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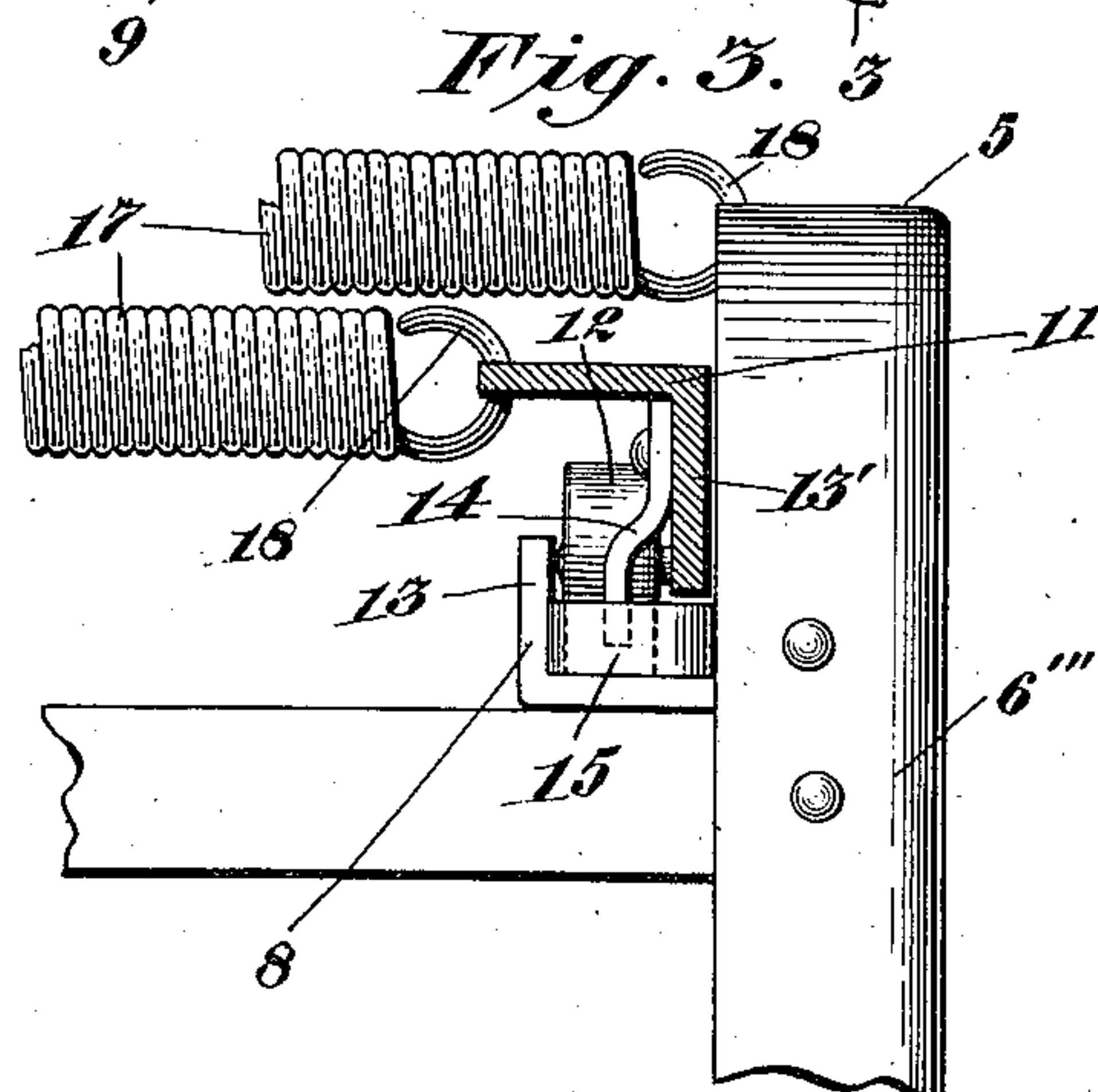
