Sept. 6, 1932. W. HEERDT 1,875,456

FOLDING BEDSTEAD

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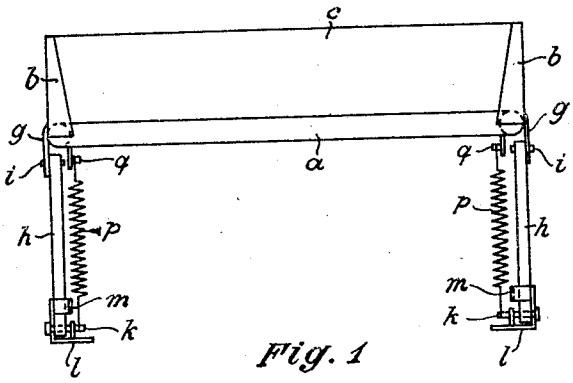


Fig. 1

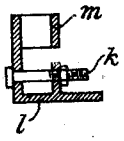


Fig. 6

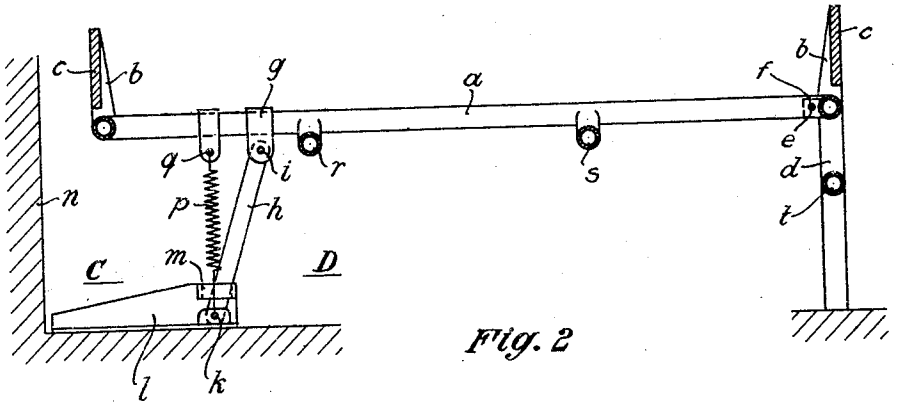


Fig. 2

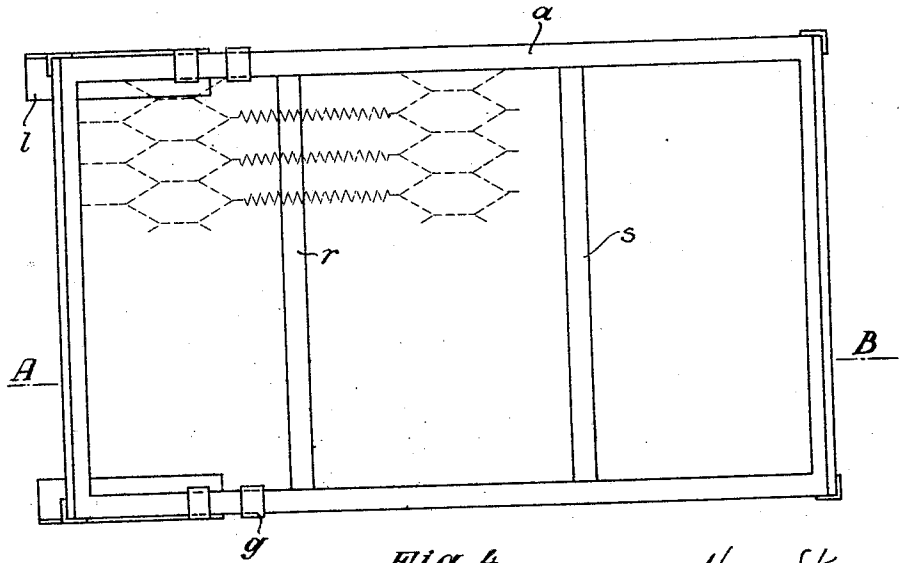


Fig. 4

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FOLDING BEDSTEAD

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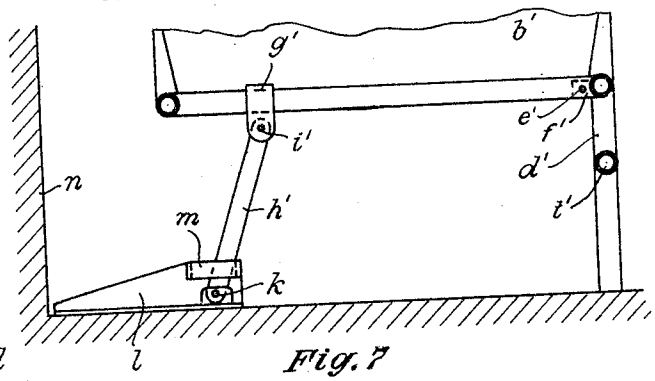


