

SUBJECT: SAFETY HARNESS, FRONT SEATS

MODELS: LAND-ROVER

- 88" Basic and Station Wagons. See page 1.
- 88" Cab. See page 3.
- 109" Full-length Hood. See page 4.
- 109" Cab. See page 6.
- 109" Station Wagon. See page 8.
- Position of seat strap. All models. See page 9.

Each part number represents a complete set of safety harness and fixings for one person, R.H. or L.H. side. The Irvin safety harness has two main components, a short strap carrying the tongue section of the buckle, and a long combined diagonal shoulder and lap strap on which the mating buckle is fitted.

When the harness is installed the long diagonal strap passes over the outboard shoulder and across the lap. It is then attached to the short strap. See Fig. 16.

IMPORTANT. This harness has been scientifically designed and tested to meet the requirements of B.S. 3254 and is officially approved by the Rover Company Limited. Alterations and additions must NOT be made to this harness.

88" BASIC AND STATION WAGON

PARTS REQUIRED

	Qty.	Part No.
Safety harness kit, R.H.	1	320540
Safety harness kit, L.H.	1	320541

Procedure—One side only

1. Remove the two corner bolts, securing seat base to body floor and sill panel.
2. Position the sill gusset R.H. or L.H. as required into the corner and secure, using the original body fixing bolts as shown in Fig. 1.

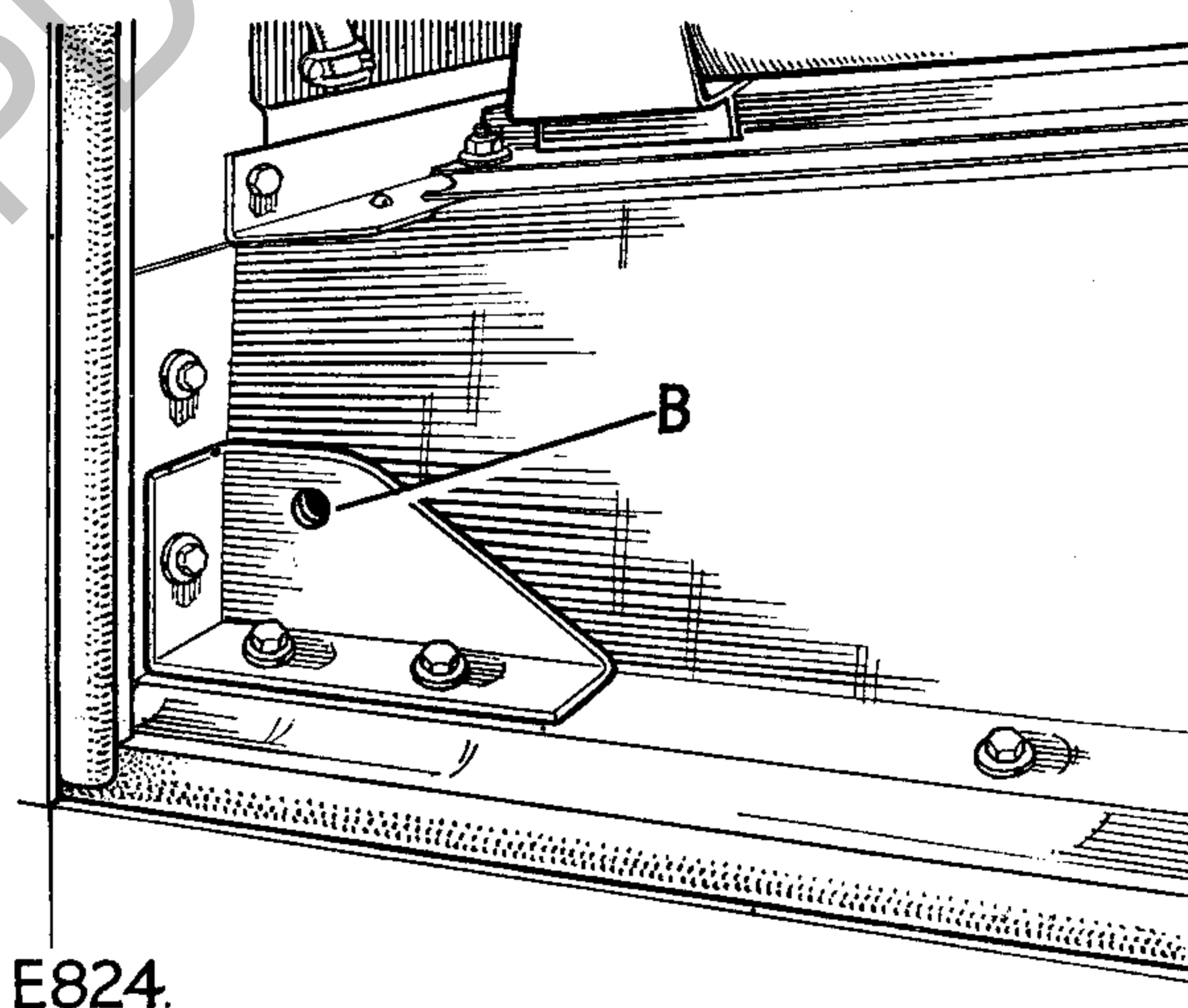


Fig. 1. Sill gusset in position.

B—Harness fixing hole.

3. Drill the remaining gusset fixing hole through sill and body panel $\frac{9}{32}$ in. (7 mm) diameter and secure gusset, using bolt ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long), plain washer, spring washer and nut ($\frac{1}{4}$ in. UNF).
4. Using the safety harness fixing hole in sill gusset as a template, drill a $\frac{15}{32}$ in. (12 mm) diameter hole through seat panel. Take care when drilling not to damage fuel tank fitted to R.H. side.
5. Mark off a centre line of vehicle on body floor, adjacent to seat bulkhead—then mark a position $9\frac{7}{8}$ in. (251 mm) from the centre line toward body side, as shown in Fig. 2.

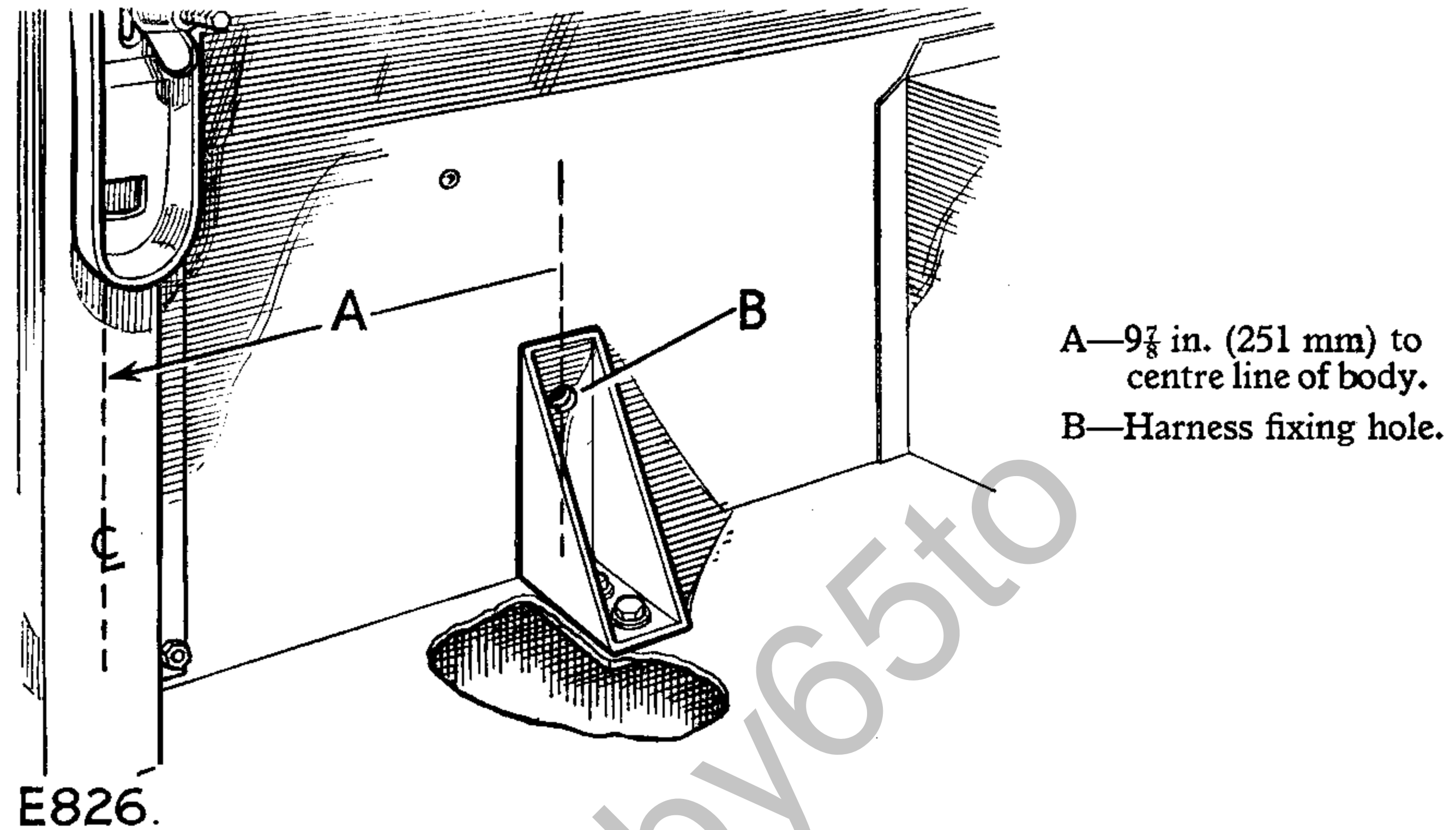


Fig. 2. Bulkhead gusset in position.

6. Position the bulkhead gusset central on the $9\frac{7}{8}$ in. (251 mm) line marking and, using the gusset as a template, drill the two gusset fixing holes $\frac{9}{32}$ in. (7 mm) diameter through the floor panel.
7. Secure the gusset in position, with washer plate assembly underneath floor panel, using two bolts ($\frac{5}{16}$ in. UNF x $\frac{7}{8}$ in. long), plain washers and spring washers.
8. Using the safety harness fixing hole in bulkhead gusset as a template, drill $\frac{15}{32}$ in. (12 mm) diameter hole through bulkhead panel.
9. On the seat bulkhead top capping, mark off a centre position of vehicle—then mark off a position outboard $24\frac{5}{16}$ in. (617 mm) as shown in Fig. 3.

