July 9, 1957 V. MARINO 2,798,313

DETACHABLE TOP LIFT

Filed March 15, 1956

FIG. 1.

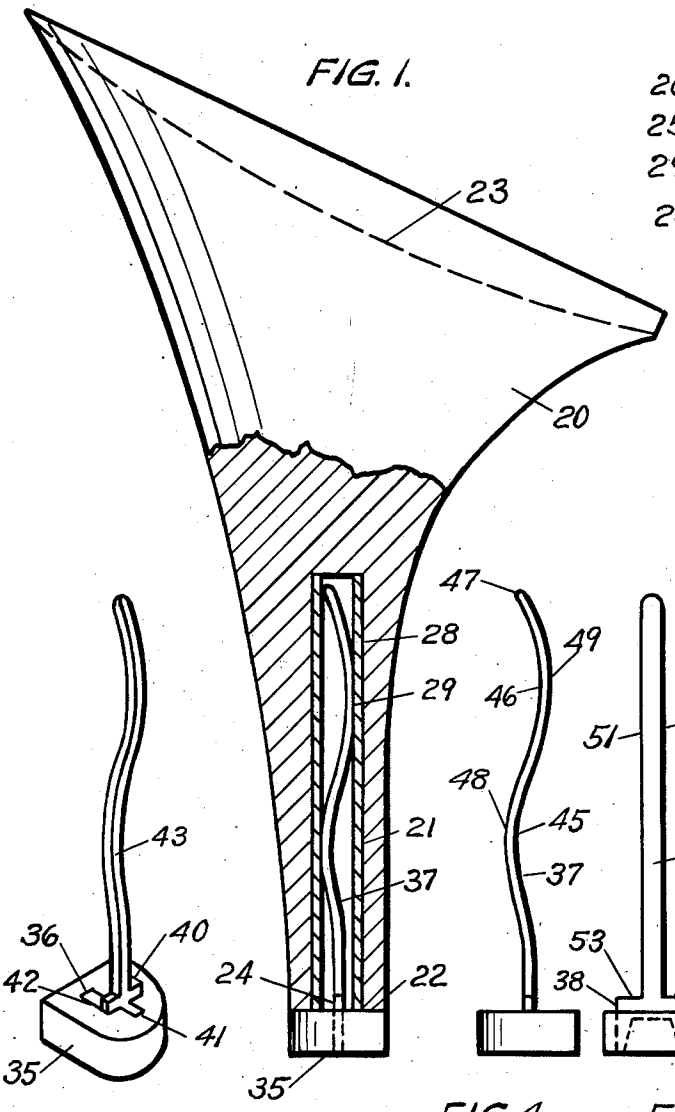


FIG. 2.

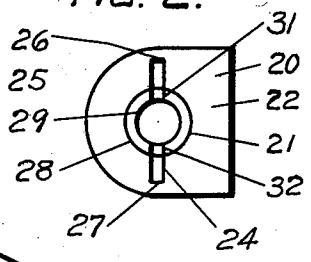


FIG. 3.

FIG. 4.

FIG. 5.

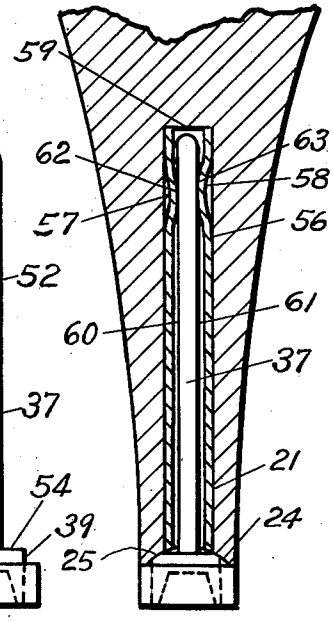


FIG. 6.

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DETACHABLE TOP LIFT

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6 Claims. (Cl. 36—42)

This invention relates to an improvement in detachable top lifts.

Many structures have been proposed for detaching the top lifts on the heels of ladies' shoes. Usually such devices have involved an elongated post member upstanding from the top lift and fitting in an elongated socket member in the heel. Removability has been achieved by threading the members or by snap fastener type mechanisms or by the frictional pressure of resilient spring elements.

The socket member has usually been an elongated tube or sleeve which serves the additional purpose of strengthening extremely brittle or pointed heels against breakage. To avoid rotation of the top lift, the sleeve and post have sometimes been of irregular cross section such as polygonal or triangular.

It is an object of this invention to provide a detachable top lift that is simple and inexpensive and requires only a circular axial bore and a shallow slot in the heel to serve as a socket member. Thus the expense of making and drive fitting a sleeve of polygonal cross section into a circular drilled hole may be eliminated to reduce overall cost.

Another object of the invention is to provide a detachable top lift of one piece of material which will remain seated in the axial bore of a heel during use, but may be slidably removed when desired.

A further object of the invention is to secure a frictional, resilient pressure between the upstanding post of a detachable top lift and the inside face of a bore or sleeve in a heel by a unitary strip of metal of sinuous or serpentine configuration.

Other advantages of the invention will be apparent from the claims, from the description of the drawing and from the drawing in which—

Fig. 1 is a side view of a lady's heel, partly broken away to show the preferred embodiment of the invention.

Fig. 2 is an enlarged bottom view of the lower, or top lift engaging, face of the device shown in Fig. 1.

Fig. 3 is a perspective view of a top lift and post in accordance with the invention and having three offset prongs for connecting the parts together.

Fig. 4 is a side view of the top lift and post shown in Fig. 1, but removed from the heel bore.