Fig. 7

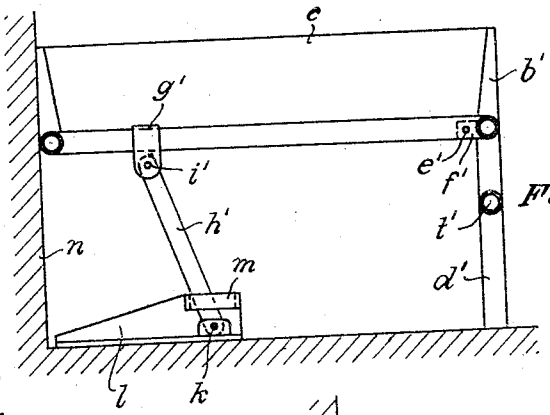


Fig. 8

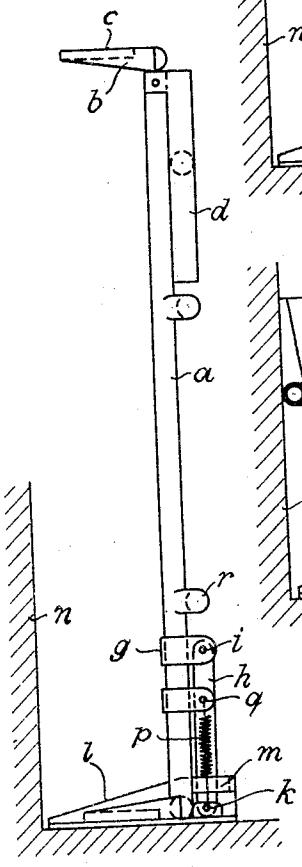


Fig. 5

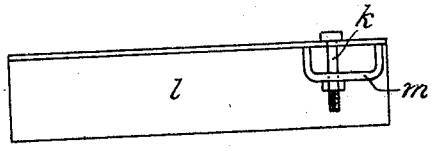


Fig. 3

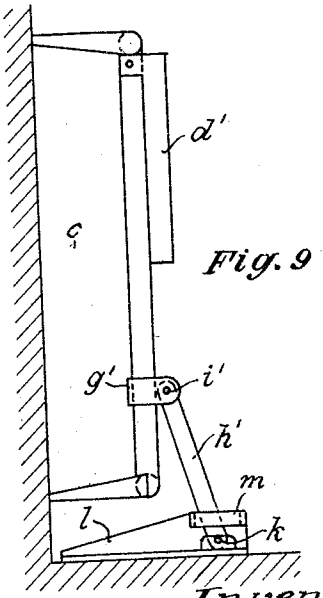


Fig. 9

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Patented Sept. 6, 1932

1,875,456

UNITED STATES PATENT OFFICE

WALTER HEERDT, OF FRANKFORT-ON-THE-MAIN-ESCHERSHEIM, GERMANY

FOLDING BEDSTEAD

Application filed January 6, 1930, Serial No. 418,923, and in France January 5, 1929.

This invention has reference generally to furniture and more particularly relates to a folding bedstead.

The invention as its primary aim and object contemplates the provision of a bedstead of the above character embodying novel means for pivotally connecting one end of the same to the floor so that the frame may be arranged in a horizontal position when in use or folded into an upright position preferably against the wall so as to occupy a minimum amount of space when not in use.

Other objects as well as the nature, characteristic features and scope of the invention will be more readily apparent from the following description taken in connection with the accompanying drawings and pointed out in the claim forming a part of this specification.

The invention is clearly illustrated in the accompanying drawings, in which:—

Fig. 1 is an end elevational view of the improved bedstead in a horizontal position,

Fig. 2 is a longitudinal sectional view showing the bedstead in a horizontal position,

Fig. 3 is a top plan detail of one of the foot members,

Fig. 4 is a top plan view of the bedstead in a horizontal position,

Fig. 5 is a side elevational view showing the bedstead in an elevated position,

Fig. 6 is an enlarged cross sectional view of one of the foot members,

Fig. 7 is a longitudinal sectional view showing a slightly modified form of the invention in a horizontal position,

Fig. 8 is a similar view showing another horizontal position of the same bedstead, and

Fig. 9 is a side elevational view of the form shown in Figs. 7 and 8 in an elevated or vertical position.

Similar characters of reference are employed in all of the above described views to indicate corresponding parts.

The bedstead consists of a rectangular frame *a* of the usual dimensions provided with head-pieces *c*, for instance, formed of wood, sheet metal or any suitable material, secured to the head and foot ends of the frame by means of angle pieces *b*. Two foot-supports *d* are pivoted at *e* or *e'* adjacent the foot of the bedstead in such a manner that upon folding the bedstead into a vertical position they will due to gravity move downwardly into a position substantially parallel with the bed frame and will lie directly against the frame. For this purpose, the said supports are preferably provided, at their upper ends, with angular projections *f* or *f'*, which, in a horizontal position of the bedstead, embrace the corners of the frame.

At a certain distance from its other end the frame has pivotally connected on each side at *i* and *i'* other foot-supports *h* and *h'*, for instance by means of an intermediate strap bracket *g* or *g'* slipped over the sides of the frame and extending downwardly therefrom.

