Oct. 20, 1953 J. LOVIN 2,655,976

LINOLEUM REMOVER

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Fig. 1

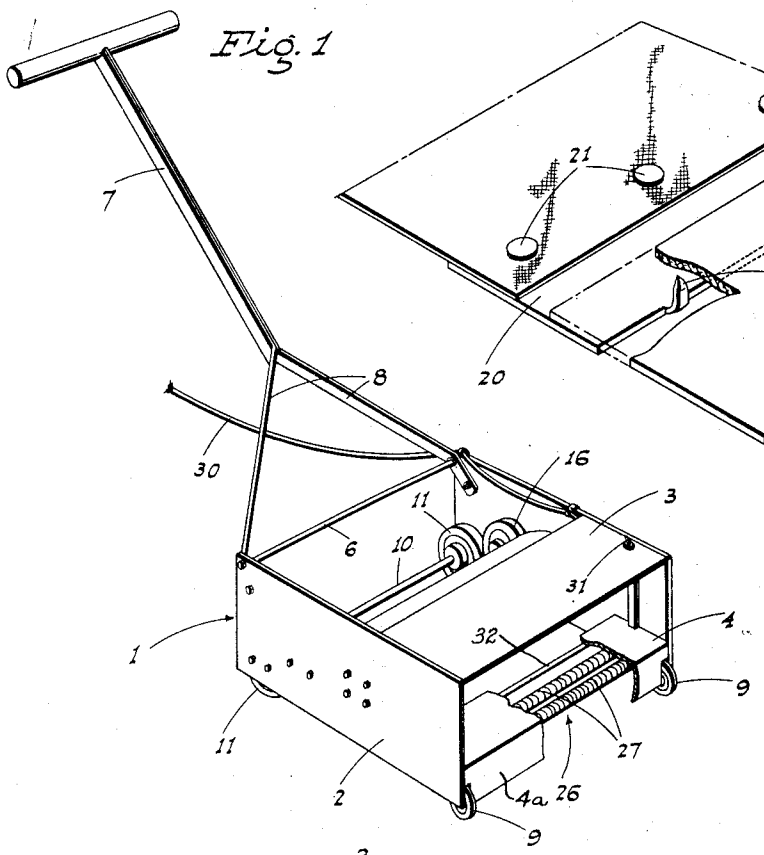
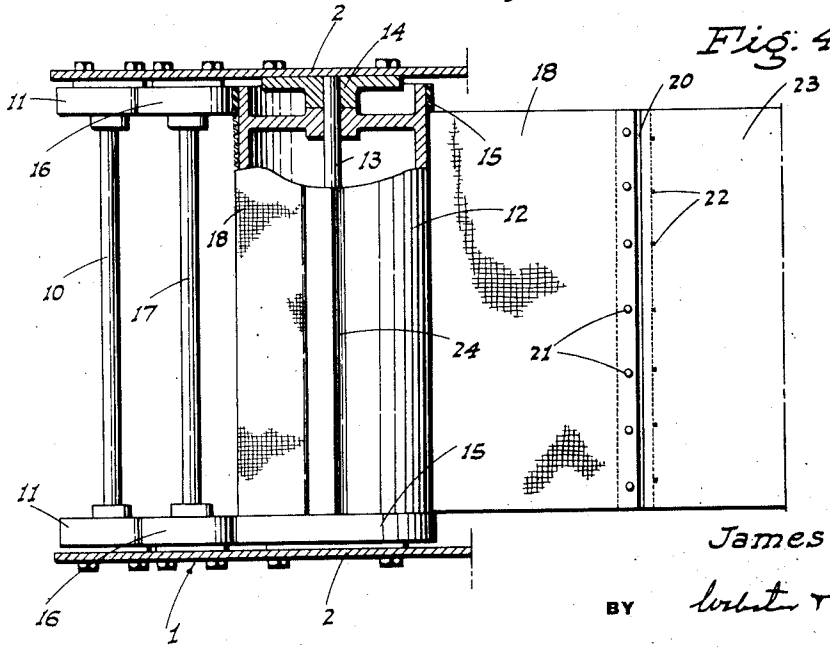