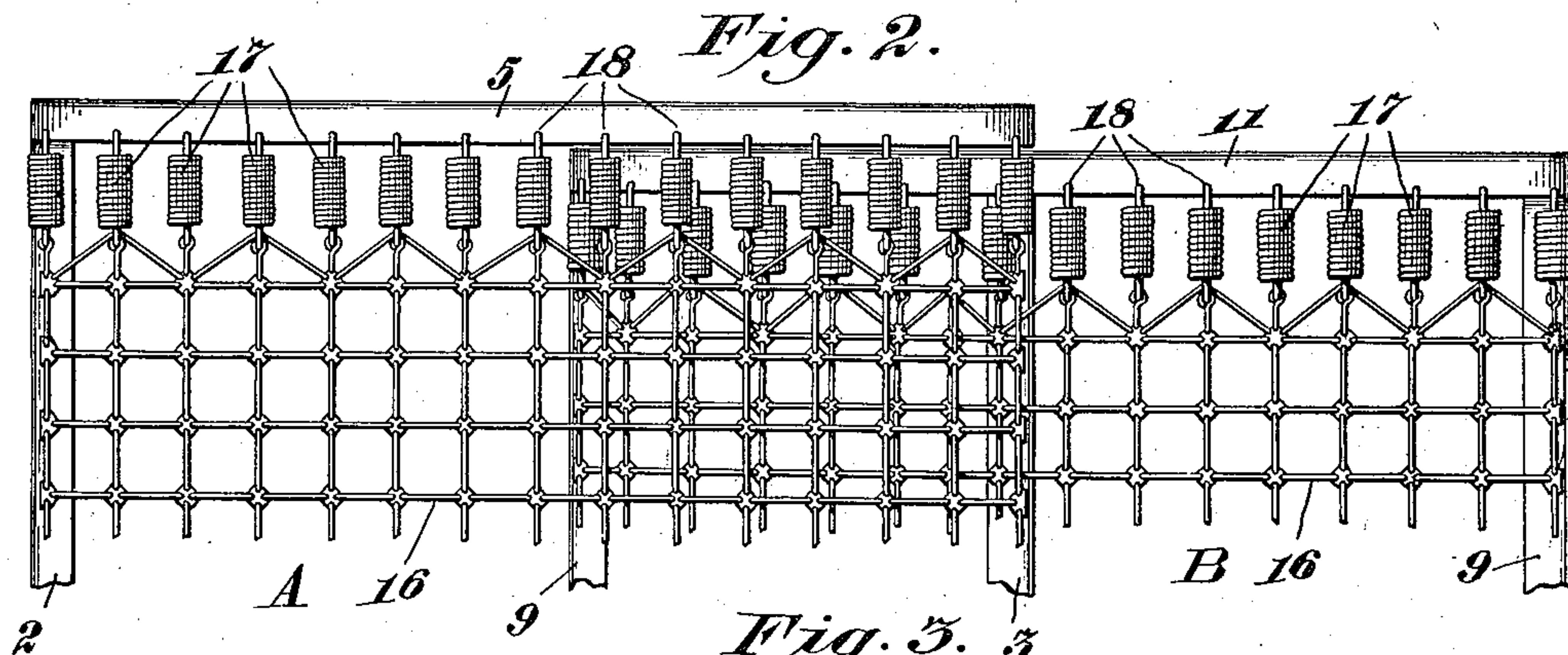
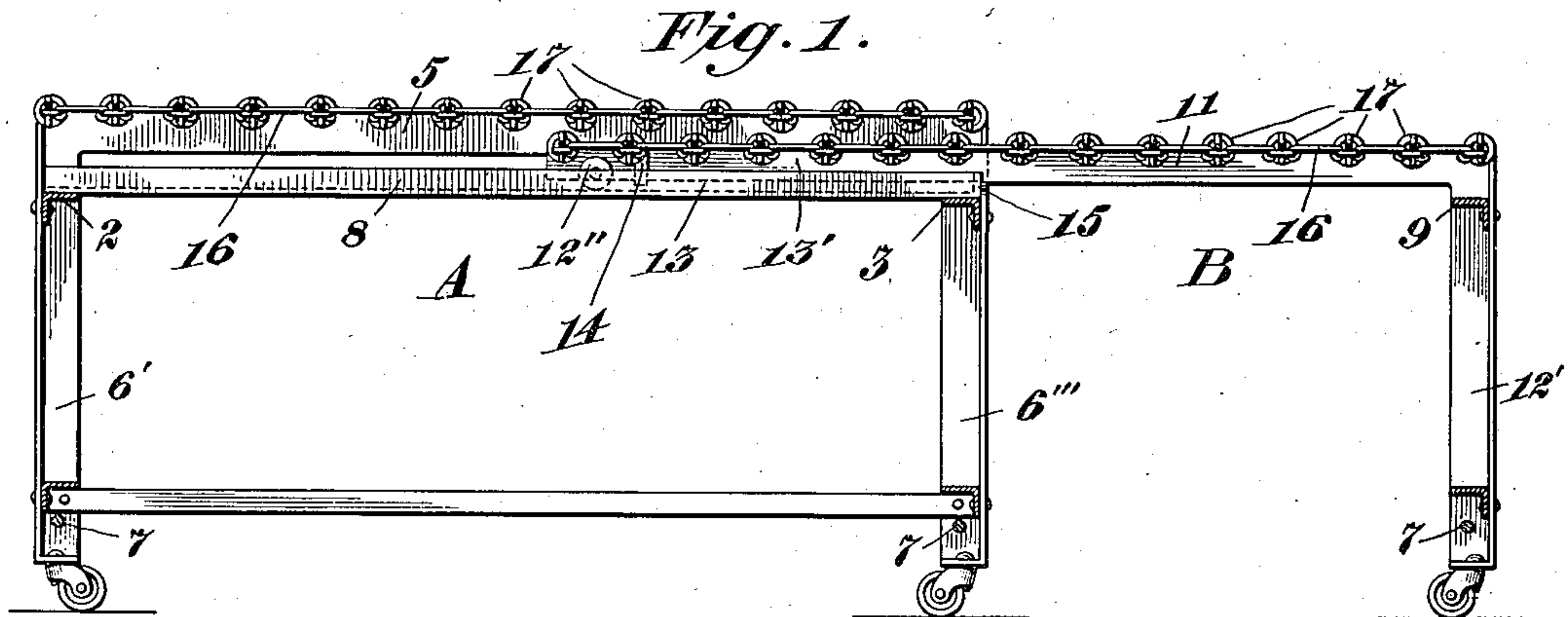
Patented Nov. 4, 1902.