The lower ends of the foot-supports *h* and *h'* are pivotally connected by pins *k* in the vertical supporting portions of angle members *l* of strong sheet metal, which are fitted on the floor, so that the bedstead, on being lifted at the other end, can be raised round the turning points *i* and *k* on the supports *h* and *h'* into a corresponding vertical position. This arrangement is made in such a way that the supports *h* and *h'*, on moving the bedstead into a horizontal position, are turned at an angle of about 20° to the front, that is towards the other end of the bed, so that the turning points *i* and *i'* are so far removed from the wall *n*, that, on moving the bedstead round the turning point *i* or *i'*, the head-piece *c* or the lateral edge of the floor-plate approaching the floor and the corresponding longitudinal edge of the frame *a* cannot strike against the wall.

In order to limit the movement of the supports in opposite directions, stops are provided in the form of loops *m* and are preferably rectangular and fitted on the inner faces of the vertical supporting portions of the angle members above the turning points *k*, the foot supports *h* and *h'* passing through the loops in such a way that they can freely move within these loops between their attached ends which constitute stops. The said loops may be seen from Fig. 2, which represents a vertical section through the bedstead according to A—B of Fig. 4, but in

which the springs are omitted, as well as from the detailed illustrations according to Fig. 3 showing a horizontal section on line C—D of Fig. 2, and to Fig. 6 with the foot-member l and the loop m, as seen from the front side. Also Figs. 7 and 9 show the said loops, namely, with a bedstead turning in the plane of the longitudinal direction.

Now, for tilting up the bedstead from the horizontal position, the free end of the frame is moved upwards, for instance, by lifting it at transverse piece t arranged between the front foot supports, or the transverse piece t arranged between the two lateral feet, until the frame a is arranged in a vertical direction. A bedstead that may be turned in the plane of the longitudinal direction, the supports of which h' are arranged in angles against the wall in their extreme position for the purpose of leaning the frame against the wall (see Fig. 8), by which arrangement the stable adjustment of the bed can only be guaranteed, has first to be removed from the wall so far that the supports will be placed into the opposite end position (Fig. 7). When tilting up the bedstead into a vertical position, the supports h and h' will first remain in their oblique position, until the side-pieces of the frame a contact therewith. From this moment, the supports h and h' are moved further about the turning points i and i' by the frame, while the turning of the latter is continued, until, with a vertical position of the frame and the supports, these will strike the inner ends of the loops m, thus putting an end to the movement of both parts in the case of bedsteads that may be turned in a transverse direction, while those turning in a longitudinal direction, after their vertical adjustment, the supports allow the frame to move on against the wall until touching it, in which operation the longitudinal edge will lie but a little above the plane or the loops. Now the turning point i or i' and thus also the whole of the bedstead in its vertical position is approaching the wall n as much as possible or leaning against the same, by which the minimum use of space imaginable for the bed in an upright position is secured (see Figs. 5 and 9). In order to facilitate the lifting of the frame and, moreover, its remaining in the vertical position, springs p are provided for the bedsteads that may be moved in the plane of the longitudinal direction which springs are fixed to the bed frame in a suitable manner, namely, with the upper ends to strap brackets q near the strap brackets g, between the latter and the nearest end of the bed frame, while the lower ends are connected with the pins k on the angle members l. It will be sufficient to provide such a spring only on one side of the frame.

For making the frame a, any suitable material may be employed, such as wood or metal, for instance, brass, iron, enamelled iron and the like, having any kind of section, for instance, tubular angle shaped or T-shaped. An embodiment of the invention by means of tubes, for instance steel tubes, has proved particularly advantageous, because this structure requires a minimum expenditure of material with an equal stability, this reducing not only the cost of manufacture, but also facilitating the handling of the bed owing to the diminution of its weight.

For stiffening the frame and for connecting the outer feet with each other, preferably transverse pieces (r, s, t, or t') may be supplied at suitable spots, the said pieces serving at the same time as a handle when raising the bed.

According to the plan view represented in Fig. 4 it is advisable to furnish the frame a with springs for bearing a mattress.

What is claimed as new and desired to be secured by Letters Patent is:—

An independent foldable bedstead adapted to be maintained in a horizontal or vertical position comprising in combination, an oblong frame, freely movable foot supports connected to one end of the frame, other foot supports pivotally connected to the sides of the frame and spaced from the opposite end of the frame, angular foot members each including a horizontal attaching portion, and a vertical supporting portion, a pair of stops in the form of a loop carried on the vertical supporting portion of each of the foot members, the last mentioned foot supports being pivoted to the foot members and arranged within the loop between the stops, said stops acting to limit the pivotal movement of the adjacent foot supports within an angular amplitude of about 20° on each side relative to the vertical position, and tension springs arranged adjacent the inner sides of the last mentioned foot supports and having the respective ends connected to the lower pivotal connections of the last mentioned foot supports and to the sides of the oblong frame.

In testimony whereof I affix my signature.

WALTER HEERDT.