G. S. HUTCHINSON.

FOLDING STOOL.

APPLICATION FILED MAR. 25, 1908.

901,904.

Patented Oct. 20, 1908.

3 SHEETS—SHEET 1.

Fig. 1.

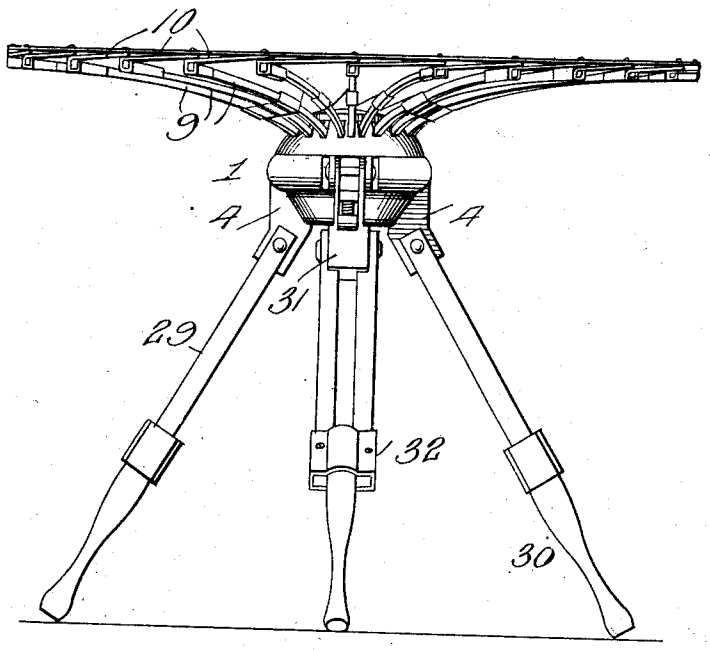
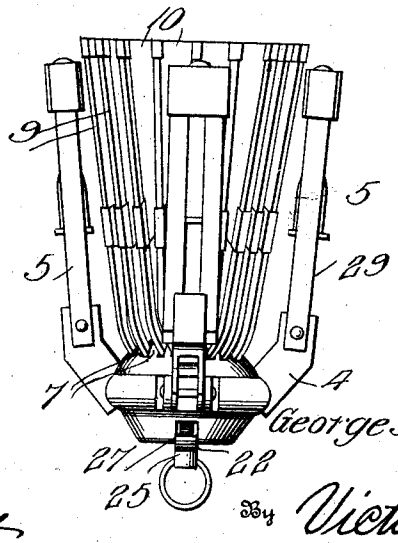


Fig. 3



Witnesses

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3 SHEETS—SHEET 2.

Fig. 2

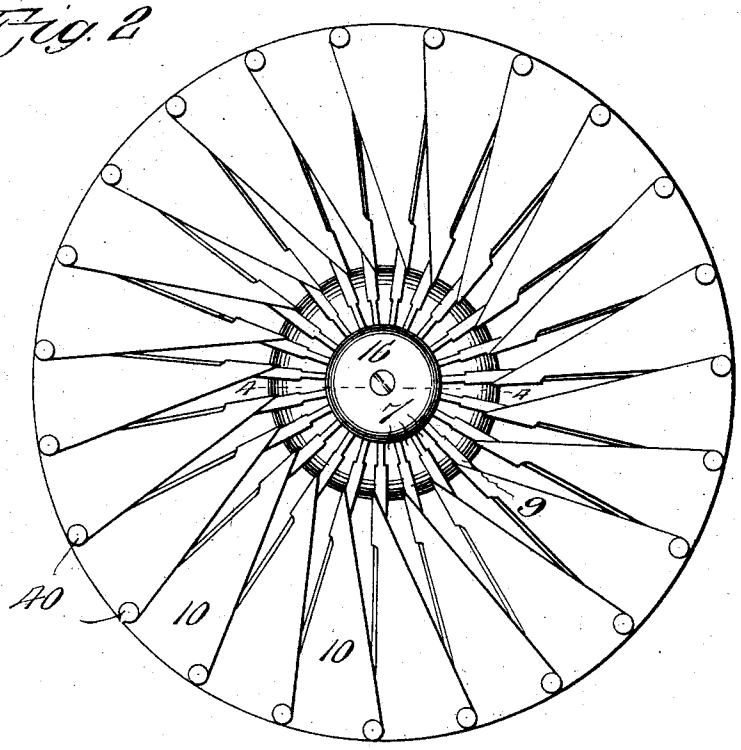
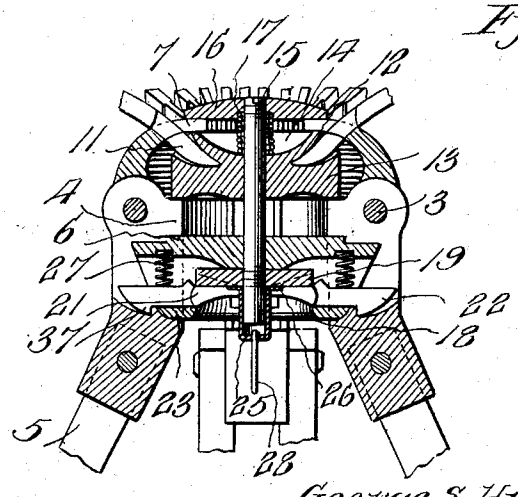


