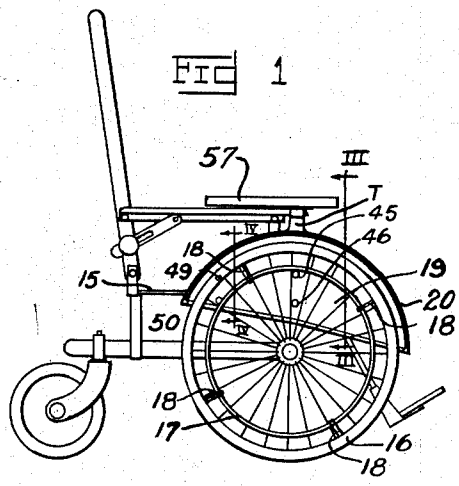
June 22, 1954 F. O. BREED 2,681,689

FENDER FOR WHEEL CHAIRS

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FIG 1



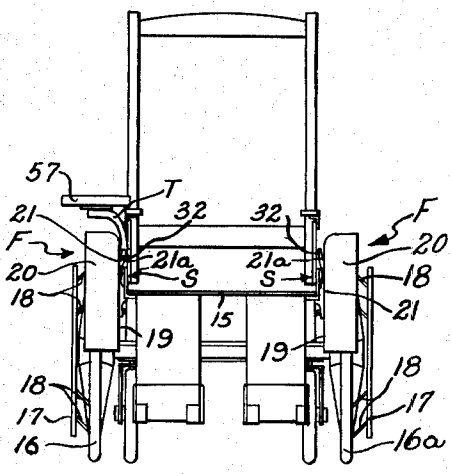


FIG 2

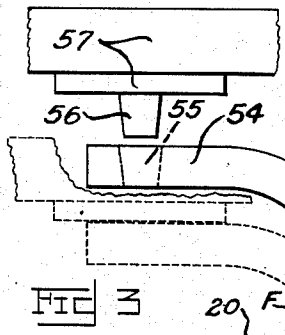


FIG 3

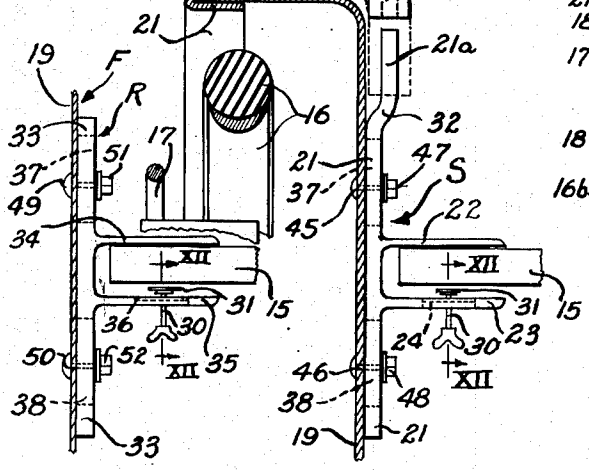


FIG 4

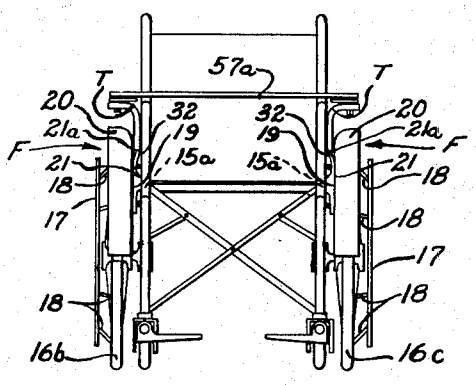


FIG 5

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FENDER FOR WHEEL CHAIRS

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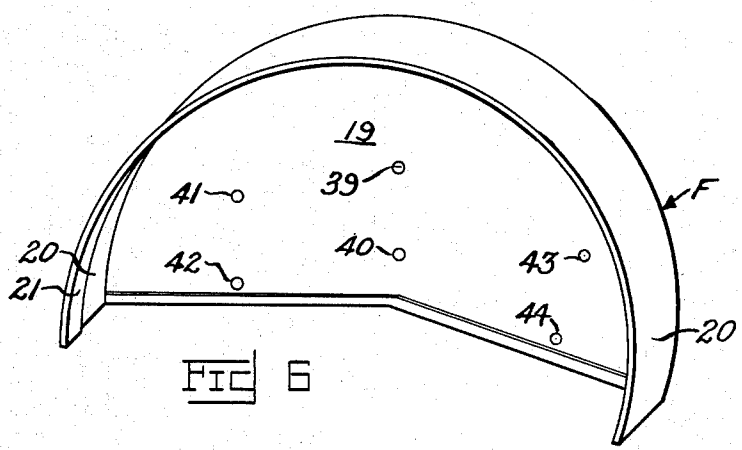


