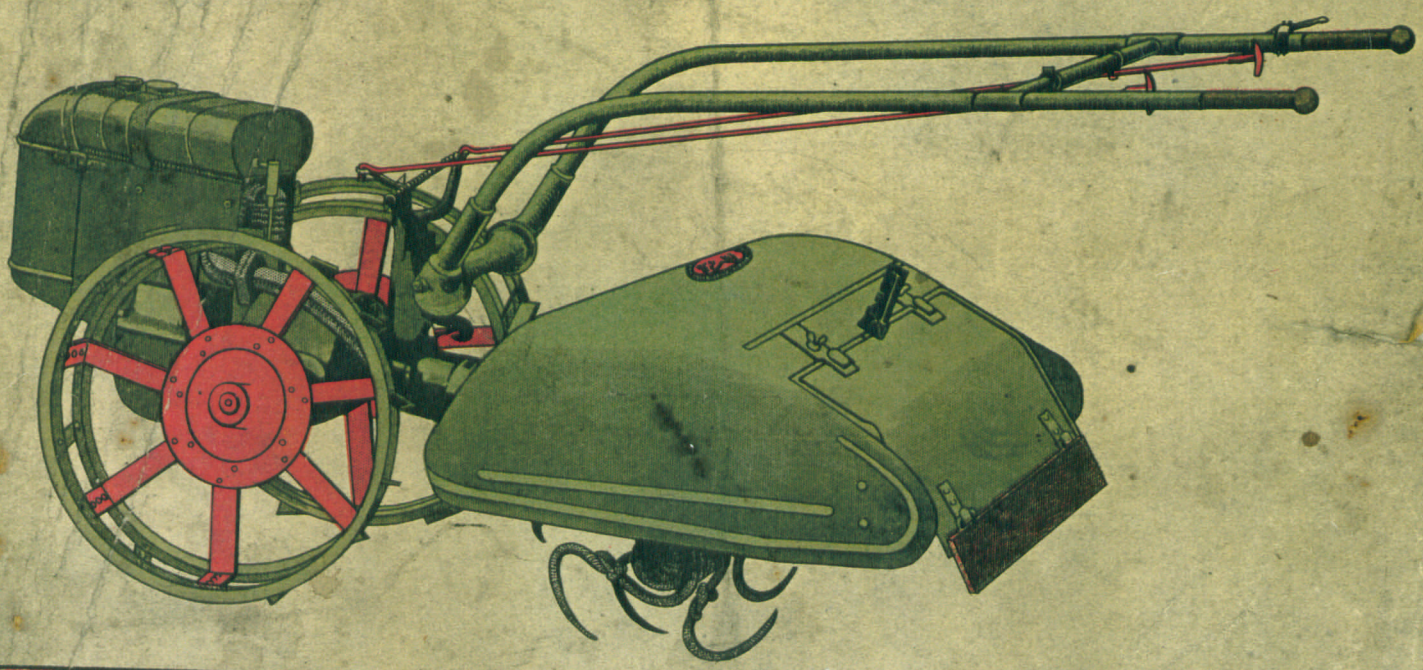
ONE OPERATION

TILLING
CULTIVATING
RIDGING
MOWING
POWER
GENERATING
and

PROFIT MAKING

SIMAR ROTOTILLER 5



SELLING AGENTS FOR THE BRITISH ISLES

GeoMonro Ltd

MACHINERY SECTION

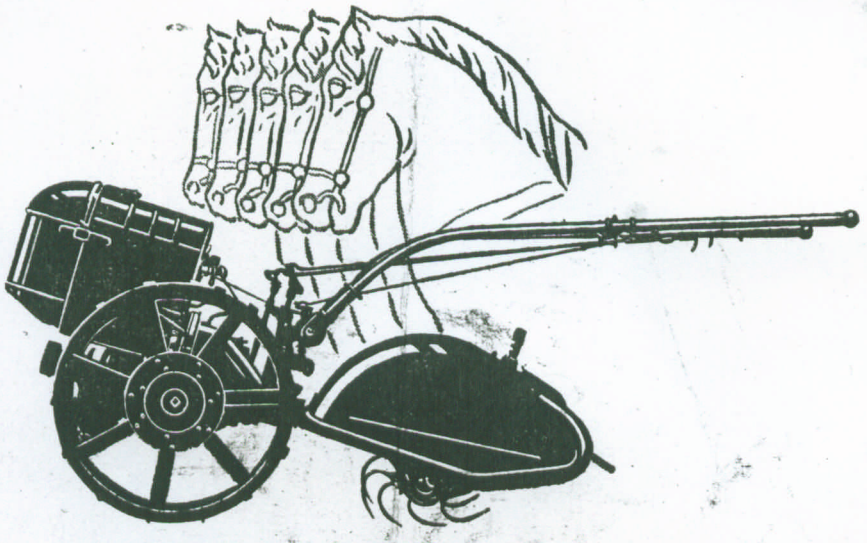
WALTHAM CROSS Herts.

IT·DOES·NOT·COST

IT PAYS

1930 EDITION

THE GREATEST ADVANCE EVER MADE IN EFFICIENT CULTIVATION.



5,000 NOW IN USE

Amongst the many Agricultural Colleges and Research Stations and other Official Bodies using Rototillers can be instanced the following:—

Rothamstead Experimental Station, Harpenden.
South Eastern Agricultural College, Wye, Kent.
Horticultural Research Station, Cambridge.
Somerset Farm Institute, Cannington, nr. Bridgwater.
Welsh Plant Breeding Station, University College of Wales, Aberystwyth.
Pibwrlwyd Farm Institute, Carmarthen.
Flintshire Education Authority, Mold.
The Drs. Newington, Ticehurst House, Ticehurst.
Scottish Society for Plant and Research Breeding.
Imperial Forestry Institute, Oxford.
Royal Horticultural Society, Wisley Gardens, Ripley.
Forestry Commission, Shrewsbury.
Forestry Commission, Edinburgh.
Forestry Commission, Aberdeen.
Linen Industry Research Assoc., Lambeg, Co. Antrim.
St. Andrew's Hospital, Northampton.
Calderstones (Certified Institute for Mental Defectives), Whalley, Blackburn.
Ministry of Transport, 7, Whitehall, S.W.1.
Elbridge Experimental Station, Saltash, Cornwall.
County Mental Hospital, Bridgend, Glam.
Glamorgan Blind School, Bridgend.
National Sanatorium, Benenden, Kent.
East Anglian Institute of Agriculture, Chelmsford.
Springfield Mental Hospital, Upper Tooting, S.W.
Cheadle Royal Hospital, Cheadle, Cheshire.
North Wales Counties Mental Hospital, Denbigh.
County Mental Hospital, Wittingham, nr. Preston.

IF you can do so purchase your ROTOTILLER in advance of the season when it will be needed for continuous heavy work. By doing so you will become better acquainted with the handling of the machine. Besides this a period of light work is all to the good of a new engine.

USE a ROTOTILLER to raise not only your crops but also your profits.

WHEN you have finished with this Booklet please pass it on to a friend. We believe you will thereby render him a service. We shall appreciate your courtesy.

IF as a ROTOTILLER user you ever experience cause for complaint please write fully to us, when the matter will be investigated to your satisfaction.

EVERY ROTOTILLER is fully guaranteed against defect in material or workmanship.

FREE demonstrations represent an integral part of our sales policy. There is no obligation incurred when a demonstration is arranged.

USERS are enthusiastic. You will be no less so when you realise in practice the inestimable boon of our machines.

EVENTUALLY

YOU WILL USE A ROTOTILLER—

WHY NOT NOW?

ROTOTILLER 5

(MARK D)

THE RESULT OF TEN YEARS OF RESEARCH, EXPERIMENTING AND PRACTICAL TESTING.

FIG. 1.—This untouched photograph was taken after one hour's work with a new machine and gives an adequate idea of the quality and quantity of the work which the ROTOTILLER is capable of accomplishing.

The ROTOTILLER 5, one of the latest and most ingenious members of the family of Rototillers, embodies many novel features and has been specially designed for—

NURSERIES.
BUSH FRUIT PLANTATIONS.
ORCHARDS.
GLASSHOUSES.
BULB FARMS
MARKET GARDENS.
FLOWER GARDENS.
SMALL HOLDINGS.
KITCHEN GARDENS.
LANDSCAPE GARDENING.
POULTRY RUNS
FORESTRY WORK.
STRAWBERRY CULTIVATION.
CHRYSANTHEMUM CULTIVATION.
PRIVATE ESTATES.
SUGAR BEET CULTIVATION.
POTATO CULTIVATION
COLONIAL PLANTATIONS.
TEA GARDENS.
DITCH DIGGING.
CIVIL ENGINEERING WORK.

The principal tasks which can be performed by the ROTOTILLER 5 are:—

DEEP TILLAGE OR SURFACE CULTIVATION IN THE OPEN FIELD.
DEEP TILLAGE OR SURFACE CULTIVATION BETWEEN ALL CROPS PLANTED IN ROWS.
CULTIVATION OF NARROW ROWS BY STRADDLING ONE ROW OF PLANTS.
RIDGING, ROLLING, WEEDING, GRASS-CUTTING, STATIONARY POWER GENERATING.
MANURE MIXING, etc., etc.