Fig. 4



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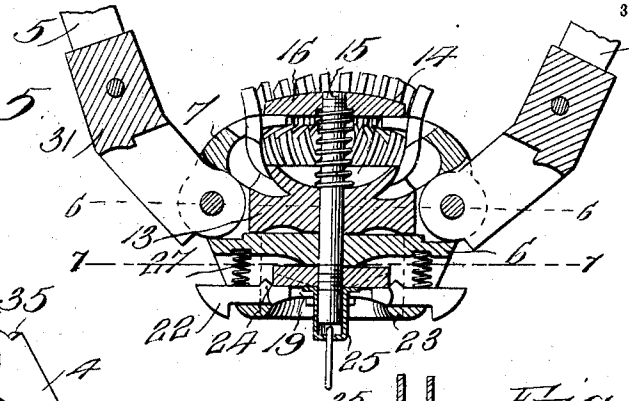
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3 SHEETS—SHEET 3.

Fig. 5.



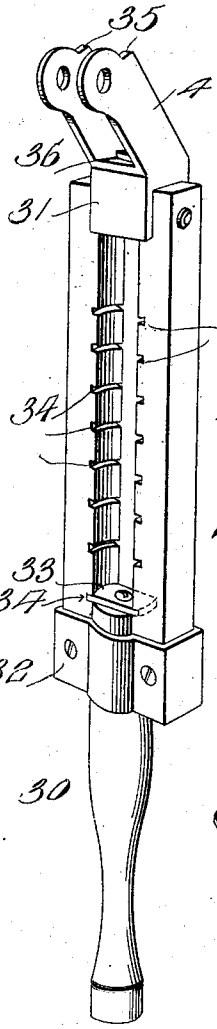


Fig. 8.

Fig. 6.

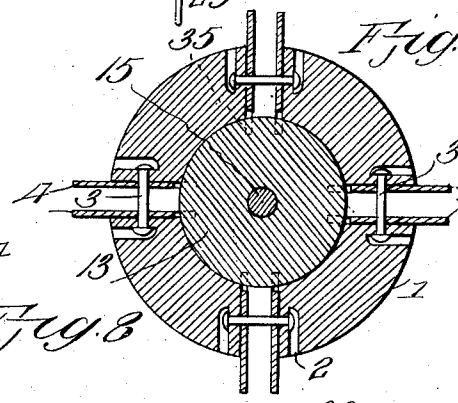
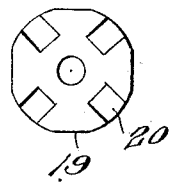


Fig. 10.



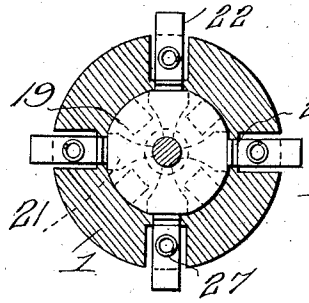


Fig. 7.

