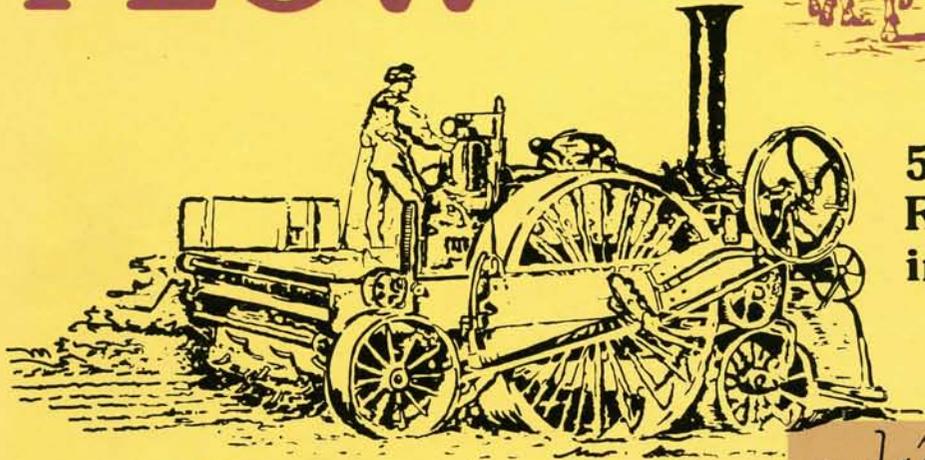
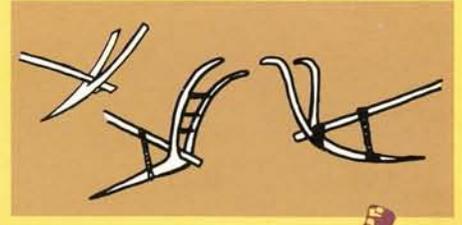
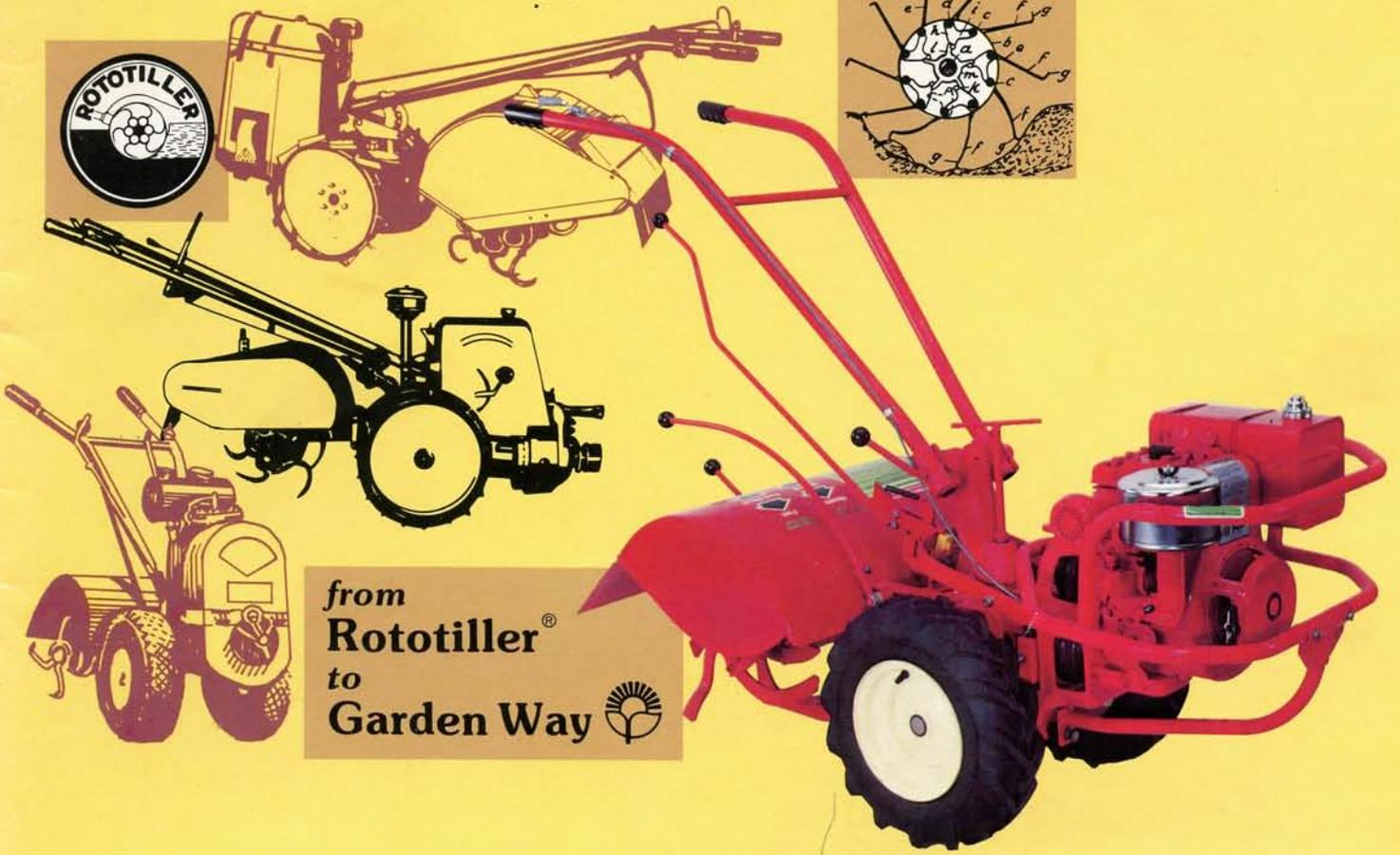