A. DE PINIEC-MALLET.
EXTENSIBLE BEDSTEAD OR COUCH.

(Application filed Feb. 14, 1901.)

(No Model.)

2 Sheets—Sheet 1.



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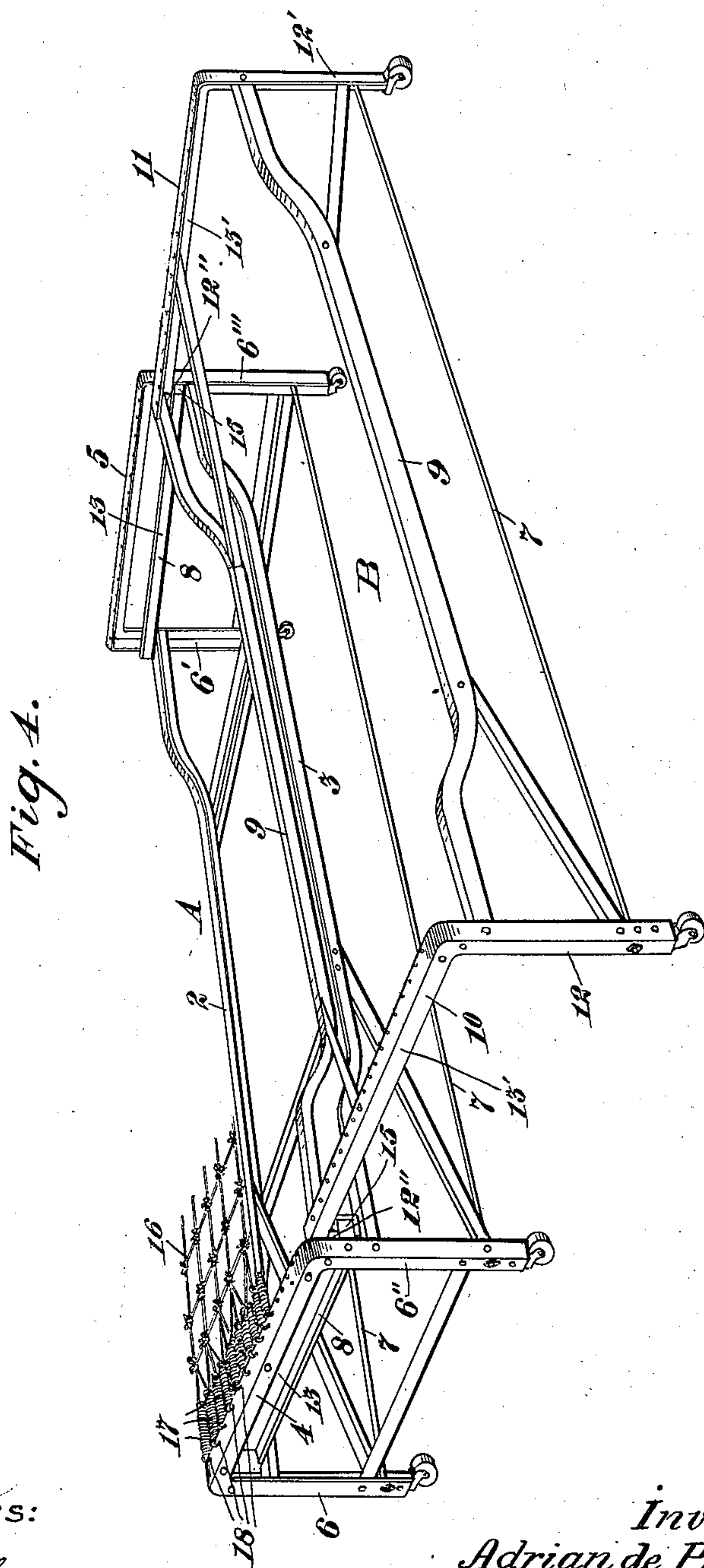
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2 Sheets—Sheet 2.