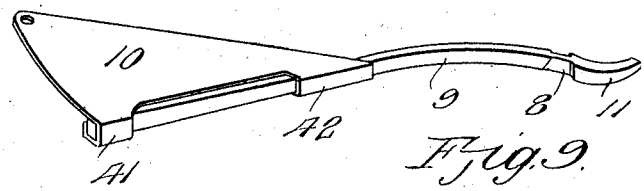


Fig. 9.

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UNITED STATES PATENT OFFICE.

GEORGE S. HUTCHINSON, OF NORTH BENNINGTON, VERMONT.

FOLDING STOOL.

No. 901,904. Specification of Letters Patent. Patented Oct. 20, 1908.

Application filed March 25, 1908. Serial No. 423,257.

To all whom it may concern:

Be it known that I, GEORGE S. HUTCHINSON, a citizen of the United States, residing at North Bennington, in the county of Bennington and State of Vermont, have invented new and useful Improvements in Folding Stools, of which the following is a specification.

This invention relates to folding stools, and the object of the invention is to provide a simple, cheap, and substantial device of this character, whereby a stool may be readily folded into small compass when the device is to be transported or stored.

Another object of the invention is to provide a device of this character having any desired number of legs or supporting members, which may be readily folded within each other a required length and held in such adjusted position to allow the seat to assume a perfect horizontal position regardless of the unevenness of the ground upon which the seat is positioned.

A still further object of the invention is to provide a stool of the character set forth with a substantially springy or yieldable seat which will readily adapt itself to the anatomy of the user.

With these objects in view the invention resides in the novel construction of foldable stools, hereinafter fully described and claimed.

In the accompanying drawings, Figure 1 is a side elevation of a foldable stool constructed in accordance with my invention. Fig. 2 is a top plan view of the same. Fig. 3 is a side elevation showing the device folded. Fig. 4 is a transverse sectional view upon the line 4—4 of Fig. 2. Fig. 5 is a similar view, the parts being in their folded position. Fig. 6 is a transverse sectional view upon the line 6—6 of Fig. 5. Fig. 7 is a similar view upon the line 7—7 of Fig. 5. Fig. 8 is a detail perspective view of one of the legs. Fig. 9 is a detail perspective view of one of the sections of which the top is formed. Fig. 10 is a bottom plan view of a nut employed for securing the catches upon the body portion of my improvement.

In the drawings the numeral 1 designates the body portion of my improved folding stool. The body 1 is provided with a plurality of ears 2, each having perforations adapted for the reception of pintles 3, by which ears 4, of foldable legs 5 are secured upon the body. The body 1 is hollow in formation, but is provided with a wall 6, by which it is divided into an upper and a lower compartment. The upper compartment, upon which are positioned the ears 2, is provided with a plurality of radially inclined fingers 7, suitably spaced apart to provide for the reception of a reduced portion 8, provided upon the ribs 9, carrying the flexible wings or segments 10, of the seat of the stool. The ribs 9 are continued inwardly at a suitable curve beyond the inner wall of the reduced portion 8, and these extensions 11 are adapted for engagement within a suitably flared recess 12 provided upon the upper portion of an annular collar 13. The collar 13 has its upper face dished as at 14, and its lower face smooth so as to provide a means of contacting with offsets provided upon the ears 4 of the leg members, in a manner hereinafter to be described. The floor or wall 6 of the body 1 is provided with a central orifice adapted to aline with a similar orifice provided within the collar 13, and these orifices are provided for the reception of a suitable post 15. This post 15 is provided with suitable threads upon its upper extremity adapted for the reception of an annular nut 16, positioned above the fingers 7, and interposed around this post 15 between the collar 16 and the dished face 14 of the collar 13 is an expansion spring 17.

