May 30, 1967 A. COKER ETAL 3,321,850

STUDS FOR BOOTS OR SHOES

Filed June 10, 1964

Fig. 1.

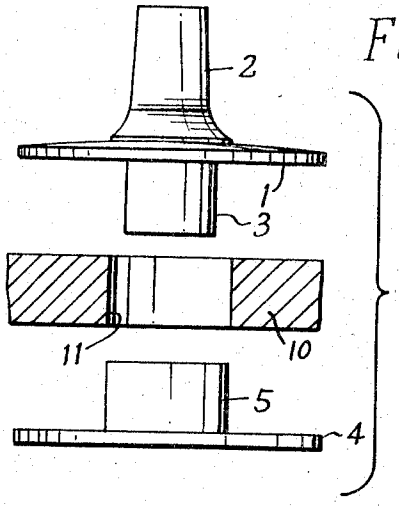


Fig. 2.

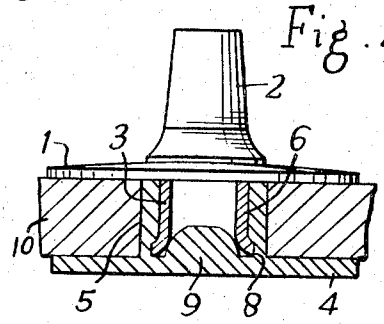


Fig. 3.

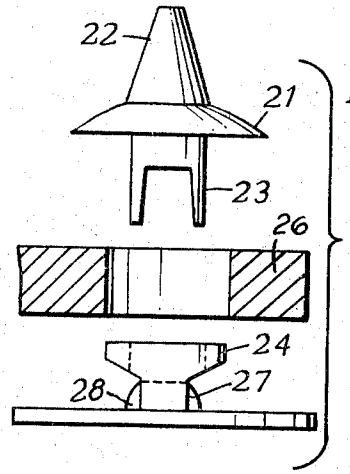


Fig. 4.

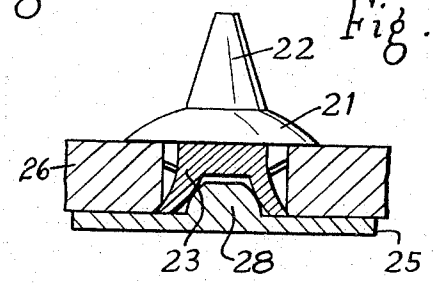


Fig. 5.

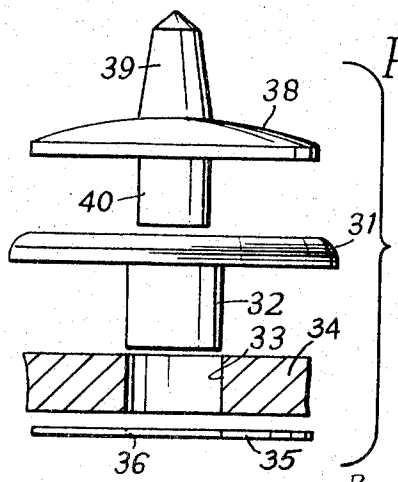
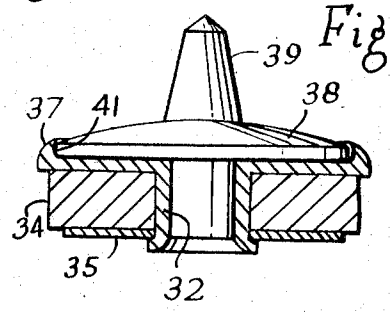


Fig. 6.



ALFRED COKER & EDGAR COKER

By MASON, KOLEHMAINEN, RATHBURN & WYSS

ATTORNEYS

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STUDS FOR BOOTS OR SHOES

Alfred Coker, 10 Ridgeway, Weston Favell, Northampton, England, and Edgar Coker, 534 Wellingborough Road, Northampton, England

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Claims priority, application Great Britain, June 10, 1963, 23,108/63
5 Claims. (Cl. 36—67)

The invention relates to studs and in particular to the attachment of studs to the soles or heels for boots or shoes.

Studs fitted to boots or shoes often work loose during use, and it is among the objects of the present invention to overcome this disadvantage.

According to the present invention there is provided a stud having a member for location between the welt or inner layer and the sole or heel of a boot or shoe, and an element including a spike or projection for engagement with the member. Preferably, the member and the element with the spike or projection are pressed into locking engagement and such engagement is made stronger during use due to pressure exerted on the spike or projection by the wearer of the boot or shoe.

Various preferred constructional forms of the invention will now be described by way of example with reference to the accompanying drawing, in which:

FIGURE 1 is an exploded view of the stud according to the present invention;

FIGURE 2 is an assembled view, partly in section, of the stud of FIGURE 1;

FIGURE 3 is an exploded view of a stud according to another embodiment of the present invention;

FIGURE 4 is an assembled view of the stud of FIGURE 3, partly in section;

FIGURE 5 is an exploded view of a stud according to yet another embodiment of the present invention; and

FIGURE 6 is an assembled view, partly in section, of the stud of FIGURE 5.

In FIGURES 1 and 2, there is shown a stud composed of two main parts, one part has a disc shaped portion 1 with a spike or projection 2 extending from one side and a tube 3 extending from the other side. The other part is provided by a disc 4 having a projection 5 formed with a central hollow bore 6. The central bore 6 of the projection 5 may have parallel side walls or may be of conical shape which converges towards the free end, or may have a portion 8 adjacent the disc 4 which is of greater diameter than the open end of the bore 6, and as shown in FIGURE 2 there may be provided an upstanding member or anvil 9 within the projection 5 adjacent the disc 4. (By upstanding is meant a member which lies proud of the disc surface.) The anvil 9 may be provided by a separate conical shaped member, by a projection formed integral with the disc 4, or by any other conveniently shaped member, such as by a tube or prism.