Fig. 5 is a front view of the device shown in Fig. 4 and

Fig. 6 is a front view of the device shown in Fig. 1 with the sleeve or socket tube modified.

In the drawing, a lady's heel **20**, is shown, the heel being of the high and sharp pointed type although the device of this invention is useful with other types of ladies' heels. An elongated axial bore **21** of circular cross section is formed in heel **20**, usually by drilling, and extends from the flat lower face **22** well up toward the concave curved upper face **23** of the heel. A transversely extending, shallow slot **24** is formed in the lower face **22** which may be formed by a disc type saw so that it has depth in its central portion **25** but does not extend to the opposite sides of the heel at its ends **26** and **27**.

Preferably, a tubular metal sleeve or socket **28** of circular cross section is drive fitted into the axial bore **21** primarily to give strength to the heel **20** in its narrow pointed portion and secondarily to provide a smooth, metal inner face **29** in the bore **21**. The sleeve **28** is suitably cut at **31** and **32** in extension of slot **24** to cooperate therewith.

The top lift **35** may be of any suitable material shaped to conform to the shape of the lower face **22** of heel **20** and the upper face of the top lift is designated **36**. A unitary, upstanding post **37** is secured to the upper face **36** by two offset prongs **38** and **39** as in Fig. 5 or by three offset prongs **40**, **41** and **42** as on post **43** shown in Fig. 3. The post **37** is preferably formed of flat strip metal having inherent resiliency and is pre-formed with sinuous or serpentine bends. Preferably post **37** is bent at the rear side thereof as at **45**, and then bent reversely at the front side thereof as at **46** with the terminal tip **47** being in the same vertical plane as the curved outer face **48** of bend **45**.

As shown in Fig. 4, the curved outer face **48** of bend **45**, the curved outer face **49** of bend **46** and the curved terminal tip **47** are all normally in vertical planes outside and beyond the plane of the cylindrical inner face **29** of the sleeve **28**. When inserted in the sleeve **28** the faces **48** and **49** and the tip **47** are thus spring pressed against the inner face **29** at three different levels and the overall height of the post **37** is slightly increased. Post **37** is substantially coextensive with the bore **21** and sleeve **28** and it will be apparent that it may be used without any sleeve **28** if desired.

Preferably the opposite side edges **51** and **52** of the post **37** are straight and parallel, as best shown in Fig. 5, and slide within a bore **21**, or within a tube **28** with very little clearance to prevent sidewise motion of the top lift. In addition, the one piece post **37** is provided with opposite, upstanding shoulders **53** and **54** which fit with the slot **24** and prevent the top lift from rotating relative to the heel **20**.

A modification is shown in Fig. 6 wherein the post **37** is inserted in a socket or sleeve **56** with slight clearance therebetween and the socket **56** is provided with a pair of oppositely disposed depressions **57** and **58** near its inner end **59**. The post **37** thus slides easily into the sleeve until nearly seated therein and the side edges **60** and **61** of the post then come into frictional contact with the inwardly projecting faces **62** and **63** of depressions **57** and **58** to assure an even tighter fit.

I claim:

1. A removable top lift device comprising an elongated, upstanding heel having an elongated axial bore extending from its lower face toward its upper face and having a transverse shallow slot in the said bottom face; a top lift conforming in shape to the shape of the bottom face of said heel and an elongated upstanding post of resilient, flat, strip material firmly secured in the upper face of said top lift, said post having transverse shoulders adapted to fit within said slot and being normally bent into serpentine, or sinuous, form for resiliently bearing against opposite sides of the inner face of said bore, at a plurality of different levels, when seated therein.

2. A combination as specified in claim 1 plus a hollow tube of uniform cross section secured within said bore and having slots which register with the slot of said bore, said tube having an inwardly projecting bulge on each opposite side transversely of the upper portion thereof adapted to bear against the opposite side edges of said post when seated within said tube.

3. A lady's heel structure comprising a heel body having a single, central, post receiving socket and a removable top lift having a single, central post secured thereto, said post being of resilient strip material of less outside dimen-

sions than the inside dimensions of said socket, but sinuously bent, in a plurality of opposite lateral directions to press against the inside face of said socket at a plurality of different levels therein for frictionally and slideably engaging in said socket.

4. In combination, a french heel having an axial bore, of circular cross section, extending from its lower face nearly to its upper face; a tubular metal sleeve of circular cross section drive fitted in, and co-extensive with said bore; a top lift adapted to fit on the lower face of said heel and a sinuous, resilient, upstanding post secured to said top lift and substantially co-extensive with said sleeve, the outer curved faces of said post being adapted to slideably and resiliently engage the inner face of said sleeve for detachably retaining said top lift on said heel.

5. A detachable top lift comprising a top lift adapted to fit a lady's french heel, said top lift having a single, central, sinuous strip of resilient metal projecting thereabove provided with at least two vertically spaced opposite bends adapted to frictionally, resiliently and slideably engage opposite interior faces of a circular vertical recess in a lady's heel at least two levels therein.

6. An attachment for top lifts or the like comprising an elongated, sinuous post of resilient, strip material having offset prongs at one end thereof for embedding in a top lift, said post having shoulders projecting above the level of said prongs and extending from side to side thereof and having at least two oppositely curved bends therein, one at the front and one at the back, and one higher than the other.

References Cited in the file of this patent

UNITED STATES PATENTS

1,725,810	Maccarone	Aug. 27, 1929
1,742,894	Bono	Jan. 7, 1930
2,495,820	Peretti	Jan. 31, 1950
2,656,621	Hoffmann	Oct. 27, 1953

FOREIGN PATENTS

20,254 of 1929	Australia	Aug. 21, 1930