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UNITED STATES PATENT OFFICE.

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EXTENSIBLE BEDSTEAD OR COUCH.

SPECIFICATION forming part of Letters Patent No. 712,718, dated November 4, 1902.

Application filed February 14, 1901. Serial No. 47,208. (No model.)

To all whom it may concern:

Be it known that I, ADRIAN DE PINIEC-MALLET, a citizen of the United States, residing in Brooklyn, in the county of Kings and State of New York, have invented certain new and useful Improvements in Extensible Bedsteads or Couches, of which the following is a specification.

This invention relates to extension-beds or couch-beds, the object being to provide an improved structure simple in construction and operation and comparatively inexpensive to manufacture, whereby it may be placed upon the market at low cost.

A further object of the invention is to provide an improved bed comprising a main section and a sliding or extensible section, each having a metallic fabric rigid therewith, the structure being so organized that the metallic fabric of one section will slide transversely or crosswise between a side bar and the metallic fabric of the other section, whereby the two sections are nested, and the two fabrics are in such close relation that they are nearly level when extended, the distance between the two being sufficient to permit the proper sliding of one under the other without interfering with such movement, and such sections comprising when closed a single and when open a full-sized double bed.

A further object of the invention is to provide an extension-couch or couch-bed which may be made of metal throughout, and thus enable each section to comprise a metallic fabric connected at each end to metallic end frames comprising mattress-supporting bars having the desired number of legs or feet, preferably formed as a part thereof, such end frames being connected by suitable metallic side bars so formed or located that the proper spring of the metallic fabric will not be interfered with and so that the fabric of the extensible section will slide between a side bar and the fabric of the main section, and thus bring such fabrics nearly level when the sections are extended.

Prior to the present improvement various attempts have been made to furnish a practicable full-sized bed which could be closed up to form a single bed; but up to the present invention these attempts have not met with commercial success for various reasons,

