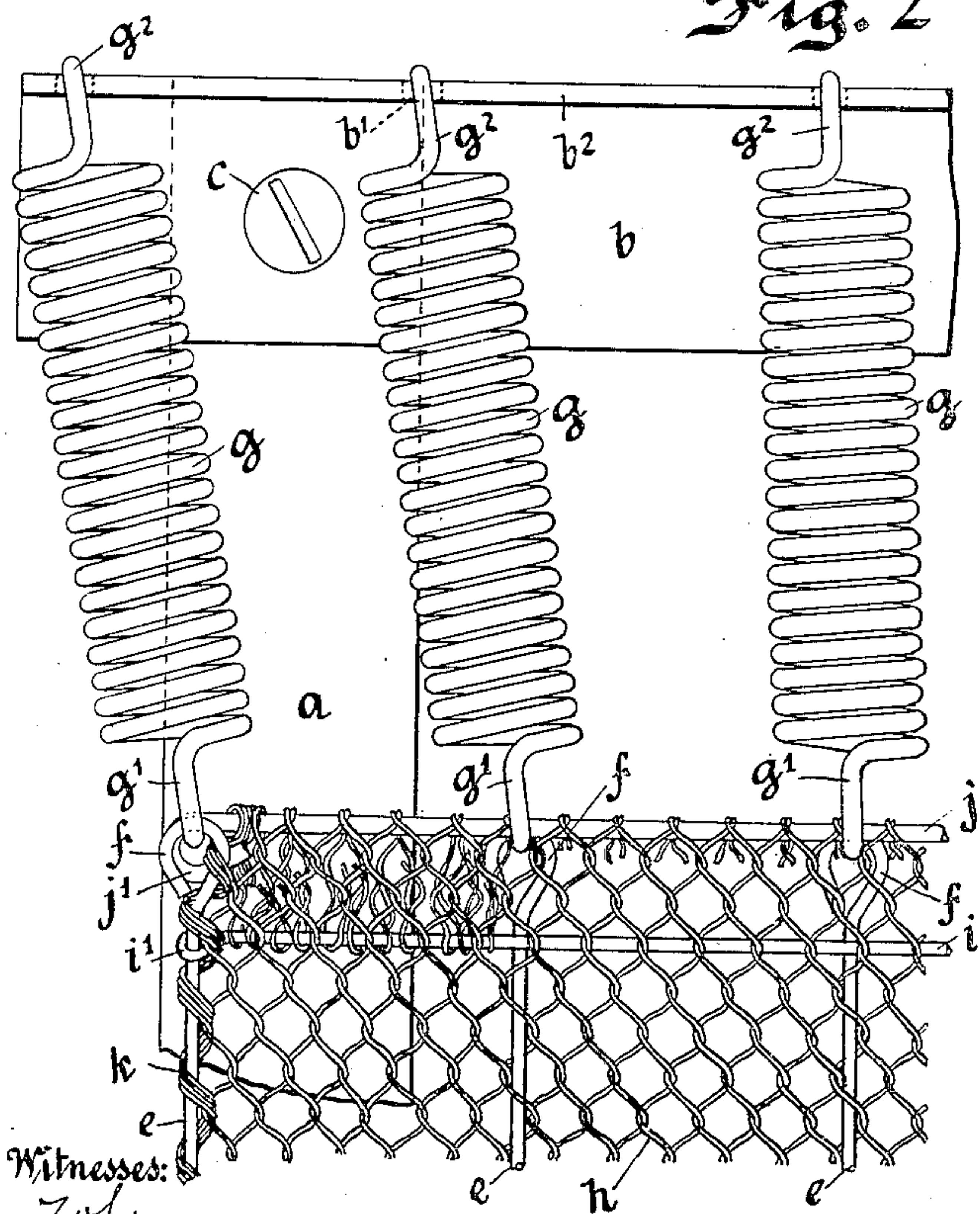


Fig. 3

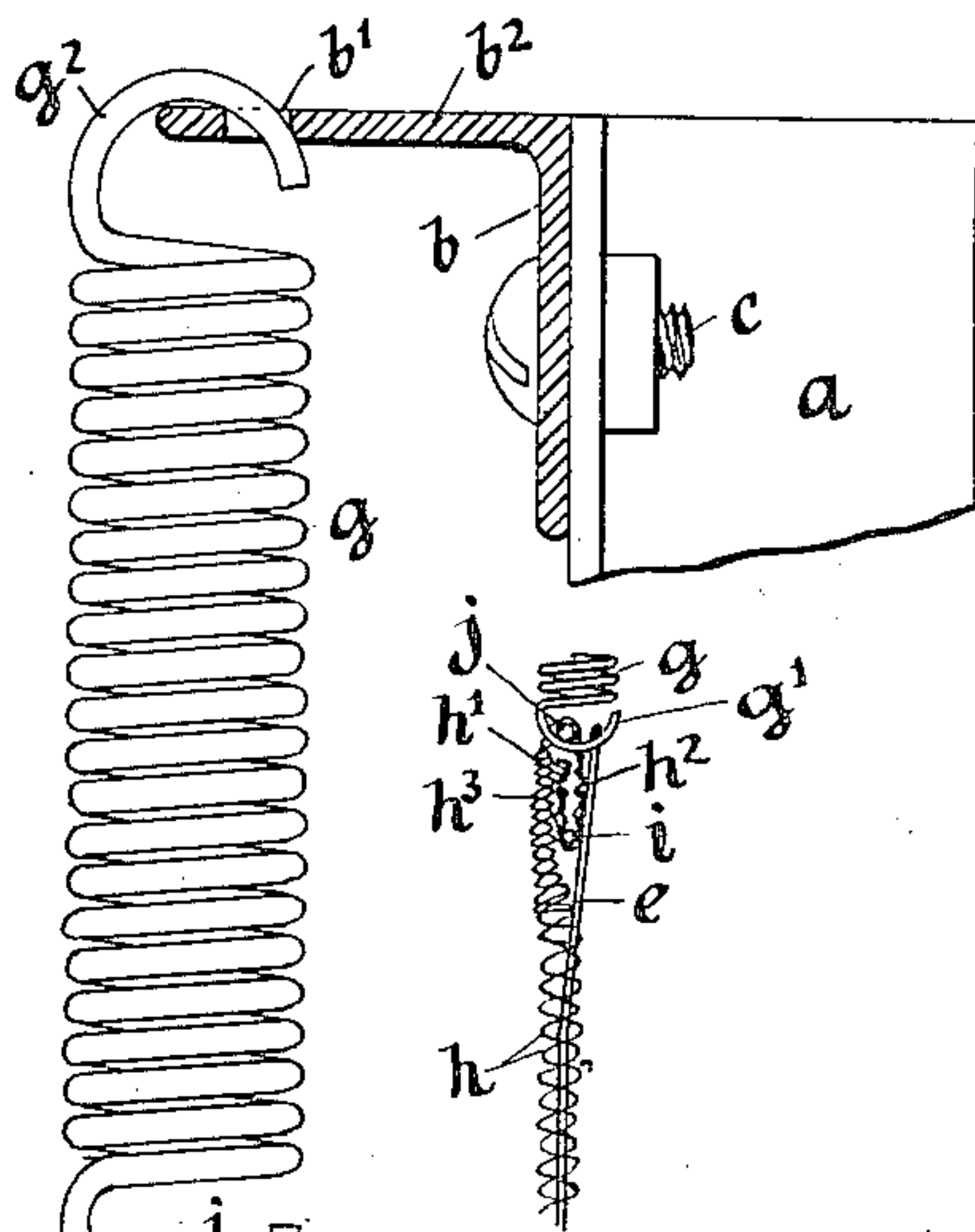


Fig. 4