The outer face or wall of the lower compartment of the body portion 1 is provided with a central annular opening 18 adapted for the reception of a nut 19, which is secured to a threaded portion of the post 15 below the under side of the wall or floor 6. This nut 19 is provided with a series of depressions 20, adapted for the reception of reduced portions 21 of latches 22. The latches 22 are adapted to lie upon the inner floor of the peripheral ring 23 provided by the opening 18. The latches 22 are also provided with an offset or stop 24, adapted to limit the movement of the latches by contacting with the sides of the nut 19. The post 15 is extended a suitable distance beyond the lower face of the nut 19, and is adapted to receive a sliding collar 25. This collar 25 has its upper extremity provided with an annular flange 26 which is adapted to overlie the inner ends of the catches 22. Positioned in suitable recesses provided upon the under face of the wall 6 are helical

springs 27, adapted to contact with the upper edges of the catches 22 and to force them normally against the face of the annular ring 23. In assembling the sliding collar and catches in position, the nut 19 is first secured upon the threaded portion of the post 15, the sliding collar is next positioned upon the post, having its flanged end resting against the lower face of the nut. The catches are now positioned by having their inner reduced portions engaging the cut away portions 20 of the nut 19. When the catches are positioned the springs 27 are brought into engagement between the floor 6 and the upper edges of the catches, and the nut 19 is rotated so as to bring the recesses or depressions 20 out of the path of the inner portions of the latches, thus securely retaining the catches and sliding collar in position. The collar 25 is provided with a suitable ring or hand hold 28, by which the collar is adapted to have its flange pulled against the inner edges of the catches and raise them against the pressure of the springs 27 until the lugs or stops 24 contact with the perimeter of the nut 19.

As illustrated more clearly in Fig. 8 of the drawings the legs 5 of my improved stool comprise upper and lower members 29 and 30, respectively. The upper member or section 29, comprises a pair of bars suitably spaced apart by the member 31, (upon which the ears 4 are formed) at their upper ends, and a suitable collar or band 32 at their lower ends. The lower member 30 is adapted to slide between the two members of the upper section, and to be retained in lowered position by a turn button 33, engaging suitable slots 34 in the sections of the upper member. By this construction it will be seen that when the turn button 33 is rotated from engagement with the slots 34, the member 30 is free to slide between the sections comprising the member 29. It will be noted that the members comprising the upper section 29 are each provided with a plurality of alining slots 34, and that by this arrangement the button 33 of any of the lower members 30, may be rotated to secure the member 30 in any desired location upon the upper member of the leg section. The ears 4 are provided with suitable perforations adapted for the reception of the pintles 3, by which the legs are secured upon the body 1. The ears 4 are formed with suitable offsets 35, adapted for engagement with the lower face of the collar 13 when the legs are in their lowered position. The casting 31 is also provided with a lug or finger 36, positioned directly between the ears 4 at their point of connection with the casting 31, and these lugs or ears are adapted for engagement with the hooks 37 provided upon the catches 22. By this construction and arrangement of parts it will be noted that the leg members are held securely in position upon the body 1, and that in order to release the legs it is necessary to raise the hooks of the catches from engagement with the lugs 36 by grasping the ring 28 and forcing the collar 25 downwardly, thus causing the flange 26 to contact with the inner ends of the catches and to raise the hooks away from the lugs 36, when the legs may be folded, as illustrated in Fig. 3 of the drawings. It will be also noted that when the legs are folded, the spring 17, exerting pressure between the collar 13 and the nut 16, forces the collar 13 downwardly, as illustrated in Fig. 5 of the drawings, and in so doing cause the rib sections 9 to travel between the fingers 7 of the body member 1 and to assume a substantially vertical position as illustrated in Figs. 3 and 5 of the drawings. It will be still further noted that the closing of the ribs of the stool is entirely automatic after the shoulders 35 of the ears 4 have been disengaged from contact with the under face of the collar 13.

The wings or segments 10, provided upon the ribs 9, of the top of the stool are preferably constructed of flexible thin sheet steel, and are connected together by flat headed rivets 40 which are adapted to engage a detachable seat, of cloth or other suitable material. It will be seen by reference to Fig. 9 of the drawings that the flexible wings 10 are provided with suitable collars 41 and 42, constructed by bending one edge of the wing upon itself. These collars are adapted to be inserted upon the rib 9, and readily detached therefrom when desired. It will be further noted that when the top of the stool is folded, the wings will slide by each other, and thus compactly form themselves into a small area.

