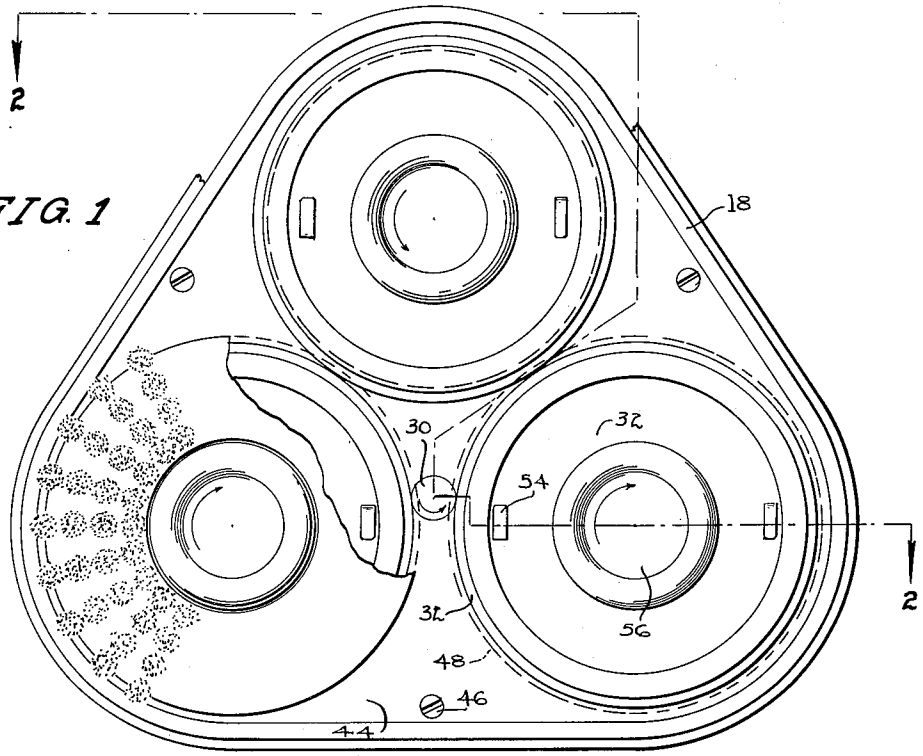
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FLOOR WAXING AND POLISHING MACHINE