Fig. 3

Fig. 4



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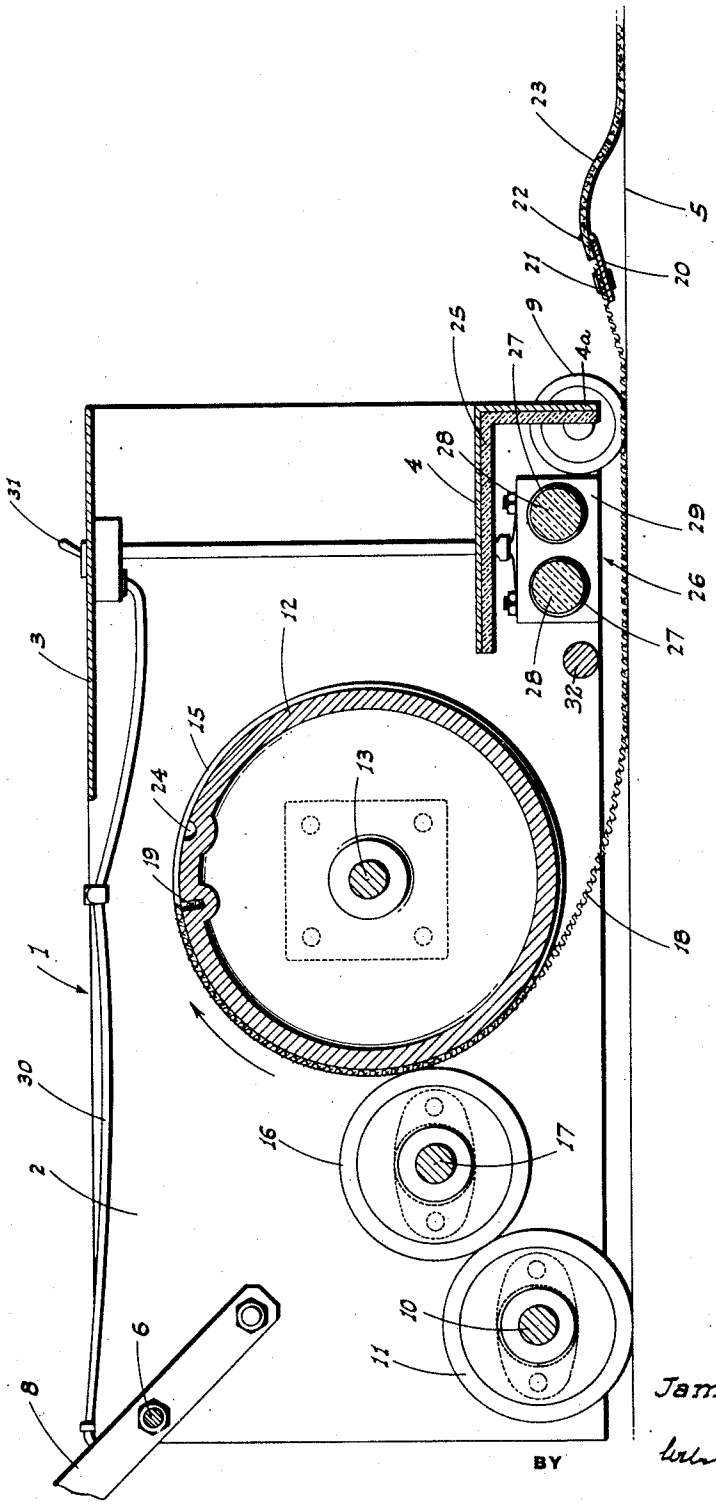
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Fig. 2



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LINOLEUM REMOVER

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4 Claims. (Cl. 154—1)

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This invention is directed to, and it is an object to provide, a novel device for removing old or worn linoleum from a floor.

Removing linoleum from a floor manually and with hand tools is a hard, tedious job. It is therefore a further object of this invention to provide a push-type, wheel-supported device which is operative, upon advance over a previously side-cut strip of linoleum, to first heat the latter to loosen or soften the adhesive, and to then lift such strip from the floor and wind the same onto a driven receiving roll.