Fig. 5

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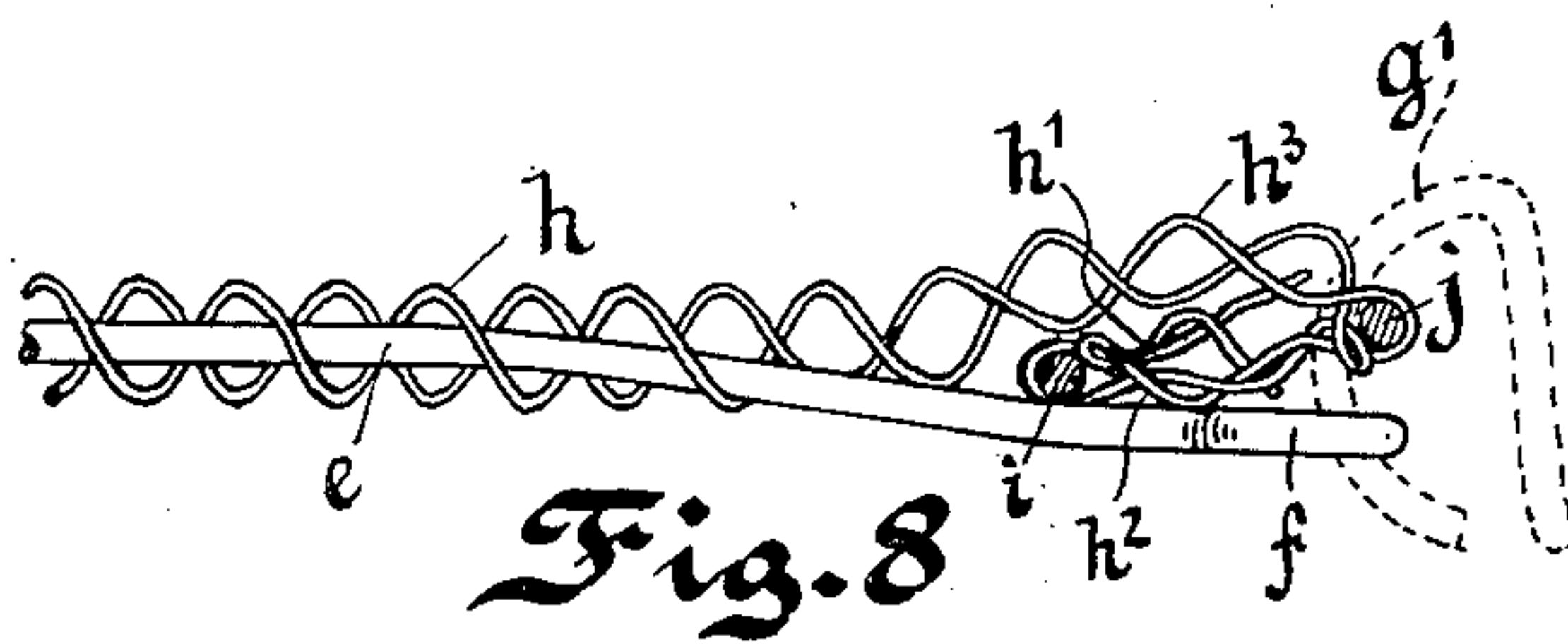