one being that it has never been found possible, so far as I am aware, to assemble a pair of metallic sections in such manner that one could be nested with the other to bring the tops thereof nearly level when extended, so that by making the stuffed mattress of one section merely slightly thicker than that of the other the beds would be perfectly level to lie upon. On the contrary, it has been the usual practice to either shift one bed under the other, thus leaving considerable space between the tops thereof impracticable to obviate by the mere thickening of the stuffed mattress, or the bed has been so constructed that when the extension is in use a division has been formed by the side bar of one structure projecting above the level of the two beds and dividing them like a fence, and I believe that I am the first to provide a bed comprising two nested sections each comprising a metallic frame having a metallic fabric rigid therewith and one movable transversely relative to the other and between a side bar and the metallic fabric of the other and organized to form a full-sized or a single bed, as may be required, with such fabrics nearly level when the sections are extended and which sections may be readily disassembled, if desired. The main or that section which usually remains stationary comprises in a general way two end frames, each composed of a horizontal mattress-supporting bar and two legs or posts and side bars connecting said end frames together, said mattress-supporting bars having a metallic fabric rigidly connected thereto and stretched between the same. The movable or extensible section likewise comprises two end frames, each composed of a horizontal mattress-supporting bar and suitable supports, shown herein as comprising a leg at the outer end of each end frame and a rest or support at the inner end thereof, the latter adapted to rest and slide along on transverse supports or guide-bars carried by the main section and side bars connecting said end frames together, said mattress-supporting bars having a metallic fabric rigidly connected thereto and stretched between the same. The extensible section is usually somewhat shorter than the main section, so that it will move inside of the end frames thereof, the mattress-supporting bars

of the extensible section being located slightly below the mattress-supporting bars of the main section, so that one fabric may readily slide under the other.

5 One embodiment of this invention is represented in the accompanying drawings, forming a part of this specification, in which—

Figure 1 is an end view of this improved extensible couch or bed. Fig. 2 is a plan view
10 of a part of this improved couch or bed. Fig. 3 is a view, partly in section, on an enlarged scale, of one corner of the sections when closed; and Fig. 4 is a perspective view of
15 this extensible couch or couch-bed with a part of the metallic fabric of the main section in position.

Similar characters of reference designate like parts throughout the drawings.

In the form shown this improved extensible couch or couch-bed comprises a pair of
20 sections A and B, one a main and the other an extensible section. The main section A comprises two similar end frames, each end frame comprising a mattress-supporting bar 4 or 5,
25 having a pair of legs or posts 6 6' or 6' and 6'', one at each end of such bar and preferably formed as a part thereof, and a transverse support or guide-bar 8, shown connected at each end to one of said legs at a point be-
30 low the bars 4 or 5.

The bars 4 and 5 of the end frames support the metallic mattress, which may be a spring-mattress or an ordinarily formed mattress of woven wire, and for this purpose they are
35 usually provided with holes for the ends of springs, which may be a part of the mattress. Other modes of attaching the mattress may be used, however.

The supporting bars and legs are preferably made of angle-iron, the legs being preferably bent into an upright position, so that the end frame may be all one member. The
40 two end frames of the main section are connected by longitudinal side bars 2 and 3, preferably made of angle-iron, such bars being shown connected to the legs of the end frames and being in the present instance in the form of drop-bars.

To give additional stiffness to the structure,
50 suitable diagonal braces are provided, secured to the side bars and legs, one at each corner of the section.

The extensible section B is shown shorter than the main section to permit it to move
55 between the end frames thereof and is constructed to support its metallic fabric in a plane slightly below the fabric of the main section, so that when the two sections are closed one mattress will be slightly below the
60 other, and when open the distance between the two mattresses will be so slight that by simply making one stuffed mattress slightly thicker than the other the bed will be perfectly level. This movable section likewise
65 comprises two end frames, each of which comprises a horizontal mattress-supporting bar 10 or 11, having supporting means at each

end thereof, one being in the form of a leg or post 12 or 12' and the other in the form of a rest, such as a roll 12'', movable upon the sup-
70 port or guide-bar 8, such end frames being connected by suitable side bars 9, likewise shown as drop side bars and preferably formed of angle-iron. This section is given additional stiffness by suitable diagonal braces, the
75 outer two connecting the side bars and legs and the inner two the side bars and bars 10 and 11.

The "drop" formation of the side bars permits the proper yielding of the metallic fabric,
80 which, it will be noted, is not connected to the framework except at its ends. This yielding of the fabrics could be obtained by locating the side bars somewhat lower, in which case the necessity of forming them as drop side
85 bars would be avoided.

In the present instance the inner drop side bar of the extensible section is located as a whole somewhat above the inner drop side
90 bar of the main section, so that such side bar will move over the other during the closing of the section.

The legs of the extensible section are slightly shorter than those of the main section to permit the mattress-supporting bars of such ex-
95 tensible section to move below the mattress-supporting bars of the main section.