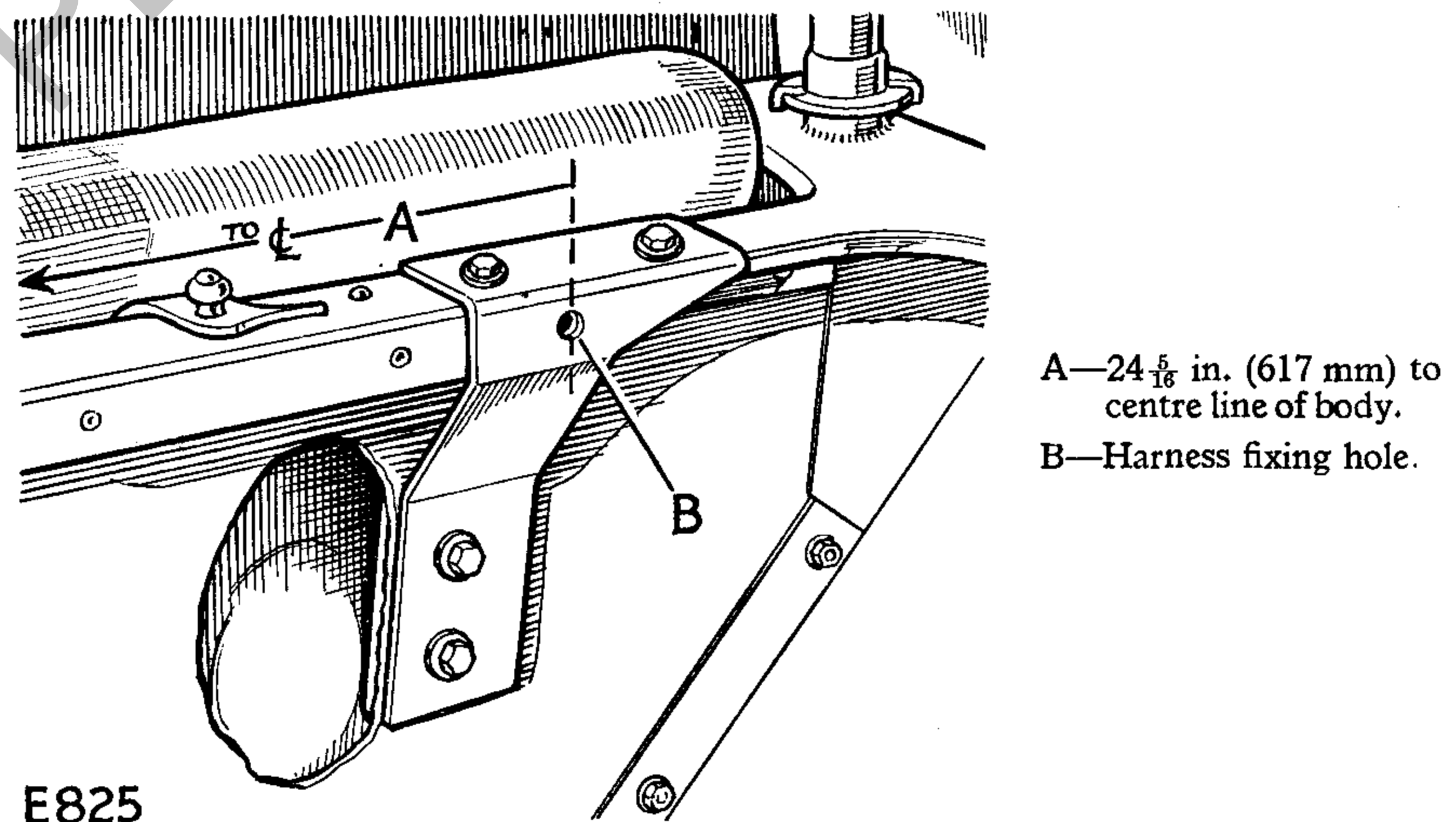


Fig. 3. Shoulder bracket in position.

10. Remove the four rivets securing capping to bulkhead at this position.
11. Position the $\frac{15}{32}$ in. (12 mm) safety harness fixing hole of shoulder bracket, R.H. or L.H. as required, on the $24\frac{5}{16}$ in. (617 mm) marking and open out the holes in capping to $\frac{9}{32}$ in. (7 mm) diameter to correspond with shoulder bracket fixing holes.
12. Secure the shoulder bracket to capping, using two bolts ($\frac{1}{4}$ in. U.N.F. x $\frac{5}{8}$ in. long) spring washers and nuts ($\frac{1}{4}$ in. UNF).
13. Using the shoulder bracket as a template, drill the two fixing holes in bulkhead panel $\frac{3}{4}$ in. (8 mm) diameter and secure bracket in position, with washer plate inside bulkhead panel, using two bolts ($\frac{5}{16}$ in. UNF x $\frac{5}{8}$ in. long), spring washers, nuts ($\frac{5}{16}$ in. UNF).
14. Using the safety harness fixing hole in shoulder bracket as a template, drill $\frac{15}{32}$ in. (12 mm) diameter hole through capping.

88" WITH CAB

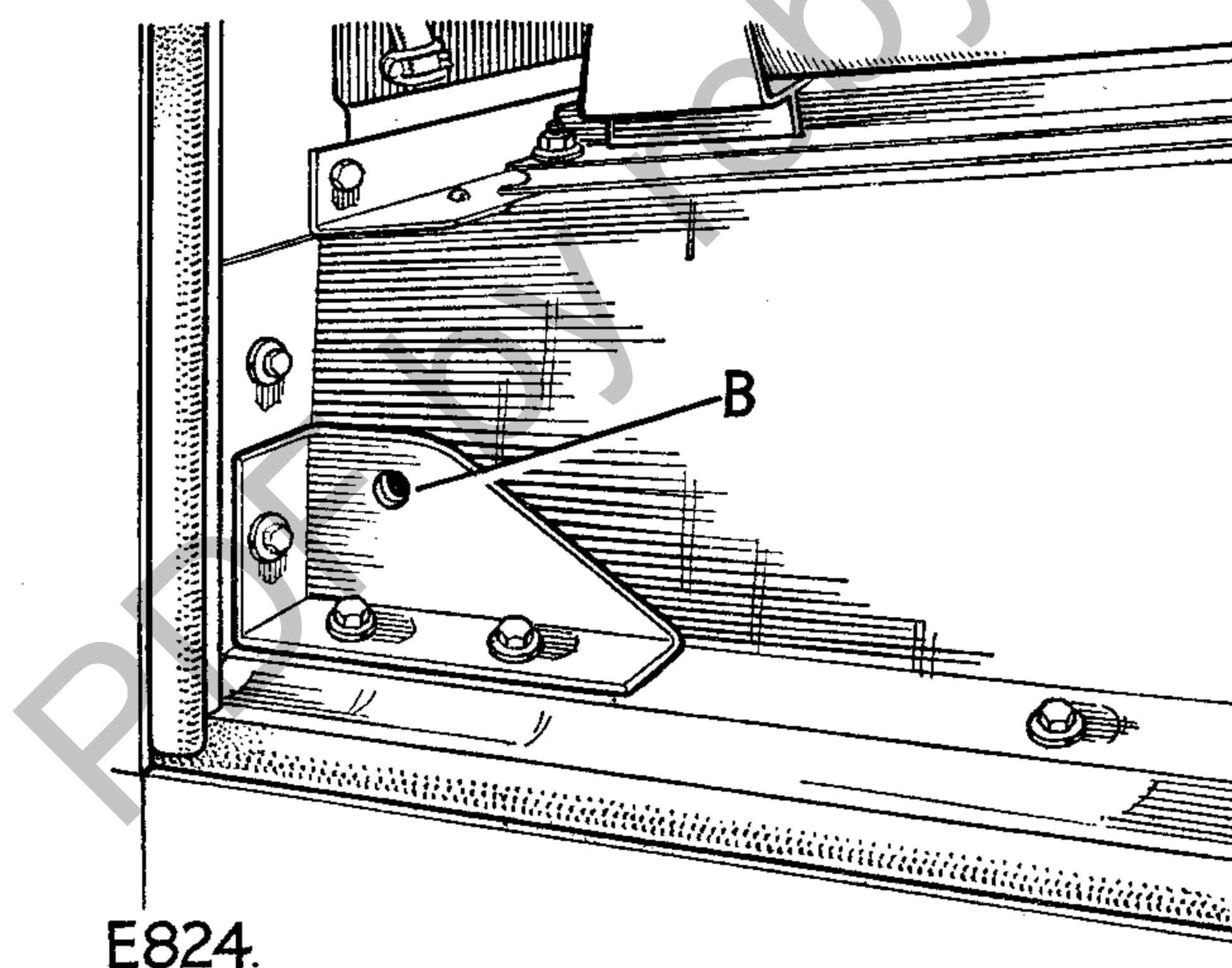
PARTS REQUIRED

Qty. Part No.

Safety harness kit, R.H. ....	....	....	....	....	....	....	1	320550
Safety harness kit, L.H. ....	....	....	....	....	....	....	1	320551

