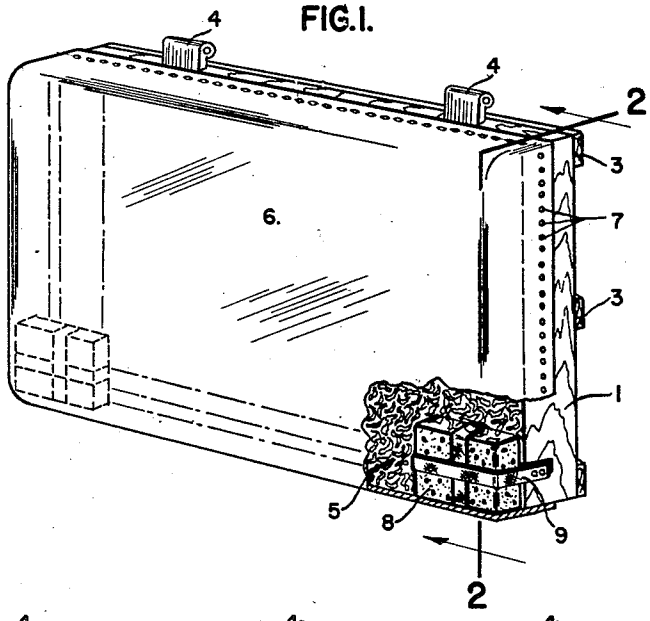
Dec. 21, 1954 A. L. McDONALD 2,697,606

PIT CUSHION FOR BOWLING ALLEYS

Filed Sept. 25, 1950

FIG.1.



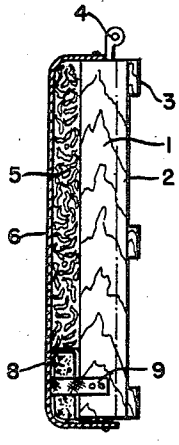


FIG.2.

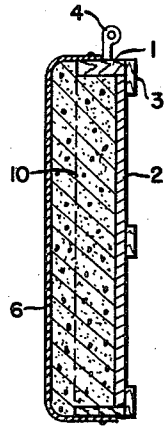


FIG.3.

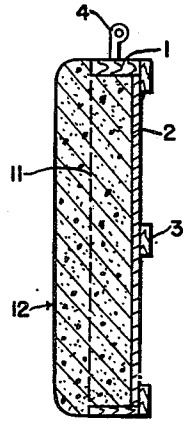


FIG.4.

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PIT CUSHION FOR BOWLING ALLEYS

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Application September 25, 1950, Serial No. 186,519

2 Claims. (Cl. 273—53)

This invention relates to improvements in a pit cushion for bowling alleys and appertains particularly to the incorporation of foam rubber or similar rubber-like material in the construction of these hingedly suspended bowling lane back-stops.

The commonly used pit cushion is a heavy rectangular hardwood frame, packed with leather cuttings and covered with bull hide, hingedly suspended across the end of the lane and side gutters to absorb the impact of flying pins and balls. About once a year these back-stops weighing two hundred weight and more must be taken down, opened up and repacked to preserve the frame against damage in consequence of the leather filling being displaced.

An object of the invention is to provide a pit cushion in which an area, mass or block of resilient material such as foam rubber is employed, being anchored to the wooden frame against displacement.

A further object of the invention is to provide a pit back-stop with an improved impact-absorbing cushion that will afford uninterrupted service for years without attention or need for repacking, retain its shape and new appearance longer and better protect the frame, thereby adding substantially to the useful life of this expensive item.

To the accomplishment of these and related objects as shall become apparent as the description proceeds, the invention resides in the construction, combination and arrangement of parts as shall be hereinafter more fully described, illustrated in the accompanying drawings, and pointed out in the claims hereunto appended.

The invention will be best understood and can be more clearly described when reference is had to the drawings forming a part of this disclosure wherein like characters indicate like parts throughout the several views.

