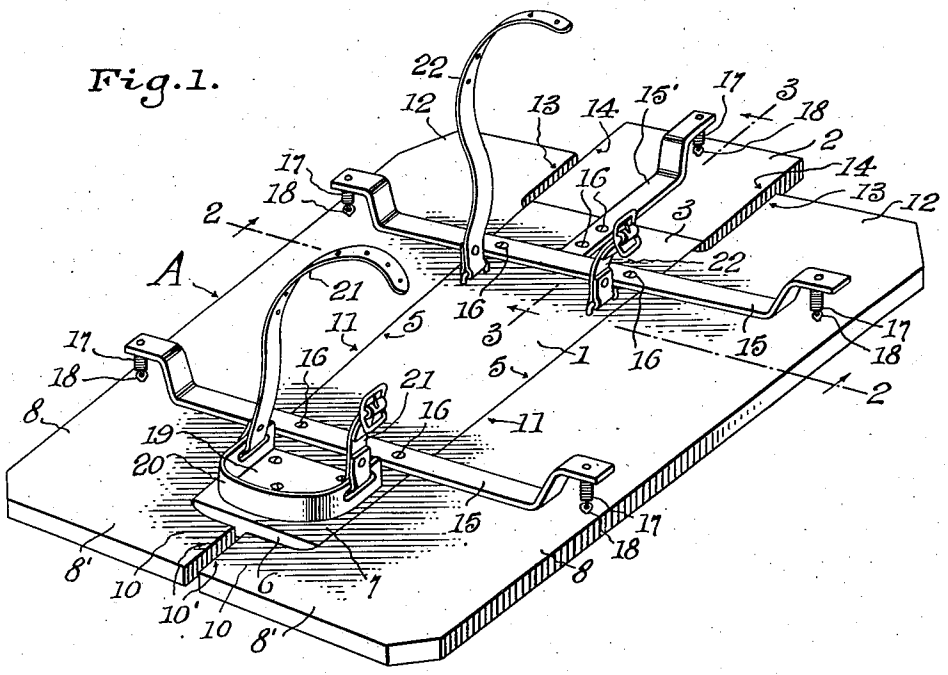
Jan. 16, 1945. C. H. KEARNY 2,367,219

MUD SHOE

Filed Nov. 1, 1943

Fig.1.



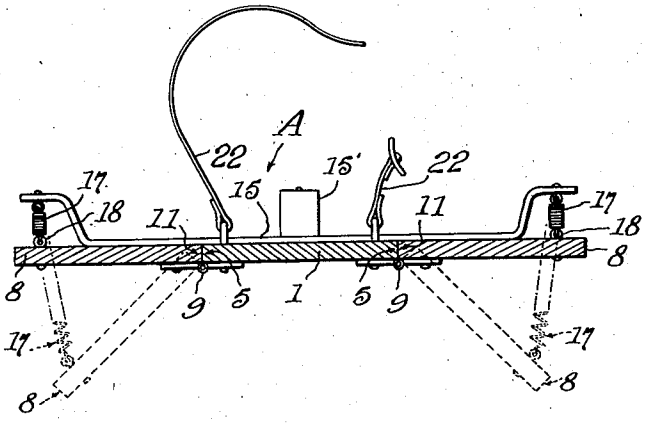


Fig.2.

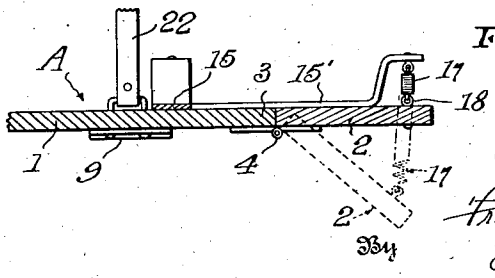


Fig.3.

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MUD SHOE

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Application November 1, 1943, Serial No. 508,521

6 Claims. (Cl. 36—7.5)

(Granted under the act of March 3, 1883, as amended April 30, 1928; 370 O. G. 757)

The invention described herein may be manufactured and used by or for the Government for governmental purposes, without payment to me of any royalty thereon.

This invention relates to a bog or mud shoe, and more particularly it is directed to a device of this character adapted to permit human beings to walk over soft or unfirm ground.

One of the objects of the invention is to provide a shoe for walking over bogs, quicksand or ground composed of mud too soft to support human beings.

