D. M. NEFF.

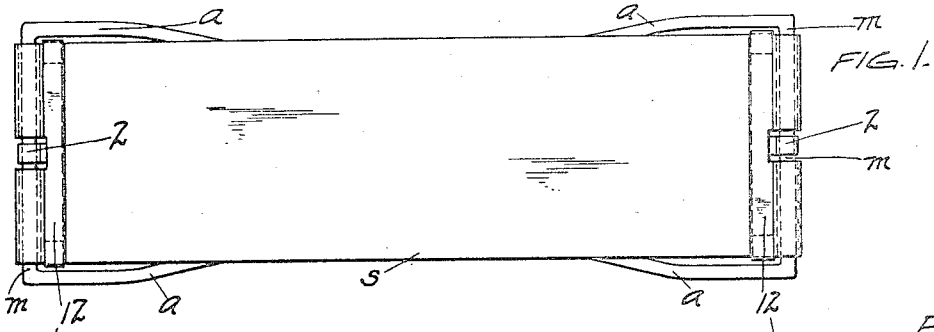
CAMP STOOL.

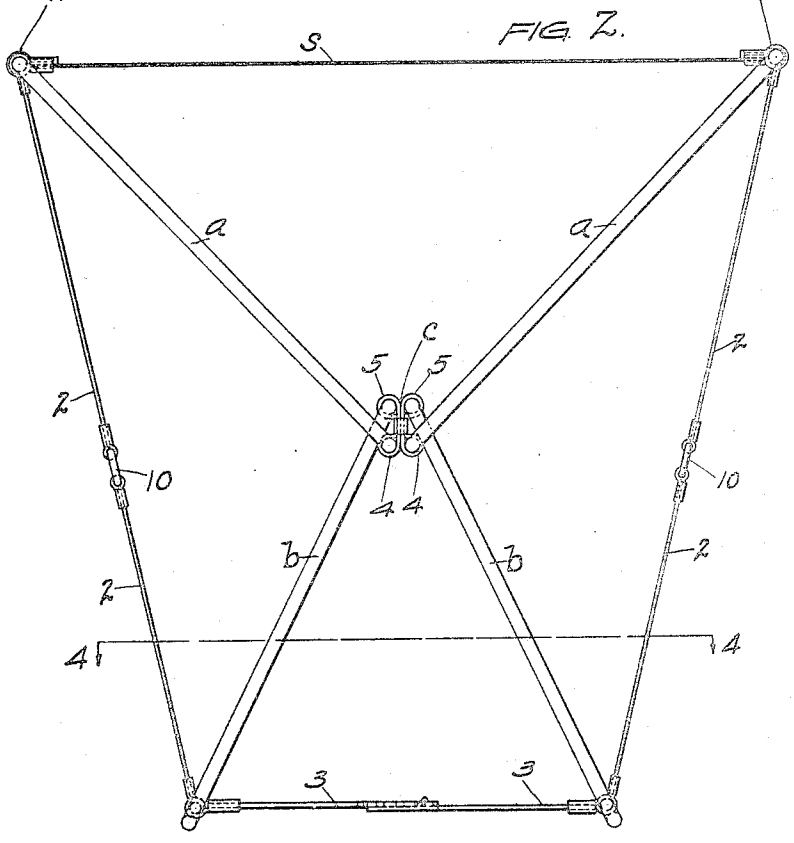
APPLICATION FILED APR. 24, 1913.

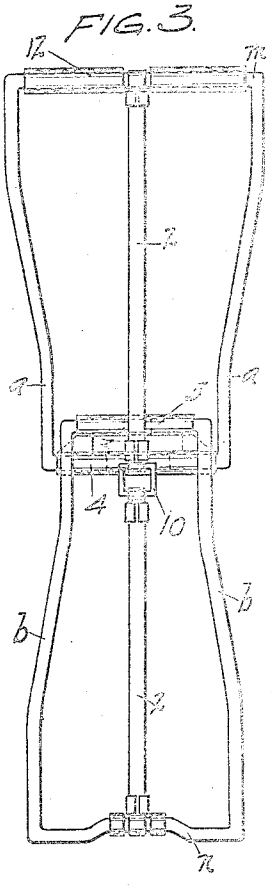
1,134,057.