ROTOTILLAGE

AN OLD UTOPIA . . . . . .

"AGAIN and again be it repeated, that it is not ploughing neither is it digging, that we want. These are only means. What we want is the end; we care not for the process. Give me a seed-bed; show me the soil comminuted, aerated, and inverted, six or eight inches deep, and I will not ask you how it came so. What does that matter? If you wanted your coffee ground for breakfast to a certain fineness of texture, would you be very particular to ask whether the mill that crushed the fragrant berry had worked by horizontal, vertical, alternate, elbow-crank, or by circular motion? If the farmer or the gardener could only have his seed-bed made ready for him as fine as a new mole-heap, or to any other coarser texture, according as he wants it, do you think he would care whether the soil had been first cut into longitudinal strips plough-fashion, or into square cubes, spade fashion, before it was finely granulated for his use?"

* * * * * * * * * * * *

"BUT if it is not ploughing, and it is not digging, what is it? 'Go to the Mole, thou dullard,' the old proverb might be travestied, 'consider her ways and be wise'—who without any coulter, share, or mould-board without spade, hoe or pickaxe, leaves behind in her rapid trace a finer mould than ever Ransome, Howard, or Croskill, than ever spade or rake produced, or the most careful-handed gardener chopped up to pot his plants with. The very rabbit scratches his hole in the ground, or the fox that scratched after him,—like a king crab, to eat the kernel and lie in the shell,—or the dog that scratches after both,—the whole tribe of 'claw-foot' in fact,—had scratched hard earth into soft mould before ever the plough or the spade, or even the more ancient hoe, had broken ground on this planet."

* * * * * * * * *

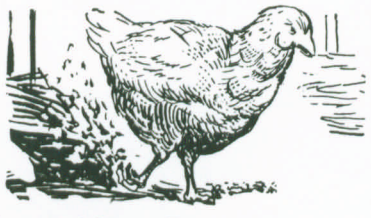
* * * * * * * * * * *

"'WHAT you save in speed you gain in power'; and an instrument, which completed the whole work of tillage as it moves along will hardly be required to go much faster. At that speed it would cover four acres a day—not of 'ploughing,' not of 'harrowing,' not of 'rolling,' not of 'scuffling,' not of 'rolling again,' 'cross-ploughing,' 'clod-crushing,' 'rolling again,' 'ridging up,' 'sowing,' and 'harrowing in,' but of all these epithet processes in one comprehensive act—and word—CULTIVATION."

* * * * * * * * * * * * * *

"IT is not ploughing, it is not harrowing, raking, hoeing, rolling, scarifying, clod-crushing, scuffling, grubbing, ridging, casting, gathering, that we all want; all these are the time-honoured, time-bothered means to a certain result. That result is—a seed-bed; and a seed-bed is, simply described, a layer of soil from six to twelve inches in depth, rendered fine by comminution, and as far as possible inverted during the process."

* * * * * * * * * * * * * *



"BEFORE we depart this life, we shall see one more wonder moving upon the face of the earth, something of this form and fashion—to wit—a transverse cylindrical shaft armed with case-hardened tine-points, in shape like a mole's claw, arranged so that the side lap of each claw may cover the work of the other, and no interval or ridge left uncut; that is a 'CULTIVATOR.' The revolution of the cylinder is not against but with that of the wheels, not dragging or retarding, but rather helping the advance of the whole machine."

Extracted from "TALPA OR THE CHRONICLES OF A CLAY FARM," by C. W HOSKYNS, dated 1853.

. . . . . REALISED ! !

THE ROTOTILLER 5.

The ROTOTILLERS soon after their first appearance were adopted with a considerable measure of success by some growers who were quick to realise their potentialities. In some quarters, scepticism as to their performance in practice was expressed, however sound the principle might seem to be in theory.

Those growers who were the first to recognise the value and advantages of the machine remain to-day amongst the most satisfied users. In many cases further and later machines have been acquired to supplement those initially bought.

FIG. 2.—THE ROTOTILLER 5 AT WORK ON A STEEP GRADIENT.

By means of practical demonstrations carried out throughout the country, and in each case free of obligation, the merits of the ROTOTILLERS have become more and more to be recognised and acknowledged, and there now exists a wide circle of users, who are alive to the benefits arising from the use of the machine.

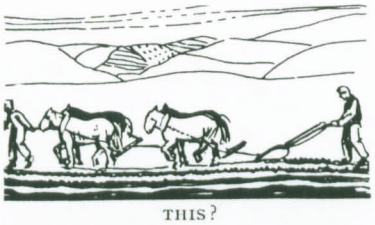
Since they were first introduced, enormous strides have been made in perfecting these tools, and development has been made along the lines of producing a mechanically perfect machine, while at the same time every endeavour has been made to improve the machine in the light of growers' requirements. Grateful acknowledgment is here made to those users of machines who have forwarded suggestions for improvements or modifications.

FIG. 3.—CULTIVATION WITH THE ROTOTILLER 5 FITTED WITH TWIN MILLER BETWEEN WHEAT SOWN IN ROWS.

The ROTOTILLER 5 embodies every technical improvement including extreme accessibility and simplification of construction and handling.

Preliminary tests under the most difficult conditions which could be found were carried out with this new model for a period of two years preceding its appearance on the market. This safeguard, combined with subsequent improvements arising from the practice of users has resulted in the machine being given a final form which growers can be assured is capable of giving continued service, however arduous may be the conditions. It is realised that once a grower possesses such a machine, he is entitled to expect that it will serve him faithfully and well. To secure this end a SERVICE ORGANISATION is in being, which procures for the user without delay or trouble that advice, information or assistance which he may require.

THIS?



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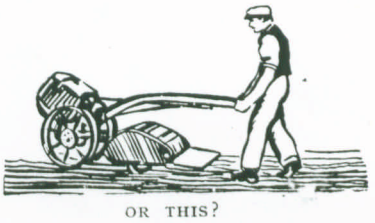

OR THIS?

SEIZES EVERY OPPORTUNITY

ROTOTILLER 5

(MARK D)

CATCHES THE WEATHER

The ROTOTILLER 5 is capable of doing on a smaller scale, work which is quite as efficient as that of its bigger brother, the well-known and widely-used ROTOTILLER 10, both as regards deep tillage or surface cultivation. The new machine represents a most encouraging sign of progress, for it meets a very definite demand which had been previously found to exist for a machine on a smaller scale than the ROTOTILLER 10. Thus ROTOTILLAGE is brought within a wider and widening circle of users. The low initial outlay is very quickly returned in the form of labour costs saved and increased quality and quantity of yields. Its principal advantage as compared with the larger machine is that it is lighter and more compact and can thus be used on those plantations where the ROTOTILLER 10 is found to be too large. The ability to straddle rows is unique to the new model, and for certain classes of cultivation, this constitutes a very important advantage.

It is impossible to appreciate fully the remarkable performance of which this machine is capable without first witnessing a demonstration of the machine in action. Such demonstrations have moreover, the effect of convincing the onlooker that older processes of soil tillage do not bear comparison with the more recent method afforded by "ROTOTILLAGE" with the additional effect that any preconceived prejudice against the principle of the machine is rapidly dispelled.

THE ROTOTILLERS HAVE BEEN AWARDED

Silver & Bronze Medals

BY THE

HIGHLAND & AGRICULTURAL SOCIETY (DUMFRIES, 1922),
(HIGHEST AWARD)

THE

ROYAL DUBLIN SOCIETY (BALLS BRIDGE 1925),
(HIGHEST AWARD)

AND THE

ROYAL CORNWALL AGRICULTURAL ASSOCIATION (1929)

GUARANTEE.

Each machine is covered by manufacturer's guarantee, extending to twelve months from date of purchase, and covering free replacement of any part or parts found to be defective in material or workmanship during that period.

FIG. 4.—INTER-CULTIVATION WITH THE STANDARD MILLER.

THE PRINCIPLE.

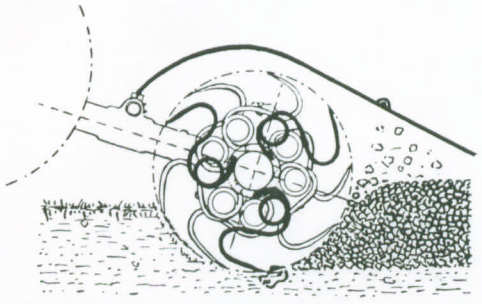

FIG. 5.—DIAGRAM ILLUSTRATING THE ROTOTILLER PRINCIPLE. Note the direction of the fast rotating claws or tines; no backward resistance.

The ROTOTILLERS have revolutionised soil tillage and cultivation methods by replacing the various processes hitherto employed by ONE SINGLE OPERATION.