Another object of the invention is to provide a bog or mud shoe which is light in weight, strong and durable in construction, efficient in use and which can be quickly and readily applied to and removed from the wearer's foot or shoe.

Heretofore the shoes employed in walking over soft mud or the like quickly produced fatigue or permitted the wearer thereof to become mired in the mud due to the weight of the material adhering to each shoe as withdrawn from the mud and also to the partial vacuum created by the suction produced as the shoes were forced into and withdrawn from the mud. It is therefore the aim and purpose of this invention to provide bog or mud shoes of such construction that the wearer thereof may walk upon soft mud or the like without tiring or being mired therein, by giving to the wearer's foot or shoe an increased supporting area in the horizontal plane when pressed downward upon the soft mud or the like, while giving them a smaller area in the horizontal plane when raised therefrom, whereby the mud or other material is shed off the sides and ends of the shoes by flowing or falling thereover, thus permitting the feet to be easily raised from the mud or other material.

With the above and other objects and advantages in view, the invention consists of certain features of construction and operation of parts which will hereinafter be described and shown in the accompanying drawing in which—

Fig. 1 is a perspective view of the improved bog or mud shoe;

Fig. 2 is a transverse sectional view taken on the line 2—2 of Fig. 1; and

Fig. 3 is a detail sectional view taken on the line 3—3 of Fig. 1.

Referring more specifically to the drawing, A indicates generally the improved bog or mud shoe comprising a sole piece or support 1 having a toe piece 2 in the form of a flap or wing swingingly connected to the front edge 3 of the sole piece or support 1 by the hinge 4 as shown in Fig. 3. The sole piece 1 is illustrated as being in the form of a segmental member, the longitudinal side edges 5 of which converge toward each other from the front edge 3 to a rear edge 6 of the heel portion 7 of the sole piece 1.

A pair of side members 8 in the form of flaps or wings are swingingly connected to the longitudinal side edges 5 of the sole piece 1 by spaced hinges 9, Fig. 2. The rear ends 8' of the side members 8 are provided with portions 10 which extend inwardly in opposed relation to each other adjacent to the rear edge 6 of the heel portion 7 of the sole piece 1, with the inner edges 10' of the portion 10 being in spaced relation with each other to provide a clearance therebetween, and the longitudinal side edges 11 of the side members 8 converge toward each other from the front edge 3 of the sole piece 1 to the rear edge 6 thereof so as to conform to the longitudinal sides edges 5 of the sole piece. The front ends 12 of the side flaps or wing members 8 project beyond the front edge 3 of the sole piece 1, with the inner edges 13 of the front ends 12 being made straight and spaced from the side edges 14 of the toe piece 2, to provide a clearance therebetween.

The toe piece 2 and side wing members 8 normally extend in the same horizontal plane as the sole piece or support 1 and are prevented from turning upwardly beyond the horizontal plane of the sole piece or support by any suitable means such as by the restraining members 15 and 15' illustrated in the form of bars which are mounted on the sole piece 1 by screws 16 or the like.

The restraining members 15 for the side wing members 8 which extend transversely across the sole piece or support 1 in suitably spaced relation above the side wing members 8 project outwardly from the longitudinal side edges 5 of the side wing members and the restraining member 15' projects longitudinally outward from the front edge 3 of the sole piece above the central portion of the toe piece 2. The portions of the restraining members 15 and 15' which project outwardly from the sole piece 1 extend in the same horizontal plane as the sole piece, whereby the toe piece 2 and side members 8 are restrained from moving upward beyond the same horizontal plane as the sole piece. In order to yieldably maintain the toe piece 2 and side members 8 in the same horizontal plane as the sole piece, any suitable means such as the springs 17 are provided at the outer ends of the restraining members 15 and 15', with the upper ends of the springs 17 being secured to the outer ends of the restraining members 15

and 15' and the lower ends of the springs being suitably secured to the upper surfaces of the toe piece 2 and side members 8 at 18.

The heel of the wearer's foot or shoe may be prevented from slipping backward on the sole piece 1 by any suitable means such as the heel support 19 here illustrated as an arcuate-shaped raised flange 20 mounted on the heel portion 7 of the sole piece. In order to secure the shoe to the wearer's foot or shoe, straps 21 are attached to the heel support 19, which straps 21 are adapted to pass about the ankle of the wearer for fastening the improved bog or mud shoe in place, and straps 22 are fastened to the sole piece or support 1, which straps 22 are adapted to be passed over the foot or shoe of the wearer for fastening the sole piece 1 thereto.