Jairo Estrada

GARDENING BEYOND THE PLOW



**50 Years of
Rotary Tillage
in America**



from
Rototiller®
to
Garden Way 

GARDENING BEYOND THE PLOW

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Scores of people were interviewed in the course of compiling this history. With deep appreciation to everyone who contributed, we especially acknowledge:

Phil Carabis, PhT (Doctor of Tillerology), who shared the remembrances accumulated over his more than 40 years in the roto-tiller business in Troy;

Alan Green, who searched out, identified and classified the tiller models and photos;

Keith Marvin, who provided much of the information about C.W. Kelsey's early automotive ventures;

Phil Musolino and John Pattison, who had compiled an earlier version of the history behind Garden Way Manufacturing Company;

And very special thanks to Dean Leith, Jr., who supplied the concept and impetus for this project, inspired the drive and determination to see it through, and whose encouragement and enthusiastic support made this book possible. (And who didn't want this mentioned here.)

Credits: Photos on page 9 courtesy of David Anthony Price, Carl Kelsey's grandson.

Reprint on page 11 from Scientific American magazine, courtesy RPI library.

Back cover from a mural by Margaret and Marian Marvin, Brunswick, NY.

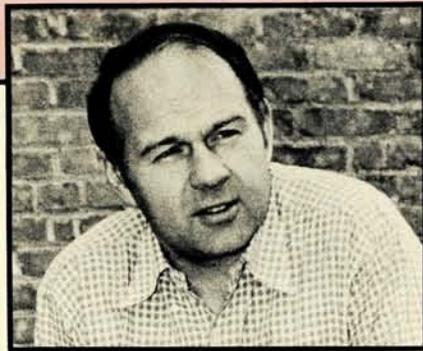
GARDENING BEYOND THE PLOW

**50 Years of
Rotary Tillage
in America**

from ROTOTILLER®▷
to TROY-BILT®
▽



DEAN LEITH, JR.
Garden Way Manufacturing Co.
102nd Street & 9th Avenue
Troy, NY 12180



Dear Gardening Friend,

I wanted to see this book written for several reasons. First was to commemorate the 50th Anniversary (1930-1980) of the introduction of rotary tillers to America by C.W. Kelsey, something I feel was of lasting significance to the way we garden today.