In the present organization each track or roll supporting member 8 is so constructed and assembled that the rolls 12'' are mounted
100 between two opposing faces 13 13', thereby preventing disengagement of the roll from the track during the sliding of the sections transversely.

While in practice the rolls may constitute
105 stops and engage suitable surfaces carried by the main section to limit the adjustment of one section relatively to the other, nevertheless it is deemed preferable to provide the extensible section with one or more stops or stop-faces
110 14, shown herein as two in number. These stops in the form shown are fastened to the roll-carrying member and are in position to engage coacting surfaces carried by the main section and which in the present instance are
115 shown as a pair of projections 15, secured one to each of the posts 6'' and 6'', whereby when the extensible section has been properly extended to form a full-sized double couch further movement thereof is prevented. These
120 stops may be pivotally secured to the bars, whereby they are movable so as to permit the separation of the sections.

The end frames of each section are connected together by suitable tie-rods 7, one con-
125 necting each pair of legs and located somewhat below the side bars. Without the provision of these tie-rods the formation of the side bars of angle-iron would not be practicable, since the tension of the spring-mat-
130 tress and the weight thereon when in use would pull the two horizontal mattress-supporting bars of each section toward each other, thus spreading the legs and buckling

the side bars; but by means of the tie-rods this is prevented, so that, as hereinbefore stated, the entire structure, including the end frames and side bars, may be made throughout of angle-iron, thus providing a much lighter structure than one formed of tubing. The side bars and tie-rods constitute stiffening means for the frame.

For the couch-bed manufacturer the present structure is preferable, since it is necessary to pull but two rolls over a mat or other obstruction on pulling out the extensible section, and these two rolls being on the outer side can be readily lifted, whereas if the inner side were provided with extended legs, such as are at the outer side of the extensible section, these rolls would likewise have to be pulled over the mat. In practice if for any reason it is desired to dispense with the extensible section it can be readily separated from the main section.

From the foregoing it will be seen that the present improvement comprises a pair of sliding metallic fabrics, such as spring or woven wire mattresses, each directly provided with legs or feet, one in the preferred form having a pair of legs and the other having four legs, that section having the largest number of legs having means coacting with the two legs of the extensible section to support such section, so that said main section constitutes not only a complete section in itself, but forms to a certain extent a part of the extensible section whereby a pair of legs act not only to support said main section, but also such extensible section. In other words, the intermediate legs or posts 6" and 6'" form supports for the inner side of both sections when the sections are extended, while the posts 6 and 6' form supports for such extensible section when the sections are closed.

Of course it will be obvious that other guiding means and stopping means may be used and that the main section could be shifted instead of the extensible section, the extensible section in the present instance being shown with its transverse members located intermediate the transverse members of the main section, although this could be reversed, if preferred. It is therefore to be understood that the various details of construction may be more or less modified without departing from the scope of this invention.

I claim as my invention—

1. Two nested bed-sections, one a main section and the other an extensible section, each including lengthwise-extending side bars, and a permanently-connected metallic fabric, the metallic fabric of one section movable transversely between a lengthwise-extending side bar and the metallic fabric of the other section whereby the tops of such fabrics are nearly level when the sections are extended.

2. Two nested bed-sections, one a main section and the other an extensible section each including lengthwise-extending side bars and a pair of transversely-extending permanently-

connected metallic-fabric-supporting bars, having permanently connected thereto and stretched therebetween a metallic fabric, the fabric of the extensible section being movable transversely between a side bar extending lengthwise of the main section and the fabric of such main section, whereby the tops of the fabrics are nearly level when the sections are extended.

3. Two nested bed-sections metallic formed throughout, one a main section and the other an extensible section each including lengthwise-extending side bars and transversely-extending permanently-connected metallic-fabric-supporting bars, and a metallic fabric rigidly connected at its ends to said transverse bars, the fabric of the extensible section being located to move between a side bar extending lengthwise of the main section and the fabric of such main section, whereby when the sections are extended the fabrics are nearly level.

4. An extensible couch-bed comprising two sections, one a main section comprising two end frames each comprehending a fabric-supporting bar and legs, lengthwise-extending side bars permanently connecting said end frames together, and a metallic fabric stretched between such end frames; and the other an extensible section likewise comprising two end frames comprehending fabric-supporting bars and legs, lengthwise-extending side bars permanently connecting such end frames together and a metallic fabric stretched between the same, the fabric of the extensible section being movable transversely between a side bar extending lengthwise of the main section and the fabric of such main section whereby such fabrics are nearly level when the sections are extended.

