Oct. 6, 1959 L. W. LOCKWOOD 2,907,106

HAND TOOL FOR REMOVING FLOOR COVERINGS

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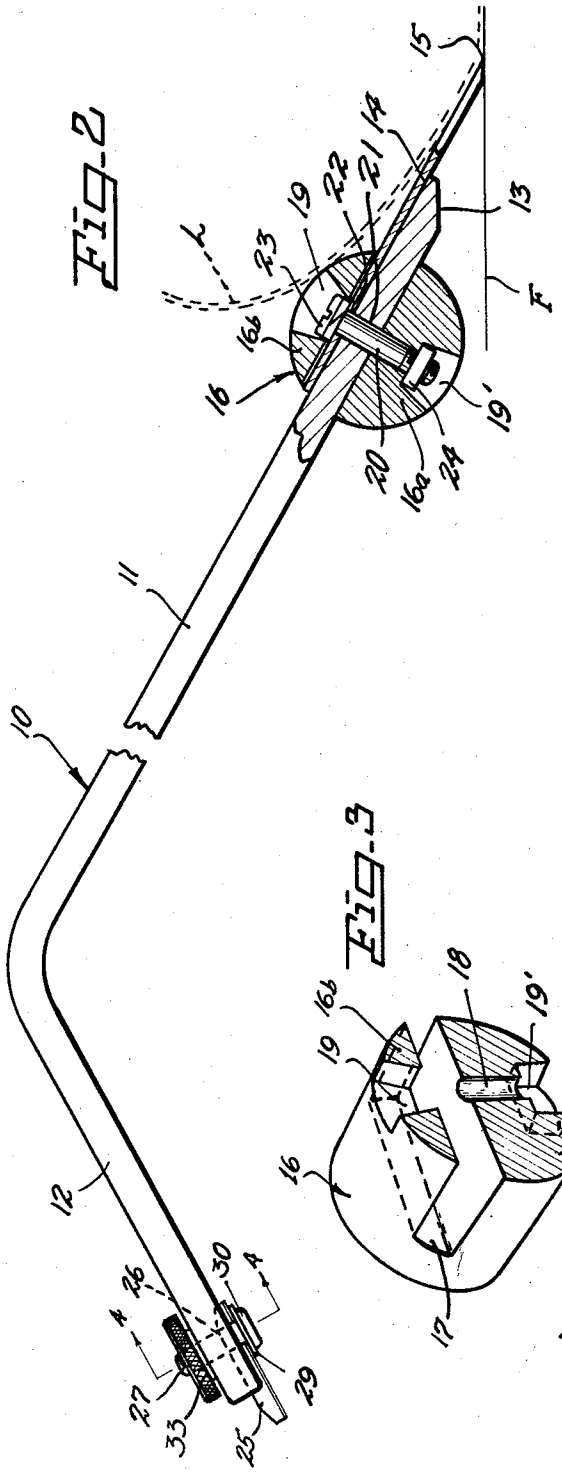

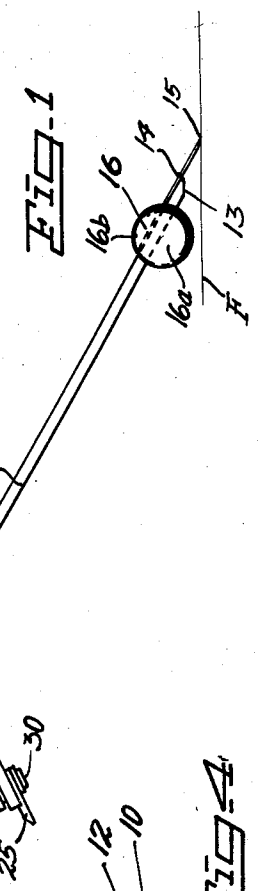

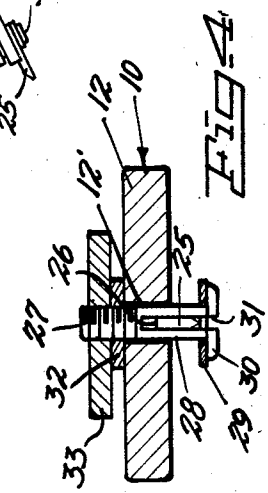

Lawrence W. Lockwood
INVENTOR.