Also, because Kelsey's Rototiller Company was the ancestor of today's Garden Way Manufacturing Company, it is part of our history here at the Tiller Factory. I wanted to share our heritage with you, hoping that you will find the story of our company and the developments behind your Troy-Bilt Tiller as interesting as I do.

Beyond that, I hope this book will point up how very important the tines-in-the-rear rotary tiller has been to the development of good gardening in America...and give me the chance to emphasize just how vital the practice of good gardening is to this country.

You see, rotary tillage made it possible for anyone to have a large, abundantly productive garden without the time and effort required by former methods. Because using a self-propelled, rear-tined tiller took the drudgery out of gardening, it made having a garden truly enjoyable.

And that's the crucial point: enjoyment means that families are encouraged to grow more of their own food at home. Consequently, they eat more sensibly and are healthier to boot. What's more, since gardening can now be done so easily, gardeners are also able to practice green manuring and the tilling under of all sorts of organic matter. The result is to enrich and increase our precious topsoil.

I believe that no other home-oriented activity does as much for America as vegetable gardening does!

Gardening conserves energy resources by making people less dependent on transported and processed supermarket foods. Gardening preserves and protects valuable growing land, particularly needed around urban areas, for future generations. Gardening permits people to be healthier, happier and more independent by giving them a greater degree of self-sufficiency through self-reliance.

Especially, by bringing families and communities together in a satisfying, worthwhile and wholesome activity, vegetable gardening enriches the quality of life for us all.

And so, although this book is a tribute to gardening machines and the men and women who built them, it is dedicated to you and to good gardeners everywhere who are doing so much to make our communities, our country and our world a better place to live...the home vegetable garden way.

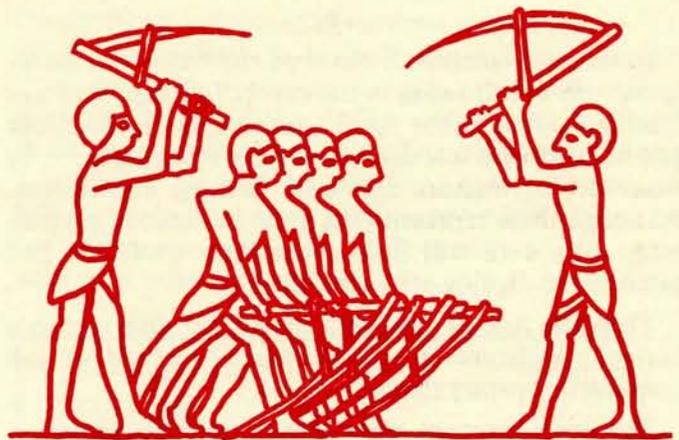
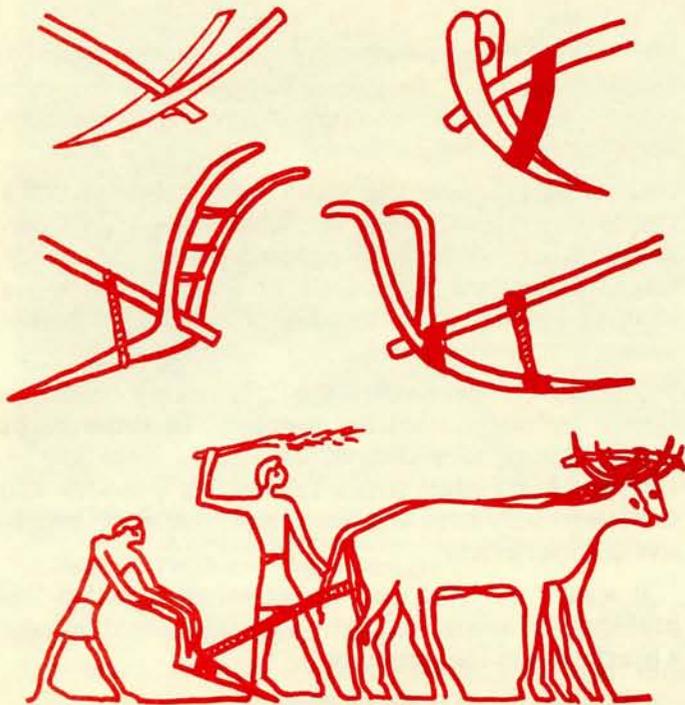
As we move further into the next 50 years of gardening "beyond the plow" with the so-much-better rear-end roto tiller, I hope you will join me and our fellow Garden Wayers in passing on your knowledge and love of gardening...so that more and more people will come to share in this deeply satisfying and richly rewarding way of life.

