June 30, 1942. E. W. HOLMES 2,288,568

CREEPER

Filed May 29, 1940

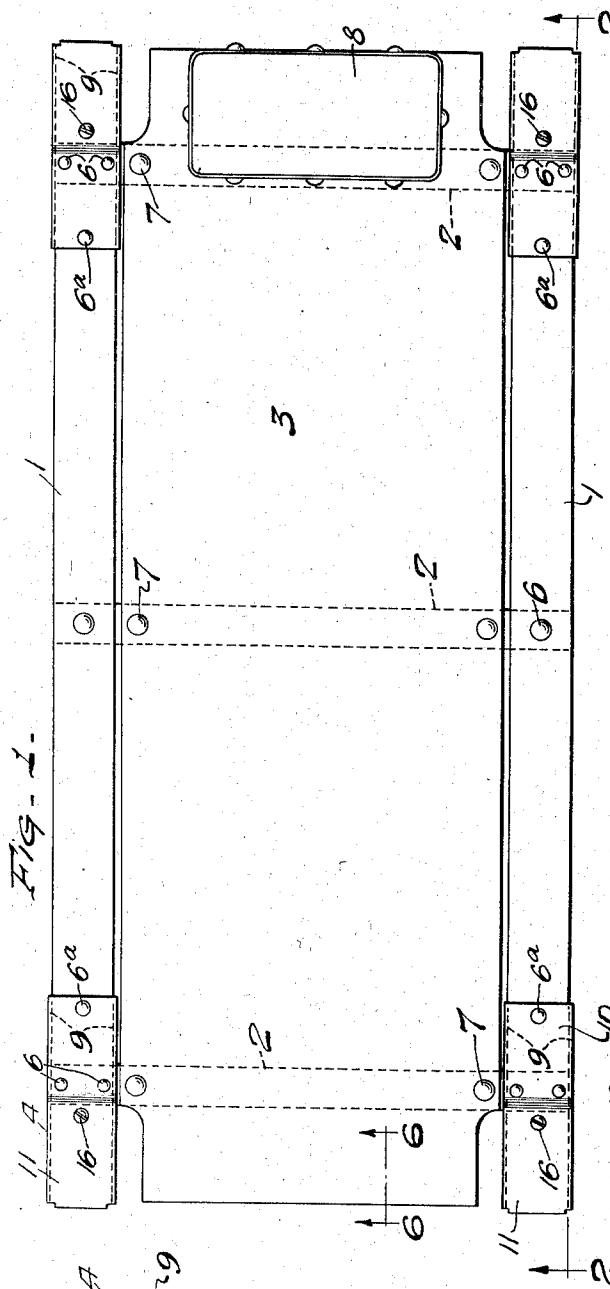


FIG. 1.

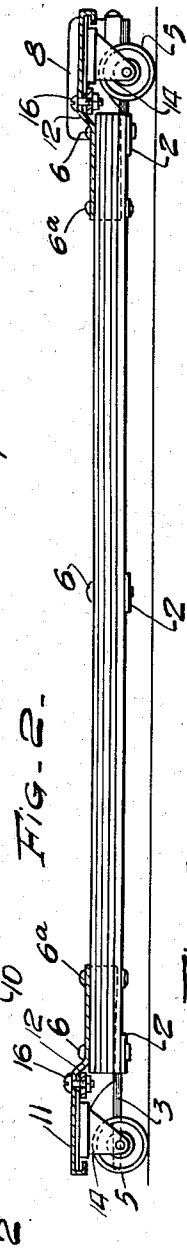


FIG. 2.

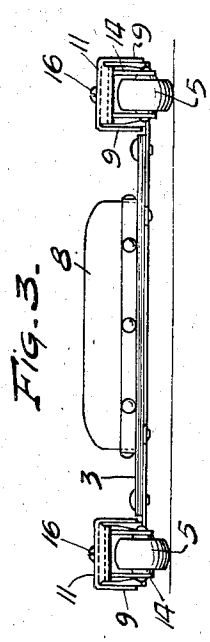


FIG. 3.

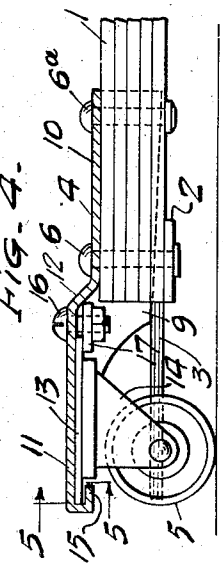


FIG. 4.