5. An extensible bed or couch comprising two sections, one a main section and the other an extensible section, each comprising a pair of end frames including supporting means adapted to rest upon the floor; lengthwise-extending side bars permanently connecting said end frames together and a metallic fabric stretched between such end frames, the metallic fabric of the extensible section being movable transversely between a side bar extending lengthwise of the main section and the metallic fabric of such main section and of substantially the same width as that of the main section so that the two fabrics will when the sections are extended form a full-sized double bed, and be nearly level.

6. An extensible bed or couch comprising a main section consisting of two end frames each composed of a horizontal mattress-supporting bar and a pair of legs or supports having rolls; lengthwise-extending side bars connecting said end frames together and a metallic fabric stretched between and permanently connected to said end frames; and an extensible section likewise comprising two end frames carrying four rolls for supporting such extensible section for sliding move-

ment transversely of the main section, lengthwise-extending side bars connecting such end frames, and a metallic fabric stretched between and permanently connected to said end frames and movable between a side bar extending lengthwise of the main section and the metallic fabric of such main section whereby when the sections are extended the fabrics are nearly level.

7. An extensible couch or bed, comprising a main section of metallic formation throughout, and an extensible section also of metallic formation throughout, each section formed of two end frames, comprising transverse fabric-supporting bars and feet and each end frame of an integral structure, lengthwise-extending side bars connecting the end frames of each section and a metallic fabric carried by each section, all of said parts of each section being permanently connected together, the extensible section having its fabric sliding transversely between a side bar and the fabric of the main section, whereby when such sections are extended the fabrics are nearly level.

8. An extensible couch or bed, comprising an angle-iron main section, and an angle-iron extensible section each formed of end frames comprising transverse fabric-supporting bars and feet, lengthwise-extending angle-iron side bars connecting the end frames of each section, tie-rods located below and extending lengthwise of the side bars and connecting the feet of the end frames to prevent the buckling of the side bars and the spreading of the lower ends of said end frames, and a metallic fabric carried by each section, the end frames, side bars and metallic fabric of each section permanently connected together, and the metallic fabric of the extensible section sliding transversely between a side bar and the fabric of the main section whereby when said sections are extended the fabrics are nearly level.

9. An extensible couch or bed comprising a pair of sections each comprising a pair of end frames connected by a metallic fabric and lengthwise-extending side bars, one of said sections having four feet or legs and a pair of transversely-extending guide-bars, and the other having a pair of feet at its outer side, its inner side resting and sliding on such guide-bars, the fabric of the latter section sliding between a lengthwise-extending side bar and the fabric of the other section, whereby when the sections are extended the two fabrics are nearly level.

10. An extensible couch or bed comprising a main section composed of two end frames each of an angle-iron structure and comprising a transverse mattress-supporting bar and a pair of legs integral therewith, angle-iron side bars connecting said end frames together, and a metallic fabric stretched between said end frames, all of said parts rigidly connected, and an extensible section likewise comprising two end frames each of an angle-iron struc-

ture and comprising a transverse mattress-supporting bar and a single integral leg at its outer end, and a rest at its inner end, angle-iron side bars connecting said end frames, and a metallic fabric stretched between said mattress-supporting bars, the fabric of one section movable transversely between the fabric and a side bar of the other section, whereby when the sections are extended the fabrics are nearly level, means carried by the main section for guiding the extensible section during its transverse movement; and tie-rods located below said side bars and extending lengthwise thereof and connecting the legs of the end frames.

11. An extensible couch or bed, comprising a main section and an extensible section, each comprising a pair of end frames permanently connected by lengthwise-extending side bars and a permanently-connected metallic fabric, the fabric of one section sliding transversely between a lengthwise-extending side bar and a fabric of the other section, whereby the tops of said fabrics are nearly level when said sections are extended, and said sections having means for limiting the transverse movement of the extensible section.

