Jan. 20, 1970 H. L. GARDNER 3,490,766

FLEXIBLE WEIGHT

Filed Oct. 19, 1967

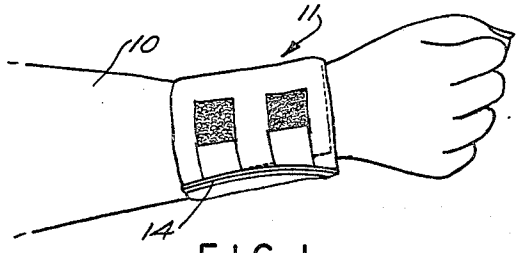

FIG. 1

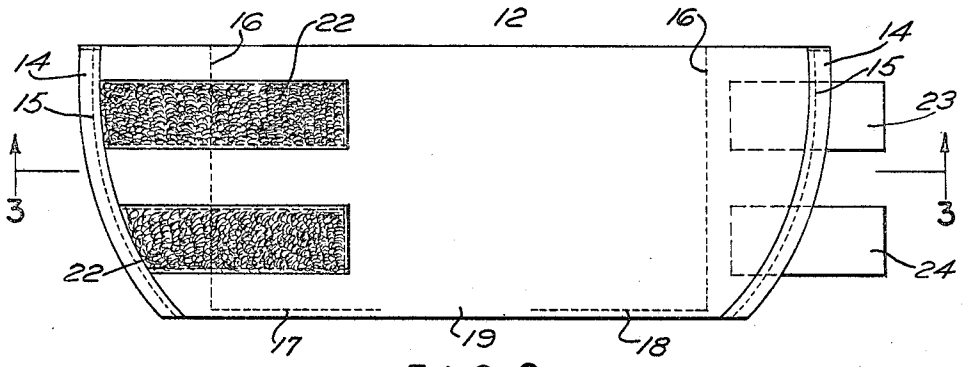

FIG. 2

FIG. 3

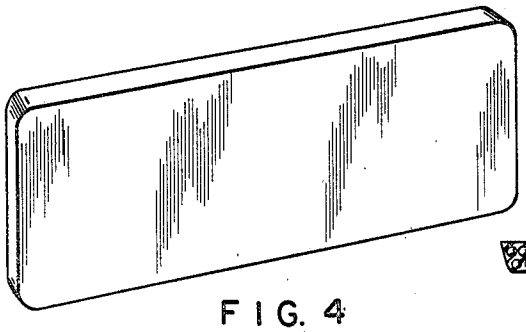

FIG. 4

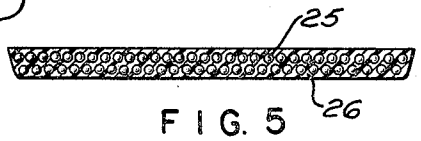

FIG. 5

FIG. 6

INVENTOR.
HARRIS L. GARDNER
BY

Barlow & Barlow
ATTORNEYS

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FLEXIBLE WEIGHT

Harris L. Gardner, 174 Riverside Ave.,
Cranston, R.I. 02910

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ABSTRACT OF THE DISCLOSURE

A strap and removable weight attachable to a part of the body for exercising that part of the body, the weight being extremely flexible by reason of a multiplicity of small particles of heavy material embedded in a relatively light, extremely flexible material and held in separated relation so that the composite is substantially the flexibility of the non-metallic, lightweight material.

BACKGROUND OF THE INVENTION

In order to train and develop the muscles of the human body, weights have been attached to various parts of the body, such as the fingers, the arms, the legs or the waist, so that movement of these parts of the body encounters additional resistance and develops the muscles of such parts of the body. The weights used have usually been stiff and rigid and of substantial size sewed into canvas which have been attached to the body or have been loose in pockets so that they do not maintain a certain definite position but would rattle around in the pockets. The rigid weight restricts the movement of parts of the body, while the loose weight is annoying because of the shifting of the weights in the pockets.