FIG 6

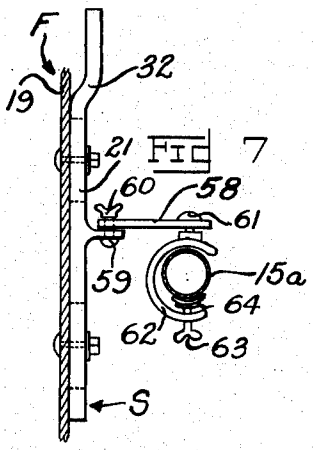


FIG 7

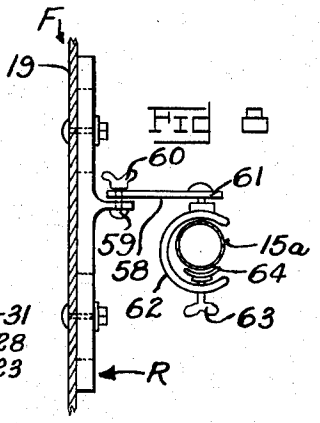


FIG 8

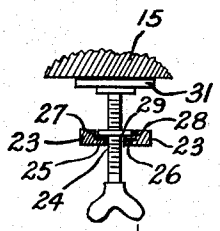


FIG 12

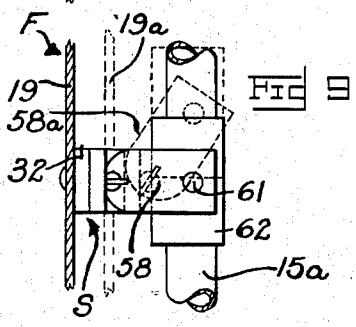


FIG 9

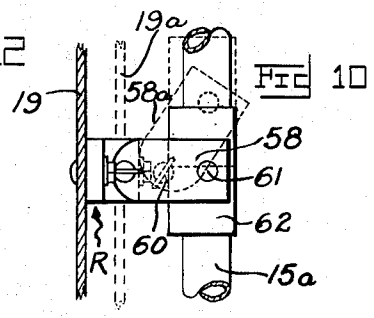


FIG 10

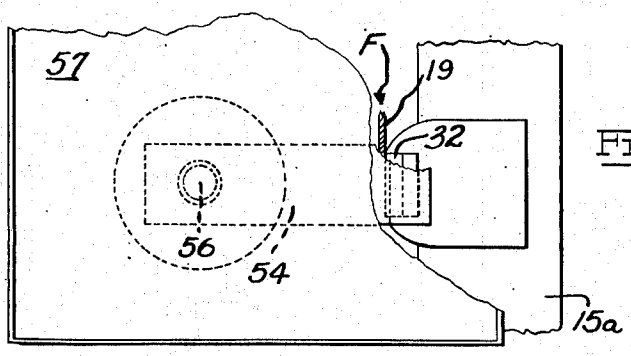


FIG 11

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Patented June 22, 1954

2,681,689

UNITED STATES PATENT OFFICE

2,681,689

FENDER FOR WHEEL CHAIRS

Florence O. Breed, Seattle, Wash.