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FIG. 1



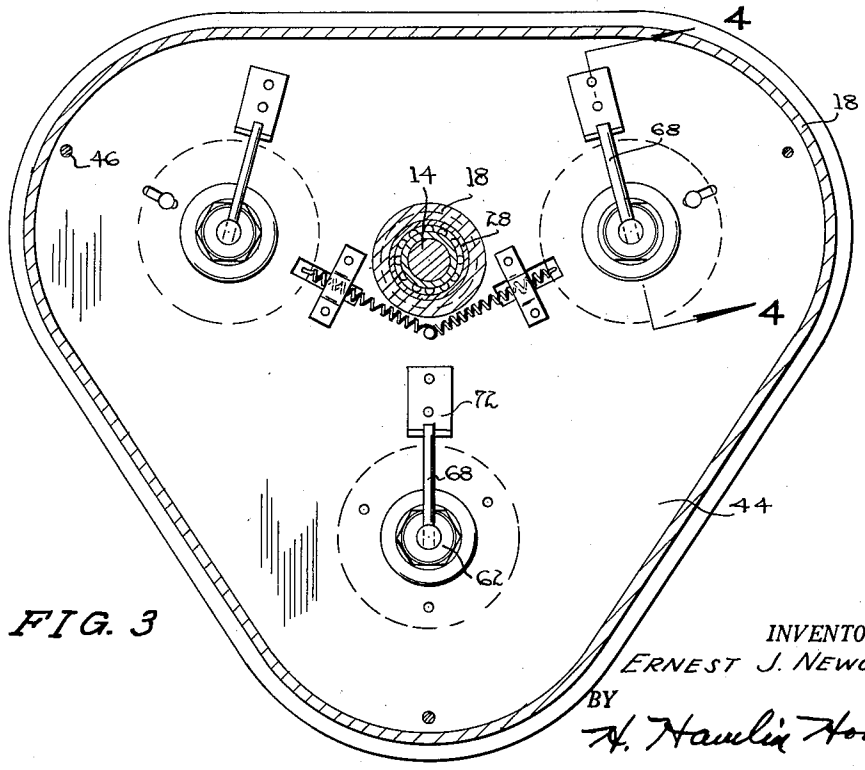


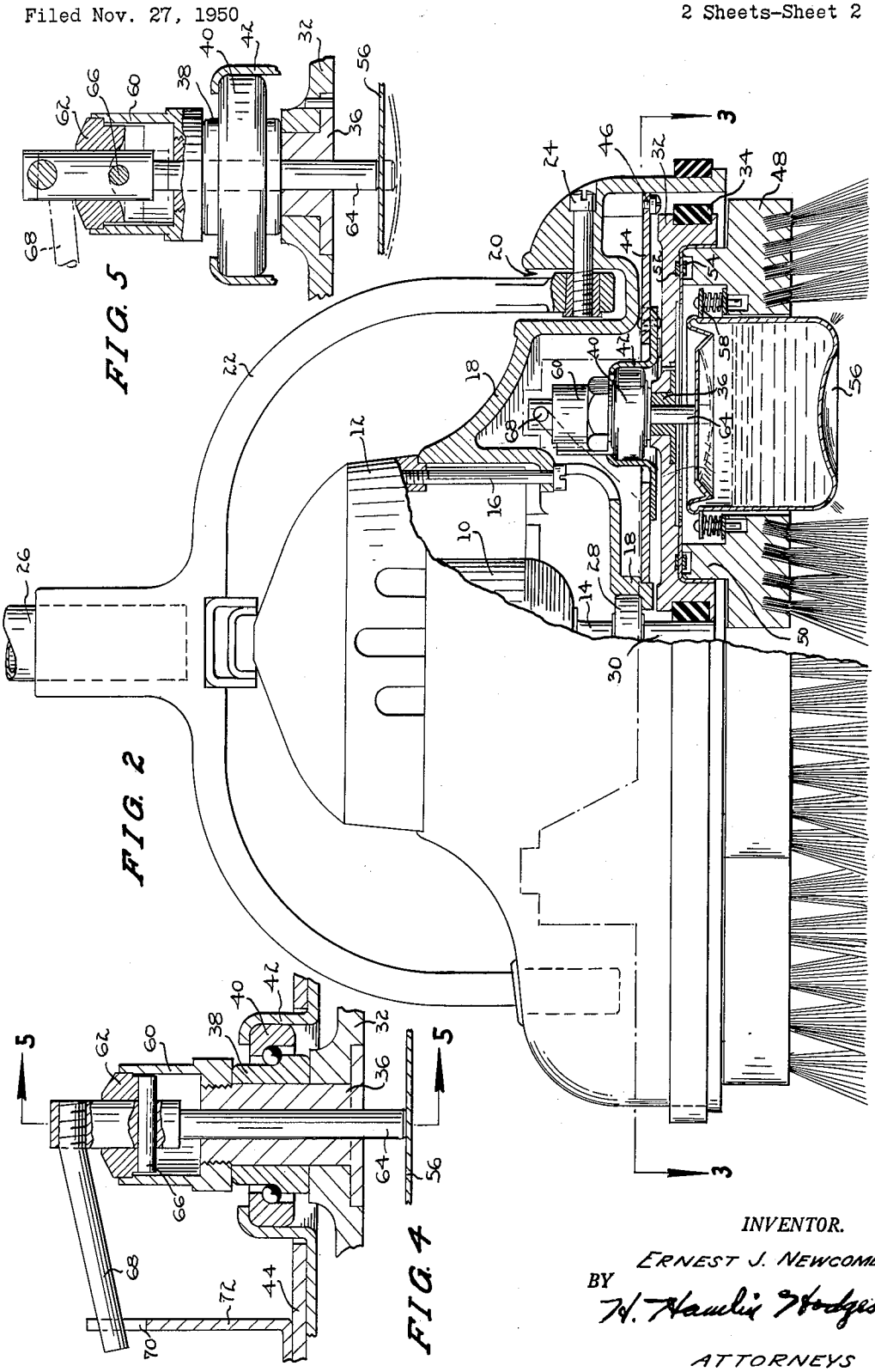
FIG. 3

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FLOOR WAXING AND POLISHING MACHINE

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FLOOR WAXING AND POLISHING MACHINE

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Application November 27, 1950, Serial No. 197,727

1 Claim. (Cl. 15—50)

My invention relates to an improvement in a floor waxing and polishing machine. This application is a continuation in part of my application Serial No. 614,966 filed September 7, 1945, and now abandoned.

My invention is adapted for use in conjunction with a waxing and polishing machine of the character that is generally provided with three brushes (see my Patent No. 1,768,137, June 24, 1930) positioned to bear on the floor surface which is to be polished. These machines generally are provided with changeable brushes, one set adapted to be used while wax is being distributed, and another set to be used to burnish the wax surface after the wax has been applied thereto. Also other forms of brushes and/or scraping tools may be attached to the machine when desired.

My invention relates primarily to a mechanism for reciprocating wax cans in a waxing and polishing machine.

An object of my invention is to provide cam operated means to effect the rapid reciprocation of a wax can.

A further object is to provide cam operated mechanism to rapidly urge a wax can downwardly against the upward urge of the can by compression springs.

A still further object is to provide a cam operated plunger adapted to move a wax can in a direction opposite to the spring-urged direction of the can.

In the drawings:

Fig. 1 is a bottom plan view with one brush broken away, the other brushes removed, and showing the forward brush holder at the top;

Fig. 2 is a view in front elevation partly in vertical cross section taken on the irregular section line 2—2 of Fig. 1;