When the bog or mud shoe is clear of mud or pressed downwardly therein, the toe piece 2 and side members 8 are yieldably held by the springs 17 against the restraining members 15 and 15' in the same horizontal plane as the sole piece or support 1 but in raising the shoe from the mud the toe piece 2 and side members 8 readily swing downwardly against the action of the springs 17 as illustrated in Figs. 2 and 3. This downward bending of the toe piece 2 and side members 8 is caused by the suction or partial vacuum between the shoe and the mud when the shoe is lifted, which suction or partial vacuum is caused by the air being expelled from between the shoes and mud when the shoes are pressed downwardly into the mud.

In order to break the suction effect or partial vacuum under the shoe when it is raised in soft material, the heel portions 10 of the side flap members 8 which curve around the heel of the wearer's foot or shoe tilt upwardly, thus prying the mud at the heels of the shoes and permitting air or water to rush thereunder whereby the suction effect or partial vacuum is eliminated with the toe piece 2 and side members 8 which swing downwardly, allowing the mud or other material to flow over them, thus permitting the feet to be easily raised from the mud or other material.

Should the wearer of the improved bog or mud shoes sink several feet in soft mud or other material such as quicksand, he can literally pump himself to the surface thereof because each time the foot is raised and then pressed downward, a part of the mud or other material above the shoe is pressed under the shoe due to the toe piece 2 and side flap members 8 at their outer edges biting into the mud or other material when they swing to a horizontal position on the downward movement of the shoe into the material. The toe piece 2 and side flap members 8 can be completely under the sole piece 1 and stood upon without damage or resulting in any decrease of efficiency in the shoe.

The invention is illustrated and described as having the form for the application to the feet or shoes of human beings which is the most important use thereof, but it will readily be understood that the shoe is not restricted to this use as it may readily be formed for application to horses' hoofs and the like.

It will thus be seen that there is herein provided a novel and efficient form of bog or mud shoe which is well adapted for the purpose indicated. Even though there has been herein disclosed the invention as comprising certain features of construction and operation of parts, it is nevertheless to be understood that various changes may be made therein without departing from the spirit or scope of the invention.

Having described my invention, what I claim as new and wish to secure by Letters Patent is:

1. A mud shoe comprising a support, a toe piece and side members movably mounted on the support, means yieldably holding the toe piece and side members in the same plane as the support, and means for securing the shoe to the wearer's foot.

2. A mud shoe comprising a support, a toe piece and side members movably mounted on the support, means restricting the movement of the toe piece and side members in one direction on said support, means yieldably holding said toe piece and side members in a horizontal plane against said first mentioned means, and means for securing the shoe to the wearer's foot.

3. A mud shoe comprising a sole piece including ends and side edges, wing portions, one of said wing portions hingedly connected to one of the ends of the sole piece and other of said wing portions movably connected to the side edges thereof, means including yieldable members holding the wing portions in the same plane as the sole piece, and means for securing the shoe to the wearer's foot.

4. A mud shoe comprising a sole piece including a toe end and side edges, wing portions movably connected to the toe end and side edges of the sole piece, rigid members mounted on the sole piece, means connected to yieldably hold the wing members in engagement with said rigid members, and means for securing the shoe to the wearer's foot.

5. A mud shoe comprising a sole piece including toe and heel ends and longitudinal side edges, wing members, one of said wing members movably connected to the toe end of said sole piece and other of said wing members hingedly connected to the longitudinal side edges of the sole piece, said last-mentioned ring members including portions adjacent to the heel end of the sole piece, means yieldably holding the wing members in the same plane as the sole piece, and means for securing the shoe to the wearer's foot.

6. A mud shoe comprising a sole piece including toe and heel ends and longitudinal side edges, wing members, one of said wing members swingingly connected to the toe end of said sole piece and other of said wing members swingingly connected to the longitudinal side edges of the sole piece, said last-mentioned wing members including portions extending in opposed relation to each other adjacent to the heel end of the sole piece, means yieldably holding the wing members in the same plane as the sole piece, and means for securing the shoe to the wearer's foot.

CRESSON H. KEARNY.