In comparison with less modern methods of soil cultivation, the chief point of difference lies in the fact that instead of dragging a rigid tool, the ROTOTILLER is helped forward by its rotary power-driven elastic tines. In this manner the engine power is applied directly to soil tillage, instead of being almost completely wasted by first being converted into a translatory pull.

The tilling unit (or "Miller" as it is termed) consists of a cylindrical drum mounted parallel to the axle of the driving wheels and revolving in the same direction as the latter. This "Miller" takes its drive direct from the engine and is independent of the wheels of the machine. The drum consists of a shaft on which are mounted two sleeves, one on either side of a central casing containing the driving gears. The sleeves carry a number of separately spring-mounted claws or tines, twelve of these working tools being used in the case of the standard No. 5 machine. Their action consists in biting the soil along the edge of a self-made trench, equal in length to the width of the "Miller" track. The soil so displaced is thrown backwards and moulded by a board carried behind the machine. This board forms part of a hood completely enclosing the top and sides of the Miller and ensures the formation of a perfectly level tilth and seed bed.

"ROTOTILLAGE" presents a drastic departure from long-established methods but the merits of the Rototillers are now becoming increasingly to be recognised in every country of the world. It is acknowledged by users that in the long run the method does not count for much—it is the result which matters. Users are unanimous that the results with Rototillers exceed anything previously achieved, as well as their own most sanguine expectations.

The special advantages resulting from the use of the ROTOTILLER for soil tillage are as follows:—

(1) PERFECT TILTH in one operation to any required depth at will from 2 to 10 inches, equally effective for deep tillage or surface scuffling.

(2) MORE THOROUGH AERATION and better percolation than is possible after ordinary ploughing and cultivation. This is a point which will call for some explanation. The fineness of tilth which the ROTOTILLER is capable of producing

FIG. 6.—MANURE MIXED BY MEANS OF THE ROTOTILLER IS EVENLY AND CONSISTENTLY DISTRIBUTED THROUGHOUT THE TILTH.

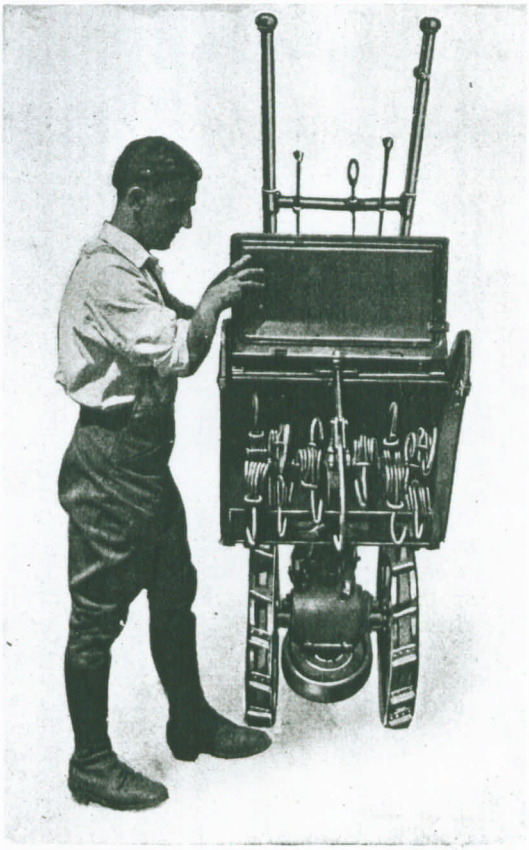

FIG. 7.—This picture shows clearly the arrangement of the miller unit.

FIG. 8.—PREPARING A SEED BED WITH THE ROTOTILLER 5.

is sometimes apt to be condemned by those inconversant with the principle of Rototillage, this applying particularly to over-winter cultivation. It is the common opinion that a fine tilth is not wanted at the back end of the year, since with the winter rains the land would become puddled, causing bad percolation of water and bad aeration. The tilth produced by the Rototiller differs considerably however from ordinary tilth in that its intense aeration will replace the frost which is often missing, and will allow the evacuation of surplus rain water. Rototillage does not result in the formation of a pan, the revolving tines leaving a broken bottom, in marked contrast to the smooth and compressed bottom left by the plough. This allows further water to drain away freely during wet spells and assists capillary action in time of droughts. It also obviates the necessity for periodical sub-soiling. In the case, however, of previously ploughed land which has been allowed to pack it is advisable to carry out a sub-soiling operation to break up the plough pan, after which sub-soiling need not be further resorted to.

(3) MANURES of any description, including green crops, are mixed evenly and consistently throughout the total depth of tilth.

(4) THE COMPACTNESS and size of the machine permits its use where tractors or even horses could not be employed. It will cultivate between very narrow rows and can be turned in an extremely confined space since the method employed is to raise the machine almost to a vertical position, nosedown, and to pivot it round on its wheels, as illustrated on page 8, fig. 16. This feature enables headlands to be reduced to a minimum. ON ACCOUNT OF ITS SMALL SIZE AND LIGHTNESS IT IS OF ESPECIAL VALUE FOR WORK IN GLASSHOUSES.

(5) UTMOST EFFICIENCY as a cleaning tool, being unrivalled for keeping land free from all weeds

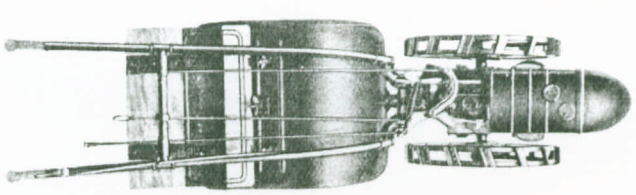

FIG. 9.—THE MACHINE AS SEEN FROM ABOVE. Note its compactness, also the accessibility of the controls.

including couch grass. The weed-seeds germinate more rapidly after rototillage, and repeated cultivation automatically kills the young weeds, while the advantage to the crop of continued hoeing is universally acknowledged.

(6) EXTREME ECONOMY, due to its efficiency, which in turn is a consequence of the light weight of the machine and of the lightness of the grip required for the wheels. Depreciation, fuel consumption, and wear and tear of working tools are low. The saving in labour costs is overwhelming.

(7) FLAT WORKING, the soil not being displaced sideways, as in the case of ploughing.

(8) MARKED INCREASE in yield and quality of produce.

(9) ADAPTABILITY to a variety of other uses. In addition to DEEP OR SHALLOW CULTIVATION it will do all the work of:—

RIDGING.
ROLLING.
MOWING.
STATIONARY POWER GENERATING.
TURF REJUVENATING.
PREPARATION OF POTTING SOIL.

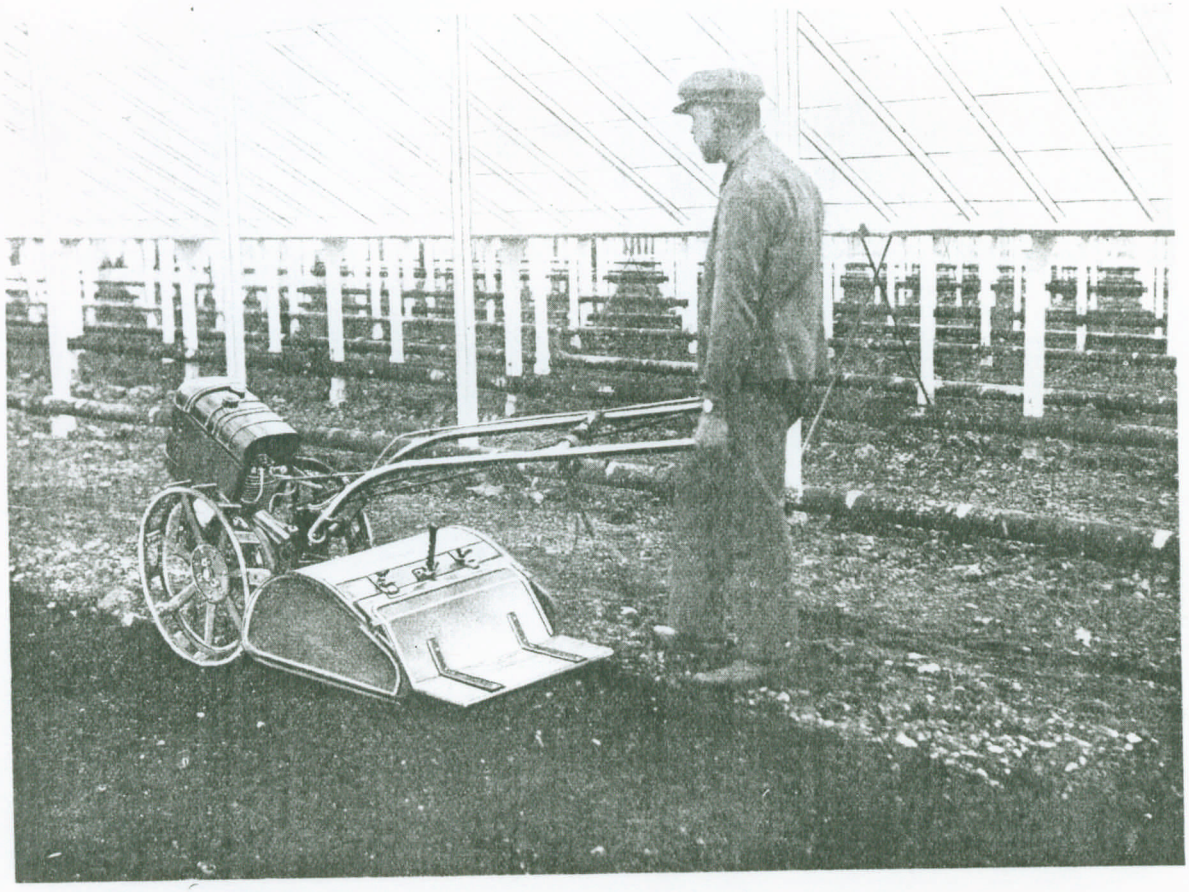

FIG. 10.—THE MACHINE AT WORK IN A GLASSHOUSE.