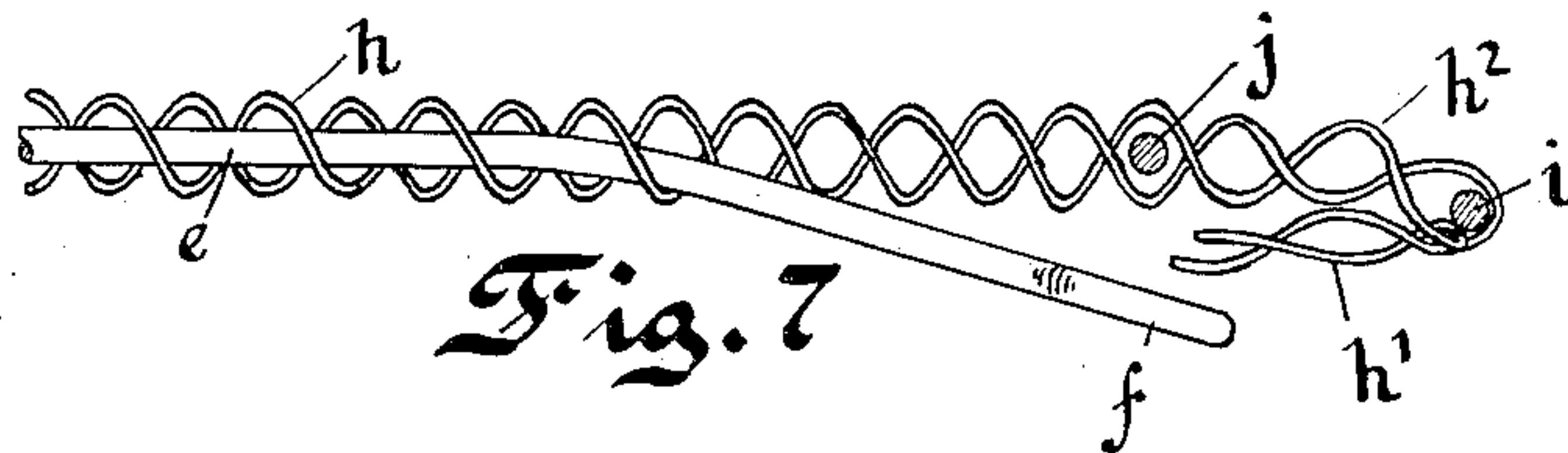
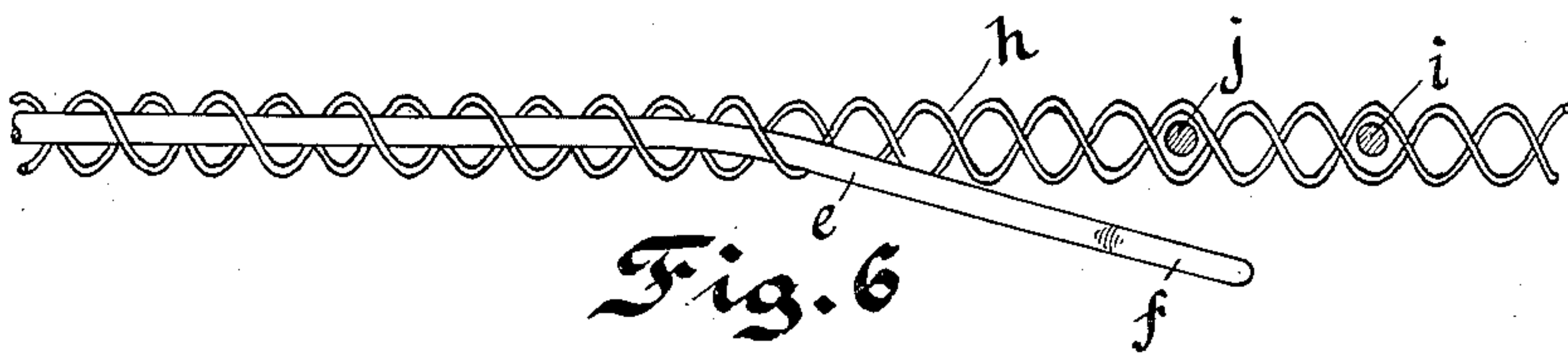
BED BOTTOM.