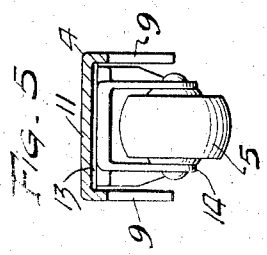


FIG. 5.



FIG. 6.

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CREEPER

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3 Claims. (Cl. 280—61.5)

The present invention relates to creepers of the well known type provided with casters for movement over the floor of a garage or the like and on which a workman may lie and ride beneath an automobile for inspection, repair, servicing or other purposes.

One of the objects of the invention is to provide a creeper of this type which is of a composite wood and metal construction the parts of which are secured together into a solid permanent unit which is capable of withstanding very rough usage.

Another object is to provide extension brackets of novel form for attaching the casters to the creeper whereby the casters are located beyond the ends of the body of the creeper and suspend the creeper at a minimum height above the floor, and afford greater stability and flexibility than when located beneath the creeper, as heretofore.

Another object is to provide extension brackets for the casters which reinforce the ends of the side members of the creeper to which they are riveted or otherwise securely attached.

A further object of the invention is to provide novel means for removably attaching the casters to the brackets whereby replacement of one or more of the casters, if necessary, may be accomplished quickly and with facility.

To these and other ends, the invention consists in certain improvements and combinations and arrangements of parts, all as will be hereinafter described in detail, the features of novelty being pointed out particularly in the claims at the end of this specification.

In the accompanying drawing:

Figure 1 is a top plan view of a creeper constructed in accordance with the present invention;

Figure 2 is a vertical section, taken on the line 2—2 in Fig. 1;

Figure 3 is an end view of the creeper;

Figure 4 is a vertical section, on an enlarged scale, taken longitudinally through one of the caster brackets and the adjacent end of the creeper to which it is attached;

Figure 5 is a vertical section, taken on the line 5—5 in Fig. 4; and

Figure 6 is a fragmentary section, on an enlarged scale, taken on the line 6—6 in Fig. 1.

Similar parts are designated by the same reference characters in the several views.

The creeper, in its preferred embodiment and as shown in the accompanying drawing, comprises a body composed essentially of a pair of side members 1, a suitable number of cross strips 2 connecting them, and a platform 3, and supporting caster brackets 4 and casters 5.

The side members 1 are each composed of strips of wood, laminated wood as shown, in which the grain in all of the laminations extends lengthwise of the strip, being preferable when flexibility greater than that afforded by a solid wooden strip is desired. The cross strips 2 are composed of thin flat spring steel, and they are fixed at their ends directly to the lower sides of the side members 1 preferably by rivets 6 which pass through the side members and, when laminated side members are used, these rivets serve to firmly secure the laminations together. The platform 3, which provides a bed on which the body of the workman may rest in a reclining position, is composed of a thin flat sheet of suitable flexible material, preferably ordinary ply-wood as shown, it resting on the cross strips and projecting upwardly between the side members so that it is accommodated between them, and being firmly fixed to the cross strips preferably by rivets 7. The usual head rest 8 employed in creepers of this type is mounted on one end of the platform. A composite wood and metal body structure is thus provided in which the parts are riveted or otherwise firmly secured together to form a solid permanent unit which possesses sufficient flexibility, both longitudinally and transversely, to enable it to withstand rough usage.

The present invention provides novel means for attaching the casters to the creeper whereby the creeper may occupy a minimum height above the floor level and thus enable the workman lying on the creeper to easily pass beneath the running boards and other low hanging parts of modern automobiles. According to the present invention, the casters are not mounted beneath the creeper as heretofore, but are carried by the brackets 4 which extend beyond the ends of the creeper, thus enabling the creeper, including its side members, to be suspended or underslung from the casters.

