March 18, 1969 A. R. VISITACION 3,432,964

SHOE-BORNE, STEP-ACTUATED NOISE MAKERS

Filed Oct. 20, 1965

FIG.1

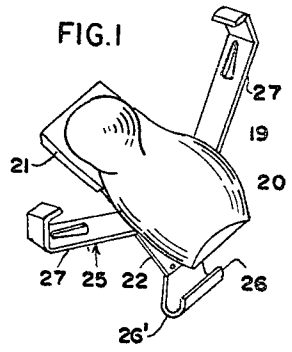
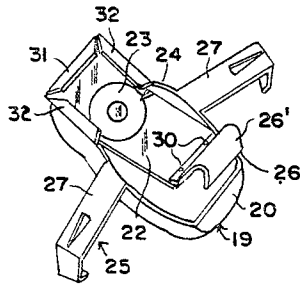


FIG. 2

FIG.3



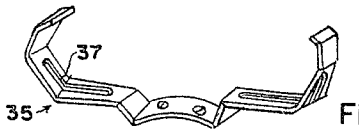


FIG.9

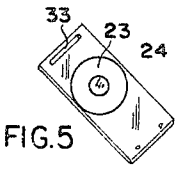


FIG.5

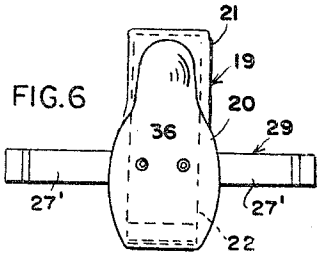


FIG.6

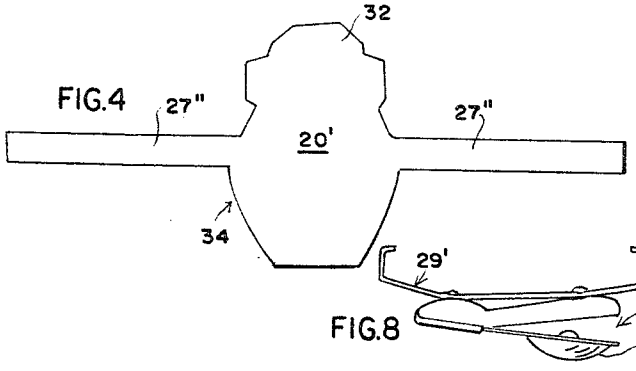


FIG.4

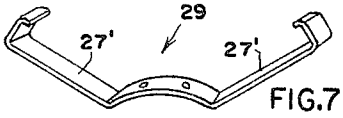


FIG.7

FIG.8

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SHOE-BORNE, STEP-ACTUATED NOISE MAKERS

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Int. Cl. A63h 5/00, 33/00

ABSTRACT OF THE DISCLOSURE

The invention relates to a shoe-borne step-actuated noise maker adapted to be removably secured to the underside of a conventional shoe adjacent to the breast of the shoe heel; the noise maker being so dimensioned that when the sole and heel rest on the ground substantially the entire noise maker is within the space bounded by the ground, the shank and the breast of the heel.

The present invention relates to noise makers commonly called "crickets" which are clicking or clacking devices of the class heretofore held in hand between the thumb and index finger, and comprising a normally open V-form, one of whose arms is a blade spring, so fashioned that when the V-form is pinched to close, a click is produced.

The principal object of this invention is to provide a novel and improved clicking device of the character set forth, positioned on the underside of the sloping shank of a heeled shoe, whereby a wearer on walking, running or dancing, will cause the clicker to operate on each step taken.

A further object is to have the clicking device of a construction which is easily attached and detached from a shoe, and whose parts are sturdy in form and assembly.

Still a further object thereof is to provide a novel and improved clicker and shoe combination of the character described, which is easy and reasonably cheap to manufacture, and which is efficient in carrying out the purposes for which it is designed.

Other objects and advantages will become apparent as this disclosure proceeds.

For one practice of this invention, a heeled shoe whose shank slopes downward to the sole, has the clicking device against the underside of the shank, with the blade spring arm lowermost. The other arm of said device presents a clamp comprising arms which releasably engage the side edges of the shank. The free end of the blade spring carries an element which extends downwardly therefrom to a plane below the underside of the heel. When both heel and sole stand on the ground, all of said clicking device is within the space bounded by the ground, the shank and the forward wall or breast of the heel, and a clicking sound has been produced. At the taking of every step, so the heel will touch the ground and then the sole, a clicking sound will be produced. In fact, two clicks are produced. One when the V-form is closed, and a second when it returns to its normal open condition.

In the accompanying drawing forming part of this specification, similar characters of reference indicate corresponding parts in all the views.

FIG. 1 is a perspective view of a clicking device embodying teachings of this invention.

FIG. 2 is a side view of a foot wearing a shoe equipped with the clicking device shown in FIG. 1.

FIG. 3 is a bottom view of FIG. 1.

FIG. 4 shows a blank for making one of the parts of the clicking device.

FIG. 5 shows a face view of a spring blade component of modified construction.

FIG. 6 is a top plan view of a clicking device of

modified construction, whose clamp for attaching it to a shoe is a separate piece secured thereon.

FIG. 7 is a perspective view of the clamp included in FIG. 6.

FIG. 8 is an elevational view of a clicking device in accordance with this invention, having a modified construction.

FIG. 9 is a perspective view of a modified form of clamp.