APPLICATION FILED OCT. 18, 1907.

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2 SHEETS—SHEET 2.

943,442.



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JAMES F. McCLATCHEY, OF KENOSHA, WISCONSIN.

BED-BOTTOM.

943,442.

Specification of Letters Patent.

Patented Dec. 14, 1909.

Application filed October 18, 1907. Serial No. 398,030.

To all whom it may concern:

Be it known that I, JAMES F. McCLATCHEY, of Kenosha, Wisconsin, have invented a Bed-Bottom, of which the following is a specification.

The object of this invention is to provide an improved bottom or mattress-support for beds, couches, davenports and similar articles of furniture.

More particularly I aim to produce a bottom which will be free from any tendency to sag by long use, and the several elements of which yield independently of one another, whereby a person lying or resting on one side of the bed, or falling thereon suddenly, will not tend to displace, raise or otherwise disturb a person resting on the other side of the bed.

I also aim, as further objects, to produce a bottom which will have a substantially smooth surface, and which shall be absolutely free from any kinks or cavities giving a lodgment or hiding-place for vermin.

I also aim to produce such a bottom at a moderate cost, cheaper in fact than other forms of bed-bottoms not having these advantages.

With these objects in view the invention consists of the constructions and combinations hereinafter more particularly described and set forth in the claims, reference being had to the accompanying drawings, which show a bed-bottom constructed according to my invention.

In these drawings, Figure 1 is a plan view of the bed-bottom. Fig. 2 is a side elevation thereof. Fig. 3 is a plan view of one corner thereof on a larger scale. Fig. 4 is a transverse section through the same, substantially on the line of one of the longitudinal wires; and Fig. 5 is a schematic cross-section to illustrate the mode of construction. Figs. 6, 7 and 8 are substantially lateral edge views of a portion of the fabric used in my bed-bottom showing the successive steps of bending the unselvaged end edge of the fabric over to fasten the same.

In these drawings every reference character refers always to the same part.