Application February 26, 1951, Serial No. 212,807

5 Claims. (Cl. 155—30)

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My invention relates to an improvement in a fender and tray support device as an accessory for wheel chairs. An object of the invention is to provide a device of the kind mentioned that may be attached to any standard wheel chair and will provide a shield or covering for the upper portion of the front side-wheels such that a woman sitting in the chair may work on sewing material, a part of which may fall over the wheel and if it were not for my improved fender device the sewing material would rest on or rub against the tire of the wheel and become soiled therefrom.

A further object of the invention is to provide a device of the kind mentioned in which a tray and supporting means therefor is provided. The tray may be a small tray that would be supported at either side of the chair or it may be a large tray that would reach across the front of the chair.

A still further object of the invention is to provide a device of the kind mentioned that is simple and sturdy in construction, one that is neat in appearance and easy and simple to attach to the chair and one that is inexpensive to make and buy. These and other objects will be more fully explained as this description progresses.

And now referring to the accompanying drawings in which similar numerals of reference designate the same parts throughout the several figures of the drawings;

Fig. 1 is a side view of a wheel chair to which my improved fender and tray support device has been attached.

Fig. 2 is a front view of a wheel chair to which my improved fender and tray device has been attached.

Fig. 3 is an enlarged detail sectional view through the fender and tray support device, the device being attached to the chair seat. The view is as seen from the line III—III in Fig. 1 and looking in the direction of the arrows.

Fig. 4 is an enlarged detail view of the rear support element for the fender, the view being as seen from the line IV—IV in Fig. 1 and looking in the direction of the arrows.

Fig. 5 is a front view of an all metal folding chair to which my invention has been applied.

Fig. 6 is a side view of the fender portion of the device.

Fig. 7 is an enlarged detail sectional view through an all metal chair and showing a fender and tray support bracket that is designed to fit on the tubular seat frame of the chair, the view is as would be seen from the line III—III

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in Fig. 1 and looking in the direction of the arrows, if the chair were made of tubular framing as shown in Fig. 5 instead of wood as shown in Fig. 1.

Fig. 8 is an enlarged detail sectional view through a tubular all metal frame chair and showing a bracket fender support, the view being as would be seen from the line IV—IV in Fig. 1 and looking in the direction of the arrows providing the chair was an all metal chair as shown in Fig. 5 instead of a wood frame chair as shown in Fig. 1.

Fig. 9 is a top plan view of the device shown in Fig. 7.

Fig. 10 is a top plan view of the device shown in Fig. 8.

Fig. 11 is an enlarged detail top plan view of the tray and support therefor shown in Figures 1, 2 and 3, a part of the tray is broken away for convenience of illustration and Fig. 12 is an enlarged sectional view as would be seen from the line XII—XII in Fig. 3 but showing the parts in clamped relation.

In the drawings is shown a wheel chair having a wood seat frame element 15 as shown in Figures 1, 2, 3 and 4, or a tubular seat support frame 15*a* as shown in Figures 5, 7, 8, 9, 10 and 11. The seat 15 or 15*a* and the balance of the chair structure is supported on supporting and drive wheels 16 and 16*a* as shown in Figures 1, 2 and 3, or as shown at 16*b* and 16*c* in Figure 5; and each of said wheels are provided with a circular hand grip element 17 that are rigidly supported in an outwardly spaced position from their respective wheel 16, 16*a*, 16*b*, or 16*c* and being concentric therewith, on supporting brackets or hangers 18.

My invention consists of a fender element F that has a side wall 19, the outer edge of which is arcuate and is rolled or turned outwardly as shown at 20 to cover and fit around the upper portion of its respective support or drive wheel 16, 16*a*, 16*b* or 16*c*. The extreme edge of the out turned fender portion 20 is folded as shown at 21 to provide a smooth edge and double thickness of material to lend strength to the fender and to prevent cracking or breaking of the fender edge.

Each fender is supported on a forward standard S and a rear bracket R.

