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Patented Sept. 20, 1898.

A. W. FURNIVALL & H. MARTIN.

EXTENSION BED.

(Application filed Oct. 13, 1897.)

(No Model.)

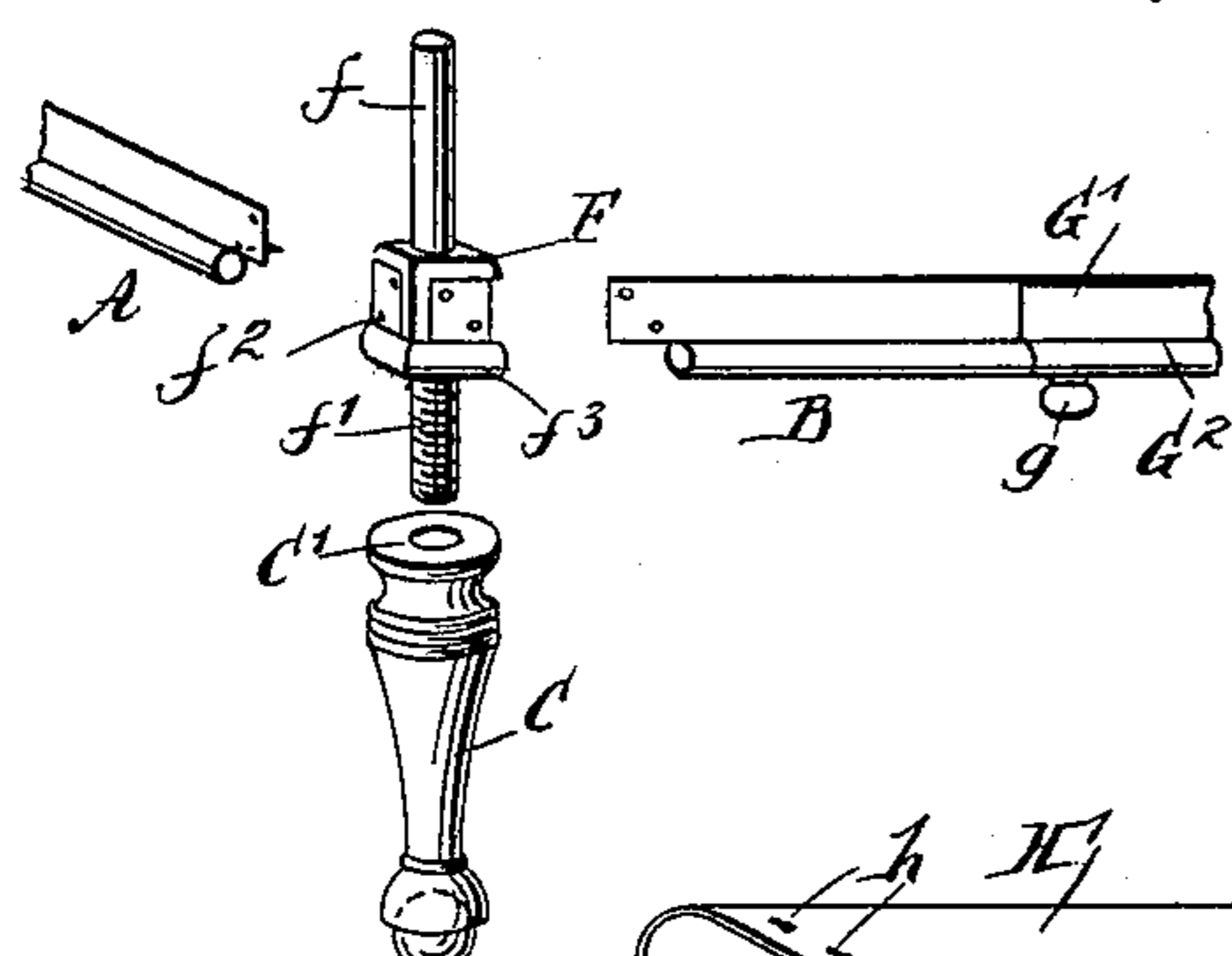
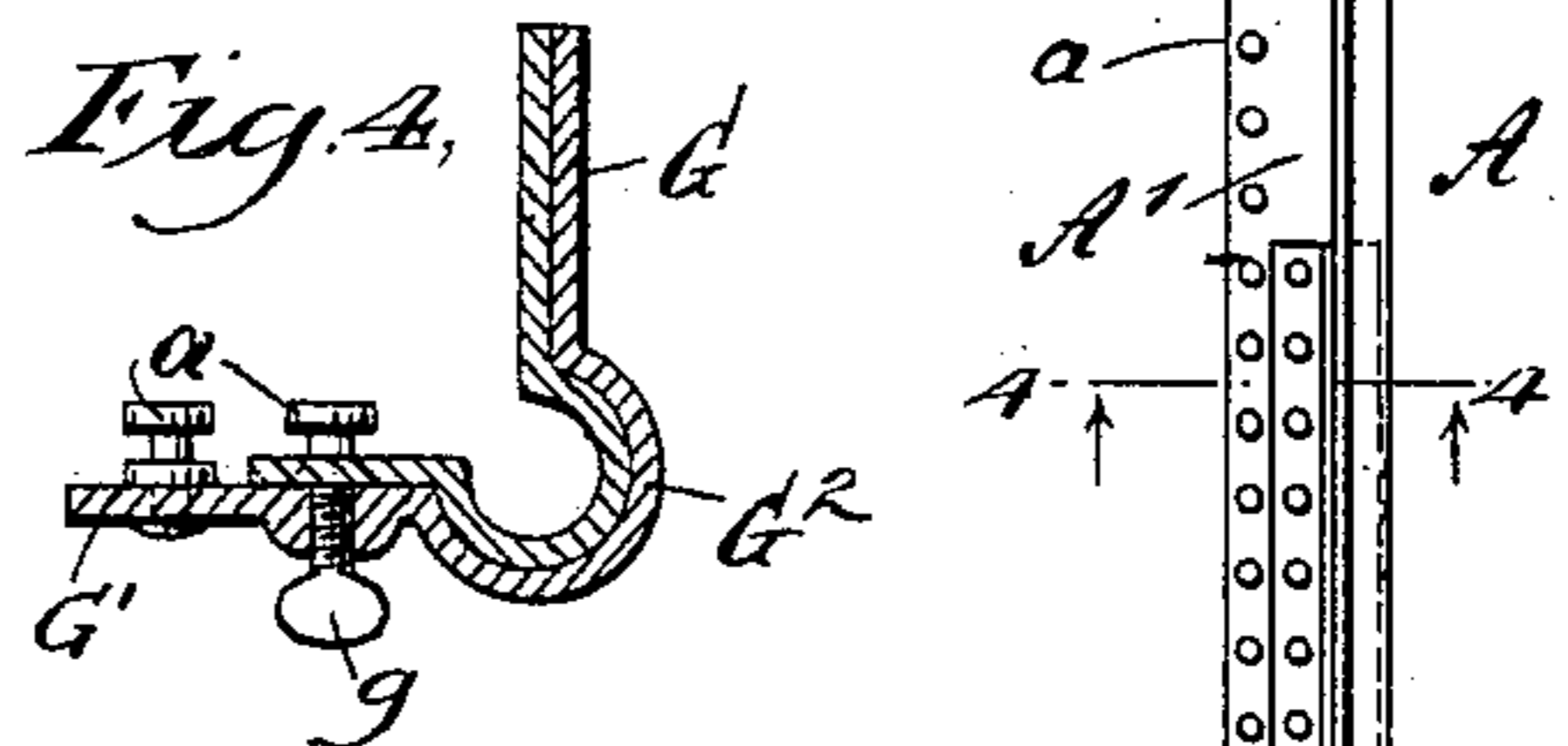
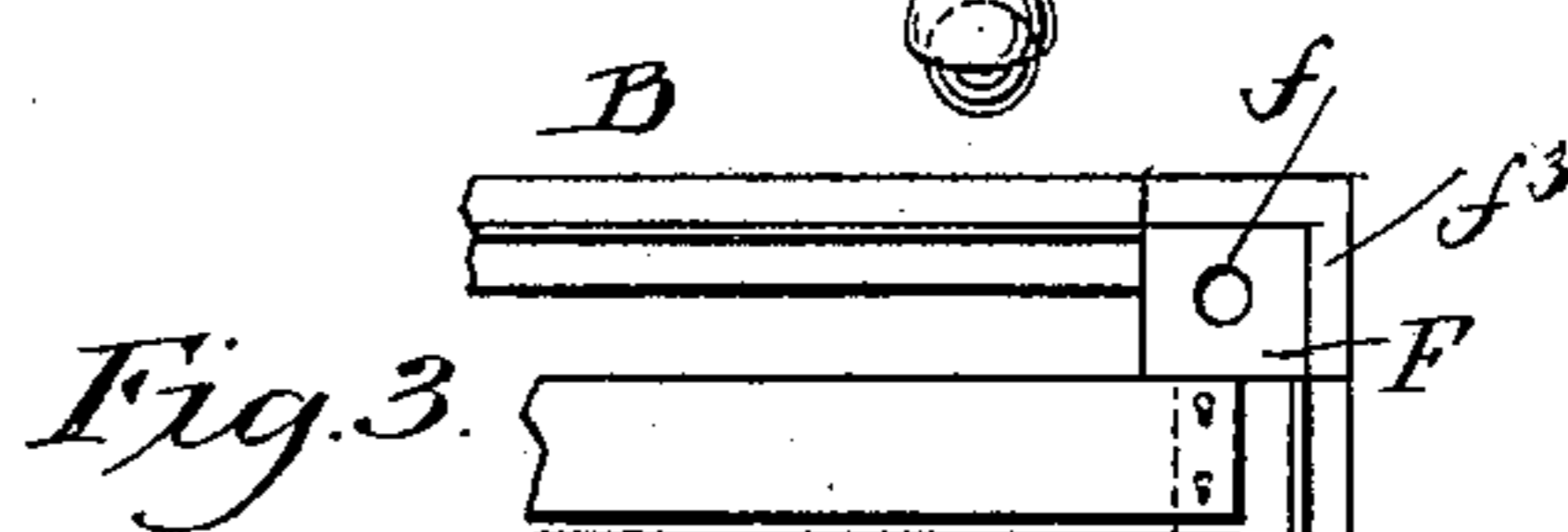