Procedure—one side only

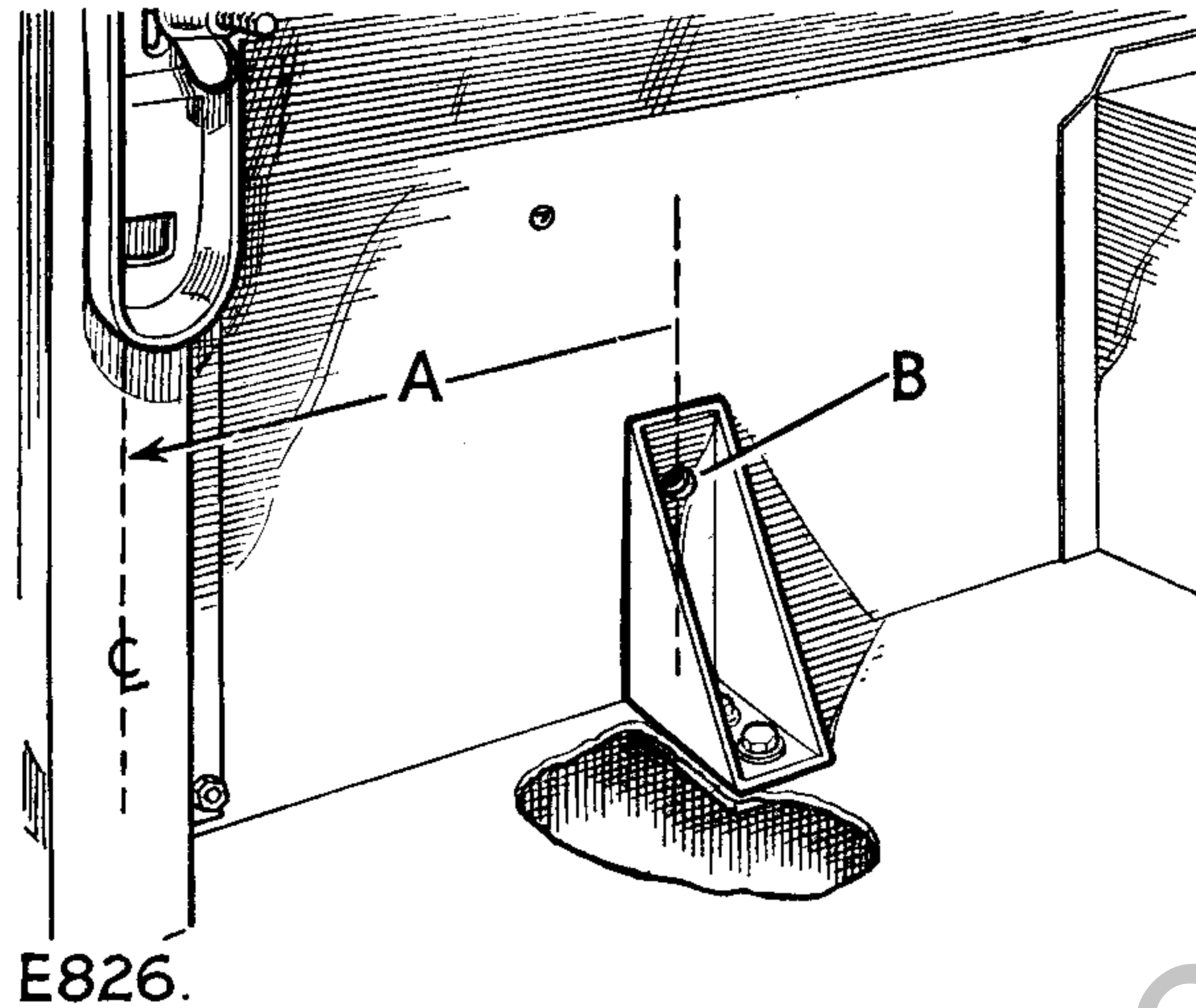
1. Remove the two corner bolts, securing seat base to body floor and sill panel.
2. Position the sill gusset R.H. or L.H. as required into the corner and secure, using the original body fixing bolts, as shown in Fig. 4.



B—Harness fixing hole.

Fig. 4. Sill gusset in position.

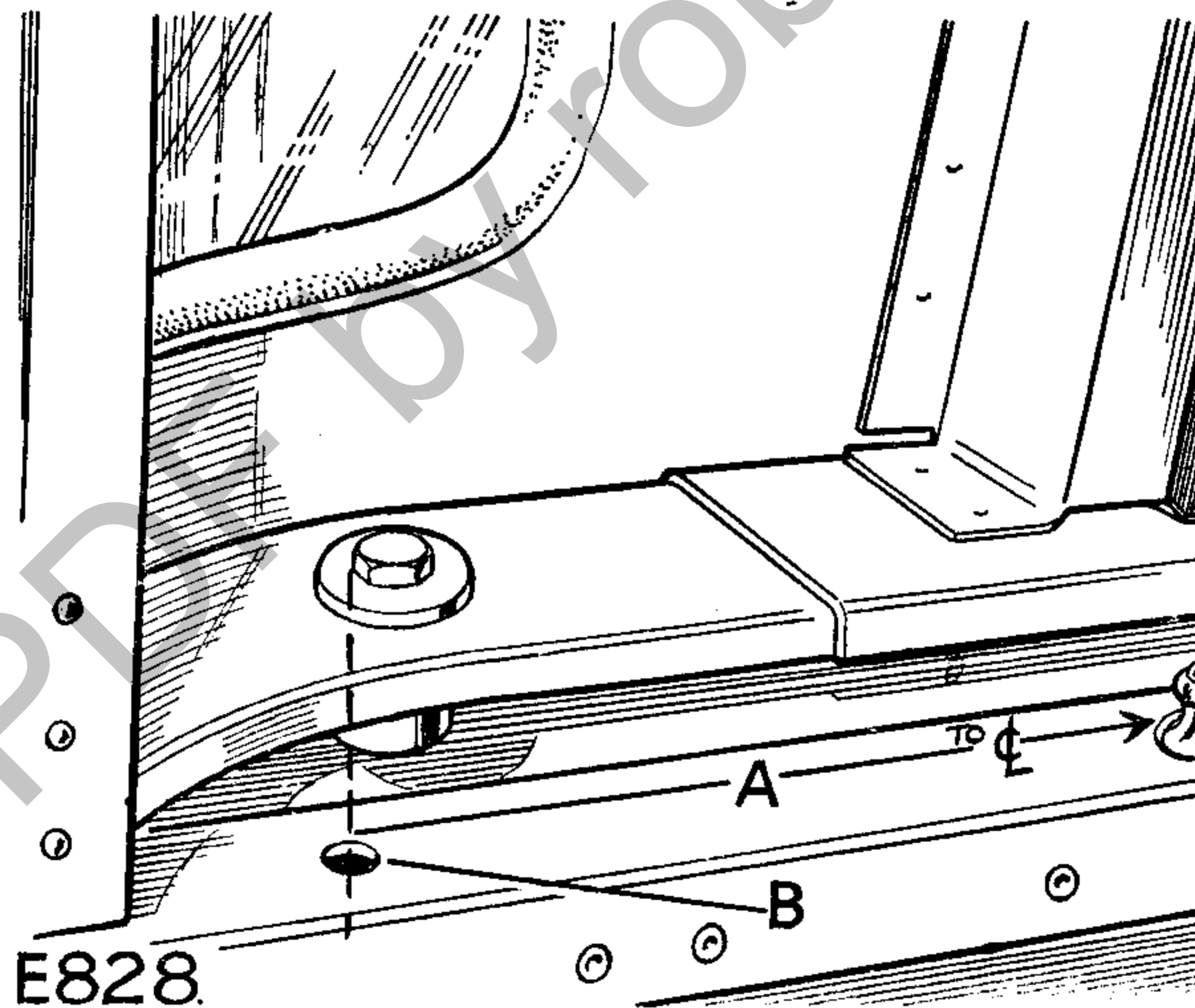
3. Drill the remaining gusset fixing hole through sill and body panel $\frac{9}{32}$ in. (7 mm) diameter and secure gusset, using bolt ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long), plain washer, spring washer and nut ($\frac{1}{4}$ in. UNF).
4. Using the safety harness fixing hole in sill gusset as a template, drill a $\frac{15}{32}$ in. (12 mm) diameter hole through seat panel. Take care when drilling not to damage fuel tank fitted to R.H. side.
5. Mark off a centre line of vehicle on body floor, adjacent to seat bulkhead—then mark a position $9\frac{7}{8}$ in. (251 mm) from the centre line toward body side, as shown in Fig. 5.
6. Position the bulkhead gusset central on the $9\frac{7}{8}$ in. (251 mm) line marking and, using the gusset as a template, drill the two gusset fixing holes $\frac{9}{32}$ in. (7 mm) diameter through the floor panel.
7. Secure the gusset in position, with washer plate assembly underneath floor panel, using two bolts ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long) plain washers and spring washers.



A—9 ⁷/₈ in. (251 mm).
 B—Harness fixing hole.

Fig. 5. Bulkhead gusset in position.

8. Using the safety harness fixing hole in bulkhead gusset as a template, drill $\frac{15}{32}$ in. (12 mm) diameter hole through bulkhead panel.
9. On the seat bulkhead top capping, mark off a centre position of vehicle.
10. Measure a distance of $25 \frac{13}{32}$ in. (671 mm) outboard, which should be to a $\frac{1}{4}$ in. bolt securing cab to seat bulkhead, as shown in Fig. 6.



A—25 ¹³/₃₂ in. (671 mm) to centre line of body.
 B—Harness fixing hole.

Fig. 6. Showing position of safety harness fixing hole.

11. Remove the $\frac{1}{4}$ in. bolt, open out the hole in both cab and top of seat bulkhead to $\frac{15}{32}$ in. (12 mm) for safety harness fixing.

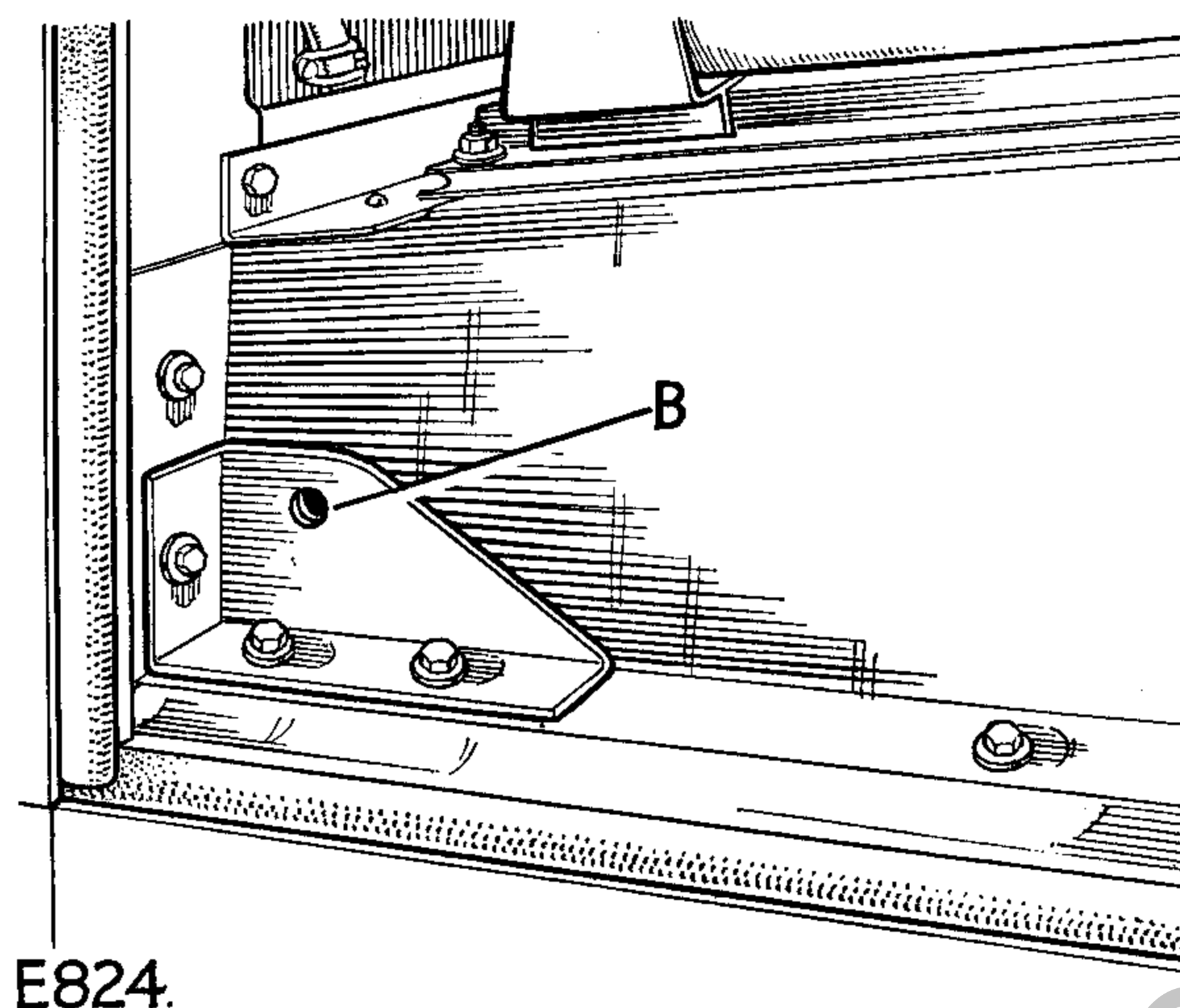
109" WITH FULL-LENGTH HOOD

PARTS REQUIRED

	Qty.	Part No.
Safety harness kit, R.H.	1	320552
Safety harness kit, L.H.	1	320553

Procedure—One side only.