The forward standard consists of a vertically positioned leg element 21 on the lower portion of which is integrally formed a pair of laterally extending and spaced apart clamp legs 22 and 23 and between which the seat frame element

15 is positioned and the clamp leg 22 rests thereon. The lower clamp leg 23 has an elongated slot 24 longitudinally positioned therein and bounded on each side by lip like elements 25 and 26 that are bounded by upwardly extending side wall portions 27 and 28 between which is slidably positioned a nut 29 that is slidably supported on the lip elements 25 and 26. A winged screw 30 is passed upwardly through the slot 24 and is threaded through the nut 29 and the upper end of the screw 30 is provided with a clamp foot 31 that is adapted to engage and press against the under side of the seat frame 15 as the screw 30 is screwed upwardly so as to bind and rigidly hold the support bracket S on the chair seat element 15. The upper portion of the supporting leg 21 has an inwardly directed curved portion 32 and then continues on upwardly as a support leg 21*a* for purposes that will later be made obvious.

Each fender is provided with a second or rear support bracket R that comprises a vertically positioned supporting leg element 33 and which is provided with a pair of laterally extending and spaced apart clamp legs 34 and 35 that are integrally formed on the vertical leg 33, and between which the rear portion of the seat frame 15 is positioned and on which the upper clamp leg 34 rests. The lower clamp leg element 35 has an elongated slot 36 longitudinally positioned therein. The clamp leg 35 is constructed the same as shown and described in Fig. 12, including the nut 29, winged screw 30 and clamp foot 31.

In both vertical supporting legs 33 and 21 of the forward standard S and rear supporting leg 33 of the bracket R is a pair of elongated slots 37 and 38 therethrough.

The side wall 19 of the fender F has three pairs of holes 39 and 40, 41 and 42, and 43 and 44. The holes of each pair of holes are positioned, one vertically above the other, and the pair of holes 39 and 40 are positioned midway between the ends of the fender and the pairs of holes 41 and 42, and 43 and 44 so that bolts 45 and 46 may be passed through the holes 39 and 40 in the fender wall 19 and through the elongated slots 37 and 38, whereupon nuts 47 and 48 may be threaded on the bolts 45 and 46 to hold the fender wall 19 on the supporting leg 21. Similarly bolts 49 and 50 are passed through the holes 41 and 42 in the fender wall 19 and also through the elongated slots 37 and 38 in the supporting leg 33 of the bracket R and nuts 51 and 52 are threaded on the bolts 49 and 50 to also hold the fender plate 19 on the vertical supporting leg of the bracket R.

The fender brackets having thus been assembled the brackets S and R may be slid along the chair seat frame element 15 to properly position the fender F longitudinally and equally over the supporting wheel 16 whereupon the wing screws 30 in both brackets S and R may be screwed upwardly so that the clamp foot 31 on each screw 30 bears against the seat frame element 15 to rigidly bind and hold the supporting brackets S and R on the seat element 15.

Before tightening the screws 30 the supporting brackets S and R may also be moved toward or away from the seat frame element 15 to properly position the fender F over the drive wheel 16. The fender having thus far been adjusted, may then be raised or lowered so that the rolled portion 20 will have the desired clearance above the wheel 16 whereupon the nuts 47, 48, 51 and 52 may be turned on their respective bolts to rigidly

bind and hold the fender plate 19 and fender F in its adjusted position relative to the wheel 16 and chair seat 15.

The relative positions of the pairs of holes 41 and 42, and 43 and 44 to the pair of holes 39 and 40 makes the fender F universal for use on either side of the chair which eliminates the problem of making right and left fenders, therefore a fender and supports therefor may be mounted, one on each side of the chair in the same manner above described and shown in Fig. 2.

The device is provided with a tray support element T, that is in the shape of an inverted L and the lower end of the vertical leg is provided with a socket that is adapted to slip over and receive the upper end 21*a* of the supporting leg 21 of the front bracket S. The horizontal leg 54 of the tray support element T has a vertically positioned hole 55 therethrough in which a tray support pin 56 is receivable for purposes of supporting a tray structure 57 at the side of the chair and over the fender F.

The pin 56 and the hole 55 are tapered so that the pin 56 will fit solidly in the hole 55 and will not allow the tray 57 to tip, although it can be turned in a horizontal plane to fit the convenience of the person using the chair.