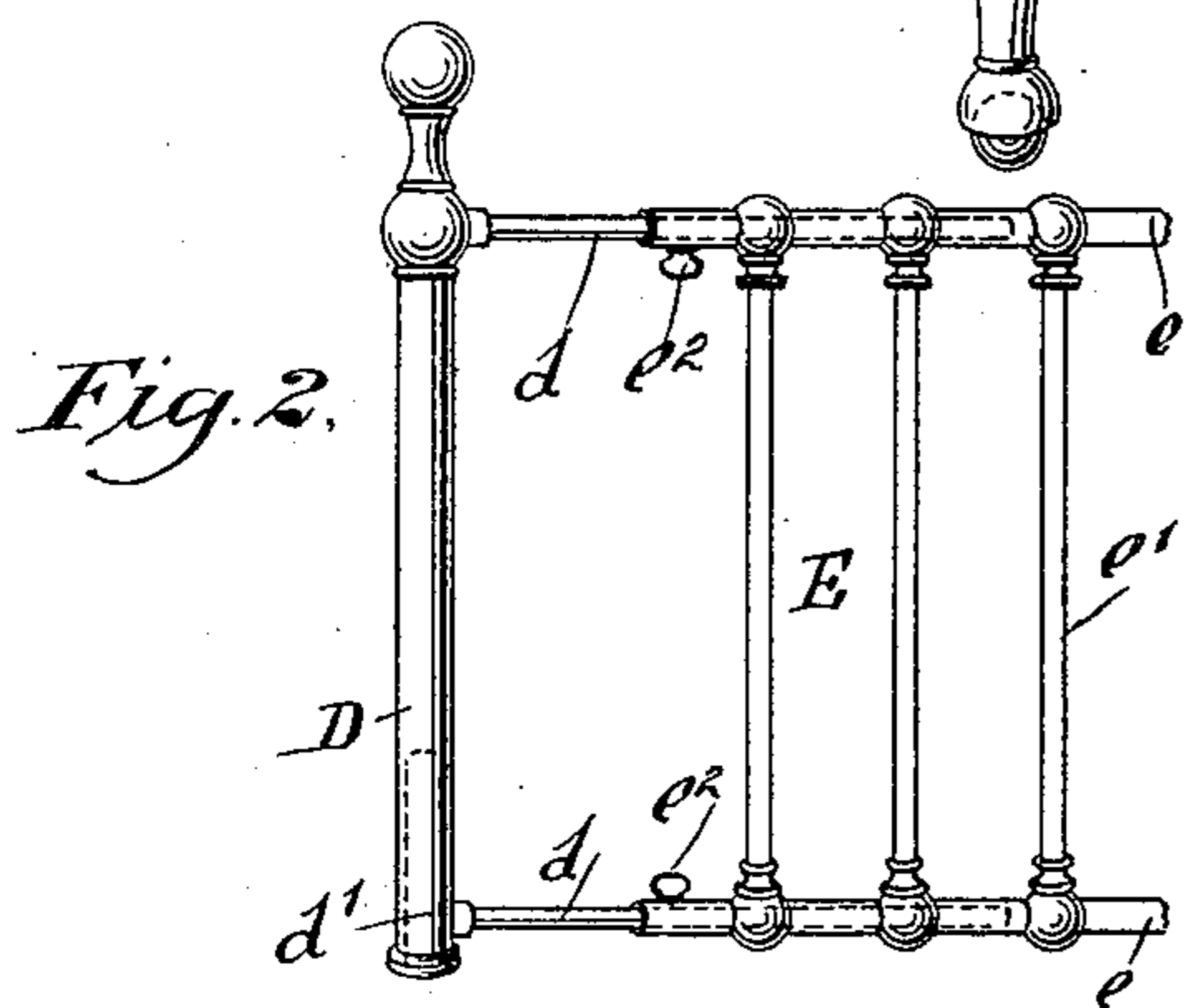
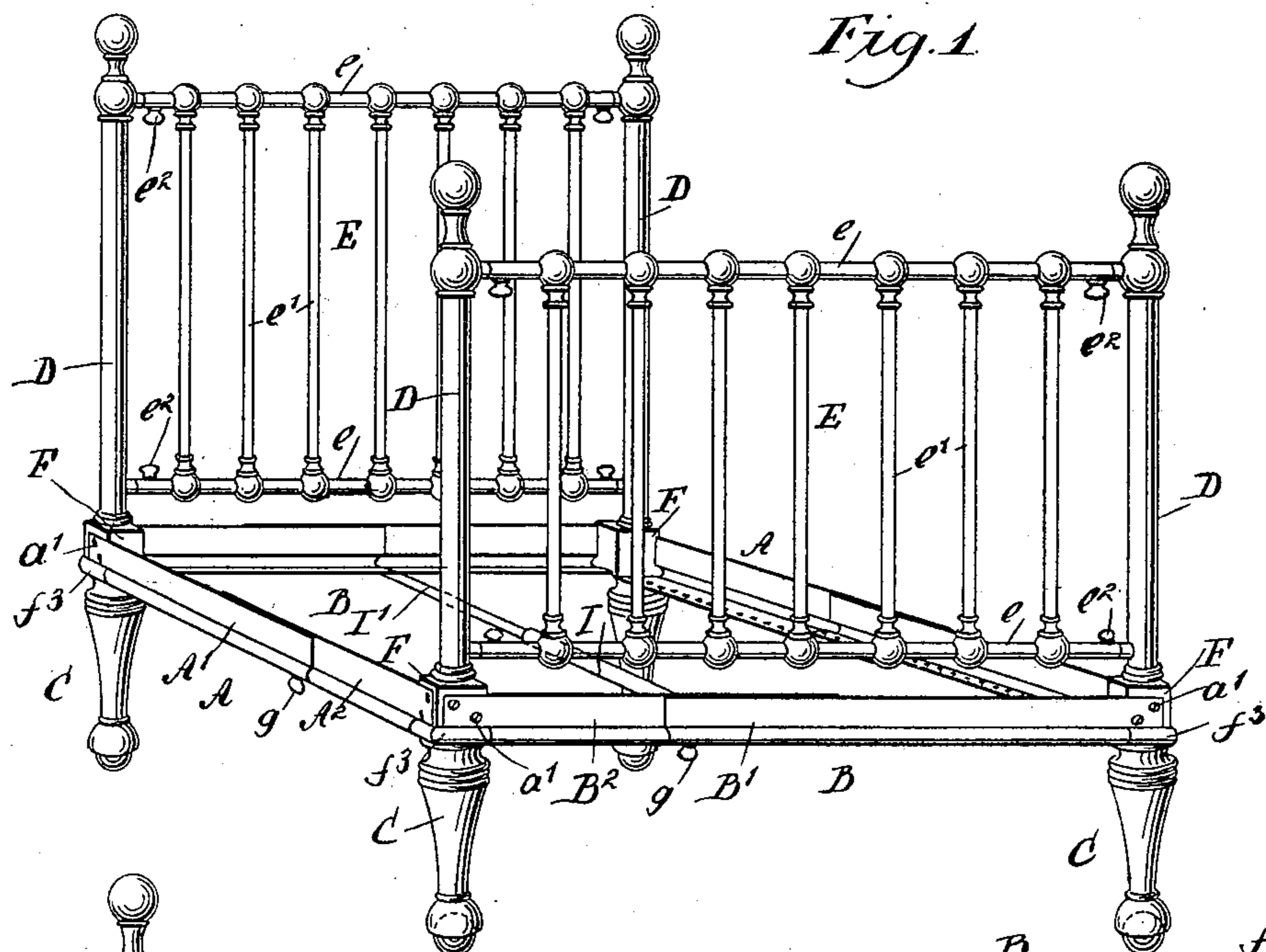