FREE DEMONSTRATIONS ARRANGED IN ANY DISTRICT ON REQUEST

SERVICE AFTER SALE IS AN ESSENTIAL PART OF OUR SELLING ORGANISATION

FIG. 11.

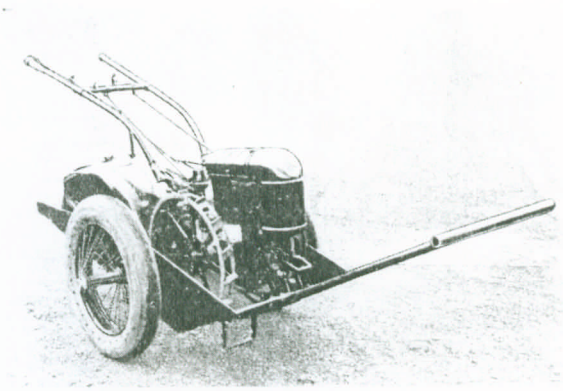

FIG. 12.—THE ROTOTILLER 5 MOUNTED ON THE DUAL PURPOSE TRUCK AS DESCRIBED ON PAGE 16 OF THIS LEAFLET.

FIG. 13.

The two photographs above give a clear idea of the compactness of the machine, and show the confined spaces in which it is possible to work.

FIG. 14.—THE ROTOTILLER ENGAGED IN MIXING A DRESSING OF LIME WITH THE SOIL.

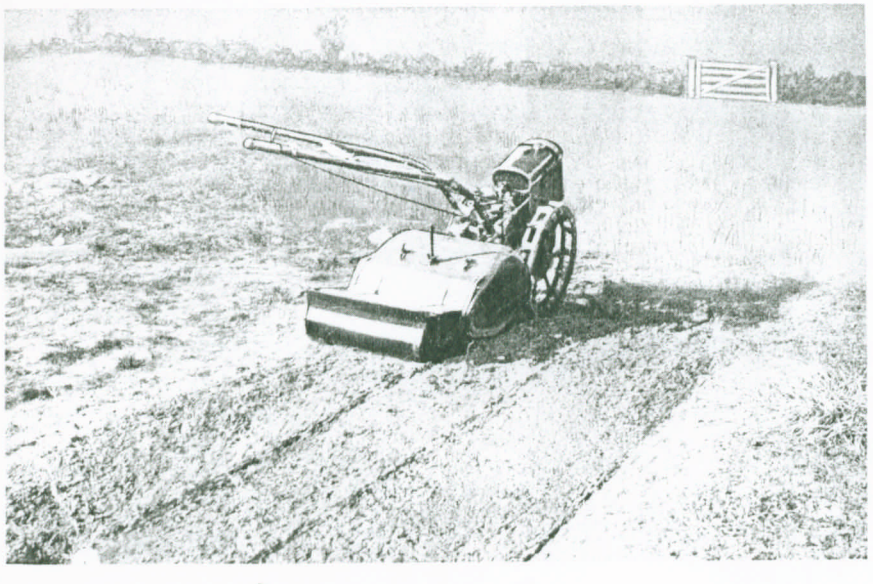

FIG. 15. THE COMBINED OPERATION OF TILLING AND ROLLING AS DESCRIBED ON PAGE 15.

It is clearly shown how completely the mixing is carried out. The lime is consistently mixed with the soil down to the maximum depth tilled.

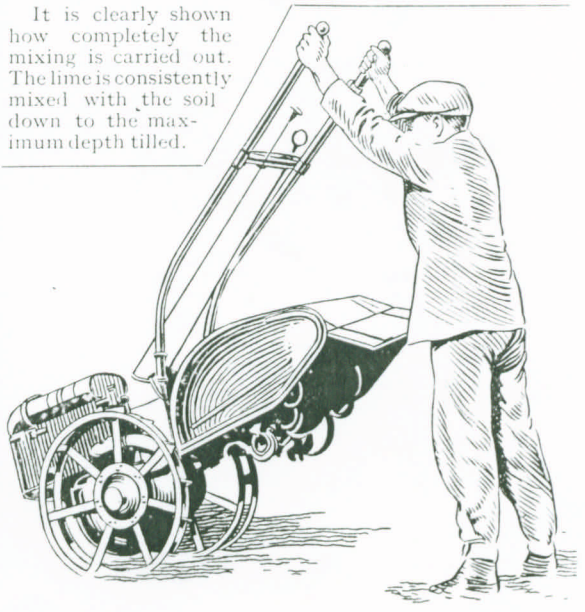

FIG. 16. THIS ILLUSTRATION CLEARLY SHOWS THE RESTRICTED SPACE NECESSARY FOR TURNING.

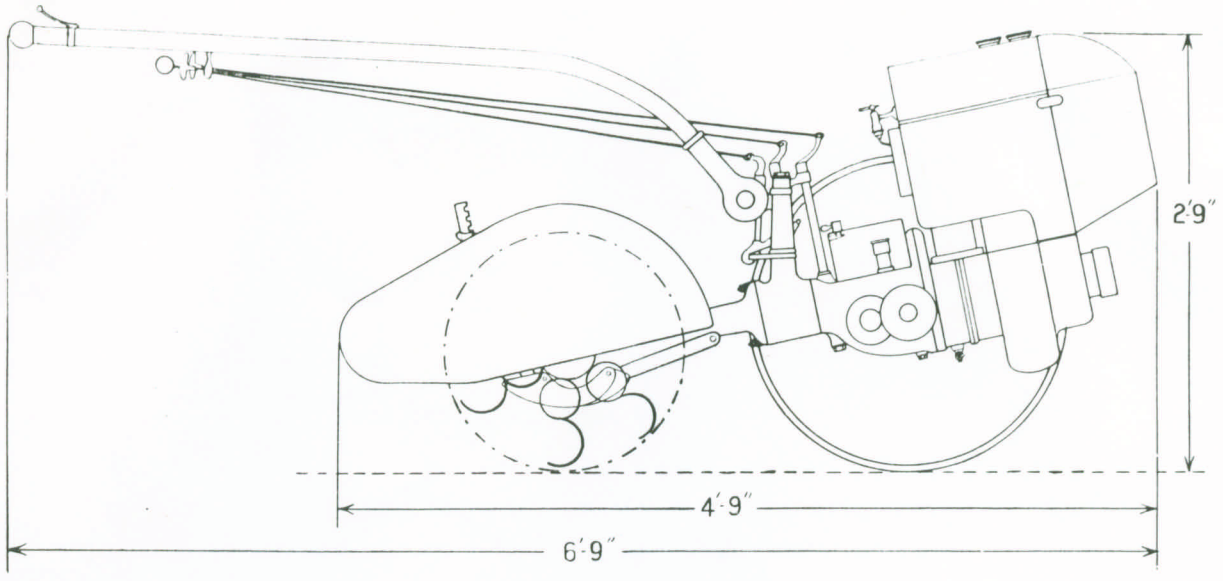

FIG. 17. THE ROTOTILLER 5 IN DIAGRAM.