Yours for a greener, happier world, The Garden Way;

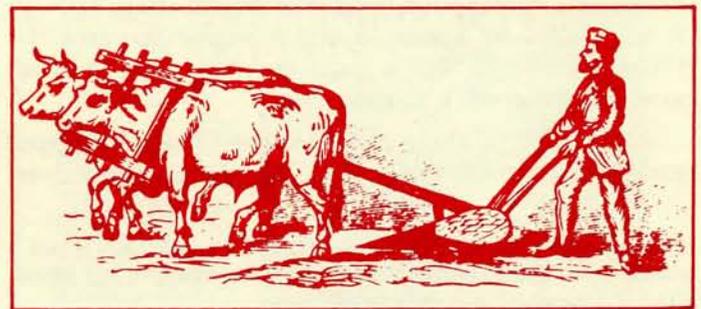
Dean Leith, Jr.

Dean Leith, Jr., Sales Manager
TROY-BILT Roto Tiller/Power Composters

The Years Before The Tiller



The Egyptian digging-stick was used to prepare the soil 8,000 years ago when agriculture was done mostly with slave labor.



After the moldboard plow was invented, animals and then machines replaced men as the power source for working large plots of ground.

Since the beginning of mankind's involvement in agriculture there had been a constant search for a better way to prepare the soil for planting. Many hundreds of gardening implements were invented down through the ages. All of them, from the ancient Egyptian digging-stick to the modern moldboard plow, operated on the same basic principle; roughly breaking up the earth and turning it over in chunks.

Whether the operation was accomplished by crude, handmade wood-and-stone implements, manufactured

tools of iron and steel, or large, heavy power machinery, the principle remained the same. It was the limiting factor in the size, efficiency and success of home vegetable growing from the start of human gardening endeavors.

The limits to size and efficiency were the most obvious. Working the soil by hand limited the gardener to only the size plot he or she had the physical strength to handle and the time available to devote to it.

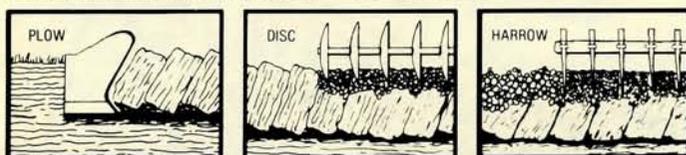
Working with animal-powered equipment or self-powered machines also had its obvious limits; the expense to purchase and maintain, the land wasted due to the scale of such large implements, and the time needed to prepare to soil suitably for planting.

Less immediately obvious, but more of a problem, was the limited success of gardening by these earlier methods. The principle of plowing, either by hand or machine, simply did not provide well enough for the all-important job of continually adding organic matter to the soil for enrichment, aeration and drainage.

The practice of turning the ground over in chunks and roughly chopping up only the surface to prepare a seedbed could not build up the topsoil without almost superhuman efforts. Thus, over the centuries the result in many areas was depletion and compaction.



Preparing the soil suitably for planting by using hand tools requires at least four separate operations. A spade turns the earth over in chunks, a fork is needed to break up the clumps of soil, a hoe chops and mixes it to a finer consistency, and then a rake levels and smooths the surface in preparation for seeding.



Using large animal-drawn or tractor-pulled equipment is less tedious, tiresome and time consuming, but still requires at least three steps to make a seedbed. The plow, disc and harrow are not efficient at mixing organic matter into the soil, while the weight of the machinery going repeatedly over the earth can result in a hard, compacted subsoil layer called plowsole or "plowpan".