These brackets, which are composed of steel or other suitable metal and are preferably pressed into shape from sheet metal of sufficient thickness, each comprise a shank at one end which is of channel shape in cross section, providing a pair of flanges 9 which are spaced apart a distance substantially equal to the width of the side member 1 so that these flanges may fit closely against the sides of the respective side member, and an intermediate portion 10 to fit on the top of the respective side member and from which the side member is hung, the shank being rigidly fixed to the top of the end of the respective side

member 1 by rivets 6 which secure the adjacent cross strip 2 and by supplemental rivets 6a all of which extend vertically through the side member and the overlying portion 10 of the bracket, the flanges 9 of the bracket embracing the sides of the side member and thereby reinforcing it and protecting it against splitting.

The rest of the bracket extends from its shank endwise beyond the end of the respective side member and provides a socket to receive the caster. This portion of the bracket comprises a flat horizontally extending portion 11 which is offset upwardly from the top 10 of the shank by the bend 12 in the top of the bracket, the flanges 9 at the sides of the shank continuing along the sides of the portion 11 although diminishing in depth, and thus increasing the rigidity of the connection between the extended portion 11 and the shank of the bracket. The extended portion 11 of the bracket is adapted to receive beneath it and between the side flanges 9 the attaching plate 13 of the caster, this attaching plate being swivelled in the usual manner to the roller carrying yoke 14 of the caster.

Novel means is provided for removably securing the casters to their respective brackets whereby they may be easily and quickly replaced when necessary, due to breakage or other causes. Preferably and as shown, such means is provided by bending the terminal end of the flat portion 11 downwardly and then under said portion so as to form an underlying hook-like locking flange 15 in which one edge of the caster attaching plate 13 may be engaged, and by providing a bolt 16 which extends downwardly through the portion 11 of the bracket adjacent to but beyond the opposite edge of the plate 13 and carries a locking plate 17 adapted to be drawn up against the underside of the caster attaching plate 13 by tightening of said bolt. By this arrangement, each caster may be applied to its respective bracket by inserting one edge of the plate 13 above the locking flange 15, while the bolt 16 and plate 17 are removed, and swinging its opposite edge against the portion 11 of the bracket, and then inserting said bolt and plate and tightening the bolt to draw the plate 17 tightly against the underside of the plate 13 at its edge opposite to the locking flange. Removal of a caster, when necessary, may be accomplished by reversing the operation just described. As the caster is held against movement longitudinally of the bracket by engagement of the locking flange 15 and locking plate 17 with two of the opposite edges of the caster attaching plate 13, and the other opposite edges of the latter are confined between the depending flanges 9 at the sides of the bracket portion 11, each caster will be securely although detachably held in its bracket.

The casters thus mounted beneath the bracket portions 11 which are offset above the tops of the side members 1 and extend beyond the ends thereof, enable the side members, suspended or hung below the brackets, and consequently the rest of the creeper, to be supported by the casters as low to the floor level as may be desired, irrespective of the size of the casters used, by providing the desired amount of offset in the brackets. The location of the casters beyond the ends of the body of the creeper, instead of beneath it as heretofore, also increases the distance between the casters, thereby increasing the flexibility and stability of the creeper.

The spring steel cross strips on which the platform rests reinforce this platform, especially when made of ply-wood, and assist it in returning to its normal flat position after it has been subjected to undue pressure or bending strain. As these cross strips are thin and are secured directly to the lower sides of the side members, they do not project appreciably below the side members to form obstructions to strike the floor during the movement of the creeper thereover, although the side members are hung or suspended at a low level by the offset extension brackets.

I claim as my invention:

1. A creeper comprising a body portion having side members, brackets each having a shank of channel form fixed to the top of the respective side member and providing flanges extending downwardly and embracing the sides thereof, each bracket having an extension proceeding endwise from and offset upwardly above said shank and extending beyond an end of the respective side member, and casters carried beneath said upwardly offset extensions of the brackets.

2. A creeper comprising a body portion having flexible side members composed of strips of laminated wood, brackets secured to the ends of the side members and having extensions projecting beyond the respective ends of the side members and offset upwardly therefrom, each bracket having a shank secured to the top of the respective side member by securing devices which extend through and secure together the laminations thereof, and casters carried beneath the upwardly offset extensions of the brackets.

3. A creeper comprising a body portion, brackets secured thereto and having portions extended beyond the ends thereof, the extended portion of each bracket having a hook-like flange projecting beneath it and having a bolt provided with a locking plate located opposite to said flange, and a caster for each bracket having an attaching plate one edge of which is pivotally engageable with said flange to bring its opposite edge into clamping relation with said locking plate.

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