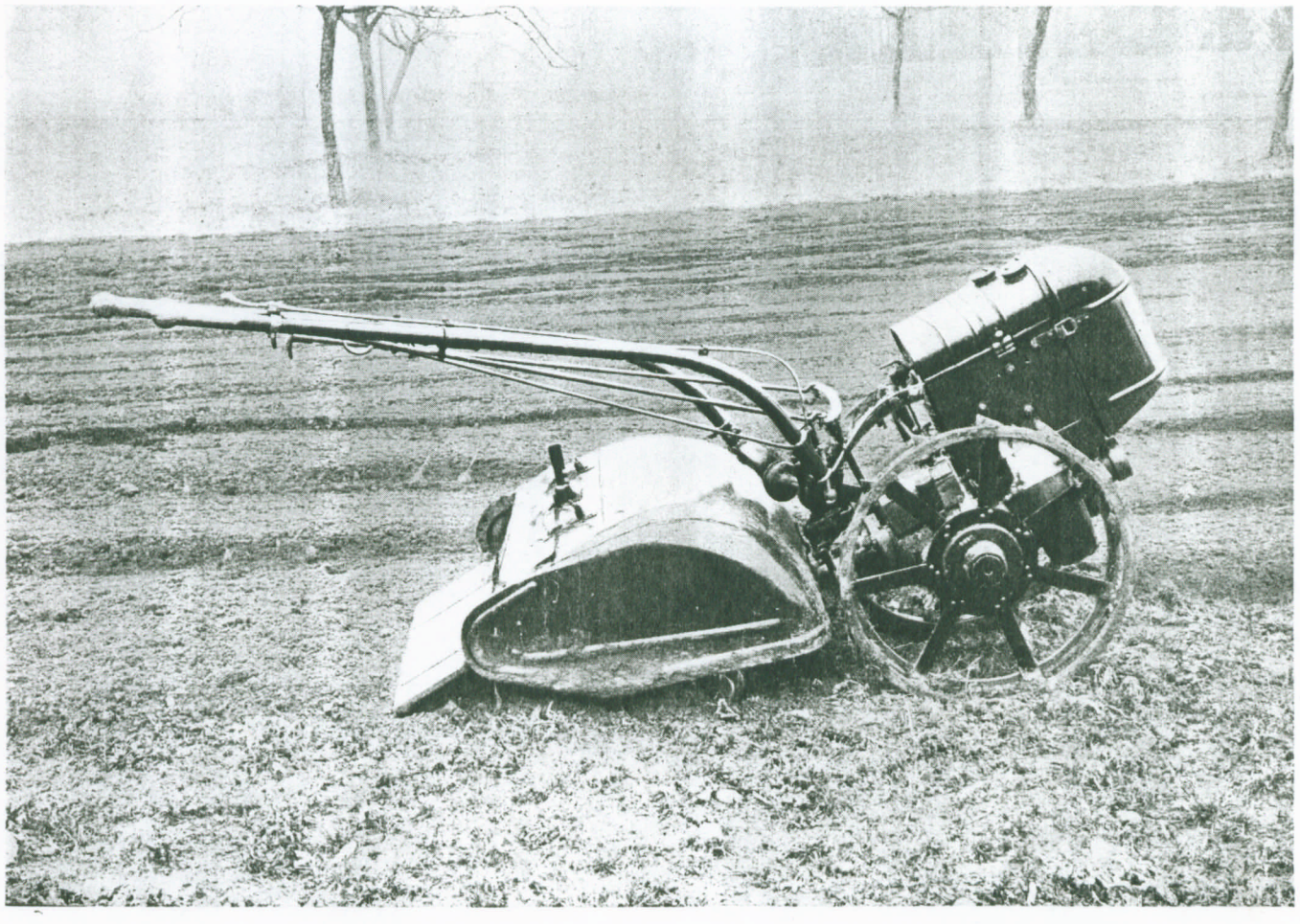

FIG. 18. THIS ILLUSTRATION SHOWS THE ACTUAL WORKING POSITION OF THE ROTOTILLER 5.

ROTOTILLER 5

(MARK D)

SPECIFICATION.

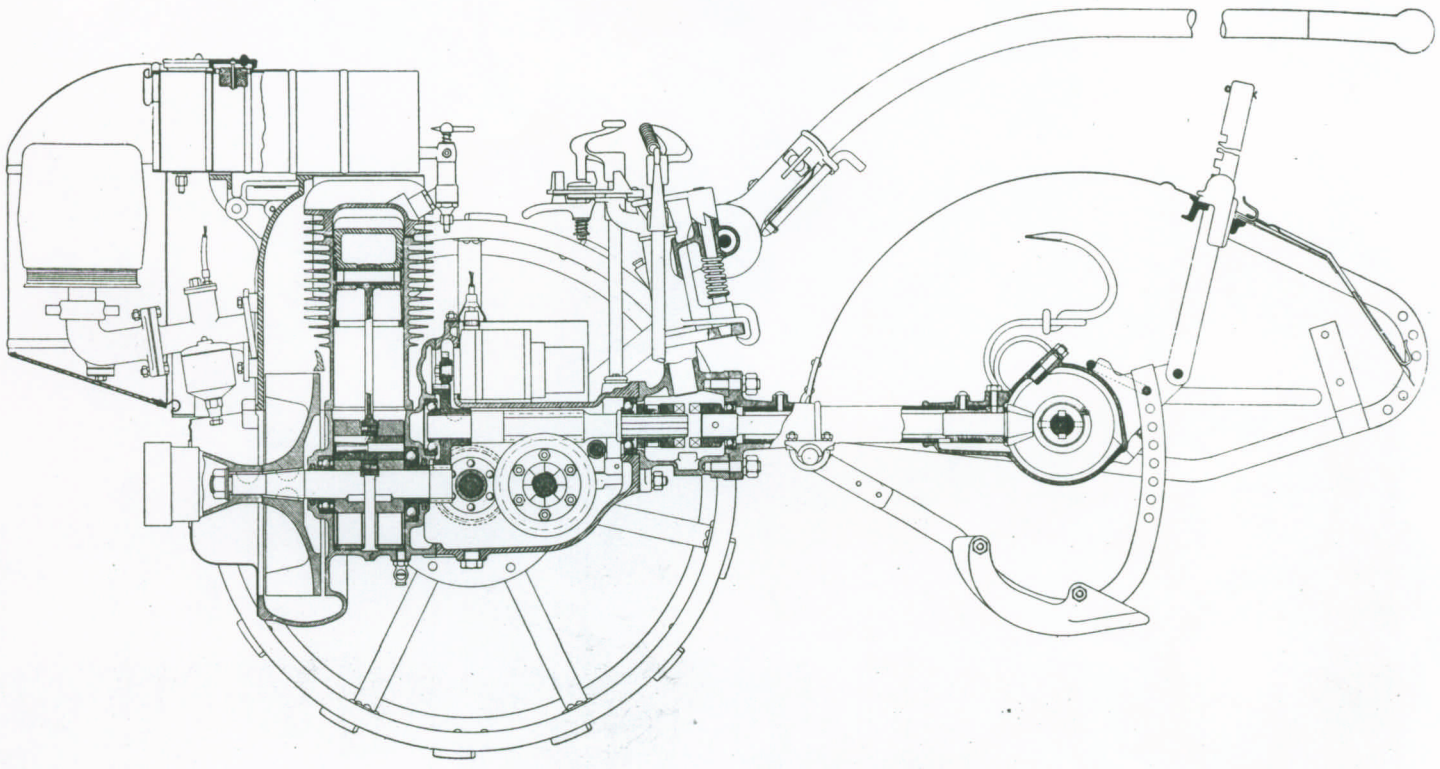

FIG. 19.—THE ROTOTILLER IN SECTION.

BODY.

The Body consists of three readily-detachable units. These are:—

The Engine unit.
The Gear Box unit.
The 'Miller' unit.

OVERALL DIMENSIONS (See also Fig. 17).

Greatest height, 33 ins.; total length, 6 ft. 9 ins. from the front of the bonnet to the extremity of the guiding handles.

TOTAL WEIGHT.

Three and a half cwt. in working order.

ENGINE.

The Simar 5 h.p. patented two-stroke Engine has been specially designed and built for the machine after exhaustive tests in connection with durability, external and internal cooling, reaction to overload, simplicity, efficiency and strength.

The cylinder capacity is 350 c.c.

The crankshaft is mounted on ball-bearings of very generous dimensions, and the big end on double roller-bearings, allowing for excessive strain or overload.

The engine is lubricated by mixing oil with the fuel so that oil consumption is strictly proportionate to the power required. A measure is supplied with each machine for the purpose of measuring the quantity of oil to be used per gallon of fuel.

The piston is manufactured from special alloy of high quality and is provided with an unique patented feature providing for the internal and automatic cooling, eliminating all the usual drawbacks of the two-stroke principle, and of air-cooled engines in general. This constitutes a particular advantage in the case of tropical climates.

COOLING.

The engine is air-cooled by means of a powerful turbo-fan (without fan belt) ensuring perfect cooling under every condition, without possibility of failure.

IGNITION.

By means of British made high-tension Magneto, dust and waterproof, fitted with advance and retard lever.

CARBURETTOR.

Fixed jet type, specially designed for the Rototiller after exhaustive tests. It is operated by Bowden cable control from the steering handles. The Carburettor has been constructed to combine efficiency with economy, yet easily accessible.

AIR CLEANER.

The engine is equipped with a very efficient labyrinth double-action Air Filter, providing a coarse preliminary cleaning and a more thorough second cleaning, thus preventing the possibility of any dust being admitted into the engine.

SPECIFICATION—(*continued*).

FUEL.

The Simar engine embodies entirely new conceptions, which enable the use of paraffin or alcohol without any complications whatever. The standard machine is fitted for using at will petrol, benzole or alcohol, with the necessity of only a slight adjustment of the carburettor. A simple exchange of the cylinder head permits of the use of paraffin as fuel.

FUEL TANKS.

Two tanks are provided; the larger has a capacity of one gallon; the smaller contains one quart. The small tank is of service to contain petrol for starting purposes when it is desired to use paraffin or alcohol as fuel. Where petrol or benzole is employed exclusively, the contents of the smaller tank can be considered to constitute a reserve supply. A two-way tap to the petrol tanks is provided.