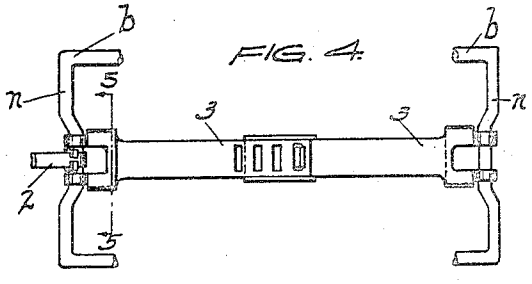
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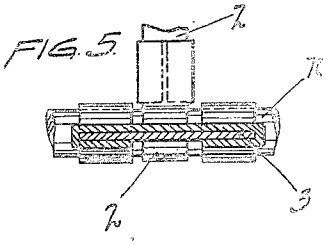
2 SHEETS—SHEET 1.











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CAMP STOOL.

APPLICATION FILED APR. 24, 1913.

1,134,057.

Patented Mar. 30, 1915.

2 SHEETS—SHEET 2.

FIG. 6.

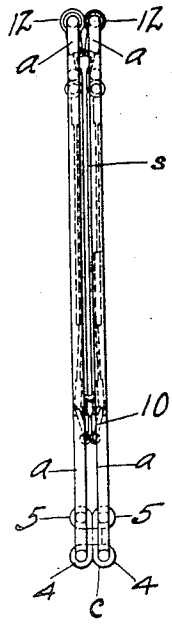


FIG. 7.

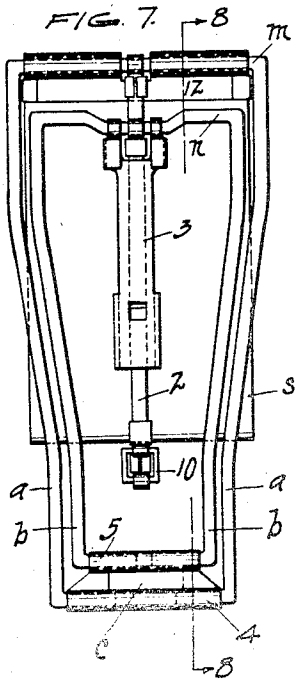


FIG. 8.

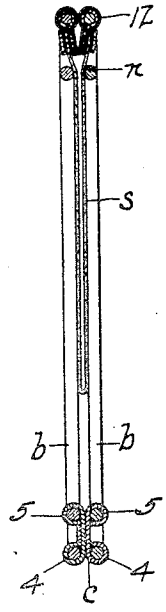


FIG. 9.

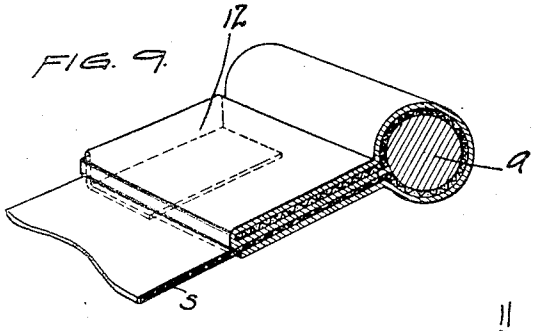


FIG. 10.

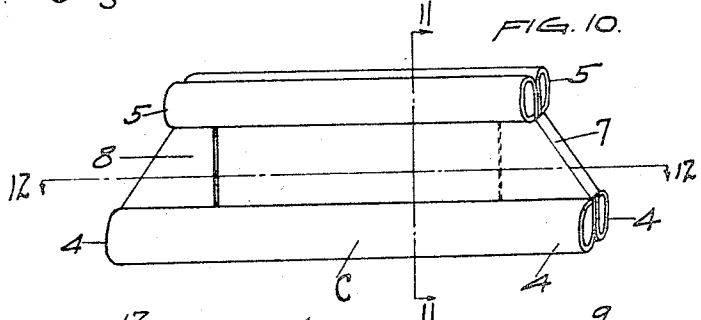


FIG. 11.

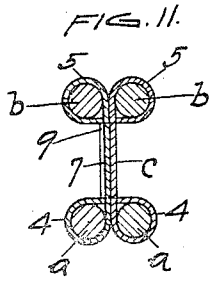
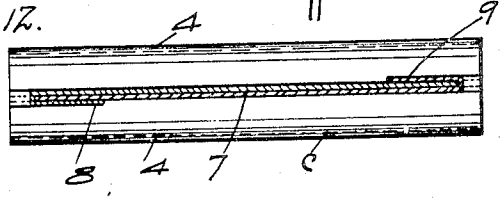


FIG. 12.



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UNITED STATES PATENT OFFICE.

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CAMP-STOOL.

1,134,057. Specification of Letters Patent. **Patented Mar. 30, 1915.**

Application filed April 24, 1913. Serial No. 763,274.