BY Fish and Neave

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HAND TOOL FOR REMOVING FLOOR COVERINGS

Lawrence W. Lockwood, Spokane, Wash., assignor to Oscar Williams, Spokane, Wash.

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2 Claims. (Cl. 30—169)

This invention is a hand tool for removing cemented floor coverings from floors.

An object of the invention is to provide a tool which may be manually operated to separate the cement bond so as to progressively remove the covering from the floor in strips.

A further object of the invention is to provide a tool of the type referred to wherein a lateral forwardly presented sharp edge is provided to sever the cement bond between the floor and the covering.

A further object of the invention is to provide a machine of the type referred to wherein the tool is provided with a fulcrum rearwardly spaced from a lateral forwardly presented sharp edge to provide means for lifting the floor covering from the floor by the lever principle of operation and also by use of the fulcrum the sharp edge may be raised and lowered and the inclination thereof shifted at the will of the operator.

Another object of the invention lies in the provision of a hand tool for removing cemented floor coverings which is unique in construction and comprises a minimum number of parts which are assembled with facility and constitute a relatively inexpensive tool which is not liable to become inoperative and is very easily transported from one job to another in a conventional tool kit.

The above and other objects of the invention will become apparent during the course of the following description and the accompanying drawings, wherein a preferred form of the invention is shown. It should be understood, however, that the drawings and description are illustrative only and are not intended to limit the invention except insofar as it is limited by the claims.

In comparatively few years next passed it has become the custom of linoleum manufacturers to provide a product having a thin paper-like back instead of the old conventional burlap fabric backing. This construction provides a floor covering which has much less body strength than the previously described old type floor coverings. It also is customary to cement these floor coverings to the floor to provide them with sufficient body to prevent undue and excess wear thereto; and yet when it becomes necessary to remove the floor covering, the body strength thereof is such as to make it a very laborious and disagreeable job and, sometimes, nearly impossible. It is, therefore, the principal object of this invention to overcome the difficulty encountered in removing linoleum floor covers which have been cemented to the floor and which do not have sufficient body strength to permit their being torn from the floor by grasping an edge of the linoleum and lifting it from the cement bond.

In the accompanying drawings, forming a part of this specification, and in which like numerals are provided to designate like parts:

Figure 1 is a side elevation of my improved tool;

Figure 2 is a view partially in side elevation and partially in vertical cross section upon an enlarged scale and having portions broken away for convenience of illustration;

Figure 3 is a perspective view upon a still further enlarged scale partially in cross section, showing a fragment of the improved fulcrum; and

Figure 4 is a transverse vertical cross section taken at line 4—4 of Figure 2.

Having reference now more particularly to the drawing, I have shown my tool as comprising an elongated body **10** having a forwardly extending major portion **11** and a rearwardly extending minor portion **12**. Inspection of Figure 4 will reveal that the body **10**, in lateral cross section, is rectangular in shape. It will also be noted that the minor portion **12** is disposed at an obtuse angle with relation to the major portion **11** of the body, the obtuse angle disclosed being substantially 120 degrees. However, this angle is relatively unimportant except insofar as it disposes the minor portion **12** at such an angle as to be convenient as a hand grip for the operation of the tool.

At its forward end, the major portion **11** has its bottom edge chamfered or bevelled at **13** to insure clearance between the body **10** and the floor surface indicated by the line F. The floor covering is indicated by dotted lines L which represent linoleum or other similar covering material which is to be removed from the floor F. At its forward end and disposed in juxtaposition, I provide a blade **14** which, obviously, will be formed of a material such as tool steel which will receive and hold a lateral forwardly presented sharp cutting edge **15** provided for severing the cement bond between the covering L and the floor F during manual movement of the tool forwardly. It is obvious from the drawing that the edge **15** of the blade **14** is disposed in advance of the body **10** and therefore the edge may be used to separate the covering from the floor without interference by the body **10**.

During this operation it is often found that the cement bond is so tenacious that it is necessary to pry the covering L from the floor F, I therefore provide a fulcrum, indicated in general by the numeral **16**, which constitutes a guide for positioning the blade during movement of the tool and also enables the operator to employ the tool as a lever and thus lift the blade **14** over the fulcrum **16** by lowering the rear minor portion or hand grip **12**.