A Better Way Born in the Age of Iron & Steam

In the mid-nineteenth century, the Industrial Revolution was in full swing in the cities of Europe and was reaching out into the rural countryside. Hand labor and horse-drawn wooden plows were being replaced by steam-driven tractors and iron farming implements. Although these represented a great advance in agriculture, they were still little more than oversized and mechanized digging-sticks in principle.

Then the Age of Iron and Steam did give rise to a radically different and revolutionary method of soil preparation: rotary tillage.

The exact moment of invention, and by whom, is unknown; but the *Romaine-Crosskill Digger* was one of the very first rotary tillers. Made in 1857, it bore almost no resemblance to the modern rototiller. It was a monstrous contraption weighing several tons. Though it was pulled by horses, a steam engine powered the tilling unit which was a huge revolving iron cylinder armed with curved iron spikes.

As it lumbered along, the *Romaine-Crosskill* chopped and mixed the soil rather than merely turning it over.

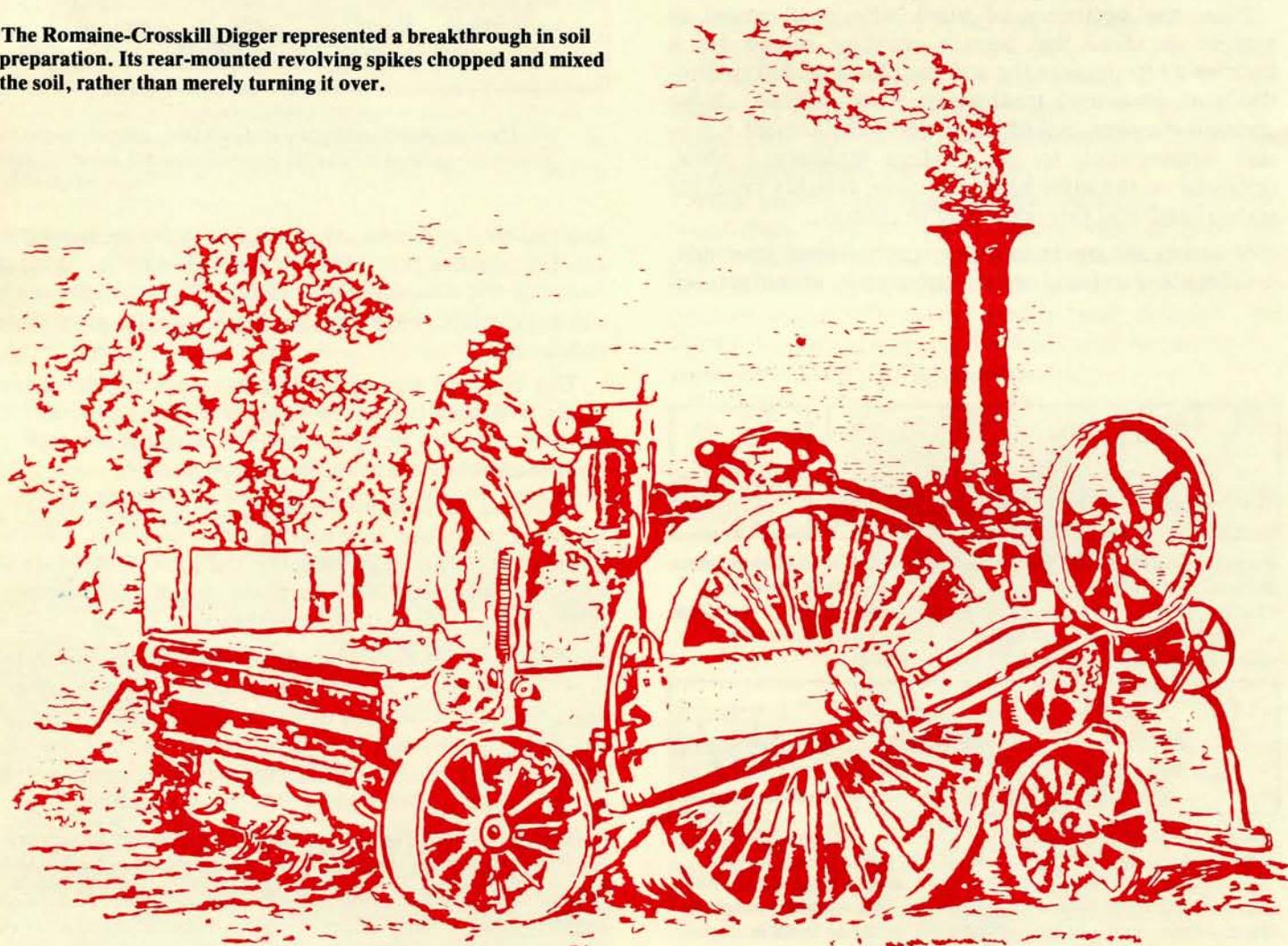
The Romaine-Crosskill Digger represented a breakthrough in soil preparation. Its rear-mounted revolving spikes chopped and mixed the soil, rather than merely turning it over.