CONSUMPTION.

1 to 3 gallons per acre, according to depth tilled and nature of the ground; Oil: 6 per cent. of the petrol consumption.

GEARS.

Drive to wheel-shaft by steel worm and phosphor-bronze worm-wheel, thence by hardened nickel steel gears all enclosed and running in oil. An extremely simple and fool-proof type of clutch is employed on the machine, the gear change being effected by sliding dogs on the lay shaft, the gears themselves being in constant mesh.

SPEEDS.

Two speeds are provided, the change of speed being effected instantly by means of a lever situated on the guiding handles. The top speed corresponds to over two miles per hour and the bottom speed to ¾ mile per hour at normal engine speed.

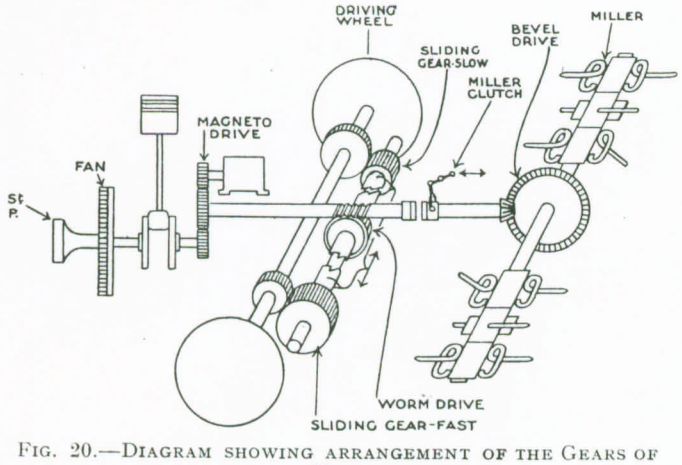

FIG. 20.—DIAGRAM SHOWING ARRANGEMENT OF THE GEARS OF THE MACHINE.

FIG. 21.—SIMAR ROTOTILLER 5 FIXED WITH SPECIAL WHEEL PROTECTIONS AS DESCRIBED ON PAGE 14.

OUTPUT.

The output with standard wheels and standard miller is one to three acres of *soil tilled* per day of eight hours. The area covered in a given time of planted land will consequently be larger on account of the space occupied by the crops.

DRIVING WHEELS.

The driving wheels are 23 inches in diameter and are made of steel assembly with angle iron treads. The overall wheel track is 18 inches, or can be reduced to 14 inches by reversing the wheels. They are mounted on hubs fitted with a permanent friction clutch device eliminating any excessive strain on the mechanism. The width of the rims is 3 inches.

STEERING.

The machine is steered by means of two guiding handles so arranged that the driver can follow behind the machine or walk at either side according to conditions, the desired change being effected whilst the machine is working. A further device permits the height of the guiding handles to be adjusted to suit the height of the driver and the depth of work required. All controls are situated on the guiding handles within ready access of the driver. This makes for great facility in operation and almost certain fool-proofness.

SPECIFICATION—(*continued*).

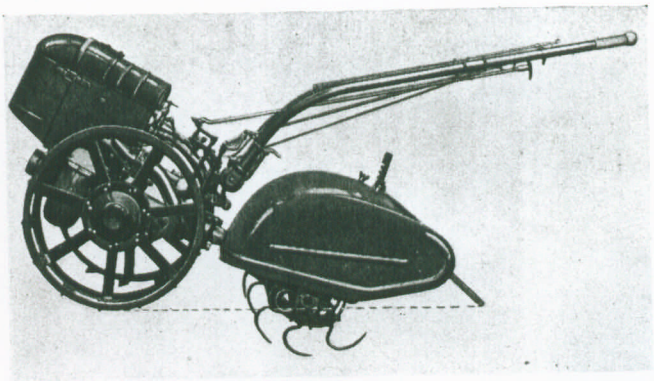

FIG. 22.—THIS ILLUSTRATION CONVEYS A GOOD IDEA OF HOW THE MILLER WORKS IN THE SOIL. THE SOIL LEVEL IS INDICATED BY DOTTED LINE.

ROTARY MILLER.

The Rotary Miller is driven by bevel pinion and crown wheel running in oil enclosed in an extension of the gear box rigidly coupled to the latter. The miller normally runs at about 150 revolutions per minute. The crown wheel is mounted on the centre of the miller axle, which is parallel to the axle of the driving wheels. The miller drive is independent from that of the driving wheels, being connected to or disconnected from the main shaft by means of a splined coupling. This permits examination of the miller and allows the machine to go from place to place under its own power without the miller being in motion. Further the miller crown wheel casing is fitted with a detachable head permitting easy dismantling and rapid examination of the miller gears. Two sleeves are mounted on the miller axle; one on either side of the crown wheel casing, each of which carries six coiled springs of special design. A semi-circular tine of hardened and tempered steel is fitted on to the extremity of each spring. These tines constitute the actual working tools attacking the soil. There are consequently twelve working tools on the machine equipped for 20-inch work. This method of springing the tool makes the action very elastic, *allowing the tines to give way in any direction when meeting stones, roots or any other obstacles.*

The miller is enclosed under a pressed steel hood, preventing soil or stones from being thrown out, but easily removable allowing easy inspection.

WIDTH OF TILLAGE.

The standard width of tillage is 20 inches.

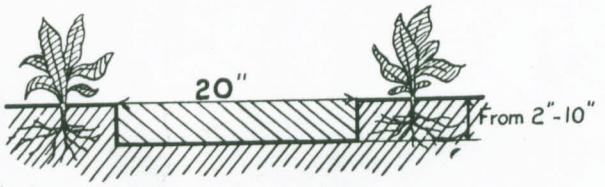

FIG. 23.—DIAGRAM OF TRACK TILLED WITH STANDARD MILLER.

DEPTH OF TILLAGE.

The depth is variable from two to ten inches, being regulated at will by the depth shoe which is situated underneath the miller gear box. The depth setting can be readily changed in a few seconds. The miller cover can be adjusted independently of the depth regulator.

VARIATIONS OF THE MILLER.

NARROW MILLER.

The Narrow Miller consists of the complete miller protection and one pair of miller sleeves, each of which is fitted with four tines and springs. The width cultivated is 14 inches. This attachment can be supplied without extra charge if fitted instead of the normal 20-in. miller.

FIG. 24.—STRAWBERRY CULTIVATION WITH THE NARROW MILLER.

Conversion from Standard Miller to Narrow Miller is extremely simple and can be effected in a few moments.

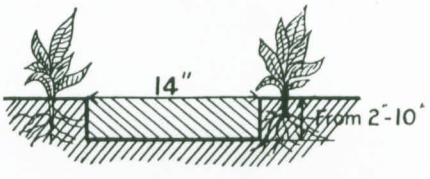

FIG. 25.—DIAGRAM OF TRACK TILLED WITH NARROW MILLER.

The Narrow Miller will be found very useful for working in confined spaces. Growers who find it a necessary adjunct to their machines will nevertheless be well advised to use the Standard Miller for open work, or between rows where space permits, as the ground is covered so much faster with the latter.

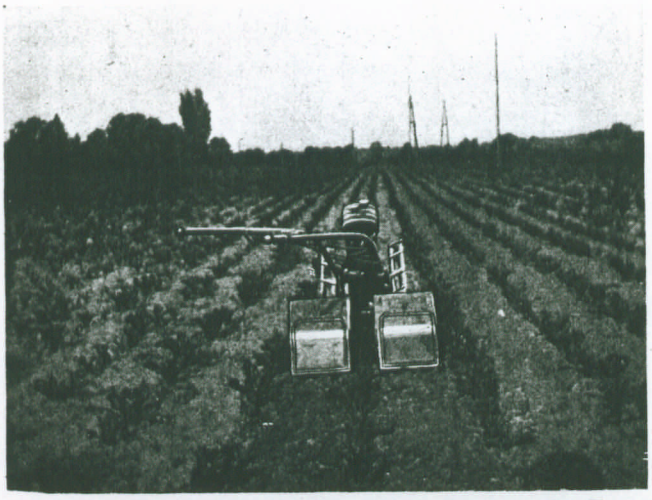

FIG. 26.—INTER-CULTIVATION OF SUGAR BEET WITH TWIN MILLER.

TWIN MILLER.

The Twin Miller Outfit consists of a pair of separate miller units fitted in place of the normal miller unit. Each miller unit is fitted with six tines and springs and cultivates a width of 10 ins., with a space of 6 ins. between the two tracks (see fig. 27). The ROTOTILLER is so designed that there is clearance under the body of the machine. With the aid of the Twin Miller, straddling can be satisfactorily carried out and the usefulness of the machine increased for those growers who wish to cultivate between comparatively narrow rows of growing crops. *The twin miller is especially suitable for inter-cultivation amongst sugar beet during growth.*

The change over from Standard to Twin miller is a simple job, requiring only the loosening of two nuts, the removal of the standard Miller Unit, its replacement by the Twin Miller Unit and the tightening up of the two nuts.