An additional object of the invention is to provide a linoleum remover which includes a linoleum heating unit in novel combination with the linoleum receiving roller.

A further object of the invention is to provide a linoleum remover which embodies a novel arrangement for securing the side-cut linoleum strip in connection with the receiving roll for pick-up by, and winding onto, the same.

A still further object of the invention is to provide a linoleum remover, as in the preceding paragraph, in which the linoleum securing arrangement includes a canvas leader anchored at one end to the receiving roll, and fitted at the other and free end with a novel hook plate for releasable connection with one end portion of the linoleum strip to be picked up.

It is also an object of the invention to provide a linoleum remover which is designed for ease and economy of manufacture.

Still another object of the invention is to provide a practical and reliable linoleum remover, and yet one which will be exceedingly effective for the purpose for which it is designed.

These objects are accomplished by means of such structure and relative arrangement of parts as will fully appear by a perusal of the following specification and claims.

In the drawings:

Fig. 1 is a perspective view, partly broken away, of the device.

Fig. 2 is an enlarged longitudinal section showing the device as in use.

Fig. 3 is a fragmentary perspective view, partly broken away, showing the hook plate as in use between the free end of the canvas leader and one end of the linoleum strip to be removed.

Fig. 4 is a fragmentary plan view, partly in section, of the linoleum strip receiving roll and the driving arrangement therefor.

Referring now more particularly to the characters of reference on the drawings, the device comprises a box-like frame, indicated generally

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at 1, which frame includes side plates 2 connected at the front by a transverse top plate 3, and therebelow by a transverse angle beam 4. The angle beam 4 is disposed so that one portion thereof is uppermost and horizontal, while the other portion thereof is foremost and depends to a point adjacent, but clear of, the floor 5.

At the upper rear corners the side plates 2 are connected by a cross rod 6, and a push handle 7 extends at a forward and downward incline toward the cross rod 6; such push handle being forked, at its lower end, as at 8. At the lower end portions of the fork 8, the same are secured to the side plates 2; the cross rod 6 extending through said lower end portions to assure that the handle 7 is maintained in proper position.

The box-like frame 1 is supported from the floor and for movement therealong by relatively small-diameter front wheels 9 journaled in connection with the front lower corners of the frame 1. Adjacent the rear lower corners of said frame there is a cross shaft 10 which is journaled in connection with, and spans between, the side plates 2, and a pair of rubber-faced, relatively large-diameter, rear wheels 11 are carried on the cross shaft 10 adjacent but inwardly of the side plates 2.

With this arrangement the device is capable of being rolled forwardly on the floor by means of the push handle 7.

Between the front wheels 9 and rear wheels 11, the device includes a relatively large-diameter, linoleum strip receiving roll 12, which roll is disposed with its axis transversely of the direction of travel, and with the low point of the roll some distance above the floor.

The roll 12 includes a transverse center shaft 13 which is journaled at its ends in connection with the side plates 2, as at 14.

At its ends the roll 12 is fitted with friction bands 15, and intermediate rubber-faced rollers 16 are engaged between the rubber-faced rear wheels 11 and the corresponding friction bands 15, whereby rotation of the rear wheels 11 imparts a rotary drive to the roll 12, with the latter turning in the direction indicated by the arrow in Fig. 2. The intermediate rollers 16 are carried on a cross shaft 17 journaled at its ends in connection with the side plates 2.

A canvas strip or leader 18 is anchored at one end, as at 19, to the roll 12, and is of a length to extend from such roll forwardly beneath the transverse angle beam 4 to a termination ahead of the device.

The canvas leader 18 is of a width approximating the distance between the friction bands 15, and said leader lies between the latter.

At its forward or free end the canvas leader 18 is fitted with a flat, transversely extending hook plate 20 riveted to the canvas leader, as at 21, with a portion of said plate projecting ahead of the leader.

At its forward edge the hook plate 20 includes a plurality of upstanding sharpened prongs or hooks 22 adapted to be penetrated from below through the adjacent end of a previously side-cut strip 23 of the linoleum to be removed from the floor 5, which strip is approximately the width of the canvas leader 18.

