No. 756,922. PATENTED APR. 12, 1904.

W. C. WILLETS.

FOLDING LEG FOR FURNITURE.

APPLICATION FILED JULY 10, 1903.

NO MODEL.

Fig. 2

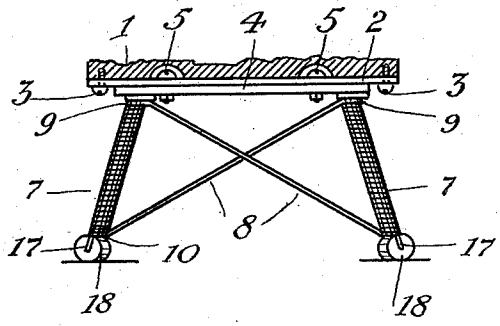


Fig. 1

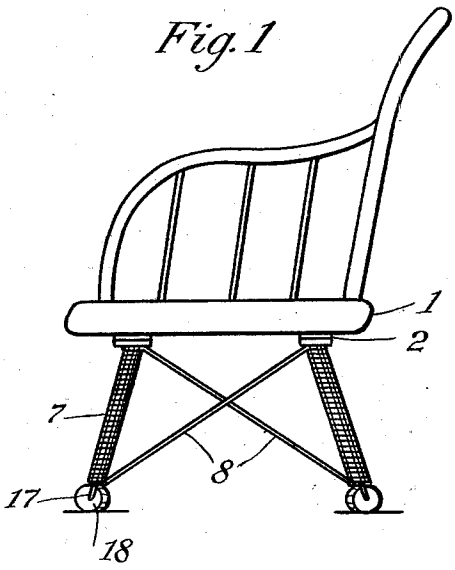
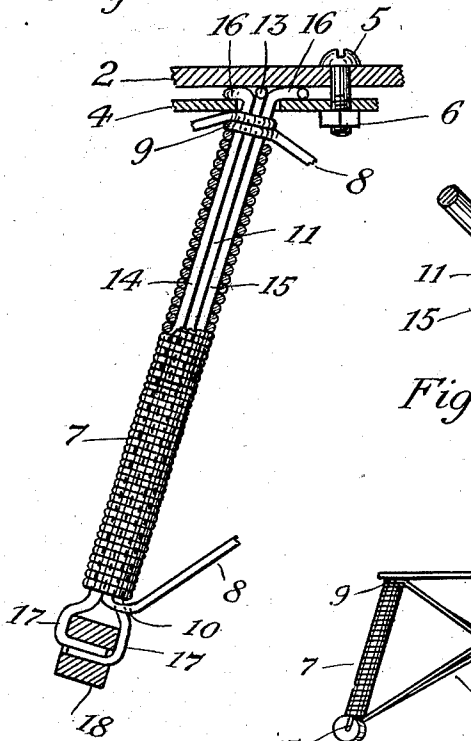


Fig 3



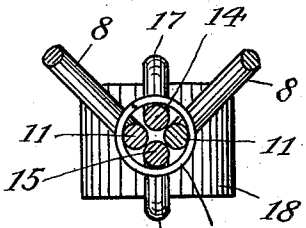


Fig 4

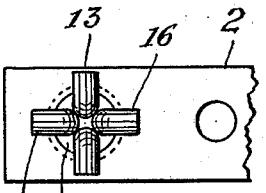


Fig 5

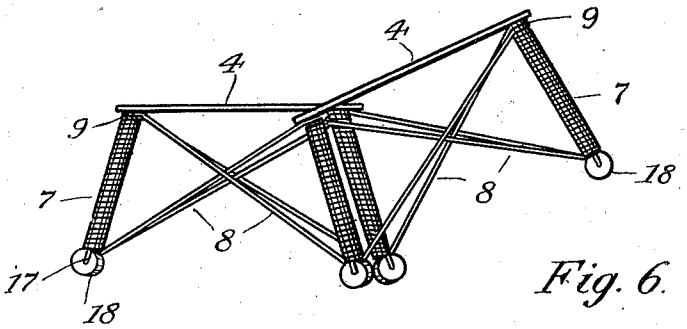


Fig. 6.

Witnesses
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William C. Willets
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THE NORRIS PETERS CO., PHOTO-LITHO., WASHINGTON, D. C.

No. 756,922. Patented April 12, 1904.

UNITED STATES PATENT OFFICE.

WILLIAM C. WILLETS, OF MINNEAPOLIS, MINNESOTA.

FOLDING LEG FOR FURNITURE.

SPECIFICATION forming part of Letters Patent No. 756,922, dated April 12, 1904.

Application filed July 10, 1903. Serial No. 164,945. (No model.)

To all whom it may concern:

Be it known that I, WILLIAM C. WILLETS, a citizen of the United States, residing at Minneapolis, county of Hennepin, and State of Minnesota, have invented certain new and useful Improvements in Folding Legs for Furniture, of which the following is a specification.

My invention relates to folding or collapsible legs for chairs, tables, and other articles; and its object is to produce a form of construction that will enable the legs of the article to be readily removed and replaced and adapt the legs and their frame or connecting devices to be folded into flat shape when detached for packing and shipment.

The improved devices, generally stated, comprise a pair of bars or other connecting devices adapted to be detachably secured to the under side of a chair-seat, table, or other article, four legs secured to the ends of the bars, and tie-rods swiveled to the upper ends of the legs and pivotally connected to the lower ends of the adjacent legs, whereby a braced folding frame is produced. Such leg-frame constitutes a firm and strong support for a chair or other article and when detached can be folded into flat and compact form, so as to occupy a comparatively small space.