12. A section for an extensible couch or bed, comprising two end frames constructed of substantially equal strength and comprising transverse supporting bars and legs, a spring or metallic fabric permanently connected to the transverse supporting-bars of the two end frames, and stiffening means connecting the two end frames and having a part connecting said end frames adjacent to the tops thereof but below said fabric and a part connecting the end frames a relatively great distance below the said connections near the tops of said end frames, the lower part of said stiffening means effective to take the pulling strains of said spring fabric and of the weight thereon and prevent the tops of said end frames from approaching each other, and another section also having a metallic fabric and stiffening means, the fabric of one section movable between the fabric and the plane of the stiffening means of the other section.

13. A section for an extensible couch or bed comprising two end frames constructed of substantially equal strength and each end frame comprising a transverse supporting-bar and a pair of feet, a spring or metallic fabric permanently connected to the transverse supporting-bars of the two end frames, stiffening devices located below said fabric and connecting the feet of the two end frames and each comprising a drop side bar and a supplementary rod located below said side bar and effective to take the pulling strains of said fabric and of the weight thereon and prevent the tops of said end frames from approaching each other, the strength of said supplementary rod being greater than that of the end frames, and a sliding section having a metallic fabric movable between the fabric and the plane of the drop side bars of said first section.

14. A section for an extensible couch or bed, comprising a pair of end frames each comprising a transverse fabric-supporting bar and a leg at one end of said bar, said bar carrying a rest at its opposite end, a metallic fabric stretched between and permanently connected to said end frames, a pair of drop side bars located below said fabric and connecting said end frames, and a stiffening-rod connecting said feet below one of said side bars, and another section having a metallic fabric and side bars between which fabric and the plane of said side bars the fabric of said first section is shiftable.

15. An extensible couch-bed comprising a main section and an extensible section, each formed of a pair of end frames; a metallic fabric connecting said end frames and drop side bars connecting the end frames of each section whereby the yielding of the fabrics is not interfered with; the fabric of the extensible section sliding transversely between a side bar and a fabric of the main section whereby when the sections are extended such fabrics are nearly level.

16. An extensible couch or bed comprising a pair of sections, one movable relatively to the other, one of said sections having tracks or ways and the other of said sections having guide-rolls in engagement with said tracks or ways, and movable stops for limiting the movement of said sections relatively to each other.

17. An extensible couch or bed comprising a pair of separable sections, each comprising a pair of end frames, a metallic fabric permanently connected to said pair of end frames, and side bars connecting said pair of end frames, one of said sections movable transversely between a side bar and the metallic fabric of the other section, and one of said sections having shiftable means for limiting the shifting of said section, the organization being such that by shifting said means the sections can be separated.

18. In a couch-bed, a main section comprising two end frames, each composed of a horizontal mattress-supporting bar and two legs, and side bars connecting said end frames together, disposed below said mattress-supporting bars, a horizontal supporting-bar at each end of the main section, and a movable section comprising two end frames, each com-

posed of a horizontal mattress-supporting bar and a leg at one end thereof, and a rest or support at the other end thereof, the latter adapted to rest upon and slide along on the horizontal supporting-bars of the main section, and "drop" side bars connecting said end frames together, disposed below the mattress-supporting bars, one occupying a plane above the side bars of the main section, substantially as described.

19. In a couch-bed, a main section comprising two end frames, each composed of a horizontal mattress-supporting bar and two legs, and side bars connecting said end frames together, a horizontal supporting-bar at each end of the main section, a movable section made shorter than the main section comprising two end frames, each composed of a horizontal mattress-supporting bar and a leg at one end thereof, and a rest or support at the other end thereof, the latter adapted to rest upon and slide along on the horizontal supporting-bars of the main section, "drop" side bars connecting said end frames together, the mattress-supporting bars of the movable section occupying a plane below the mattress-supporting bars of the main section and one of the "drop" side bars of said movable section occupying a plane above the side bars of the main section, substantially as described.

20. In a couch-bed, a main section comprising two end frames, each composed of a horizontal mattress-supporting bar and two legs, and side bars connecting said end frames together, a horizontal supporting-bar at each end of the main section, a movable section, made shorter than the main section, comprising two end frames, each composed of a horizontal mattress-supporting bar occupying a plane below the mattress-supporting bars of the main section, a leg at one end thereof, and a rest or support at the other end thereof, the latter adapted to rest upon and slide along on the horizontal supporting-bars of the main section, and side bars connecting said end frames together, one occupying a plane above the side bars of the main section, substantially as described.

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