1. Remove the two corner bolts, securing seat base to body floor and sill panel.
2. Position the sill gusset R.H. or L.H. as required into the corner and secure, using the original body fixing holes, as shown in Fig. 7.

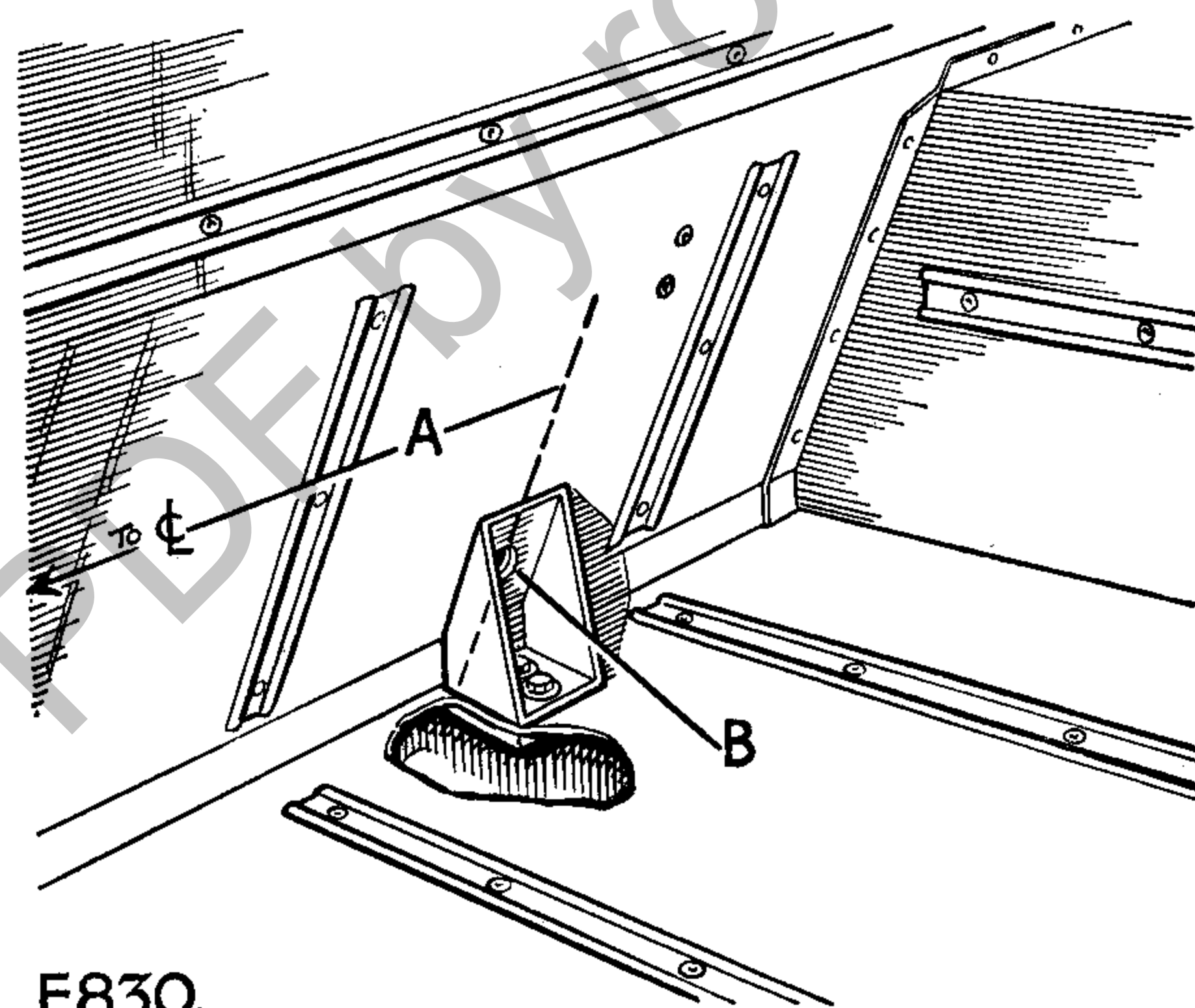


B—Harness fixing hole.

E824.

Fig. 7. Sill gusset in position.

3. Drill the remaining gusset fixing hole through sill and body panel $\frac{9}{32}$ in. (7 mm) diameter and secure gusset, using bolt ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long), plain washer, spring washer and nut ($\frac{1}{4}$ in. UNF).
4. Using the safety harness fixing hole in sill gusset as a template, drill a $\frac{15}{16}$ in. (12 mm) diameter hole through seat panel. Take care when drilling not to damage fuel tank fitted to R.H. side.
5. Mark off a centre line of vehicle on body floor, adjacent to seat bulkhead—then mark a position $9\frac{7}{8}$ in. (251 mm) from the centre toward body side, as shown in Fig. 8.



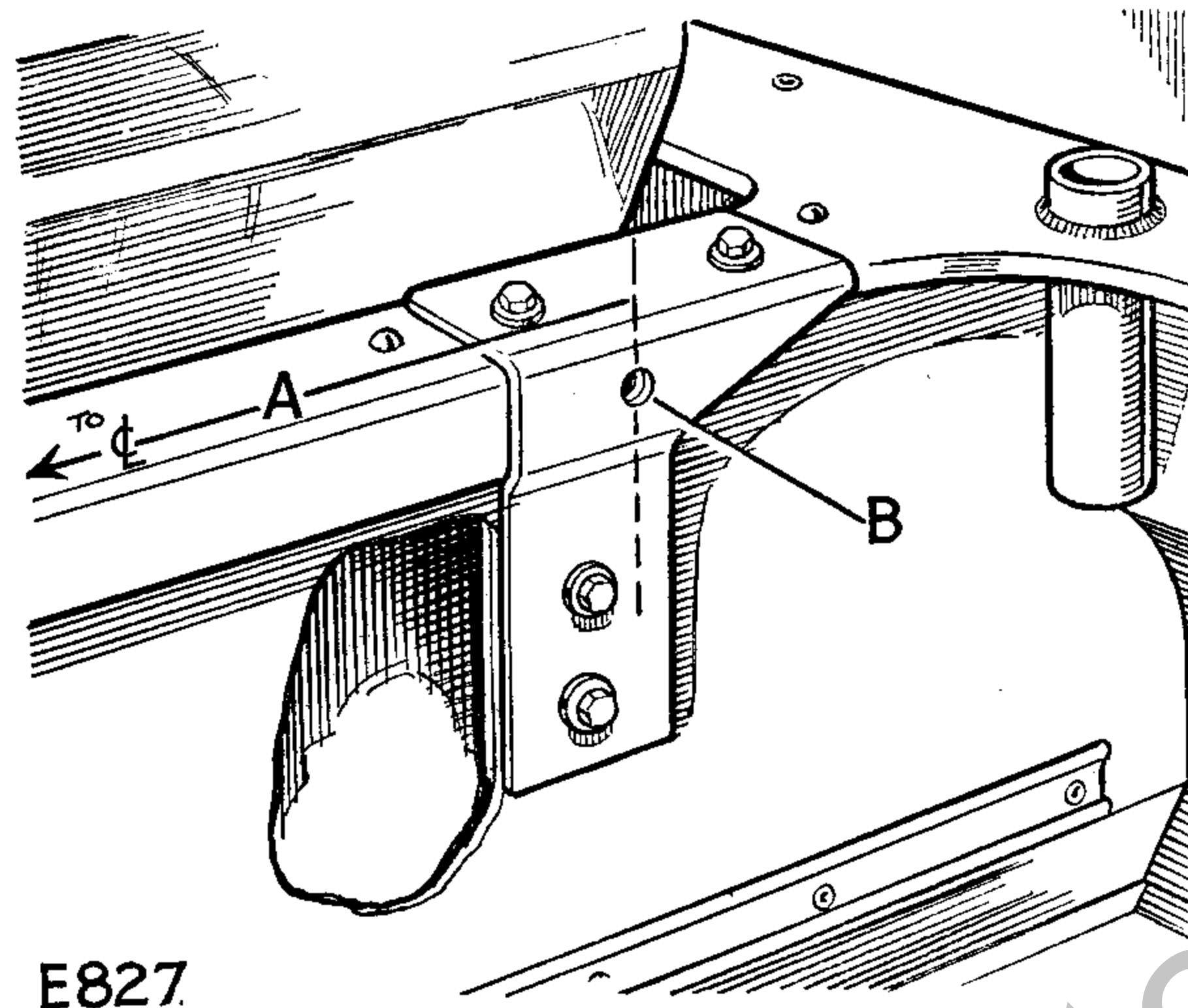
A— $9\frac{7}{8}$ in. (251 mm) to centre line of body.

B—Harness fixing hole.

E830.

Fig. 8. Bulkhead gusset in position.

6. Position the bulkhead gusset central on the $9\frac{7}{8}$ in. (251 mm) line marking and, using the gusset as a template, drill the two gusset fixing holes $\frac{3}{16}$ in. (8 mm) diameter through the floor panel.
7. Secure the gusset in position, with washer plate assembly underneath floor panel, using two bolts ($\frac{5}{16}$ in. UNF x $\frac{5}{8}$ in. long), plain washers and spring washers.
8. Using the safety harness fixing hole in bulkhead gusset as a template, drill $\frac{15}{16}$ in. (12 mm) diameter hole through bulkhead panel.
9. On the seat bulkhead top capping, mark off a centre position of vehicle—then mark off a position outboard $24\frac{5}{16}$ in., as shown in Fig. 9.



A— $24\frac{5}{16}$ in. (617 mm) to centre line of body.
B—Harness fixing hole.

