A. S. GAY.

SPRING HEEL.

APPLICATION FILED JULY 20, 1916.

1,218,392.

Patented Mar. 6, 1917.

Fig. 1.

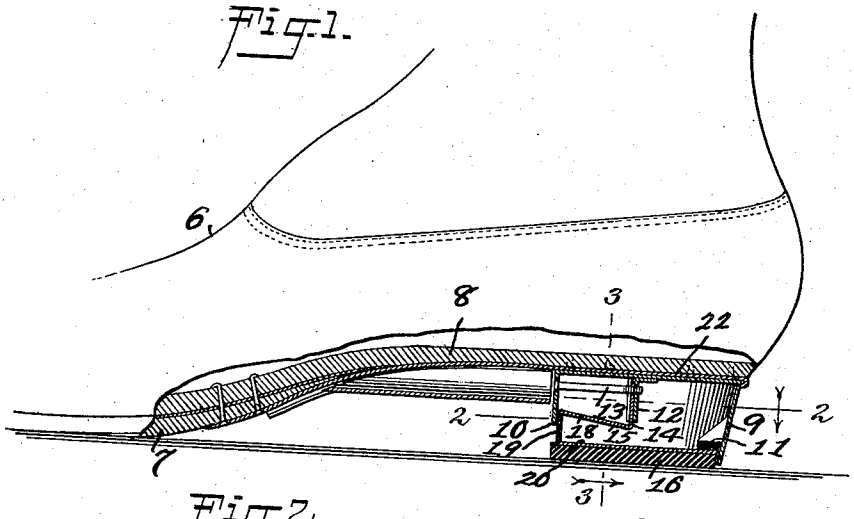


Fig. 2.

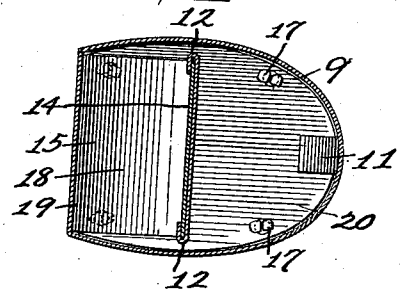


Fig. 3.

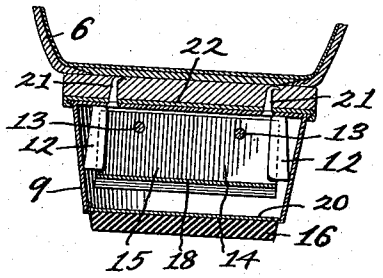


Fig. 4.

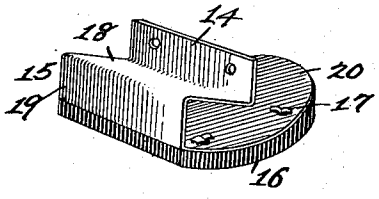
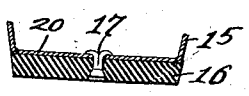


Fig. 5.



WITNESSES

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SPRING-HEEL.

1,218,392. Specification of Letters Patent. Patented Mar. 6, 1917.

Application filed July 20, 1916. Serial No. 110,292.

To all whom it may concern:

Be it known that I, ARTHUR S. GAY, a citizen of the United States, and a resident of Everett, in the county of Snohomish and State of Washington, have invented certain new and useful Improvements in Spring-Heels, of which the following is a specification.

This invention relates to spring heels for shoes or other footwear and is a departure from the disclosure made in my application for Letters Patent of the United States filed on the 7th day of June, 1916, Serial No. 102,185, wherein only the rear portions of the heels yielded to load whereas in the present form the entire heel yields when the weight of a wearer is brought thereon.

My invention is fully described in the following specification, of which the accompanying drawings form a part, in which like characters refer to like parts in each of the views, and in which:—

Figure 1 is a side elevation of a shoe provided with my spring heel, partly in section to show the construction of the latter, and with said heel subjected to load;

Fig. 2 is a section taken on the line 2—2 of Fig. 1:

Fig. 3 is a section taken on the line 3—3 of Fig. 1;

Fig. 4 is a detached view of the spring lift carrier; and Fig. 5 is a sectional view showing the means employed for holding a lift to the spring.

Referring to the drawings, 6 represents a shoe having a sole 7, an arch 8, and a heel 9, the last being of metal and hollow with the forward side thereof vertically shortened, at 10, a bumper 11 being provided above the lower rear edge and vertical side channels 12 being provided intermediate the length of the heel.

Held in the channels 12, by means of a screw 13 or equivalent, is a vertical member 14 of a carrier 15 for a heel lift 16 held thereto by means of split rivets 17 or equivalent, said carrier being formed of said vertical member 14, a forwardly directed member 18 extended to the inner surface of the forward side of the heel, a downwardly directed member 19 and a horizontal member 20 conforming to and arranged within the heel shell and carrying the lift 16.

The heel shell is closed at its top and riveted or otherwise secured to the insole of the shoe, as shown at 21 Fig. 3, said rivets also passing through a plate 22 conforming to the heel at its rear end and directed forwardly and riveted to the sole 7 at its junction with the arch 8.

The rear end of the carrier member 20 is normally at a level just above the lower rear edge of the heel shell and is capable of a vertical movement approximating the thickness of the lift 16 whereby the lower rear edge of the heel will closely approach but not touch the surface walked upon, the bumper 11 limiting this vertical movement of the lift carrier at the rear of the heel and which bumper is preferably provided with a resilient pad 11^a.

The bend between the carrier members 18 and 19 is normally slightly above the lower edge of the shortened side 10 of the heel and the vertical movement of the forward part of the carrier will usually be limited by the highest position of the rear end of the carrier and by the sole 7, although inequalities in the surface being walked upon may force the forward portion of the carrier upwardly of this normal limit.

The carrier is of spring metal and the yield thereof under load is distributed between the several angles between the several members thereof, the rear portion thereof yielding first in ordinary walking, and the entire heel yielding as the weight of the wearer is brought upon it, and lifts of solid leather or other material may be used in view of the yielding nature and resiliency of the carrier.

My invention is very simple, though highly efficient, is comparatively inexpensive and readily installed on a shoe and, while I have shown a preferred embodiment of the invention, I do not desire to limit myself to the exact details as changes may be made thereover without departing from the spirit of the invention and which will come within the scope of the appended claims.

Having fully described my invention, what I claim as new, and desire to secure by Letters Patent, is:—

1. As an article of manufacture, for use on a shoe, a heel comprising a shell open at its bottom and having its breast side cut away at its bottom, a downwardly extending member provided with channels at its sides, and a lift carrier consisting of a vertical member held in said channels, a forwardly directed member, a downwardly

directed member covering the cut away portion of said breast side, and a rearwardly directed horizontal member conforming to said shell, said carrier being composed of spring material.

2. As an article of manufacture, for use on a shoe, a heel comprising a shell open at its bottom and having its breast side cut away at its bottom, a downwardly extending member provided with channels at its sides, and a lift carrier consisting of a vertical member held in said channels, a forwardly directed member, a downwardly directed member covering the cut away portion of said breast side, and a rearwardly directed horizontal member conforming to said shell, and means for limiting inward movement of the free end of said horizontal member, said carrier being composed of spring material.

ARTHUR S. GAY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."