Fig. 5.

WITNESSES:

Edw. Thorpe
H. L. Reynolds

INVENTORS
A. W. Furnivall
H. Martin

ATTORNEYS.

UNITED STATES PATENT OFFICE.

ALFRED W. FURNIVALL AND HENRY MARTIN, OF NEW YORK, N. Y.

EXTENSION-BED.

SPECIFICATION forming part of Letters Patent No. 611,115, dated September 20, 1898.

Application filed October 13, 1897. Serial No. 655,058. (No model.)

To all whom it may concern:

Be it known that we, ALFRED W. FURNIVALL and HENRY MARTIN, of New York, (Astoria, Long Island City,) in the county of Queens and State of New York, have invented a new and Improved Extension-Bed, of which the following is a full, clear, and exact description.

Our invention relates to an improvement in beds by which they may be adjusted to various lengths and widths to suit different circumstances; and it consists of a side rail of peculiar shape by which the adjustable rail is readily secured, and, further, of a peculiar spring especially adapted for beds of this character and adjustable in length.

The invention also consists of certain improved constructions, which will be hereinafter described, and particularly pointed out in the claims.

Figure 1 shows our improved bed in perspective. Fig. 2 is a fragmentary perspective showing the method of attaching the parts to the posts, said parts being slightly detached to more fully show their shape. Fig. 3 is a plan view showing one of the side rails and the attachment of the same to the posts and to the springs. Fig. 4 is a cross-sectional elevation taken upon the line 4-4 of Fig. 3, showing the construction of the side rails; and Fig. 5 is a perspective showing the construction of the springs.

The object of our invention is to construct a bed which may be adjusted both in width and length to suit the requirements of different circumstances. With this object in view the side and end rails are each made in two parts, said parts being telescopic or otherwise adjustable upon each other, so that the rails may be lengthened or shortened, as desired. The side rails A are adjustable independently of the end rails B. These rails are formed in two pieces A' and A², which may be of any suitable shape which is capable of adjustment one upon the other, so as to vary the length of the rail. The form of preferred construction is shown in the drawings. This consists, as shown most clearly in Fig. 4, of a rail formed of two plates which are bent so as to form vertical and horizontal flanges G and G', which are united by a bulb G². This bulb, as shown in Fig. 4, is of circular outline and is of dif-