In the drawing, the numeral **15** designates generally a shoe, whose shank **16** slopes downwardly from the heel **17** to the sole **18**. A conventional clicking device, indicated generally by the numeral **19**, comprises a shallow elongated shell **20**, having a coplanar tab **21** which mounts one end of a cantilever blade spring **22** across the mouth of said shell; said blade spring and shell being in acute angular relation, thereby making their assembly a V-form structure. When said blade spring and shell are brought together to close the V-form, an audible click occurs due to the action at the dent formations **23**, **24** in the blade spring, all of which is well known and therefore needs no further explanation. Added to such conventional clicking device, are the clamp indicated generally by the numeral **25**, and the element **26**; the former comprising the arms **27** which releasably engage the opposite side edges of said shank **16**, whereby the device **19** is mounted on the underside of the shoe shank **16**, with the blade spring **22** lowermost said element being secured to the free end of the blade spring, and extending downwardly therefrom to a plane below the common plane of the shoe's sole and heel. When the shoe stands with both its heel and sole on the ground indicated by the numeral **28**, said element will be within the space bounded by the ground, said shank **16**, and the forward wall or breast **17'** of the heel. Said clamp arms **27** are resilient, and in the embodiment shown in FIGS. 1–3, are integral with the shell **20**. In the embodiment shown in FIG. 6, the clamp arms **27'** are offered by a single piece **29**, which is secured to the shell at **36**.

The element **26**, which may be secured by the rivets **30**, onto the end lane of the free end of the blade spring **22**, preferably presents a convex surface **26'** for contact with the ground **28**, in order to avoid a scraping noise which would interfere with the clarity of the clicks produced by the device **19**. Also, to assure that the blade spring will not work loose from the hold of the gripping tabs **31**, **32**, it is suggested that it be provided with a slit **33** near its fixed end, to be engaged by inserting through it, the marginal end of the tab **32**, which latter should be of a size to suit this purpose, as is shown in the blank **34**. This blank is for making the shell one-piece with the clamp arms. The central section **20'** of said one-piece blank is for forming thereof, the shell part **20**, while its oppositely extending lateral blades **27''**, are for making the arms **27**. The clicking device, for all shoe sizes, is the same. Only the arms **27''** are made long enough to suit the largest shoe size. The die for making this blank, may have suitable inserts as is well known punch press work practice, to arrange for blanks in which the length of the arms **27''** can be varied as need be. It is readily understood without further illustration, that a clicking device **19**, associated with a lady's high heel shoe, would require a ground-contacting element akin to **26**, which is rather long. It should therefore be of rather stiff material in such instance so as not to buckle. This invention also contemplates that the device **19** and its ground follower, as a unitary structure, may be permanently attached to the shoe.

I have also shown a slightly modified embodiment in FIG. 8, which when mounted so its clamp **21'** engages the opposite side edges of the shoe's shank **16**, will have the

clicker **19** across the underside of the shoe instead of along it as in FIG. 1. Here in FIG. 8, the ground follower is a frusto-spherical button whose convex surface is lowermost in the assembly.

Another form of clamp is indicated generally by the numeral **35** having a plurality of bends in each arm and also an elongated slot **37**. This clamp adapts itself to different shoe widths.

This invention is capable of numerous forms and various applications without departing from the essential features herein set forth. It is therefore intended and desired that the embodiments herein shall be deemed illustrative and not restrictive and that the patent shall cover all patentable novelty herein set forth; reference being had to the following claims rather than to the specific showings and description herein, to indicate the scope of this invention.

I claim:

1. The combination with a shoe having a heel, a sole and a shank sloping downwardly from the heel to the sole, of a clicking device of the type comprising a member carrying a cantilever blade spring fixed thereto and facing it and forming a normally open V-shape therewith, constructed and arranged that an audible noise occurs on at least one of the relative movements of the arms of said V-shape during its closing and opening; said member being positioned under the shank with said blade lowermost, means mounting said member onto the shoe, and an element extending downwardly from said blade to a point below the plane of the underside of the heel, whereby on standing the shoe so that its heel and sole contact a plane surface, said element will rise whereupon said V-shape will close, said mounting means being a flexible resilient clamp releasably gripping the opposite side edges of the shoe shank.

2. The combination as defined in claim **1**, wherein said member and the clamp are integral and made of a single blank of sheet metal.

3. The combination as defined in claim **1**, wherein said blade spring is provided with an opening adjacent the vertex of the V-form; said member having an element extending bent therefrom and engaged in said opening whereby said blade spring is maintained against longitudinal movement in relation to said member.

4. The combination as defined in claim **1**, wherein said element has a convex undersurface.

5. A clicking device for use with a shoe having a heel, a sole and a shank extending upwardly from the sole to the top of said heel, said clicking device comprising a normally open V-form, one of whose arms is a blade spring and so fashioned that when the V-form is pinched to close, a click is produced, said device being removably clamped to said shoe shank with the blade spring being lowermost, said device being so dimensioned that when both sole and heel rest on the ground, the whole of the clicking device is within the space bounded by the ground, the shoe shank and the breast of the heel; the lower extremity of said blade spring extending downwardly below the lower surface of said heel to be activated to produce a noise as a foot wearing said shoe is elevated from and lowered to the ground in walking, running or dancing, whereby a clicking sound will be produced, once when the V-form is closed and again when it returns to its normal open condition.

6. The combination as defined in claim **5**, wherein the noise maker carries a clamp comprising a central section secured thereto and having opposite arms yieldingly extending from said central section; said arms, each having a plurality of few transverse bends similarly in each of them whereby the clamp is adaptable to engage shoes at the opposite side edges of shanks of different widths.

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U.S. Cl. X.R.

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