SUMMARY OF THE INVENTION

A training weight having a plurality of small parts of high specific gravity embedded in separated relation in a highly flexible, non-metallic plastic material so as to hold the particles firmly in their relative position and yet maintain an extreme flexibility substantially that of the non-metallic plastic material which is used to embed the weights.

DESCRIPTION OF THE DRAWINGS

FIG. 1 is a perspective view showing a wrist about which there is secured a strap having a pocket therein for holding the weight of this invention in position;

FIG. 2 is a plan view of the strap;

FIG. 3 is a central sectional view;

FIG. 4 is a perspective view of a weight which is positioned in the pocket of the strap;

FIG. 5 is a sectional view on a larger scale across the weight showing the relatively heavy particles as molded into a plastic medium shaped to fit into the pocket; and

FIG. 6 is a longitudinal section of the weight on the scale of FIG. 5.

DESCRIPTION OF THE PREFERRED EMBODIMENTS

With reference to the drawings, FIG. 1 shows at **10** an arm with a strap designated generally **11** about the wrist. This strap is for the purpose of holding a weight in position on the wrist for exercising the arm in movements of the arm for developing and strengthening the muscles thereof. This strap **11** comprises essentially two pieces **12** and **13** of fabric held together at their ends by a binding **14** attached by sewing **15** to the two ends of the fabric **12** and **13** and holding the fabric pieces together. The fabric is further stitched one to the other as at **16** spaced inwardly from the ends and again along the lower edges of the two plies of fabric at **17** and **18** in spaced relation as at **19**, thus providing a vented pocket **20** for reception of the weight. Suitable Velcro hooks **21** and eyes **22** may be utilized together with straps **23** and **24** for holding the band about the wrist.

The weight which is more particularly the subject of this invention for insertion into the pocket **20** comprises a plurality of small particles **25** of a high specific gravity usually of metal which may be of irregular shape such as iron fillings or small castings of iron or steel or may be certain oxides, sulphates, or the like of metal which will have a relatively high specific gravity. Conveniently lead shot may be used, and that is what is shown in FIG. 5 of the drawings.

These heavy particles are molded into a plastic material **26** in separated relation such as shown in the drawing and are held in separated relation by this molding so that the composite weight **25** and plastic material **26** has substantially the flexibility of the plastic material, and the weights are held in separated relation so that this may occur. This plastic material is utilized in a fluid state to mold about the heavy particles and becomes the continuous phase whereas the heavy particles are the separate phase of the composite weighting material. The weight particles extend the full length and width of the plastic and are in concentrated relation throughout. The composite weight may be made heavier by thickening the composite or lighter by thinning it. Also the width of the material may be varied for varying the weight or the number of particles of high specific gravity may be varied.

I wish to be understood that by the term "metal" I include not only the chemical metal itself but also metal in its impurities, oxides, sulfates or various other chemical forms, it being chiefly a heavier or high specific gravity substance which may be utilized for a training weight, the essential being that the particles are small and are held in separated relation so as to provide a desired, very flexible composite weight for training purposes.

The plastic material **26** above referred to may be rubber or some thermoplastic which is flexible after solidification.

I claim:

1. A portable training device comprising a flexible body with a pocket therein, said pocket having an opening in one side edge thereof, a unit in said pocket removable through said opening and having a plurality of individual small metallic parts each completely surrounded and embedded in a flexible non-adherent non-metal plastic material and extending the length and width of said unit and held in separated relation by said plastic material thus rendering the composite substantially the flexibility of the non-metallic plastic.

2. A portable training device as in claim **1** wherein the metallic parts are generally spherical.

3. A portable training device as in claim **1** wherein the plastic material is a continuous phase and the metallic parts are the separate phase.

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RICHARD C. PINKHAM, Primary Examiner
W. R. BROWNE, Assistant Examiner

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272—67