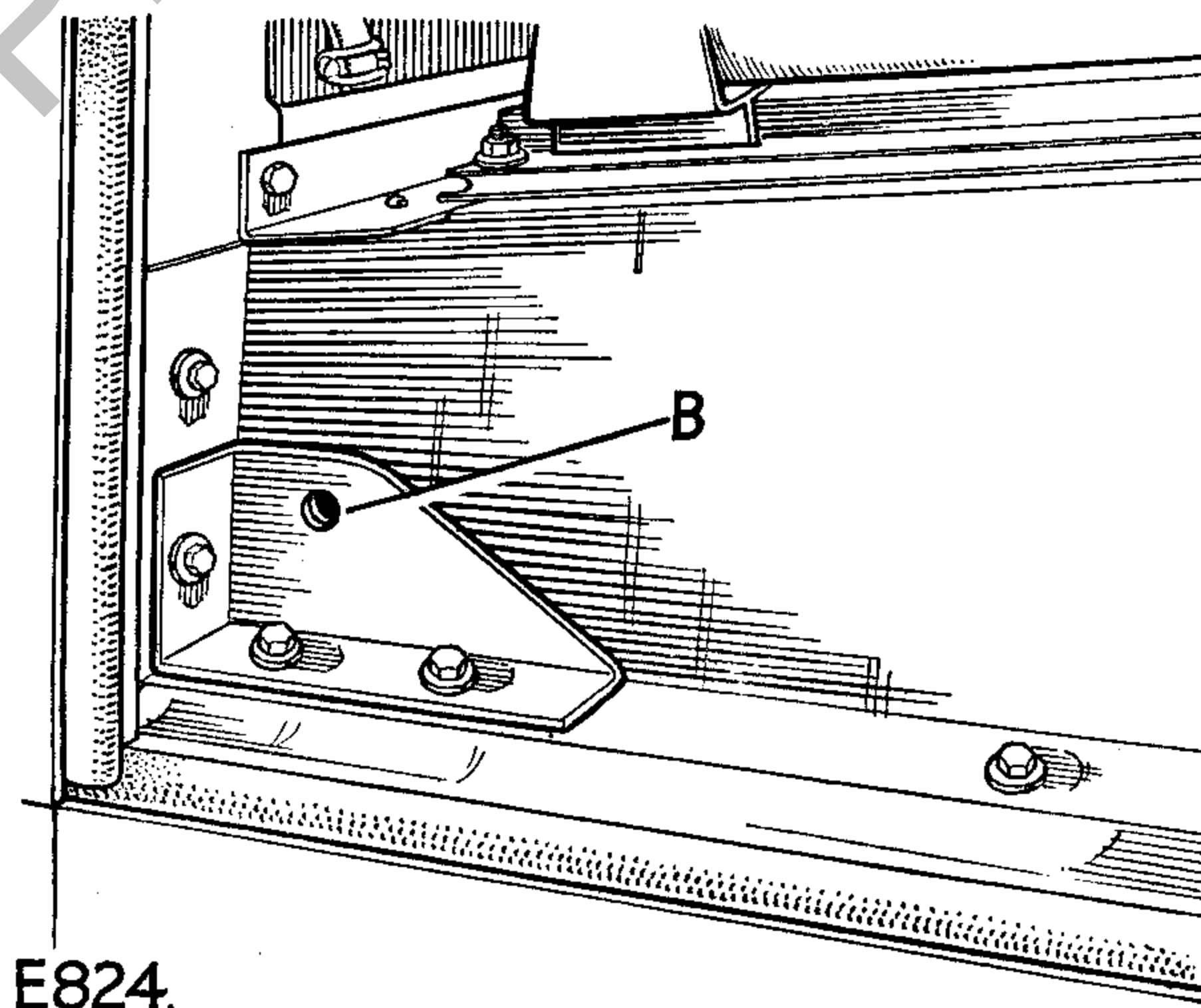
Fig. 9. Shoulder bracket in position.

10. Remove the four rivets securing capping at this position.
11. Position the $\frac{15}{32}$ in. (12 mm) safety harness fixing hole of shoulder bracket R.H. or L.H. as required on the $24\frac{5}{16}$ in. (617 mm) marking and open out the holes in capping to $\frac{3}{32}$ in. (7 mm) diameter to correspond with shoulder bracket fixing holes.
12. Secure the shoulder bracket to capping, using two bolts ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long) spring washers and nuts ($\frac{1}{4}$ in. UNF).
13. Using the shoulder bracket as a template, drill the two fixing holes in bulkhead panel $\frac{3}{4}$ in. (8 mm) diameter and secure bracket in position, with washer plate inside bulkhead panel, using two bolts ($\frac{5}{16}$ " UNF x $\frac{5}{8}$ in. long), spring washer and nuts ($\frac{5}{16}$ in. UNF).
14. Using the safety harness fixing hole in shoulder bracket as a template, drill $\frac{15}{32}$ in. (12 mm) diameter hole through capping.

PARTS REQUIRED

109" WITH CAB

	Qty.	Part No.
Safety harness kit, R.H.	1	320548
Safety harness kit, L.H.	1	320549



B—Harness fixing hole.

Fig. 10. Sill gusset in position.

Procedure—One side only

1. Remove the two corner bolts, securing seat base to body floor and sill panel.
2. Position the sill gusset R.H. or L.H. as required into the corner and secure, using the original body fixing bolts, as shown in Fig. 10.
3. Drill the remaining gusset fixing hole through sill and body panel $\frac{3}{8}$ in. (7 mm) diameter and secure gusset, using bolt ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long), plain washer, spring washer and nut ($\frac{1}{4}$ in. UNF).
4. Using the safety harness fixing hole in sill gusset as a template, drill a $\frac{15}{16}$ in. (12 mm) diameter hole through seat panel. Take care when drilling not to damage fuel tank fitted to R.H. side.
5. Mark off a centre line of vehicle on body floor, adjacent to seat bulkhead—then mark off a position $9\frac{7}{8}$ in. (251 mm) from the centre line toward body side, as shown in Fig. 11.

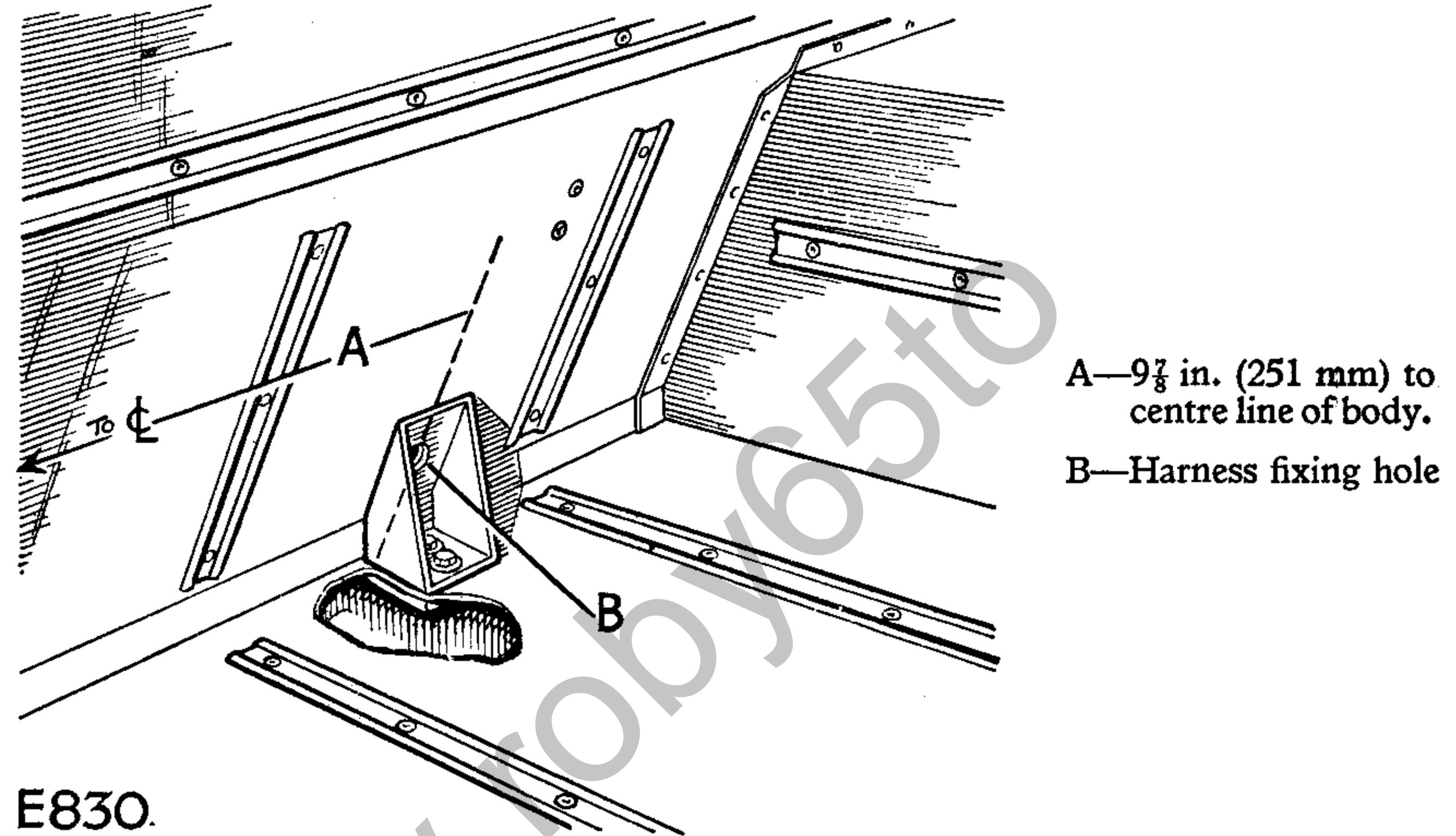


Fig. 11. Bulkhead gusset in position.

6. Position the bulkhead gusset central on the $9\frac{7}{8}$ in. (251 mm) line marking and, using the gusset as a template, drill the two gusset fixing holes $\frac{3}{4}$ in. (8 mm) diameter through the floor panel.
7. Secure the gusset in position, with washer plate assembly underneath floor panel, using two bolts ($\frac{5}{16}$ in. UNF x $\frac{5}{8}$ in. long), plain washers and spring washers.
8. Using the safety harness fixing hole in bulkhead gusset as a template, drill $\frac{15}{16}$ in. (12 mm) diameter hole through bulkhead panel.