After attachment of the hook plate 20 to the linoleum strip 23, the device is slowly advanced along such linoleum strip, with the result that the canvas leader 18 first winds onto the roll 12 and then the strip 23 is gradually lifted or peeled from the floor and wound onto said roll. The roll 12 includes a transverse depression 24 which receives the hooks 22 as the leader and linoleum strip wind onto the roll 12.

The peeling or lifting of the linoleum strip 23 from the floor is facilitated by heating such strip in advance of the roll 12, and this is accomplished as follows:

Directly below the transverse angle beam 4, which beam is internally faced with a heat-resistant lining 25, there is an elongated, transversely extending heating unit, indicated generally at 26. The heating unit 26 comprises a plurality of helical resistance coils 27, each of which is wound on a dielectric core 28, which cores are supported, at the ends, by suitable brackets 29 fixed to the side plates 2.

The coils 27 are energized from an electric supply cord 30 which leads into the box-like frame 1 from the rear; such electric cord having a switch 31 interposed therein.

The heating unit is preferably disposed close to the floor, so that the heat is most effectively employed, and in order to prevent the linoleum as wound onto the roll 12 from possibly contacting the heating unit, a cross rod 32 extends between the side plates 2 immediately to the rear of the heating unit and at a level below the same, as shown in Fig. 2. Also, the forward depending portion 4a of angle 4 projects to a bottom termination below the heating unit, further protecting the linoleum from possible contact with the heating unit.

When the device is in use and the coils 27 are energized, they effectively heat the linoleum strip 23 with slow advance of said device; such heating of the linoleum strip loosening or softening the adhesive by means of which the linoleum is secured to the floor. Thus, as the strip 23 reaches the bottom of the roll 12, such strip readily peels off the floor and is wound onto the roll 12, whence it may be subsequently readily removed and discarded.

With the described device, old or worn linoleum can be effectively removed from a floor, and without the tedious labor heretofore required; the device being practical and reliable for the intended purpose.

From the foregoing description it will be readily seen that there has been produced such a device as substantially fulfills the objects of the invention, as set forth herein.

While this specification sets forth in detail the present and preferred construction of the device, still in practice such deviations from such detail may be resorted to as do not form a departure from the spirit of the invention, as defined by the appended claims.

Having thus described the invention, the following is claimed as new and useful, and upon which Letters Patent are desired:

1. A linoleum remover comprising a frame, wheel means supporting the frame for advancing movement along a side-cut strip of linoluem on a floor, a linoleum strip receiving roll journaled transversely in the frame above the floor, said wheel means including transversely spaced friction faced wheels, friction bands on the roll in alinement with said wheels, intermediate friction faced rollers engaged between corresponding wheels and bands in driving relation to the roll, the roll turning upward at the rear, and means to connect one end of the linoleum strip to said roll for pick-up thereby upon advance of the frame.

2. A linoleum remover comprising a frame, wheel means supporting the frame for advancing movement along a side-cut strip of linoleum on a floor, a linoleum strip receiving roll journaled transversely in the frame above the floor, means to drive the roll from the wheel means, the roll turning upward at the rear, a leader of flexible material secured at one end to the roll, the leader being of a length to initially extend to a point ahead of the frame, means to detachably connect the free end of the leader to an adjacent end of the linoleum strip, and an electric heating unit mounted in the frame ahead of the roll and adjacent the floor in heating relation to the linoleum strip as the frame advances.

3. A linoleum remover comprising a frame supported for advancing movement along a side-cut strip of linoleum on a floor, a strip receiving roll journaled on the frame transversely thereof, means to drive the roll so that said roll turns upwardly at the rear upon advance of the frame, means to connect one end of the strip to the roll for pick up thereby upon advance of the frame, a transverse heating unit mounted on the frame ahead of the roll adjacent but above the floor, and means on the frame to prevent contact of the linoleum strip with the heating unit as said strip is disengaged from the floor and is being wound onto the roll.

4. A device as in claim 3, in which said last named means includes a cross rod on the frame immediately to the rear of the heating unit at a level below the same.

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