Fig. 3 is a horizontal cross section on the irregular section line 3—3 of Fig. 2;

Fig. 4 is a vertical cross section on the line 4—4 of Fig. 3; and

Fig. 5 is a partial vertical cross section on the line 5—5 of Fig. 4.

In Fig. 1 I have shown a bottom plan view, partly broken away, disclosing the arrangement of brush holders adapted to position brushes for use with my waxing and polishing machine. This is believed to be sufficiently representative of the machine so that one familiar with present day waxing and polishing machines can readily visualize (when considered with Fig. 2) the general appearance of the machine, the same being provided with three brushes which are positioned to bear on a floor surface to be scraped, cleaned, waxed or polished, the brushes being adapted to be rotated by a single electric motor preferably being suspended with its shaft in a vertical position.

A suitable electric motor **10** of sufficient horsepower is mounted within a motor case **12** so that its shaft **14** will be in a vertical position in the approximate center of the assembled waxing and polishing machine. Preferably the electric motor **10** is secured to the motor case **12** by suitable bolts **16**, or electric motor **10** and the motor case **12** may be cast in one piece. Also secured to the motor case **12** by the bolts **16**, a housing and motor support **18** is

secured and is adapted to extend outwardly and inwardly to substantially cover and encase the three brush holders and brushes and to support the motor respectively.

On two opposite sides of the housing **18**, I provide recesses **20** in which two ends of a yoke **22** may be inserted and held pivotally by suitable pins **24**. Extending from the approximate center of the yoke **22**, I provide a handle **26** which preferably is hollow to provide suitable space for a conventional electric cord (not shown) to be suitably connected at one end thereof to the armature brushes of the motor **10**, and the other end thereof to a source of supply of electricity.