By arranging the foldable legs as above described it will be seen that the stool seat may be easily arranged to assume a perfectly horizontal position regardless of unevenness of the ground upon which it is positioned, and that by constructing the wings of the seat of flexible material and arranging them as heretofore set forth, the seat will readily adjust itself to the anatomy of the body of the user and that the heads of the buttons 40 will effectively prevent disconnection of the wings when pressure at the ends of the wings is exerted.

Having thus fully described the invention what is claimed as new is:

1. A seat for foldable stools comprising a plurality of flexible wings having their outer edges overlapping each other, a plurality of pivoted ribs, and means carried by said wings for detachable engagement with said ribs.

2. A seat for foldable stools comprising a plurality of flexible wings, each wing having one edge overlapping the edge of its adjacent wing, flat headed rivets engaged with

the wings, a plurality of pivoted ribs, and means carried by said wings for detachable engagement with said ribs.

3. A seat for foldable stools comprising a plurality of substantially V-shaped wings, a plurality of collars carried by each wing and formed by bending one edge of each wing upon itself, and a plurality of pivotally mounted ribs detachably engaged with said collars.

4. A folding stool comprising a hollow body having a plurality of fingers and a plurality of movable ribs between said fingers, a movable collar within the body engaging the fingers, pivoted legs upon the body having offsets engaging the lower face of the collar, and means provided within the body for forcing the collar downwardly and folding the ribs when the offsets of the legs are brought away from engagement with the collar.

5. A foldable stool comprising a hollow body having a plurality of fingers, a plurality of ribs between said fingers, a collar within the body engaging said ribs, a post within the body, a nut upon said post normally engaging the top of the fingers, a pressure spring between the nut and the collar, and pivoted legs having offsets engaging the lower face of the collar secured to the body.

6. A foldable stool comprising a hollow body having a plurality of fingers and a plurality of movable ribs engaged between the fingers, a post within the body, a nut upon the post, a pressure spring upon the post, a sliding collar engaging the inner ends of the ribs upon the post and adapted for engagement by the spring, and sectional legs having offsets adapted to engage the slidable collar pivotally connected with the body.

7. A foldable stool comprising a hollow body having a plurality of inturned fingers and a series of movable ribs engaging between said fingers, a floor upon the body dividing the body into an upper and a lower section, a post within the body, a nut upon the post, a spring upon the post, a sliding collar upon the post engaging the inner ends of the ribs and adapted to be contacted by the spring, sectional legs having offsets adapted to contact the sliding collar pivoted upon the body, lugs upon the legs, catches provided by the body adapted to engage the lugs, and means for releasing the catches.

8. A foldable stool comprising a hollow body having in turned fingers and movable ribs engaging the fingers, a floor upon the body dividing the body into an upper and a lower compartment, a post upon the body, a nut upon the post adapted to overlie the fingers of the body, a sliding collar upon the post, said collar adapted to engage the inner edges of the ribs and to lie normally against the floor of the body, a pressure spring between the nut and the collar, spring pressed catches within the lower compartment of the body, means for releasing the catches, and sectional legs having an offset adapted to engage the slidable collar and lugs adapted to be engaged by the catches.

9. In a foldable stool, a body having a plurality of in turned fingers and ribs engaged between said fingers, removable wings upon said ribs, a floor upon the body dividing the body into an upper and lower compartment, a post within the body, a nut upon the post adapted to overlie the fingers of the body, a slidable collar upon the post adapted to engage the ribs, a pressure spring between the nut and the collar, spring pressed catches within the lower compartment, a collar having a flange mounted upon the post and engaging the catches, a hand hold upon the collar, sectional legs having an offset adapted to engage the sliding collar contacting the ribs and a lug adapted to be contacted by the catches pivoted to the body, said legs having an upper section comprising a pair of members and a lower section comprising a single member adapted for slidable engagement between the upper members, and means provided upon the lower member for retaining said member in open position upon the upper member.

In testimony whereof I affix my signature in presence of two witnesses.

GEORGE S. HUTCHINSON.

Witnesses:

S. E. HUTCHINSON,

M. B. RUMRILL.