To all whom it may concern:

Be it known that I, DOUGLAS M. NEFF, subject of Canada, residing at East Cleveland, in the county of Cuyahoga and State of Ohio, have invented certain new and useful Improvements in Camp-Stools, of which the following is a specification.

This invention relates to camp stools of the type adapted to be folded and carried in a coat pocket, all substantially as shown and described and particularly pointed out in the claims.

In the accompanying drawings, Figure 1 is a plan view of the stool open, and Fig. 2 is a side elevation open as in Fig. 1. Fig. 3 is an end elevation and open as in Figs. 1 and 2. Fig. 4 is a plan view on line 4—4, Fig. 2. Fig. 5 is an enlarged cross section on line 5—5, Fig. 4. Sheet 2, Fig. 6, is an edge view of the stool folded and Fig. 7 is a side view, folded. Fig. 8 is a sectional view on a line corresponding to 8—8, Fig. 7, looking to the right. Fig. 9 is a sectional detail in perspective of a portion of the seat and the end support thereof. Fig. 10 is a perspective view enlarged, of the hinge member at the middle of the stool for the folding supports as hereinafter fully described. Fig. 11 is a cross section of Fig. 10 on line 11, and Fig. 12 is a longitudinal section on line 12, Fig. 10.

As indicated in the title, the invention consists in a stool which is so constructed as to be compactly folded to be carried in a coat pocket, if desired, and which has ample strength to support any one who may desire to use it. To these ends the stool consists of a frame having two similar seat supporting members *a*, and two so-called leg or base members *b* and an intermediate part or member *c* on which the members *a* and *b* are pivotally connected. Incident to these are the side links 2 which connect the parts *a* and *b* and the bottom link 3 connecting the bottoms of the legs or leg members *b*. A canvas or like flexible seat *s* connects the tops of the two supporting members *a*. These are the parts of the stool in general terms, and said parts are so constructed and related that they may be unfolded as in Figs. 1, 2 and 3, or folded as in Figs. 6, 7 and 8. Specifically, the said parts *a* and *b* are built of suitably heavy wire or rods nearly or quite as thick as an ordinary lead pencil, and the said parts *a* are bent at the middle to form straight cross portions *m* for the seat *s* and have their ends bent inward at right angles toward each other and confined in the loops or hinge portions 4 of the said member *c*. In this connection it is to be especially observed that the side portions of both members *a* and *b* taper inward somewhat from the cross portions *m* and *n* at their middle to or toward the hinge or pivot member *c*, so that both said members *a* and *b* are noticeably narrower as they approach the pivot *c* than at their middle, and the taper of the two parts *a* and *b* is uniform, one with the other. However, the said taper does not start from the immediate cross portion *m* of the seat but some distance below the same, and the narrowing occurs from this point to about the same distance from the hinge member *c*, so that the portions of said sides *a* and *b* near the seat and the pivot member *c* are parallel. Of course this is a detail of construction which is not emphasized as important in its particulars but yet it is important that the structure as a whole should be narrowed relatively as shown at *c* compared with the greater width at seat *s* to enable the stool to be placed in a coat pocket. It is to be further observed, also, that while the outlines of parts *a* and *b* correspond in these details, the part *b* is enough narrower than the part *a* to fold bodily within the same as seen in Figs. 6 and 7. The said hinge or pivot part *c* is preferably constructed from two similar sheets of metal into shape seen in Figs. 10 and 11, and the leg or base supports *b* are pivoted in the ears or loops 5 in the top of said part while the seat supports *a* are pivoted in the loops or ears 4 at the bottom thereof. By thus hinging the leg supports on the inside of part *c* and shortening the same so that the cross portion *n* will swing within the cross portion *m*, the said supports can be folded within the sides and top of seat support *a* as shown and described. The said part *c* furthermore has a middle flat portion or webbing 7 of double thickness provided at opposite ends with wings 8 and 9 respectively, bent or lapped back flat from one side firmly against the opposite side as seen in Figs. 10 and 12 and thus binding the said plates firmly together. This unifies the two plates and makes them as one in working effect and value. The said wings 8 and 9 also are of such width that they fill

the space between the loops or rolls 4 and 5 and thus serve as reinforcing portions between the said loops respectively.

An additional feature of construction material especially in the use of the stool is the fact that the seat supports *a* pivot beneath the pivots of the leg members *b*, thus bringing the said seat pivots correspondingly nearer to the floor and to this extent broadening the base on which they rest. This makes for increased safety against undue tilting of the stool when occupied and gives a much better poise than would be possible if the said pivots were allowed. The depth of the webbing 7 could of course be increased and this would bring the pivot loops 4 still lower down and the balancing advantage would be correspondingly enhanced by that much but the present construction serves the purpose and makes for lightness of the stool.