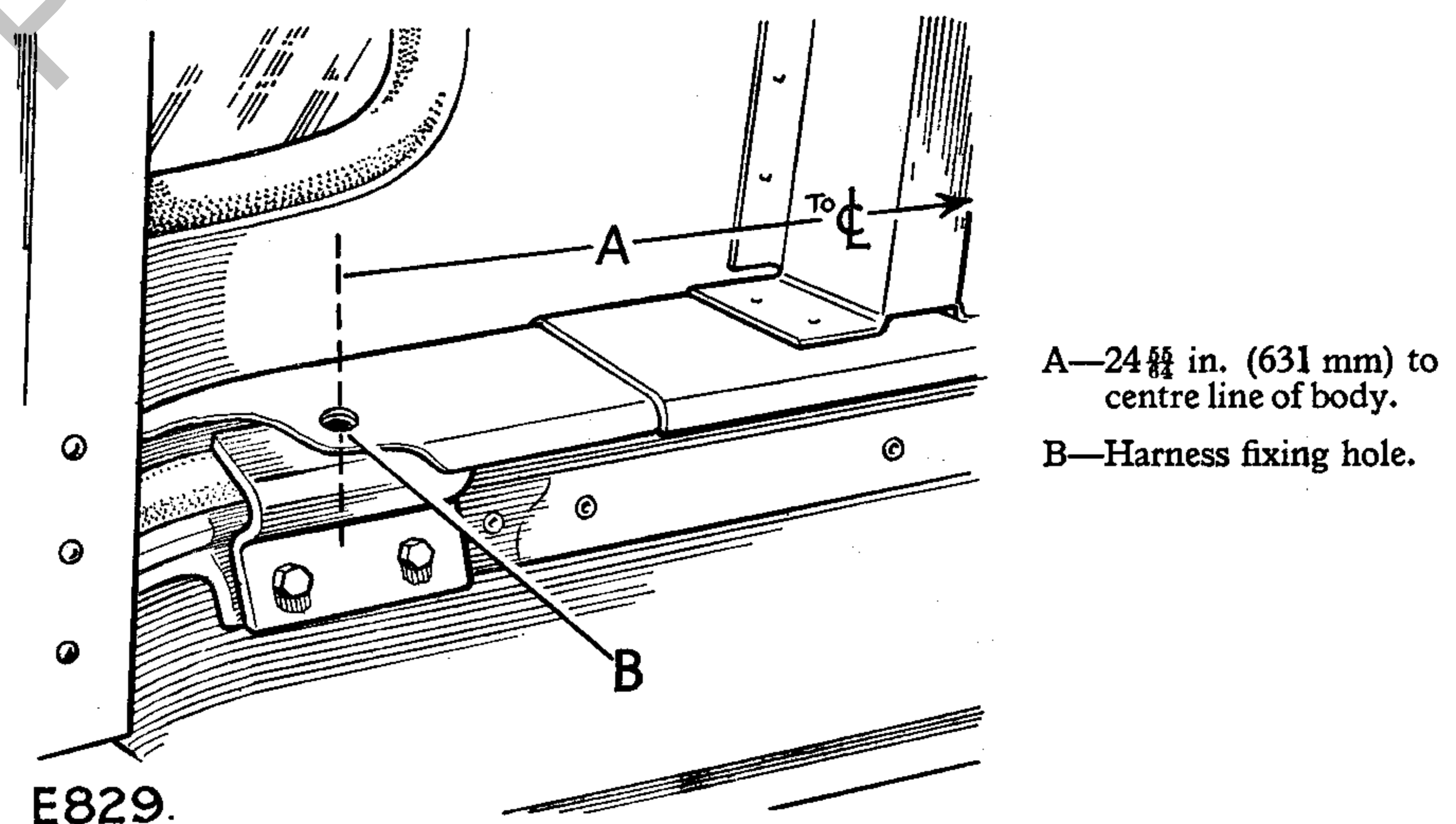


Fig. 12. Cab mounting assembly in position.

9. Remove the outboard distance piece, securing cab to seat bulkhead capping, a distance of $24\frac{5}{8}$ in. (631 mm) from the centre position of vehicle, as shown in Fig. 12.
10. Fit in place, cab mounting assembly for safety harness fitting, using the original fixings.

109" STATION WAGON

PARTS REQUIRED

							Qty.	Part No.
Safety harness kit, R.H.	....	....	....	....	....	....	1	320554
Safety harness kit, L.H.	....	....	....	....	....	....	1	320555

Procedure—One side only

1. Remove the two corner bolts, securing seat base to body floor and sill panel.
2. Position the sill gusset R.H. or L.H. as required into the corner and secure, using the original body fixings, as shown in Fig. 13.

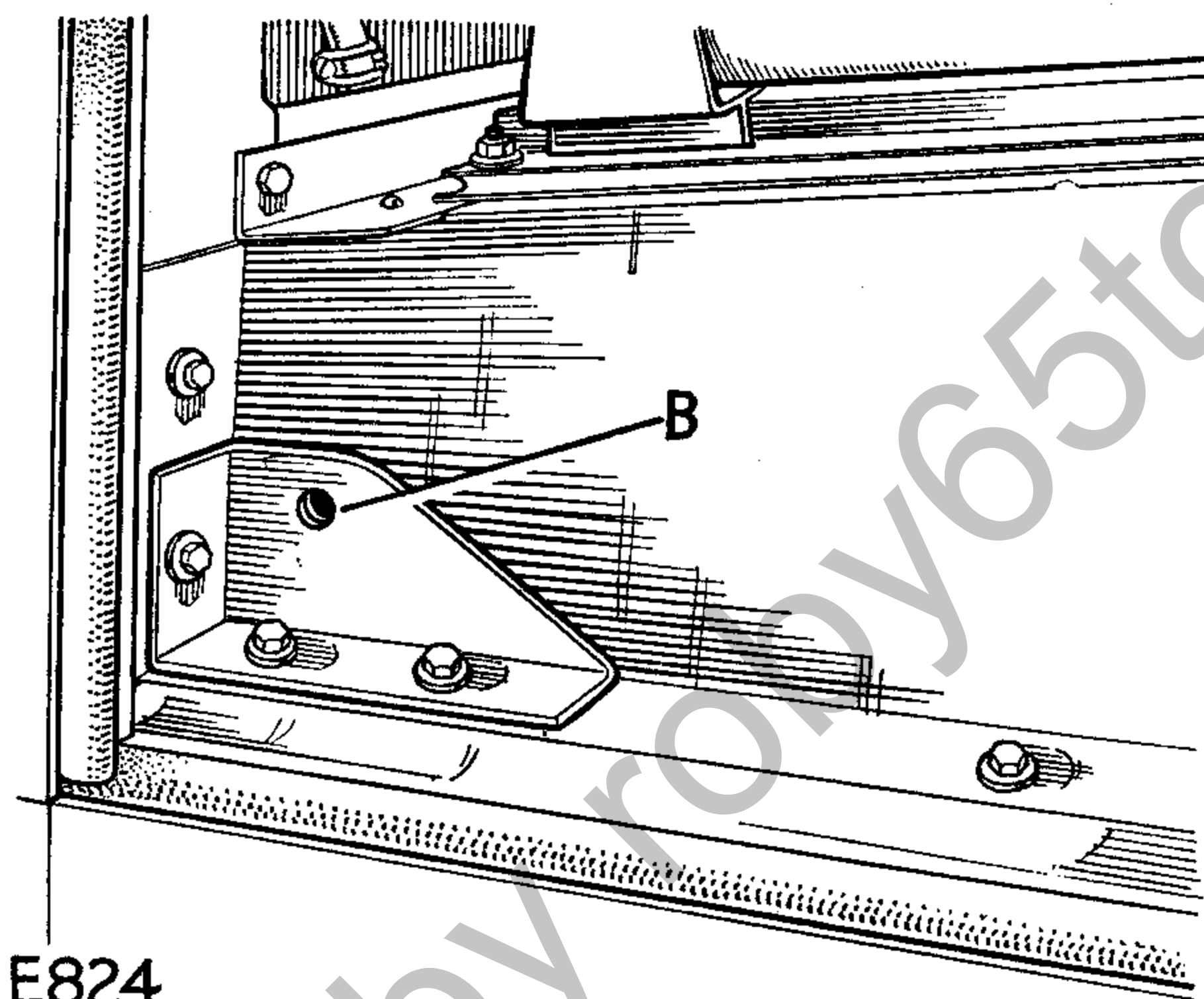


Fig. 13.
Sill gusset in position.

B—Harness fixing hole.

3. Drill the remaining gusset fixing hole through sill and body panel $\frac{3}{8}$ in. (7 mm) diameter and secure gusset, using bolt ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long), plain washer, spring washer and nut ($\frac{1}{4}$ in. UNF).
4. Using the safety harness fixing hole in sill gusset as a template, drill a $\frac{1}{2}$ in. (12 mm) diameter hole through seat panel. Take care when drilling not to damage fuel tank fitted to R.H. side.
5. Mark off a centre line of vehicle on body floor adjacent to seat bulkhead—then mark off a position $9\frac{7}{8}$ in. (251 mm) from the centre line toward body side, as shown in Fig. 14.