In the drawings:

Figure 1 is a perspective view of a bowling alley pit cushion embodying a preferred form of the invention; the lower, right, front corner of the bull hide cover being removed;

Figure 2 is a vertical transverse sectional-elevation thereof, as taken on line 2—2 of Figure 1, just under the end flap of the cover;

Figure 3 is a vertical section approximately at the centre of a modified form using only foam rubber as a filling; and

Figure 4 is a similar section of a further modification wherein even the bull hide cover is dispensed with.

The usual bowling alley pit cushion or back-stop, as here shown, consists of a rectangular wooden frame 1 with a back panel 2 and horizontal reinforcing slats 3. Hinge parts 4 rise from the top of the frame 1 for suspending such frame so that it may swing freely when arranged in place across the end of a bowling alley, being of a width to guard the end of the lane together with the gutters on either side thereof. Completing such cushion is a tightly packed filling of leather cuttings 5 and a bull hide covering 6 secured to the frame 1 by tacks 7 about its perimeter.

In the course of time, the constant hammering of the pins and balls softens the leather packing somewhat and the lower front corners of the cushion, opposite the ends of the gutters, where it takes the greatest punishment, eventually grow thin as the leather filling is slowly compacted and displaced therefrom. It is then that the cushion ceases to function perfectly and the frame becomes sufficiently unprotected that it is susceptible to damage. The dismounting of the heavy back-stop, the removal of the cover and the packing of the leather filling then ensues.

I have found that a solid mass of resilient material that will not soften, creep, become compacted, or displaced may be used to good advantage in such a cushion to retain the cushion shape and protect the frame from

damage. Rubber, natural, synthetic or in combination or rubber-like material in sponge or foam form seems best suited to the need and I have obtained satisfactory results from such commerical lines as Goodyear "airfoam," Firestone "foamix," and Dunlop "airpillow."

The simplest way to incorporate such resilient, rubber-like masses into the pit cushion is to mount a triangular or rectangular block 8 in each front lower corner, as seen in Figures 1 and 2, disposing such rubber blocks in front of the frame 1 and reaching flush with the outer sides of the end and bottom rails of the frame 1, as clearly shown. These illustrated rectangular blocks are approximately 9 x 7 inches and 2½ inches thick. Canvas tapes 9 looped both horizontally and vertically around the blocks are secured to the wooden frame 1 and effectively anchor the rubber parts in place. The remaining area in the cushion is packed as usual with the leather cuttings 5 and the whole enveloped as already described in the bull hide 6.

The foam rubber filling is further projected in the modified form of the invention shown in Figure 3 wherein no leather cuttings are employed but the single moulded block 10 of resilient rubber-like material fills the entire cushion, being supported by the usual frame 1 and covered with the conventional bull hide envelope 6.

The all-rubber cushion 11, shown in Figure 4 is a similar one-piece moulded body, supported by the usual frame 1 but is used without any extraneous cover; a smooth and relatively heavy skim coating 12 being formed on the front exposed surface of the rubber-like body in the course of moulding the same, as is well known in the rubber art.

From the foregoing description taken in connection with the accompanying drawings, it will be manifest that a pit cushion for bowling alleys is provided that will fulfil all the necessary requirements of such a device, but as many changes could be made in the above description and many apparently widely different embodiments of the invention may be constructed within the scope of the appended claims, without departing from the spirit or scope thereof ,it is intended that all matters contained in the said accompanying specification and drawings shall be interpreted as illustrative and not in a limitative or restrictive sense.

What I claim as new and desire to secure by Letters Patent is:

1. A bowling alley pit cushion comprising a rigid frame, a front cover secured along its margin to said frame and cooperating with said frame to define a space, a tightly packed filling of leather cuttings received by said space and completely filling said space except the two extreme lower front corner parts thereof, a solid block of resilient material capable of being repeatedly compressed without assuming permanent deformation positioned in and completely filling each of said non-filled parts of said space, the filling of leather cuttings pressing forcibly against the top, back and the inner end of each block, and anchoring means for securely holding each block in its non-filled part of said space.

2. A bowling alley pit cushion as claimed in claim 1 wherein each block has its outer end flush with the outer face of the side of the frame and its bottom flush with the outer face of the bottom of the frame so that no leather cutting filling is disposed outwardly of the outer end and the bottom of each block.

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