The leg members swing from within outward and downward, and the connections 2 between the same and the seat-supports *a* are of such length as to be stretched substantially taut when the stool is unfolded. Then as weight comes on the stool the said connections resist tipping sidewise of the seat portion of the stool under the weight, Fig. 2.

The difference in the lengths of the seat and leg members from their pivots is accommodated in the connections 2 by a link 10 in each connection, and the said connections are made preferably of strips of flat spring metal engaged with the parts *a* and *b* at their middle, as seen in Fig. 3. The bottom cross portion *n* of the leg members *b* is, therefore, bent upward at its middle a slight distance to receive the said link and the ends of the bottom connection 3, as seen in Fig. 4. In this instance the connection 3 also is of sheet metal, and a hook *h* is provided where the two parts meet and adapted to engage in any one of the plurality of slots in the other part. When the weight is on the seat the tendency of course is for the legs to spread, and connection 3 prevents such action.

The seat *s* is, preferably, of a good grade of woven canvas, but it may be of any equivalent material, such as carpet or leather or the like. It should in any event be flexible so as to fold out of the way, and it is secured to the cross portions *m* of the members *a* by wrapping the canvas once around said portions and overlapping the ends relatively as seen in Fig. 9. This done, I fasten said ends by means of tin or sheet metal clips 12, which are wrapped about said wrapped ends of the seat and have the otherwise free end of the seat on top confined between the top and the infolded end of the said clip as shown in Fig. 9. This avoids rivets or the like and affords a comparatively smooth connection of the seat with its supports and has no objectionable edges or angles to injure clothing.

It is material and important that the central pivot member *c* should be unitary and rigid its entire length and that the ends of the seat and leg members *a* and *b* should project into loops 4 and 5 thereof preferably to near the middle, as shown, so as to insure the confinement of said supports and to produce rigidity and permanency. Otherwise, or if mere sockets were provided at each side for said members, there would be no lateral stay between them where the weight centers and an unstable structure would result. The said member *c* is constructed to conform to the difference in width of the respective parts *a* and *b* at their pivots, and the loops 5 are therefore shorter than the loops 4, as shown in Figs. 7 and 10.

The rest or weight comes on the bottom substantially straight portions *n* of the leg members, and these are made as wide as can be and yet fold within the sides of the seat supports *a*.

It will be noticed that the respective members *a* and *b* cross each other in substantially X form at the pivot center *c* as seen in side elevation when the stool is open, Fig. 2.

Practically the legs or leg members *b* and pivot member *c* constitute the stool base, and the seat members hang or are suspended at their lower ends by their pivotal engagement in the lower and otherwise free portion of said pivot member *c*. There is in fact a slight rocking movement or tilting afforded by this reason and which has been found agreeable to the user but the swing is limited, of course.

What I claim is:

1. A folding stool having seat and leg members of rigid wire and of substantially rectangular shape, a hinge having opposite loops at its top engaging the top cross portions of said leg members and suspended therefrom between said members and parallel loops in the bottom of said hinge projected laterally at both ends between said leg members and having the said seat members hinged therein.

2. A stool having separate seat and leg members of rigid wire and a central hinge consisting of two strips of sheet metal rigidly connected and provided with two sets of loops in parallel planes lengthwise and one set relatively above the other, the said leg members pivoted in the upper set of said loops and the said seat members crossing said leg members on the outside and pivoted in the lower set of loops, and flexible connections between said members to hold the same in working relations.

3. A folding stool having two seat members and two leg members made of rigid wire and provided with substantially parallel cross portions at both outer and inner

ends and a hinge in which said members are pivoted in pairs at different elevations, the inner ends of the said members respectively being narrowed as compared with the outer ends and adapted to fold one within the other, and flexible connections between the outer cross portions of said seat and leg members respectively, and a seat on said seat members, whereby the immediate outer portions of the seat members are tied to the outer portions of the said leg members.

4. A folding stool having rigid wire seat and leg members formed with straight transverse ends and inwardly inclined sides, and the extremities of said wire bent inward at right angles and constituting the hinge portion of said members respectively, in combination with a hinge on which said members are pivotally engaged in sets at different elevations and the said leg and seat members crossing each other in substantially X form at said hinge and with the seat members outside, and all said members foldably connected across the top and the bottom and ends of said stool.

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

DOUGLAS M. NEFF.

Witnesses:
E. M. FISHER,
F. C. MUSSUN.