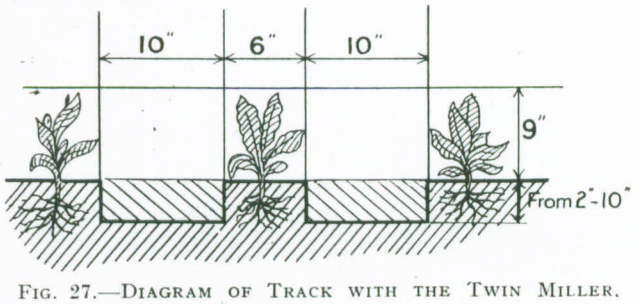

FIG. 27.—DIAGRAM OF TRACK WITH THE TWIN MILLER.

VARIOUS TYPES OF TINES.

MILLER TINES—(the working tools).

FIG. 28.

The Normal Miller Tines are fitted as standard to the machine. The primary use of these tines is for deep tillage, but they are equally useful for shallow work.

Knife Tines are supplied for dealing with abnormally weedy ground. These tines have a straight shaft and cutting edge. Their action consists in cutting the long fibres which are in consequence prevented from accumulating on the hook-shaped tines, rendering them self-cleaning. These tines can also be effectively employed for *rejuvenation of pastureland.*

FIG. 29.

Curved Knife Tines.

A further type of tine is available which is similar to the Knife Tine, except that the shaft is bent at the end approximately at right-angles. These tines will be found of use for tillage especially where a COARSER TILTH is desired than that which is obtained with the Normal Tines, while there is no tendency to choke in cases where weedy land has to be dealt with. They can also be used in preference to the ordinary Knife Tine, where shallow cultivation is wanted on land over-run with weeds.

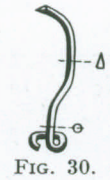

FIG. 30.

Scuffling Tines.

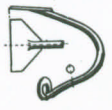

FIG. 31.

Two distinct types of tines are supplied for purposes of surface scarifying. The use of the *Broad* Scuffling Tines leaves no portion of the ground surface undisturbed even when working very shallow. The *Narrow* Scuffling Tines will penetrate a little more deeply into the soil surface than the Broad Scuffling Tine. Both types will be found very effective for cleaning the surface of the land and for disturbing the top soil, and maintaining a dust mulch.

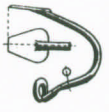

FIG. 32.

FIG. 33.

FIG. 34.

FIG. 35.

These illustrations show clearly how to carry out the simple operation of fitting a Tine on the Miller Spring.

ACCESSORIES AND ADDITIONAL CAPABILITIES.

A wide range of accessories has been evolved for use in connection with the ROTOTILLER 5, in addition to those dealing more particularly with the miller action.

The more important accessories are described below, but enquiries are invited on any problem which can not be solved by the use of the various outfits described in this booklet.

THE RIDGER (See Fig. 36).

The ridger fits behind the miller and is adjustable both for height and width. It is fixed by means of two bolts only. This accessory does not drag behind the machine, but catches the soil as the latter is thrown back by the revolving miller tines. Thus ridging is effected in one operation with tilling, the ridger acting only as a mould board, to ridge up the tilth produced by the action of the miller tines. The ridging attachment is useful for leaving the soil in ridges during the winter, and is also a tool of special value for potato growing etc.

THE SMALL DIAMETER DRIVING WHEELS.

For specially heavy tillage work, such as deep work on the stiffer soils, special wheels of smaller diameter and fitted with strakes giving stronger adherence can be supplied. They have a diameter of 18 ins. as compared with the 24 ins. diameter of the standard wheels. These wheels cannot be reversed like the standard wheels to give a reduced track.

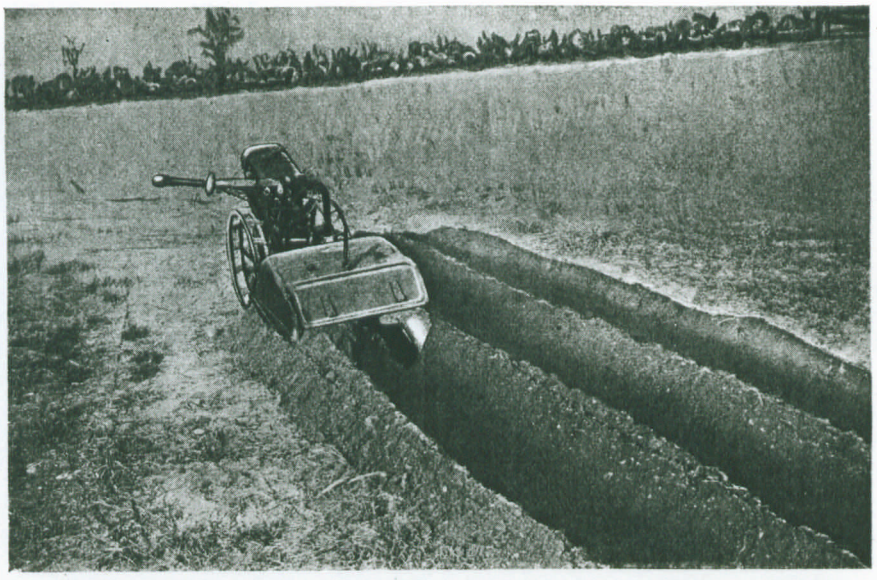

FIG. 36.—TILLING AND RIDGING IN ONE OPERATION.

THE TRACTION HITCH.

A hitch can be fitted to the ROTOTILLER 5 in place of the miller. Only a few minutes are required to effect the exchange and the machine so adapted can be used in connection with light traction duties such as seed-drilling and lawn-mowing, and similar light work.

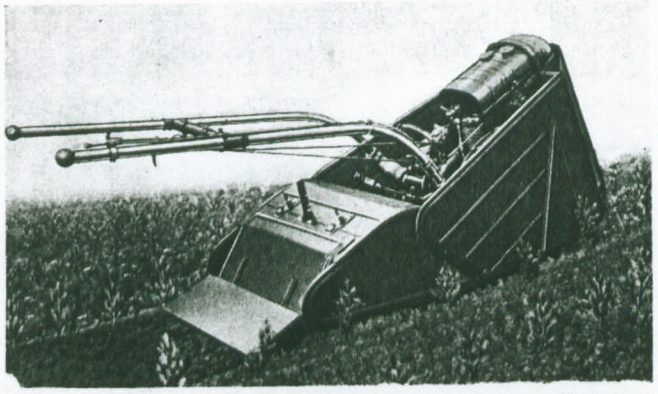

FIG. 37.—ROTOTILLER 5 WITH SPECIAL SHIELD FITTED.

THE SPECIAL DEPTH SHOE.

In exceptionally light soil it is advisable to use a special broad depth shoe, giving a larger bearing surface than that of the one which is normally supplied with every machine.

THE SHIELD (See Fig. 37).

Various types of protection can be fitted to the ROTOTILLER 5 to enable the machine to be used close to plants.

One of these is the side wing and shield outfit for use in bush plantations illustrated on this page. The external shape given to the shield is that of a smooth snow-plough, with stream-line surface and a slight tendency to lift low-lying branches.

THE WHEEL PROTECTIONS (See Fig. 21).

A further type of shield is available and is illustrated on page 11. It consists of a pair of wheel protections which are raised by the driver from the steering handles when turning the machine at the end of a row. This modified shield is of very great service in certain cases of cultivation between rows.

THE ROLLER (See Fig. 15).

A roller attachment can be instantly fitted to the standard miller, permitting compacting of the tilth produced by the miller to be effected in one operation with tilling. This attachment will be found very useful for completing the preparation of a seed-bed.

The roller can also be used for regulating the depth of tillage on abnormally light soil.

THE PULLEY ATTACHMENT (See Figs. 38-39).

The ROTOTILLER 5 can be used for every type of stationary engine work. It will drive anything within the scope of its engine power, including chaff cutters, root pulpers, dynamos, sawbenches, and crushers of all kinds. It is fixed to the machine in place of the miller unit, and requires only the removing and replacing of two nuts.

The pulley normally supplied has a diameter of 5½ inches and a width of 4 inches. At usual engine speed it turns at about 650 revolutions per minute. Pulleys of other dimensions can be supplied on request.

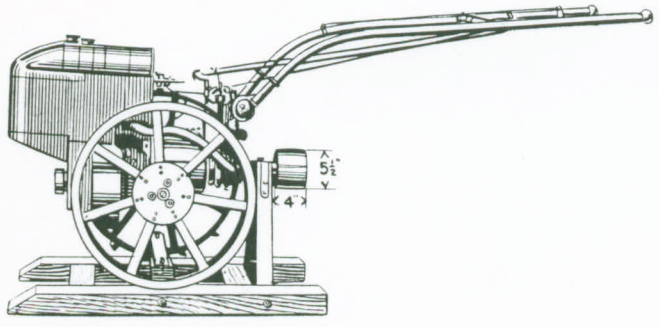

FIG. 38.—DIAGRAM SHOWING SIMAR ROTOTILLER 5 FITTED WITH PULLEY ATTACHMENTS READY FOR BELT WORK.