ferent sizes upon the two parts of the rail, the same being adjusted so that one will slide and closely fit within the other. The circle of the bulb is made such that the inner bulb cannot be pulled laterally out of the outer but can move relatively thereto only by sliding longitudinally. The vertical flanges G are preferably made both of the same width, so that their upper lines will coincide. The horizontal flanges, however, vary in width. The plate which is outermost has the broader horizontal flange. This is necessitated by reason of the fact that the rails are provided with pins *a* upon the inner edge of the horizontal flanges, said pins being used as an attachment for the springs. The inner rail having the narrower flange may slide within the line of the pins *a* upon the outer flange, thus preventing interference with the same. The end rails B are similarly formed, excepting that they are not provided with pins *a* for attachment of the springs. The two pieces of the rail may be secured at any point by means of a screw *g*, which passes through the horizontal flange G' of the outer rail and bears against the corresponding flange of the inner rail. As this screw is set up it bends the inner rail in the bulb G², so as to bind it in the outer rail and prevent sliding. They might also be secured by means of a pin dropped into registrable holes in both. The ends of the rails are secured to blocks F at each corner by means of screws *a'* or any other suitable device. The use of screws is preferred, as the bed may be readily taken apart. These blocks are provided with vertically-extending pins *f* and *f'* above and below the same. The pin *f'*, extending below the block, is threaded and adapted to screw into the threaded socket C' in the leg or support C. The upwardly-extending pin *f* is adapted to fit within the hollow lower end *d'* of the post D. This post D may be solid and have a socket formed in its lower end or be made of a tube of such a size as to fit over the pin *f*. The posts D are provided with horizontal inwardly-extending bars *d*, which are preferably round. These bars slide within tubes *e* of the head and foot pieces E. The construction shown in the drawings is one which would be used in connection with an iron bedstead, in which the head and foot piece is

composed of the horizontal bars *e* and the vertical connecting-rod *e'*. In this case the horizontal rods *e* are so placed that they register with the rods *d*, fixed upon the posts *D*, said rods sliding within the tubes *e*. By this means the head-piece is retained centrally on the bed at any adjustment, the adjustment being secured at each end thereof. In other constructions horizontal tubes corresponding with the tubes *e* would be secured to the head and foot pieces to receive the rods *d* and to permit of the adjustment described.

The block *F*, to which the rails are attached, is provided with a bead *f*³, corresponding in shape with the bulb or bead *G*² of the rails, thus presenting a uniformity of appearance. The springs designed for this bed are shown in perspective in Fig. 5. These consist of short sections which extend across the bed and which are formed of two spring-plates which are reversely curved or bent into an **S** shape. These plates thus consist of the top horizontal portion *H*¹, the bottom horizontal portion *H*³, and the central connecting portion *H*², the outer edges of the horizontal portions having a curved edge *H*⁴, which interlocks with the edge of the other plate, so as to secure the two together and prevent lateral displacement. These plates are so bent that one plate will slide longitudinally upon the other, but cannot be displaced laterally. The outer ends of the plates are provided with holes *h*, adapted to fit over the pins *a* upon the side rails. The plates forming the springs are thus enabled to slide upon each other, so as to vary the length of the spring and accommodate themselves to the varying width of the bed. In changing the length of the bed one or more of the spring-sections would be removed or replaced, as necessary.

The central portion of the spring is supported by a bar attached to the central portion of the end rails and extending longitudinally of the bedstead. This bar consists of two portions *I* and *I'*, which telescope upon each other. They may be made of any shape which will readily telescope. As shown in the drawings they consist simply of two tubes, one within the other.

This form of bed may be easily constructed, is simple and cheap, and will accommodate itself in size to almost any location or requirement. It may be adjusted from the width of an ordinary single bed to the width of a double bed and may be varied equally in length. It may also be readily taken apart for storage or transportation.

The form of springs shown in connection with the bed will not sag in the center, and they are of such construction that they are durable and cheap in first cost.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. A bedstead having the side rails thereof composed of plates each having a vertical and a horizontal flange, the plates being fitted to

slide one upon the other, and having interlocking engagement whereby side displacement is prevented, substantially as described.

2. A bedstead having the side and end rails thereof each composed of plates having a vertical and a horizontal flange, the plates at the angle being formed to slide one within the other and lock against side displacement, substantially as described.

3. A bed-rail formed of plates bent into angle-shaped bars which at the angles form bulbs adapted to slide one within the other and to lock the two against side displacement, substantially as described.

4. A bed-rail consisting of plates each bent to form a vertical and a horizontal flange, and having the flanges joined by a bulb, the bulbs of the said plates sliding one within the other and locking against side displacement, the horizontal flange of the inner plate being narrower than that of the outer plate, for the purpose set forth.