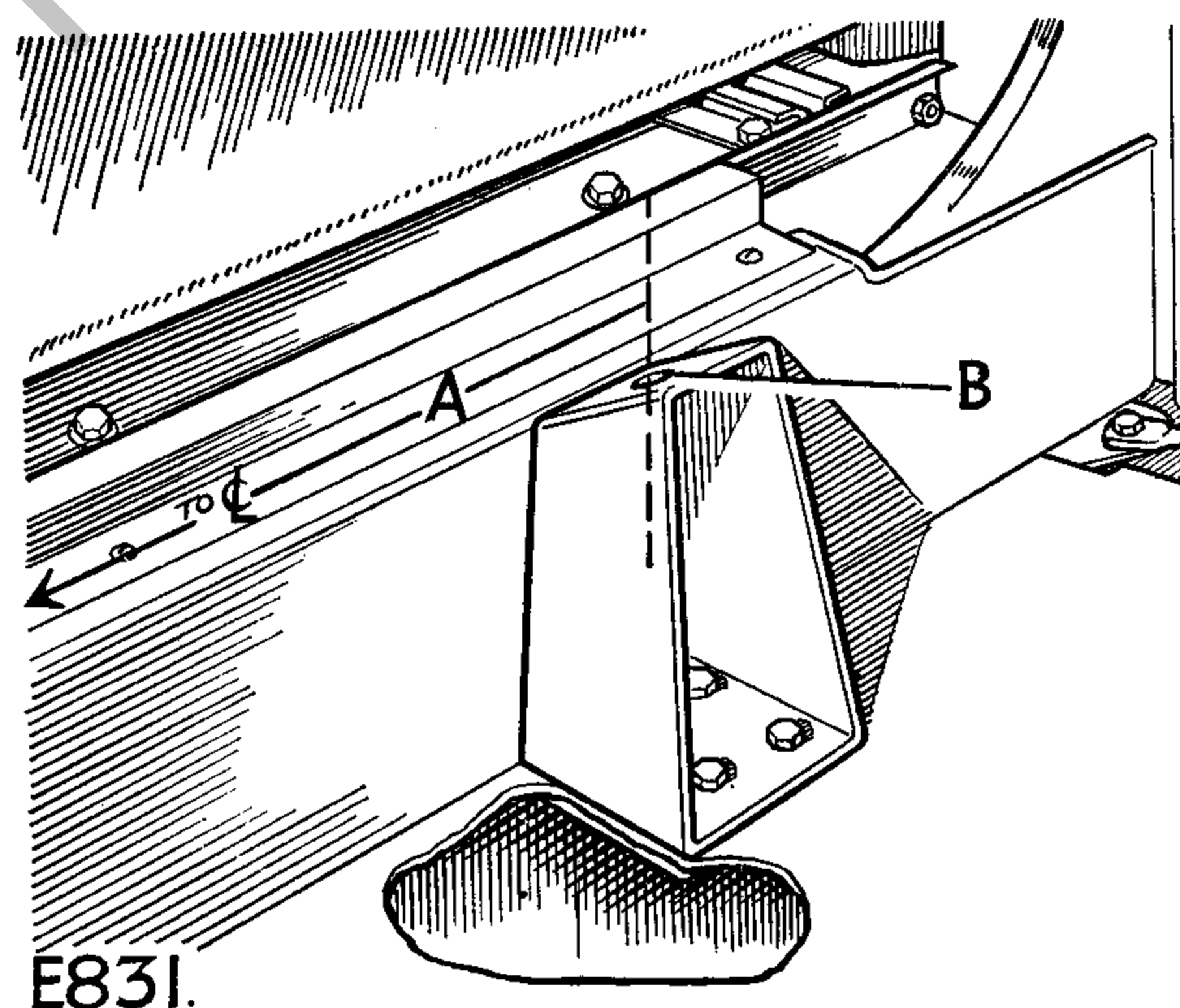


Fig. 14.
Toe panel gusset in position.

A—8 in. (203 mm) to centre line of body.

B—Harness fixing holes.

6. Position the toe panel gusset central on the 8 in. (203 mm) line marking and, using the gusset as a template, drill the four holes through floor panel $\frac{9}{32}$ in. (7,0 mm) diameter in line with spot welds.
7. Secure the gusset in position with two washer plates underneath body floor, using four bolts ($\frac{1}{4}$ in. UNF x $\frac{5}{8}$ in. long), spring washers and nuts ($\frac{1}{4}$ in. UNF).
8. Remove the roll trim, front fixing, from cant rail, secured with four drive screws.
9. Remove the $\frac{1}{4}$ in. bolt, a distance of $\frac{3}{4}$ in. (19 mm) from top corner, securing cant rail to B.C. post—then open out the hole to $\frac{3}{4}$ in. (8 mm) diameter.
10. Secure the shoulder bracket R.H. or L.H. as required to the top corner of B.C. post, with the bracket web facing inboard, using bolt ($\frac{5}{16}$ in. UNF x $\frac{1}{2}$ in. long), spring washer and nut ($\frac{5}{16}$ in. UNF) as shown in Fig. 15.
11. Using the remaining hole in bracket as a template drill a $\frac{3}{4}$ in. (8 mm) diameter hole in cant rail and secure bracket, using bolt ($\frac{5}{16}$ in. UNF x $\frac{1}{2}$ in. long), spring washer, nut ($\frac{5}{16}$ in. UNF).

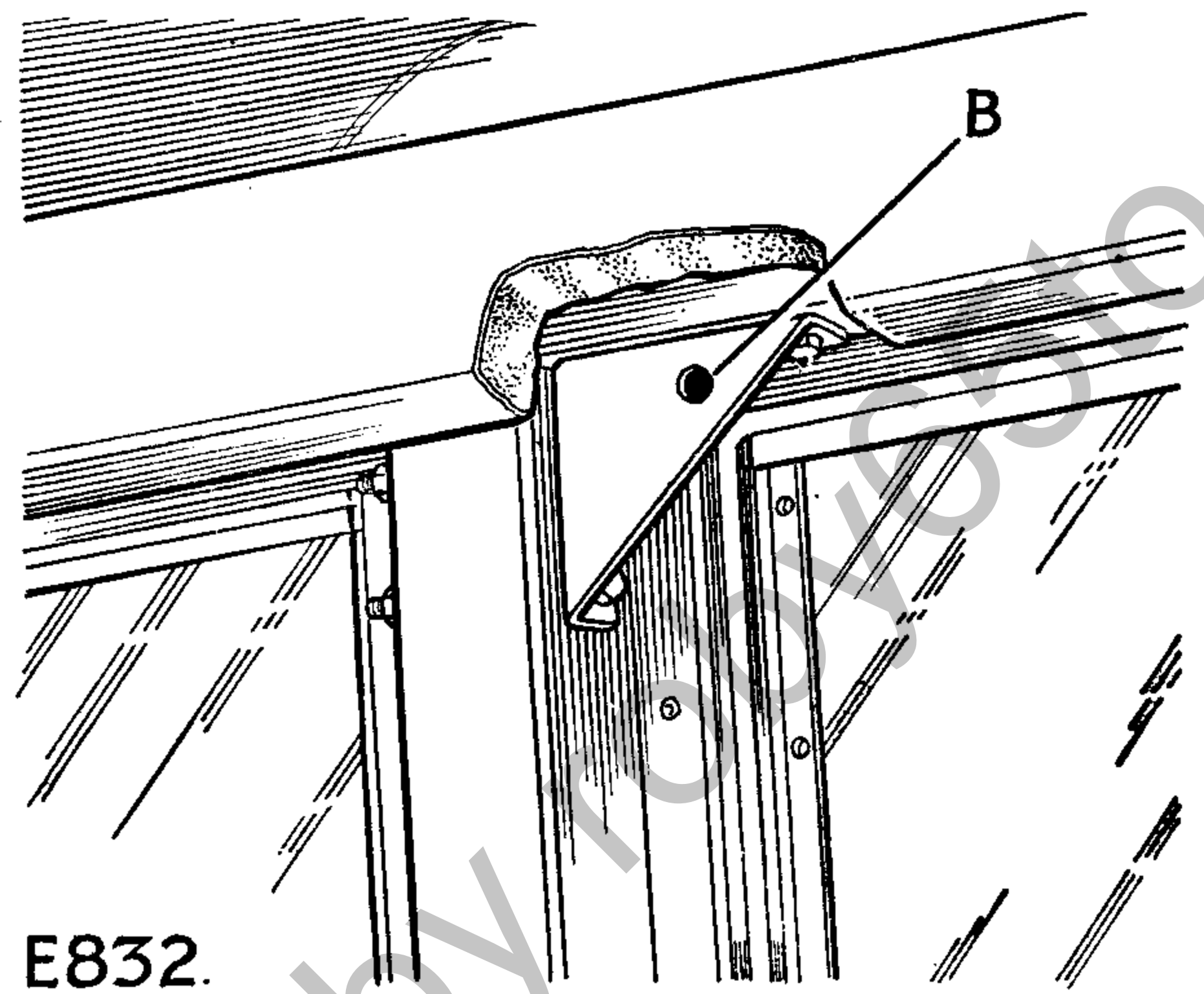


Fig. 15.
Shoulder bracket in
position B.C. post.

B—Harness fixing hole.

12. Using the bracket as a template, drill two $\frac{3}{4}$ in. (8 mm) diameter holes through B.C. post and secure bracket, using two bolts ($\frac{5}{16}$ in. UNF x $2\frac{1}{2}$ in. long), spring washer and nut ($\frac{5}{16}$ in. UNF).
13. Replace the front roll trim panel, cutting away the trim panel where necessary.

POSITION OF SEAT STRAP. ALL MODELS.

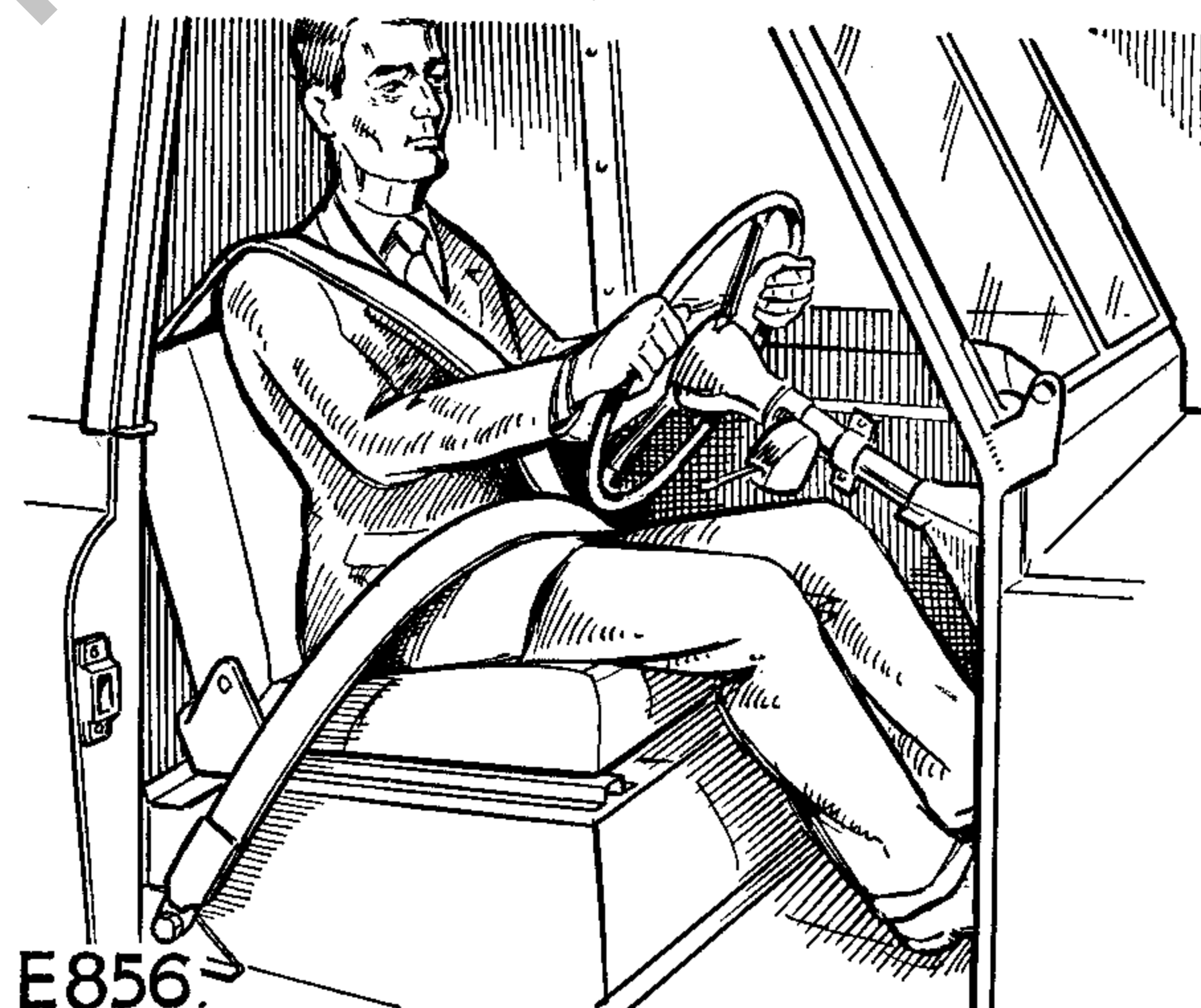


Fig. 16.
Seat straps in position.

