Oct. 29, 1946. P. ALTMAN 2,410,143

PORTABLE ENGINE

Filed June 4, 1945

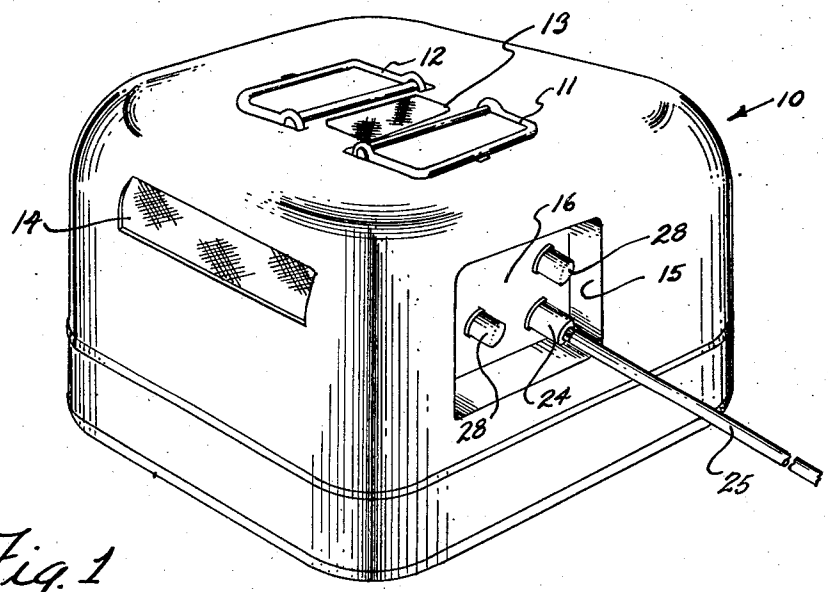


Fig. 1

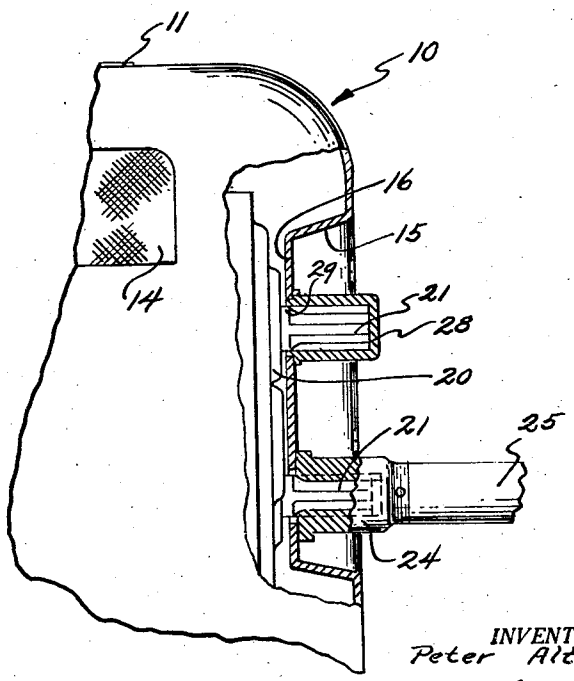


Fig. 2

INVENTOR.
Peter Altman

BY

G. F. Hauke

Attorney

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PORTABLE ENGINE

Peter Altman, Detroit, Mich., assignor to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia

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5 Claims. (Cl. 123—195)

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This invention relates to a portable engine and has particularly to do with a multiple-speed power drive for such an engine.

The engine is a relatively small, easily handled internal combustion unit, intended for numerous adaptations on farms, in the factory, at airfield outposts and the like. For example, on a farm the engine may be used for pumping, driving cream separators, grinding wheels, cement mixers, circular saws and other power tools and so forth. The engine is especially adapted for use with flexible power shafts. To render it versatile, it is provided with three independent power take-off spindles each running at a different speed. The details of this construction are shown in a copending application Ser. No. 601,984, filed June 28, 1945.

An object of the present invention is the provision of a housing unit for the engine with a contour designed for neat appearance, safety, and ease of handling.

For a more detailed understanding of my invention, reference may be had to the accompanying drawing, illustrating a preferred embodiment of my invention, in which like characters refer to like parts throughout the several views, and in which:

Fig. 1 is a perspective view of the engine housing, and

Fig. 2 is an elevation partially in section of the power recess of the engine unit.

In Fig. 1 a substantially rectangularly shaped engine housing 10 is shown with rounded corners at the top and carrying handles 11 and 12. Air openings 13 and 14 are provided to facilitate circulation of a cooling medium around said engine.

In one wall of housing 10 is a recessed pocket 15, the inner wall 16 of which backs against an engine block and a transmission housing 20. Three power spindles 21 project from the transmission housing through the inner wall. These spindles all rotate at different speeds as described in the application above identified. They are fluted and notched to cooperate with the recessed end 24 of a standard flexible power shaft 25.

Caps 28 frictionally engage recesses 29 in wall 16 and are dimensioned to furnish running clearance for spindles 21.

All of the spindles 21 rotate when the engine is running. After the flexible drive is connected to the selected spindle, the caps 28 are placed around the other spindles, and the motor may be started and operated in perfect safety.

Should a careless operator neglect to cap the unused power spindles, they are positioned within the recess 15 such that direct contact therewith is practically impossible.

Although I have illustrated but one form of

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my invention and have described in detail but a single application thereof, it will be apparent to those skilled in the art to which my invention pertains, that various modifications and changes may be made therein without departing from the spirit of my invention or from the scope of the appended claims.

I claim:

1. In a portable self-contained power unit, a plurality of simultaneously operating power spindles located with parallel axes and projecting an equal distance from an engine block on one side thereof, and a housing assembly surrounding the entire unit spaced on the spindle side of the engine a distance away from the block substantially equal to the projections of said spindles, and a recessed portion in said spaced wall facing said engine block and surrounding said power spindles.

2. In a portable self-contained internal combustion power unit, a plurality of simultaneously operating power spindles projecting from one side of an engine block, and a housing for said block having one wall spaced from said block substantially to the extent of the projection of said spindles, and a recessed portion in said wall rendering the spindles accessible for connection to a driven means.

3. A housing for an internal combustion engine having one side formed with an inwardly projecting recess over a portion of the area thereof, and a plurality of rotating power take-off spindles projecting into said recess from said engine.

4. In a portable self-contained internal combustion power unit, a plurality of simultaneously operating power spindles projecting from one side of an engine block, and a housing for said block having one wall spaced from said block to the extent of the projection of said spindles, and a recessed portion in said wall rendering the spindles accessible for connection to a driven means and independent removable means capping the unused power spindles.

5. In a portable self-contained power unit, a plurality of simultaneously operating power spindles located with parallel axes and projecting an equal distance from an engine block on one side thereof, and a housing assembly surrounding the entire unit spaced on the spindle side of the engine a distance away from the block equal to the projections of said spindles, and a recessed portion in said spaced wall facing said engine block and surrounding said power spindles, and independent removable means capping the unused power spindles and secured to said housing.

PETER ALTMAN.