THE SOIL SHREDDER (See Fig. 40).

The Standard Rototiller can be converted in a few minutes into an efficient stationary soil shredder which will prove very useful as a desintegrator of potting earth, or a mixer of all kinds of manures and soils. It consists essentially of a box fixing over the miller and resting on the ground. The rough material can be fed continuously through the hopper and after pulverisation issues through the slots provided on the easily removable sides of the box.

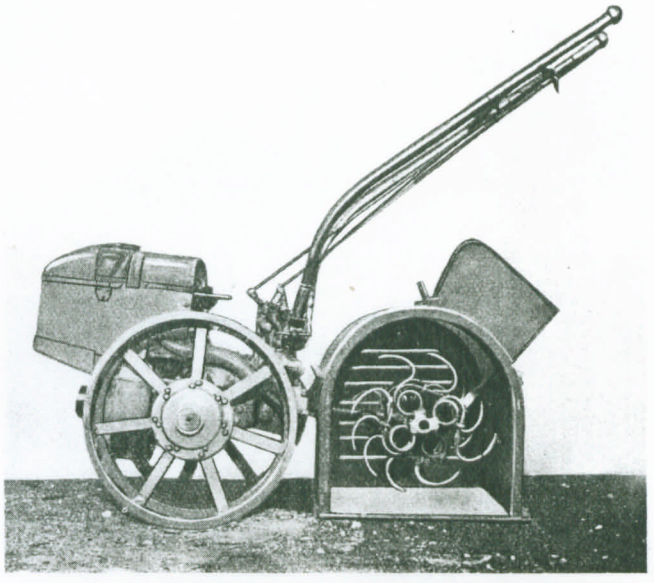

FIG. 40.—THE SOIL SHREDDER FITTED TO THE ROTOTILLER 5.

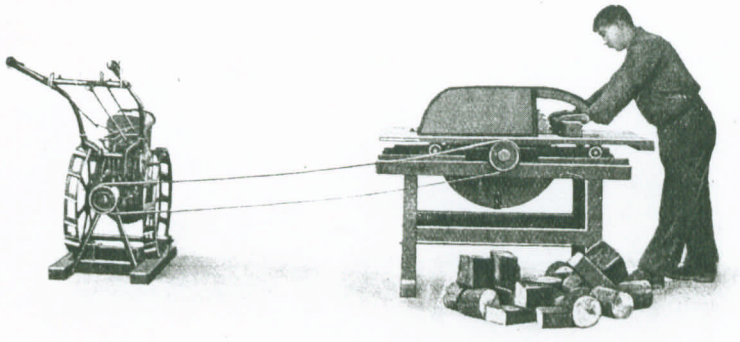

FIG. 39.—THE SIMAR ROTOTILLER 5 AT WORK AS A STATIONARY ENGINE.

THE DUAL PURPOSE TRUCK.
(See Fig. 12).

The illustration on page 8 shows the ROTOTILLER 5 mounted on a specially designed pneumatic carriage, which is of value when the machine has to travel distances on the roads. The machine thus carried is very easily wheeled and in addition vibration is eliminated.

THE MOWING ATTACHMENT (See Figs. 41-42).

The sketch and the illustration on the following page show the ROTOTILLER 5 adapted as a high-grade mowing unit. Particular attention is drawn to the fact that the machine so adapted constitutes a complete self-contained mowing machine, and not a makeshift combination.

The principal dimensions of the mower unit are shown on Fig. 41.

The conversion of the machine into mower necessitates the removal of two nuts only and takes two minutes.

The ROTOTILLER 5 fitted with the mower is a very efficient tool giving an output of approximately 1 acre per hour.

The blade carrier is assembled to the frame by means of a double articulation which enables the blade accurately to follow the ground independently of any rocking of the machine.

The blade carrier is fully balanced, and the carrier wheels are adjustable so that no effort is required from the driver in driving or in the lifting of the blade.

An ingenious design of the levers which transmit the engine power to the blade, permit the blade to be kept working even if it be lifted away from the ground; this renders the equipment foolproof.

The ROTOTILLER 5 with mower fitted can cut heavy crops with ease.

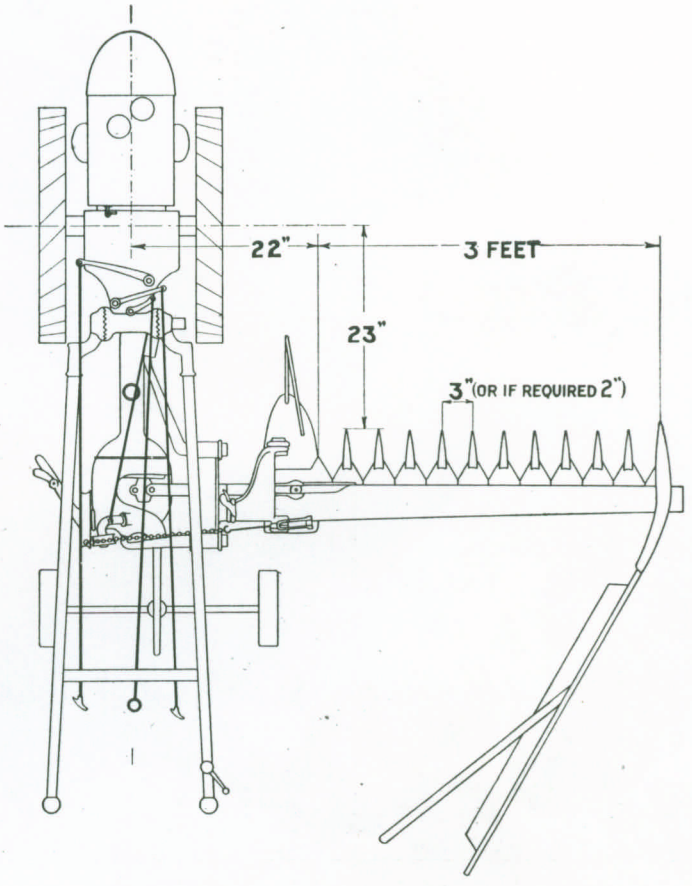

FIG. 41.—DIAGRAM OF THE MOWING ATTACHMENT.

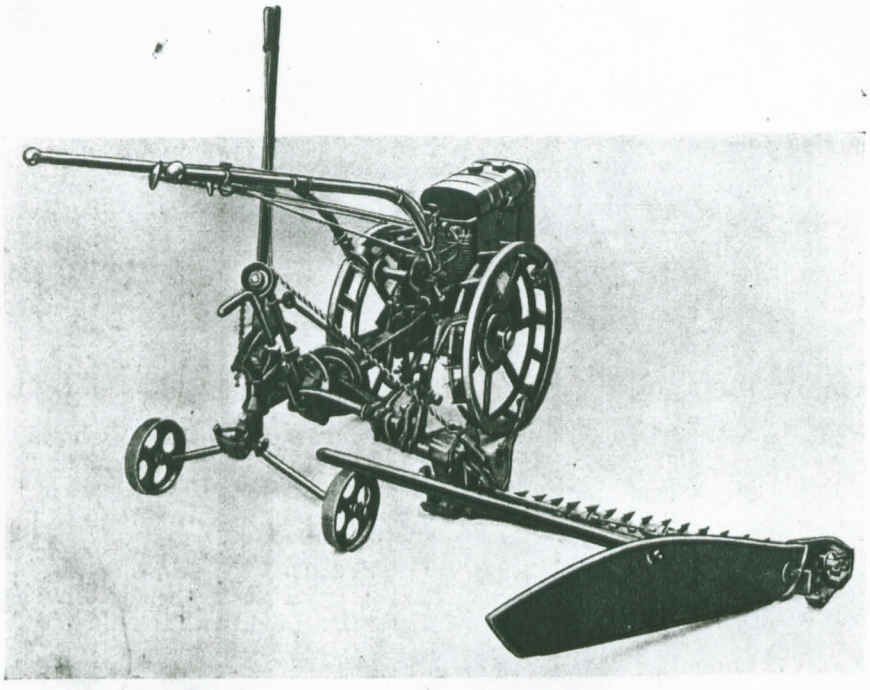

FIG. 42.—THE SIMAR ROTOTILLER 5 ADAPTED AS A MOWER.

OTHER ACCESSORIES.

There are other accessories for more specialised duties and which are not described herein in order not to extend abnormally this leaflet. We shall be pleased to give information concerning same on request. Such are for instance the mudscraper for miller cover, the centre ridge tool, the silencer, the disc miller, the rim extensions, the grip rims, the pneumatic tyres, etc.

FREE TUITION BY A FULLY QUALIFIED EXPERT IS GIVEN TO EACH PURCHASER OF A SIMAR ROTOTILLER


SIMAR · ROTOTILLER · PATENTED
AWARDED TWO SILVER MEDALS
ONE
OPERATION
tilling or cultivating
THE MACHINE THAT SAVES LABOUR AND MAKES SOIL PAY