Straps should be comfortably tight, just enough to prevent undue body movement.

Buckle and tongue to be at hip position.

14. When seated in the vehicle the straps should be attached to the brackets so that they fit as shown in Fig. 16, that is, with the shoulder strap over the outboard shoulder and the buckle and tongue on the hip.
15. Fasten the buckle as follows:—

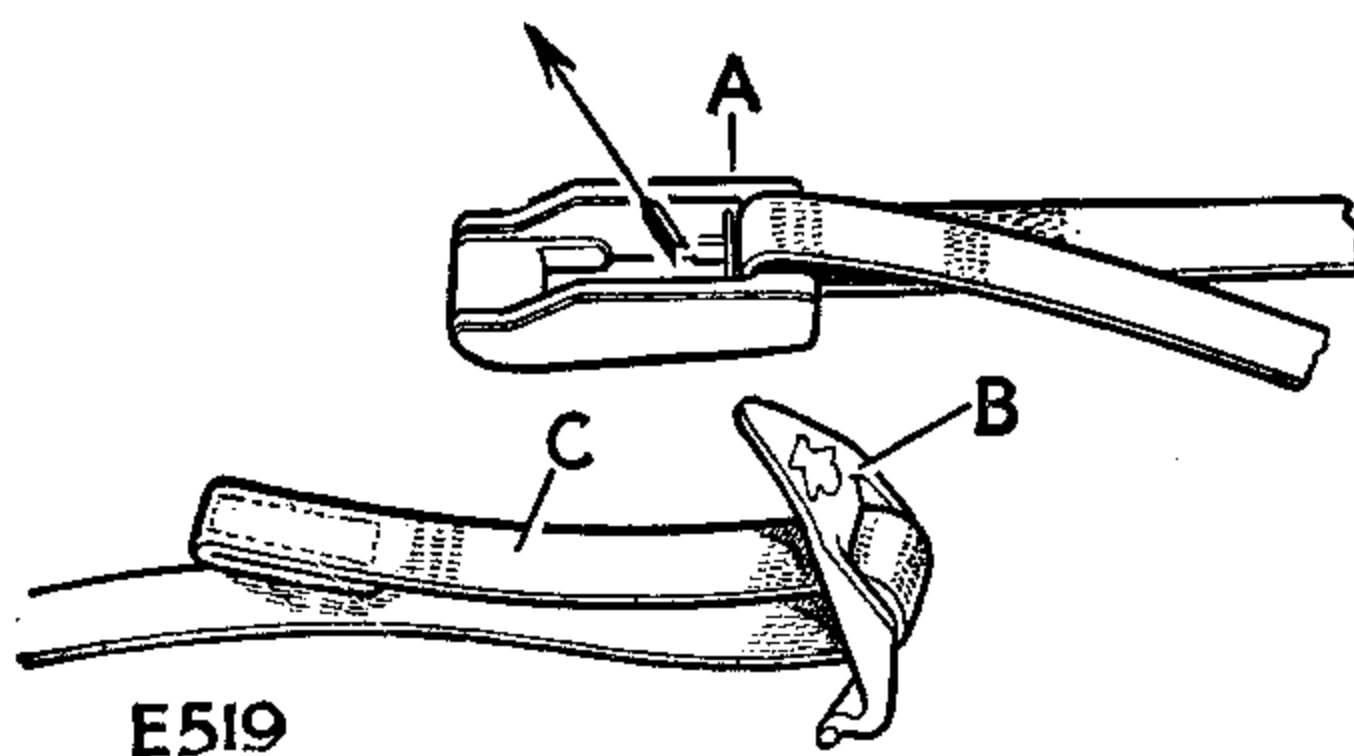


Fig. 17. Fastening the seat strap buckle first stage.

A—Buckle. B—Tongue. C—Free end of strap.

- (a) Hold the buckle 'A' in one hand with the flat side to the body. See Fig. 17.
- (b) Take the tongue 'B' in the other hand, holding it so that the free end of the seat strap is outwards.

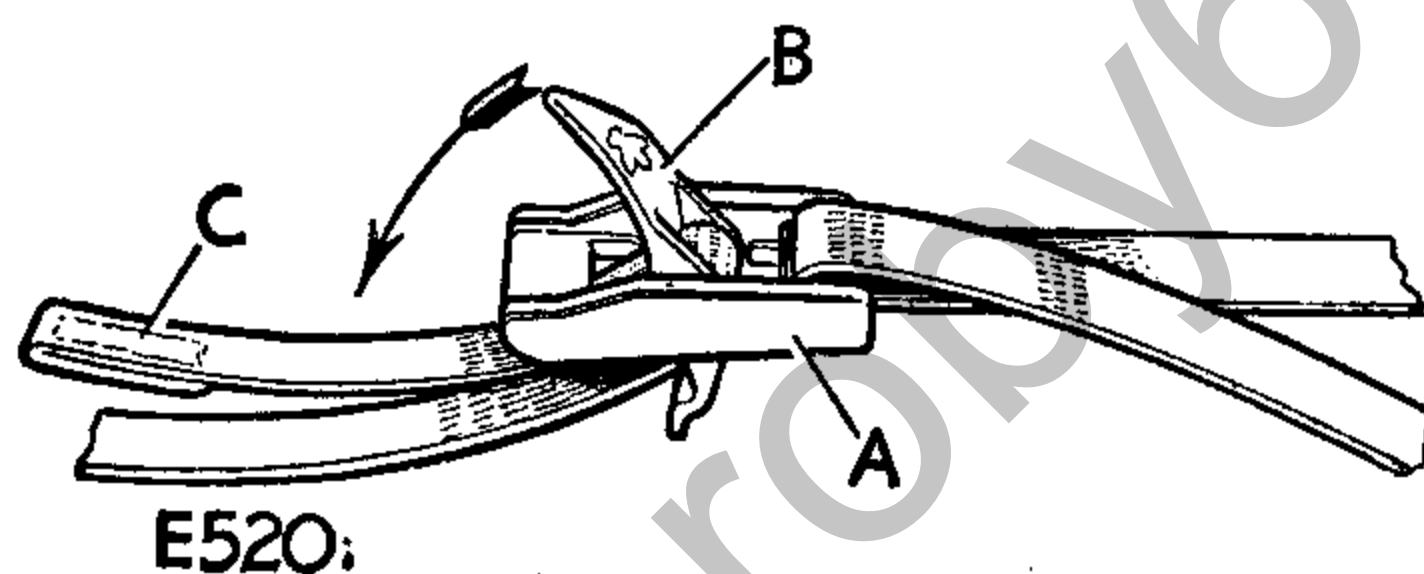


Fig. 18. Fastening the seat strap buckle, second stage.

A—Buckle. B—Tongue. C—Free end of strap.

- (c) Pass the top of the tongue 'B' up through the buckle 'A' and turn down the tongue in the direction of the arrow. See Fig. 18.
- (d) The free end of the seat strap must not be passed through buckle.

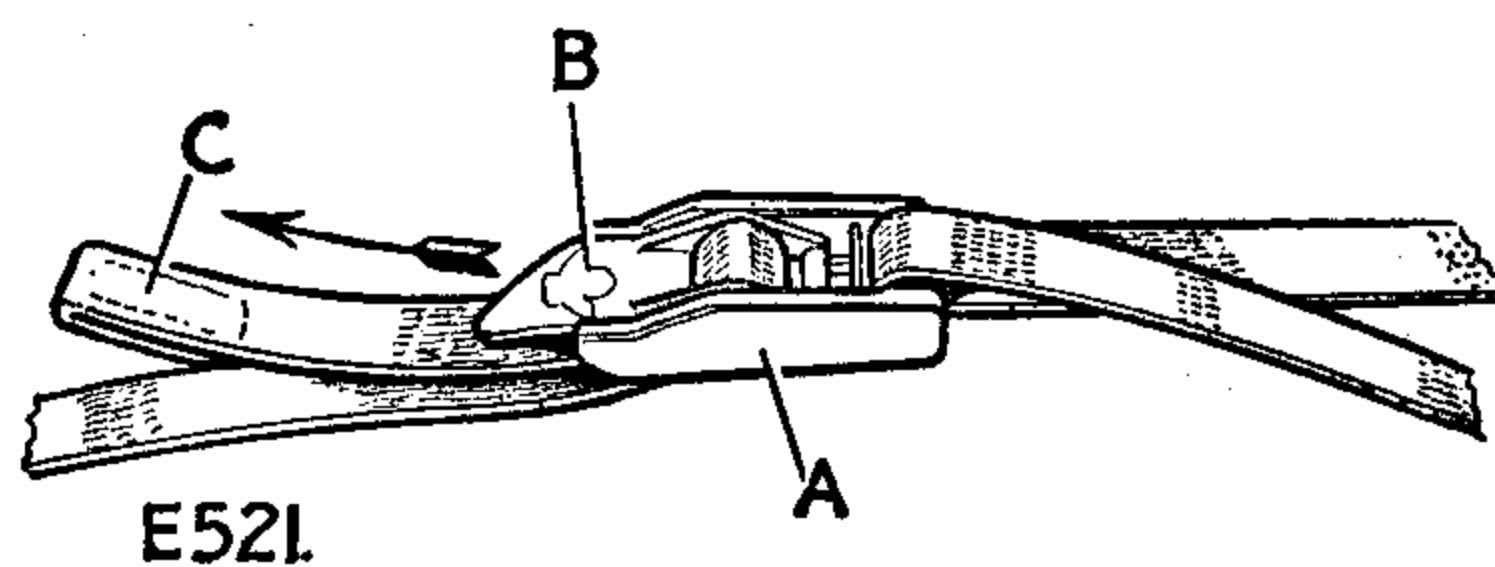


Fig. 19. Fastening the seat strap buckle, third stage.

A—Buckle. B—Tongue. C—Free end of strap, pull in direction of arrow to adjust.

- (e) The tongue 'B' should rest on the buckle 'A' as shown at Fig. 19. Pull free end of strap 'C' in direction of arrow to adjust. Straps should be comfortably tight, just enough to prevent undue body movement.
- (f) To undo the buckle and leave the seat, simply lift up the tip of the tongue. The two sections of the harness will instantly fall apart.