To assemble the stud to a sole or heel 10 for a boot or shoe, the disc 4 is disposed between the welt or inner layer and the sole or heel 10 with the projection 5 located in an aperture 11 in the sole or heel 10. The aperture 11 corresponds in shape to the external shape of the projection 5. The tube 3 is inserted within the bore 6 of the projection 5 and as pressure is exerted, between the two parts, the member or anvil 9 is pressed into the bore of the tube 3 so as to expand the tube 3 into contact with the internal bore of the projection 5 thus locking the stud in position and at the same time the disc shaped portion 1 of the stud is pressed into contact with the outer surface of the sole or heel 10.

In FIGURES 3 and 4 is shown an alternative construction where the stud again is provided by two parts, one

part has a mushroom shaped washer 21 which has projecting from one side a spike or projection 22 and a two pronged bifurcated shank 23 projecting from the other side of the washer 21. The other part has a housing 24 projecting from a disc shaped member 25 which may be provided with one or more projections (not shown) which when in position between the sole or heel 26 and inner member (not shown) of a boot or shoe, bite into the sole or heel 26 of the boot or shoe and prevent rotation of the housing 24. The part of the housing 24 adjacent the member 25 has a conical part or anvil 28 and adjacent the widest part of the conical part 28 on opposite sides of the housing 24, are apertures 27. When the bifurcated shank 23 is inserted within the housing 24 it abuts against the conical part 28 and the shank 23 is splayed outwardly so that each prong of the shank 23 passes through an aperture 27 and thus lock the part of the stud in position.

FIGURES 5 and 6 show a further construction of a stud which has a member provided with a head 31 and a hollow stem 32 which in use projects through an aperture 33 in a sole or heel 34 of a boot or shoe. Between the welt (not shown) and the sole or heel 34 is a washer 35 provided with a central aperture 36 through which the hollow stem 32 passes and the end of the stem 32 is burred or turned over and locked against the washer 35. The dome-shaped head 31 has a countersunk portion 41 surmounted by a circumferential wall 37 which is inclined towards the free end of the head 31. The stud proper is formed by a mushroom shaped flange 38 provided on one side with a spike or projection 39 and on the other side with a stem 40. The stem 40 is inserted in the bore of the hollow stem 32 and, on pressure being exerted on the spike or projection 39 the mushroom shaped flange 38 is locked within the countersunk portion 36 of the head 31 thus securing the spike or projection 39 in position. Instead of the head 31 having a countersunk portion so that the flange 38 is locked by the wall 37 there may be provided peripheral portions or tags (not shown) which turn over and lock the flange in position.

Instead of there being a push fit, the bore of the stem 32 and the surface of the stem 40 may be threaded so that the flange will lock within the countersunk portion of the dome shaped head when the two stems are screwed fully home. With this construction the flange would be loose and free to rotate about the shank provided between the stem and the spike or projection.

A washer (not shown) for example of synthetic plastics material may be inserted between the disc 4 or the washer 21 of the stud and the sole or heel in any of the constructions shown in FIGURES 1, 2 and 3.

The tip of the spike or projection may be in the form of a cylinder, a pyramid, a dome or like configuration.

In use, due to the further pressure exerted by the wearer of the boot or shoe the parts of the stud are pressed further into locking contact and thus the stud will not inadvertently work loose.

We claim:

1. A stud for securement to the bottom of a shoe or like member and comprising a first part having a first portion adapted to extend through an aperture in the shoe bottom member and having a flange-like portion connected thereto and adapted to engage the inner surface of said bottom member to retain said first part from pulling through said aperture, said first part including radially recessed means in said first portion and anvil means centrally of said radially recessed means; and a second part including a head with a ground engaging projection extending from one side thereof and having an anchoring portion opposite said projection adapted to be driven against said anvil means and be spread radially outwardly

into locking engagement within said radially recessed means.

2. A stud as set forth in claim 1 wherein said first portion comprises a cylindrical skirt opening outwardly of said shoe bottom member when assembled, and said radially recessed means comprises a radial groove in the side wall of said skirt adjacent the inner end thereof, and said anvil means comprises an upstanding projection within the inner end of said skirt.

3. A stud as set forth in claim 2 wherein said second portion is generally cylindrical and is adapted to be driven against said anvil and spread outwardly to interlock within said radial groove.

4. A stud as set forth in claim 1 wherein said radially recessed means is defined by apertures in said portion of said first part, and wherein said anchoring portion is bifurcated so that the bifurcations are spread through the last mentioned apertures when said parts are assembled.

5. A stud as set forth in claim 1 wherein said first part includes a disc member defining said anvil means bounded by a peripheral wall, said radially recessed means being defined in said peripheral wall, the anchoring portion of said second part adapted to engage within the peripheral recess when said parts are assembled.

References Cited

UNITED STATES PATENTS

487,238	12/1892	Little.	
1,433,411	10/1922	Plant	36—67.5
1,687,634	10/1928	Pierce	36—67.5
1,827,514	10/1931	Golden	36—67.5
1,899,300	2/1933	Albee	36—67.5
1,982,588	11/1934	Bartel	36—67.5
2,040,186	5/1936	Riddell	36—67.5 X
2,053,906	9/1936	Fuller	36—67.2
2,222,747	11/1940	Klein et al.	36—67.5 X
2,689,417	9/1954	Bernstein	36—67.5
2,745,197	5/1956	Holt.	

FOREIGN PATENTS

593,982	10/1947	Great Britain.
165,809	2/1934	Switzerland.

PATRICK D. LAWSON, *Primary Examiner.*

JORDAN FRANKLIN, *Examiner.*

A. R. GUEST, *Assistant Examiner.*