My improvements are illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of a chair provided with the improved supports. Fig. 2 is a similar view showing in section the chair-seat and the manner of fastening the supports to it. Fig. 3 is an enlarged view of one of the legs and its connections. Fig. 4 shows a transverse section of one of the legs. Fig. 5 is a top view showing the means for securing the leg to the fastening-bar, and Fig. 6 is a side elevation of the legs and their connections detached from the chair and folded.

In the drawings, 1 designates the seat of a chair, and 2 plates extending across its under surface and secured to it by screws 3. Beneath the plates 2 are two bars 4 of the leg-frame, secured to the plates by bolts 5 and detachable therefrom by removal of the nuts 6.

Instead of the plates 2 any other desirable means may be employed for detachably securing the bars 4 to the chair-seat or other article, and instead of the bars 4 extending from one leg to another a separate short plate may be used for each leg.

The leg and diagonal tie-rods may be of any desired construction, provided they are so connected to one another and to the bars 4 or equivalent devices as to constitute suitable supports for the chair or other article and be collapsible when detached therefrom. I prefer, however, the special construction of these parts shown in the drawings for small and light chairs—such, for instance, as children's chairs and similar articles. In the construction illustrated a tube formed, preferably, of spirally-wound wire 7 is employed; but obviously a section of ordinary metal tubing could be used instead for receiving and holding together the several wires or rods which constitute the main supports for the article.

The tie-rods 8 extend in inclined direction from the top of one leg to the foot of the next, and each tie-rod has an eye 9 formed at its upper end, which loosely encircles the upper portion of the leg and swivels it with respect thereto. At the foot of the adjacent leg the tie-rod is bent at an acute angle 10, whence it extends upwardly, as shown at 11, through the tube and through an opening 12 in the bar or plate 4 and to a point above where its end 13 is bent over to substantially horizontal position. Each leg has two tie-rods thus swiveled to its upper portion and two other tie-rods entered at its base and extending through its tube to constitute portions of its body. Two other rods or wires 14 and 15 are also passed through the tube and have their upper ends 16 bent over in the same way as the ends 13 of the tie-rod wires. The lower exposed portions 17 of the wires 14 and 15 are preferably bowed outward and then inward to provide means for attaching a block 18 of rubber or other suitable material to prevent the wires from scratching the floor, or the wire ends 17 may be used to attach the legs to chair-rockers or to any other desired object. The portions 11 of the tie-rod wires within the tubes are loose enough to allow them to be turned on their axes to permit the tie-rods proper to be swung in lateral direction. By this arrangement each tie-rod is so swiveled

or connected at its ends to two of the leg-tubes as to allow its free lateral swinging movement with respect to the legs to which it is connected, and as each leg is connected at the top to one of the bars or plates 4 the latter are capable of being moved when detached from the opposite positions they occupied when attached to a chair-seat to positions where their end portions will be in contact, as illustrated in Fig. 6. This construction of the devices enables the bars 4 to be secured to a chair-bottom or to any other suitable base or article to retain the four legs in their proper positions to support the chair or other article, and when desired the bars or connections can be quickly detached and the legs removed by taking off the nuts 6, and the legs can then be folded into compact and almost flat form for storage or shipment.

As the means for fastening the legs to another object are not material to the invention, the bars or connections 4 may be dispensed with, and as there are uses to which such folding legs can be put without attachment to the bases of objects to support them—as, for instance, in the manufacture of screens—I do not limit myself to a construction in which is included means for attaching the devices of the improvement to some other object to support it.

Having described my invention, what I claim, and desire to secure by Letters Patent, is—

1. The combination with an article, of supports therefor comprising bars or plates, means for removably attaching them to the base of the article, legs pivotally connected to the ends of the bars, and oppositely-inclined tie-rods pivotally connected to the upper and lower portions of adjacent legs, substantially as set forth.

2. A folding support comprising bars or plates, means for removably attaching them to the base of an article, legs pivotally connected to the ends of the bars, and oppositely-inclined tie-rods pivotally connected to the upper and lower portions of adjacent legs, whereby the support is adapted to be spread apart to rectangular shape or collapsed to flat form as desired, substantially as set forth.

3. A folding-support comprising legs pivotally connected together and each composed of a plurality of rods, sleeves inclosing said rods, and oppositely-inclined tie-rods swiveled to the upper and lower portions of adjacent legs, whereby the support is adapted to be spread apart to rectangular shape or collapsed to flat form as desired, substantially as set forth.

4. A folding support comprising legs pivotally connected together and each composed of a plurality of rods, sleeves formed of spirally-wound wires inclosing said rods, and oppositely-inclined tie-rods pivotally connected to the upper and lower portions of adjacent legs, substantially as set forth.

5. A folding support, comprising legs pivotally connected together and each composed of a plurality of rods, and oppositely-inclined tie-rods swiveled to the upper and lower portions of adjacent legs, whereby the support is adapted to be spread apart to rectangular shape or collapsed to flat form as desired, substantially as set forth.

6. A folding support, comprising four legs consisting of a plurality of rods connected together, and inclined tie-rods each of which has a lower end portion upwardly bent to constitute a part of one of the legs, and its other end bent to form an eye for loosely encircling the upper portion of an adjacent leg, substantially as set forth.

7. A folding support, comprising four legs, and oppositely-inclined tie-rods pivotally connected respectively to the upper and lower portions of adjacent legs, whereby the support is adapted to be spread apart to rectangular shape or collapsed to flat form as desired, substantially as set forth.

In testimony whereof I have signed my name to this specification, in the presence of two subscribing witnesses, this 17th day of June, 1903.

WILLIAM C. WILLETS.

Witnesses:
P. H. GUNCKEL,
H. A. BOWMAN.