The bottom shown in the drawing is a rigid one, such as is used in an ordinary bed, and it will be understood that for furniture such as davenports, couches etc. requiring folding bottoms, the bottom will be made in hinged sections, folding upon one another as will hereinafter appear. As shown, the

frame comprises four angle-bars *a a* and *b b*, constituting the sides and ends thereof, united at the corners by screw-bolts *c* and maintained in rectangular shape by diagonal braces *d*. The mattress-support consists of longitudinal wires *e*, spaced at regular intervals from side to side of the bed, these being provided at their ends with hooks or eyes *f* (see Fig. 3), which engage with a series of coiled springs *g* provided with hooks *g'*, *g''*, at each end thereof, the ends *g'* engaging with the eyes *f*, and the ends *g''* engaging in holes *b'* formed in the upstanding flanges *b'* of the end-bars *b* of the frame. I prefer to provide a spring *g* at each end of each wire *e* to connect it with the frame; but it is obvious that the device will work, consistently with my invention, if the springs at one end are omitted, the wires *e* being connected directly to the frame or by rigid links.

As thus far described the bed-bottom is sufficient to support the mattress; but it would have the defect that the wires would be apt to spread at the point supporting the weight upon the bed allowing the mattress to double up between the wires and fall between them. To prevent this and hold the wires properly spaced I provide a helical wire-fabric *h*, consisting of rows of helically wound interlinked longitudinal wires, through the coils of some of which the wires *e* are made to pass, thus holding them at the proper spacing and preventing them from separating beyond a given distance.

It is to be observed that the wire-fabric *h* in my bed-bottom, contrary to the disposition of similar fabrics of other forms of bed-bottoms, is not stretched elastically and does not perform the function of a support, but merely of a flexible spacing medium for the real support, to wit, the wires *e*. As however the unselvaged ends of the fabric would, if allowed to remain loose, draw toward the center and cause the fabric to bunch in the middle, it is necessary to hold them in proper position. To this end I may employ any of the known or improved means for fastening the unselvaged edge of a fabric of this kind; but the method of fastening here shown is a novel one which possesses the advantages over previous methods both of greater cheapness and also of being formed entirely of wire, whereby no hiding places are left for vermin. This method of fastening consists in providing

two transverse wires i and j , over which the unselvaged edge of the fabric is successively bent, and the wire j engaged with the hooks g' of the springs g . As the mixture of
 5 wires makes the construction not entirely clear from Figs. 3 and 4, I have shown the method schematically in Fig. 5. A lap of the unselvaged edge of the fabric, say half an inch in width, is first turned over the
 10 wire i , and flattened out forming a lap h' ; this then with a further lap h^2 is flattened out and turned over the transverse wire j , the portion h^3 of the fabric opposite the lap h^2 being likewise flattened out to some
 15 extent as may be necessary or desirable. The curling ends of the lap h' interlock and engage with the wires of the laps h^2 and h^3 , which effectively holds the wires and prevents them from coming loose. In addition
 20 the ends of the wires e underlie the laps h' and h^2 and the wires i and prevent them from unbending. Further security against this effect is obtained by forming upon the ends of the wires i eyes i' which engage the
 25 shanks of the outside wires e , and are themselves engaged between the coils of the series of helical wires k which form the selvage of the fabric. The ends of the wires j are likewise preferably formed with eyes j' ,
 30 which are best arranged to underlie the eyes f of the outside wires e . I may form this fastening more simply, by withdrawing the cross-wires i altogether after the fastening is otherwise set up, but it makes a better job
 35 to leave them in place. A further advantageous improvement on this construction consists in passing the wires i and j through the meshes of the fabric instead of under the latter, after which the laps h' , h^2 are bent
 40 over. This method is clearly shown in Figs. 6, 7 and 8. In Fig. 6 is shown the unturned fabric having the wires i and j interlaced between the wires thereof before the wire is bent over; Fig. 7 shows the same fabric
 45 after the first lap h' has been folded around the wire i ; and Fig. 8 shows the same after the wire i and lap h^2 have been folded around the wire j . To avoid confusion, only two adjacent wires of the fabric are shown
 50 in these figures.

As the wire-fabric h is not stretched (it is of course sufficiently pulled out to hold it smooth and level), and is perfectly flexible, the lateral elements of the bed-bottom will
 55 be substantially independent of one another, more especially if the wires in the fabric are set closer together laterally than the diameter of the coils, so as to allow a certain slight amount of spreading or separation of
 60 the wires e , such as would result from a depression of some of them due to the weight of a person on that side of the bed, without unduly drawing over or affecting in any way the wires on the other side of the bed. As
 65 moreover the support is entirely from the

springs g , which have sufficient elasticity to support resiliently any load which the bed is intended to hold, the bottom will always return to its normal position when the load is removed, and cannot sag at the side or
 70 bottom or center caused by frequent or continuous resting upon one particular point.