5. A bed-rail consisting of plates each having a vertical and a horizontal flange and fitted to slide one upon the other, the horizontal flanges of said plates being provided with pins and the horizontal flange of the inner plate being narrower than that of the outer plate, substantially as described.

6. A bedstead having side and end rails, the end rails each consisting of angular plates having an interlocking engagement and fitted to slide one upon the other whereby the side rails are adjustable toward and from each other, the said side rails being provided with pins upon the inner part thereof, and springs composed of adjustable sections having eyes in their outer ends adapted to engage said pins, substantially as described.

7. A bedstead having side and end rails adjustable in length, the said rails each consisting of two plates having vertical and horizontal flanges, the plates being fitted to slide one upon the other and having an interlocking engagement whereby side displacement is prevented, the said side rails being provided with pins upon the horizontal flanges, and springs each composed of two adjustable sections having eyes in their outer ends to engage said pins, substantially as described.

8. A bed-spring consisting of a plurality of plates reversely curved or bent into an **S** shape and fitting one with the other, substantially as described.

9. A bed-spring consisting of a plurality of plates bent into an **S** shape and fitting one within the other, the edges of said plates being rolled over or beaded to prevent lateral displacement, substantially as described.

10. A bed-spring consisting of a plurality of plates reversely curved and fitting one within the other, the outer ends of said plates having holes therein by which they may be attached to the bed-rails, substantially as described.

11. A bed-spring consisting of a plurality of plates reversely curved and fitting one within

the other, one edge of each plate being rolled or beaded over the edge of the other plate to prevent lateral displacement, the outer ends of said plates having holes therein by which they may be attached to the bed-rails, substantially as described.

12. A bedstead having rails composed of two plates bent into angle form with the two flanges joined by a bulb, said bulbs sliding one within the other and locking the plates against lateral displacement, said plates having locking-holes, and a pin for securing them together, substantially as described.

13. A bedstead having side rails adjustable toward and from each other and springs therefor consisting of two sections, each composed of spring-plates reversely curved and telescoping one upon the other, means for securing the ends thereof to the side rails and a central support therefor extending longitudinally the bed, substantially as described.

14. A bedstead comprising side and end rails adjustable in length, adjustable springs each consisting of two plates reversely curved and fitting one within the other, means for securing the ends of the springs to the side rails, and an adjustable support for said springs consisting of two telescoping sections extending longitudinally of the bedstead and attached to the end rails, substantially as described.

15. A bedstead comprising side and end rails adjustable in length, each rail consisting of two plates bent into angle form with the two flanges joined by a bulb, the said bulbs sliding one within the other, and corner-supports attached to the said rails and provided with members for the attachment of head and foot pieces, substantially as described.

16. A bedstead comprising side and end rails adjustable in length, each rail consisting of angle-shaped plates forming flanges and having bulbs at the angle adapted to slide one within the other and to lock the plates

against side displacement, corner-blocks secured to the said rails and provided with means for the attachment of head and foot pieces, the said corner-blocks being provided with beads engaging the ends of the bulb portion of the rails, substantially as described.

17. A bedstead having side and end rails, each end rail consisting of plates each having a vertical and a horizontal flange, and the plates being adapted to slide one upon the other, a portion of one plate engaging the other to lock the two against displacement, and corner-posts attached to the rails and having an adjustable connection with the head and foot pieces, substantially as described.

18. A bedstead comprising side and end rails each consisting of angle-shaped plates having bulbs at the angles adapted to slide one within the other, corner-blocks attached to the said rail, corner-posts carried by the said blocks, and head and foot pieces having adjustable connection with the said posts, substantially as described.

19. A bedstead comprising side and end rails adjustable in length, each rail consisting of angle-shaped plates fitted to slide one upon the other and having interlocking engagement whereby side displacement is prevented, corner-blocks secured to the said rails and provided with legs, corner-posts carried by the said blocks, head and foot pieces having adjustable connection with the said posts, springs consisting of adjustable sections, means for securing the ends of the springs to the side rails, and an adjustable central support for said springs attached to the end rails, substantially as described.

ALFRED W. FURNIVALL.
HENRY MARTIN.

Witnesses:

ROBT. H. LEONORE,
JOHN A. LEACH.