As clearly disclosed in the drawing, the fulcrum **16** is formed from a length of annular bar stock and is of a length greater than the transverse width of the body **10** so that it may contain an aperture **17** disposed on a chord of the circle so that a major portion **16*a*** of the fulcrum **16** is disposed below the forward portion **11** of the body **10** and a minor portion **16*b*** is disposed thereabove. This construction and disposition of parts is found to be very acceptable for this purpose, however, it will be understood that a larger size diameter fulcrum may be employed and then the aperture could be formed at the diameter of the fulcrum or at such other position as found acceptable without departing from the spirit of the invention. The minor portion **16*b*** constitutes a guard adapted to guide the linoleum upwardly as shown in dotted lines of Figure 2 and thereby preclude injury to the hand of the operator.

Disposed transversely of the axis of the fulcrum **16** and substantially midway its length, I provide a bolt receiving aperture **18** disposed 90 degrees or at right angles to the aperture **17** and communicating therewith. It will be noted that the upper portion of the bolt aperture **18** has an enlarged socket **19** which is square in horizontal cross section and tapers downwardly. Below the aperture **17** the bolt receiving hole **18** is of a diameter sufficiently enlarged over the diameter of bolt **20** to

permit passage of the bolt body therethrough and terminates in a lower socket **19'** which is substantially identical with the socket **19**.

The fulcrum **16** is applied to the body **10** with the juxtaposed forward end of the portion **11** and the rear end of the blade **14** disposed within the aperture **17** and they are provided with substantially vertical aligned apertures **21** and **22** of a size adapted to receive the body of the bolt **20** but not to pass its head **23**. The socket **19** is of sufficient size to permit passage of the head **23** and therefore, when the bolt **20** is applied through the aligned apertures **18**, **21**, and **22**, the head impinges against the blade **14** or the body of portion **11** (depending upon which is disposed on top for the time being) and the body of the bolt **20** extends through the apertures and cooperates with a clamping nut **24** disposed in socket **19'** and held against rotation and clamps the fulcrum **16** to the body of portion **11** and blade **14**. Obviously, the bolt **20** may be removed at any time to sharpen or change blades **14** when found desirable.

At the extreme rear end of the hand grip or rear end portion **21** I provide a stripping blade **25** disposed in a vertical plane and seated in a groove **26** formed in the under face of the hand grip **12**. A bore **27** is formed in the hand grip **12** and communicates at right angles with the recess **26**. A conventional bolt **27** having a kerfed upper end to normally receive a screw driver, has its kerf deepened by means of a metal saw or otherwise to form a bifurcated upper end **28** which is adapted to straddle the blade **25** and maintain it in its vertical plane and also to clamp it to the hand grip portion **12**. To provide clamping action I apply an annular washer **29** about the body of bolt **27** and against its head **30** after which the blade **25** is inserted through the deepened kerf **31** and the bolt is passed through the bore **12'** whereupon a conventional lock washer **32** and a knurled hand operated nut **33** is applied to the bolt **27** for clamping the blade **25** in position. This construction and arrangement of parts provides for the longitudinal adjustments of the blade so that it may be set at depths commensurate with the thickness of the linoleum to be removed and thus preclude marring the floor thereunder.

Having thus described my invention, I claim:

1. A hand tool for removing cemented floor coverings, comprising an elongated transversely rectangular bar having a minor rear portion disposed at an obtuse angle relative to its major forward portion; a blade of substantially the same width as the bar at the forward end of said bar and having a lateral forwardly presented sharp edge disposed in advance of the forward end of said bar; a cylindrical fulcrum having an aperture therethrough transversely of its axis and disposed on a chord of the fulcrum and receiving the forward end of said bar and the rear end of said blade; said fulcrum bar and blade being provided with an aligned bolt receiving hole disposed substantially vertically therethrough; and a clamping bolt releasably and rigidly uniting said fulcrum bar and blade.

2. In a hand tool for removing cemented floor coverings, the combination with an elongated rigid body and a forwardly extending blade disposed in juxtaposition with the front end of said body and having a lateral forwardly presented sharp edge; said body and blade having vertically disposed aligned bolt receiving holes therein; of a fulcrum laterally encircling the body and blade and an aperture in said fulcrum at right angles to said body and aligned with the bolt receiving holes of said body and blade; a bolt extending through the aligned bolt receiving holes and second named aperture with its head clamping against the blade and a nut cooperating with said bolt and clamping against said fulcrum and thereby releasably and rigidly uniting said blade, body and fulcrum.

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