For furniture having folding bottoms such as couches and davenports, the transverse wires i and j must of course be divided
 75 and linked together by eyes at the folding points of the frame.

As previously stated, all the improved features as herein-described are not essential to the substance of my invention, but such
 80 variations may be made within the scope thereof as will be indicated by my claims.

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

1. In combination with a helical wire-fabric, a pair of wires transverse to the wires constituting said fabric and parallel at a short distance from each other, the unselvaged ends of said fabric being turned
 90 first over one wire and then over the other forming three interengaging laps, the wire ends in the intermediate lap engaging between the wires of the two outer laps.

2. In a bed-bottom and the like, a fastening for the unselvaged end of the wire-fabric comprising a transverse wire over which a lap of the unselvaged edge is turned, and a plurality of longitudinal wires underlying said lap and holding it in position.
 100

3. In a bed-bottom and the like, a fastening for the unselvaged edge of a wire-fabric comprising a transverse wire over which a lap of the unselvaged edge is turned, a second transverse wire over which said lap, said first wire, and also a second lap of the edge are turned, and a plurality of longitudinal wires underlying both said turned laps and holding them in position.
 105

4. In a bed-bottom and the like, a fastening for the unselvaged edge of a wire-fabric comprising a transverse wire over which a lap of the unselvaged edge is turned a second transverse wire over which said lap, said first wire, and also a second lap of the edge are turned, and a plurality of longitudinal wires underlying both said turned laps and holding them in position, the ends of said first transverse wire having hooks engaging around the outside longitudinal
 110 wires whereby said transverse wire and elastic fabric engaged thereby are held in position.
 120

5. In a bed-bottom, a frame comprising longitudinal bars and transverse angle bars having each an upstanding flange on the outside edge thereof, a plurality of coiled springs engaging in holes in each of said upstanding flanges, a plurality of longitudinal wires connecting the respective pairs
 125
 130

of springs at opposite ends of the bed, a helical wire-fabric having longitudinal inter-linked helically wound wires through the coils of some of which said longitudinal wires pass, and a pair of transverse wires crossing the ends of said longitudinal wires and engaged by said springs, the unselvaged edge of said helical wire-fabric being engaged with and held by said transverse wires.

6. In a bed-bottom and the like, a fastening for the unselvaged edge of a helical wire-fabric comprising a transverse wire interlaced with the meshes of said fabric parallel to said end edge and at a short distance therefrom, the portion of said end-edge beyond said transverse wire being then folded over upon the fabric itself.

7. In a bed-bottom and the like, a fastening for the unselvaged edge of a helical wire-fabric comprising a transverse wire interlaced with the meshes of said fabric parallel to said end edge and at a short distance therefrom, the portion of said end-edge beyond said transverse wire being then folded over upon the fabric itself; and a second transverse wire likewise interlaced with the meshes of said fabric parallel to the first and a short distance farther from the edges than the latter, the portion of the fabric beyond said second wire including said fold around the first wire being then folded back upon the fabric itself.

8. In a bed-bottom and the like, a fastening for the unselvaged edge of a helical wire-fabric comprising a transverse wire interlaced with the meshes of said fabric parallel to said end edge and at a short distance therefrom, the portion of said end-edge beyond said transverse wire being then folded over upon the fabric itself, a second transverse wire likewise interlaced with the meshes of said fabric parallel to the first and a short distance farther from the edges than the latter, the portion of the fabric beyond said second wire including said fold around the first wire being then folded back upon the fabric itself; and a plurality of longitudinal wires interlaced longitudinally with the meshes of said fabric up to a point near said end fastening and from there passing under the folded overlaps of said unselvaged end, in conjunction with means for holding said longitudinal wires and said second transverse wires together at the point where the longitudinal wires meet the transverse wires, whereby to hold the end folds in place and prevent them from unfolding.

In witness whereof, I have hereunto set my hand this fourteenth day of October, 1907.

JAMES F. McCLATCHEY.

Witnesses:

CHARLES A. TARBELL,
MARTHA SCHUMACHER.