With the electric motor properly mounted within the motor case **12**, the motor shaft **14** will be in a vertical position in the approximate center of the assembled machine. The motor may be maintained in this position by the use of a suitable thrust bearing **28** which is mounted securely on the motor support **18** and is secured to the motor shaft **14**. The motor shaft is provided with a suitable friction pulley **30** secured to the end thereof and adapted to frictionally engage a rotary brush carrier **32**. The brush carrier **32** is provided with a suitable rubber or other frictional band **34** circumferentially surrounding it. The brush carrier **32** is provided with a suitable hollow hub **36** adapted to extend upwardly therefrom and be secured within the inner ring **38** of a ball bearing collar **38—40**.

The outer ring **40** of the ball bearing collar **38—40** is properly sweated or otherwise secured within the upstanding fingers **42** which are slidably secured to the holder arm **44**, which is suitably secured by rivets, bolts or other means **46** to studs extending inwardly from the housing and motor support **18** at the outer edges thereof. The inner edges of the holder arm **44** are suitably secured around the support extending downwardly from the housing **18** which is adapted to have secured thereto the thrust bearing **28**.

The brush carrier **32** is in the form of a hollow ring and is adapted to provide space for a brush **48** having an upwardly extending portion **50**. The portion **50** of the brush **48** is provided with suitable lugs **52** which are adapted to be engaged by similar lugs **54** secured on the brush carrier **32**.

Within the brush **48**, space is provided for the insertion of a wax can **56** which may be held by its peripheral sealing edge on a spring-urged ring **58** to normally hold the wax can **56** upwardly within the brush **48** (tending to move away from the bristles).

At the end of the hollow hub **36** remote from the brush carrier **32**, I provide a collar **60** which may be secured to the hub **36** by conventional screw threads. Within the collar **60**, I suitably secure a cam **62** having diametrically opposed high lobes. Thus the cam **62** secured to the collar **60** which is screw-threaded to the hub **36**, will revolve with the hub and the brush carrier **32** to which the latter is secured.

A plunger **64** is adapted to pass through the cam **62**, hollow hub **36** and come into engagement with the cap of the can **56** positioned within the brush **48**, which is urged into contact with the plunger **64** by the spring-pressed ring **58**.

Secured transversely to the plunger **64**, I provide a pin **66** which is adapted to bear against the cam **62** so that, as the same is rotated, the pin **66** and plunger **64** will be urged downwardly against the spring-urged ring **58**. The plunger **64** and its transverse pin **66** are prohibited from rotating with the hub **36** and collar **60** by the laterally extending rod **68** which is adapted to slide up and down within the slot **70** of the upstanding lug **72** which is secured to the holder arm **44**.

With this construction, it may be readily seen that the wax can **56** (having suitable discharge holes therein) may

be positioned within a brush 48 which is provided with a central opening and which is held by the brush carrier 32 which is adapted to be rotated by a suitable motor 10. Also means are provided for causing the wax can to be reciprocated so that as it revolves with the brush, it will be caused to move upwardly by the spring-urged ring 58 and downwardly by the cam advanced plunger 64. Such rapid up and down oscillation of the can 56 will add to the effect of the centrifugal force under which the wax within the can is being discharged therefrom.

I claim:

In a waxing machine, a plurality of centrally bearinged brush carriers rotatably supported by a housing in which a motor having a vertical drive shaft is supported, each of said carriers frictionally engaging at least one other carrier and at least one of said carriers frictionally engaging a pulley mounted on one end of the vertically positioned motor shaft, all of said carriers being rotatably driven, a brush removably affixed to each of said carriers, wax cans having peripheral dispensing openings therein within centrally disposed void spaces in said brushes, spring means urging said wax cans toward said brush carriers, cams secured to said brush carriers and adapted to rotate therewith, reciprocating plungers extending through the central bearings of said carriers and bearing upon said cans, the reciprocating plungers having transverse pins secured thereto which engage said cams rotated by the carriers, and means for preventing rotation of said plungers, whereby rotation of the said brushes and their cams causes the plungers and wax cans to reciprocate.

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