If desired, two tray support brackets T may be employed and positioned one on each front fender support element S and the horizontal legs of the bracket T turned either in or out as indicated in Fig. 5 and a long tray 57*a* having a pin such as 55 on either end thereof may be inserted in the two supporting brackets T to support and hold the tray 57*a*. Either tray may be moved from its supporting brackets merely by lifting the tray to demount it from its supporting brackets.

Some wheel chairs have a metal tubular frame such as that shown in Figs. 5, 7, 8, 9, 10 and 11. In these views the supporting brackets S and R are pivotally supported on one end of a link 58 and are adjustably held in position thereon by means of a bolt 59 and a wing nut 60. The other end of the link 58 is pivotally mounted at 61 on the upper side of a C clamp body 62, the opening of which is large enough that the seat frame tube 15*a* will pass therethrough and be seated in the upper curved portion of the C clamp body 62. The lower portion of the C clamp body 62 is provided with a wing screw 63 that is threaded therethrough and is provided with a clamp foot 64 that is curved to fit against the tubular seat frame element 15*a* and is swivelly mounted on the upper end of the wing screw 63.

The fender plate 19 is attached to its respective bracket support element the same as previously described. The adjustment of the C clamp 62 having been made, the wing screw 63 may be screwed upwardly until the clamp foot 64 engages and binds against the tubular seat frame 15*a* to rigidly hold its respective fender support element S or R in its adjusted position.

While the device as shown and described is probably the preferred form of the device, it is to be understood that such modifications of the device may be employed as lie within the scope of the appended claims without departing from the spirit and intention of the invention.

Now having fully shown and described my invention what I claim is:

1. In a protective fender device for attachment to the structural elements of a wheel chair, said device comprising a fender portion for covering the upper portion of the chair wheel, a side wall portion for the fender, said wall portion being

of such dimension as to reach from the fender portion to a point below the chair seat and to fit between the seat and wheel of the wheel chair and means for holding the device in the foregoing defined position; said means for holding the device being bracket means adjustably attached to said fender wall portion and attachable to the seat frame of the chair for longitudinal and lateral adjustments of the device.

2. In a combination tray support and fender device for wheel chairs, the structure defined in claim 1; said bracket means having means thereon for receiving a tray support element, a tray and tray support element therefor, said tray support element being received on the said fender bracket means, said tray being mounted on and demountable from said tray support element.

3. The combination of a protective fender device for a wheeled chair and a tray for use in connection therewith comprising a combination fender and tray support bracket, said bracket being attachable to a side of the chair and to a structural element of the chair, a fender, said fender adapted to cover the upper portion of its respective wheel and having a side wall attached to said brackets for the support of the fender, said side wall being positionable between its respective wheel and the seat of the chair and the lower edge of the side wall adapted to extend as far down as the seat of the chair, said bracket being adjustable longitudinally, and laterally relative to the seat of the chair for adjustment of the fender and fender wall relative to the chair seat and their respective chair wheel, a tray and a support for said tray, said tray support being detachably attached to said bracket for the support of the tray on a side of the chair, and above its respective fender.

4. The combination of a protective fender device for a wheel chair and a tray for use in connection therewith; the structure and arrangement of the several parts of the device as defined in claim 3, said tray being revolvable on and detachably attached to the support therefor.

5. In a combination protective fender device for the wheels of a wheel chair and a tray for use in connection therewith as described; a pair of combination fender and tray support brackets, a pair of fender elements having side walls, each bracket being attachable one at each side of the chair and to structural elements of the chair, each of said fender elements adapted to cover the upper portion of its respective wheel, the side wall of each fender being attached to its respective support bracket, said side walls being positionable each between their respective wheel and the seat of the chair, the lower edge of the side wall of each fender being positionable at or below the chair seat, a tray and a pair of tray supports as a further part of the combination, said tray supports being received and detachably attached one on and to each of the said brackets, said tray being detachably attached to and supported on one end thereof on each of the said tray supports.

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