However, the tremendous weight of the machine caused it to spend more time bogged down in a field than tilling across it, and only a very few of these behemoths were manufactured.

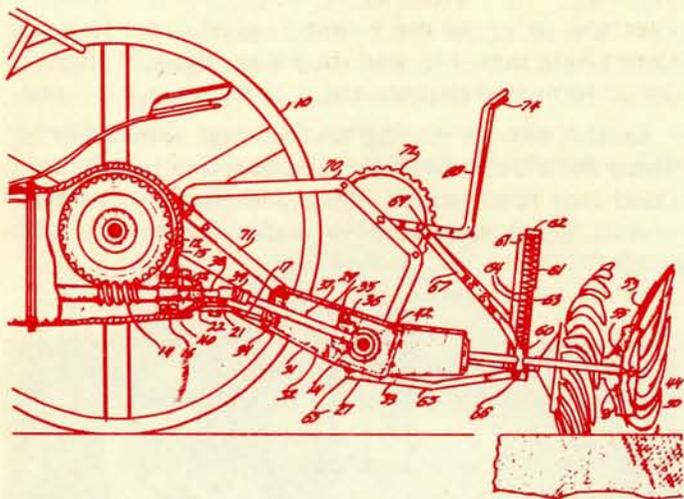
Over the course of the next 5 decades, several other versions of rotary tillage machines were built incorporating the principle of a power-driven, revolving, spiked implement. They took on nearly every shape imaginable from screw-like augers to hoe-type paddle wheels to propeller blades.

The further development of the rotary tiller was slowed by one formidable problem. In order to be strong enough to withstand the shocks when the revolving cutting edges struck the soil, early models had to be extremely large and heavy and, therefore, expensive and inefficient.

It wasn't until the early twentieth century that this problem was solved and the rotary tiller could become a practical tool for gardening.



The Modern Tiller Springs to Life



In his patent application, von Meyenburg detailed several types of power-driven revolving tillage implements. This diagram showed one which employed propeller-like tines to stir the soil behind a large tractor; not particularly an efficient design.

The breakthrough in rotary tiller design was made in Europe in 1910. That year Doctor Konrad von Meyenberg of Basel, Switzerland, applied for a patent on what was described as a completely new idea in tillage. The development of all modern rototillers can be traced back to his machine.

Earlier rotary tiller designs had used the idea of having a long, solid cutting edge affixed to a cylinder revolving at high speed. If the ground over which it was operated was hard or rocky, a tremendous blow was imparted not only to the cutting edge but throughout the entire machine. Since the mechanism had to be strong and heavy enough to hold up under these repeated shocks, a great deal of power was required to propel it.

“Like the Claws of a Scraping Animal”

Dr. von Meyenberg made two basic changes in the cutting elements; he drastically reduced their size and mounted them in a flexible, rather than fixed, fashion. In operation they employed a slicing rather than a shoveling action.

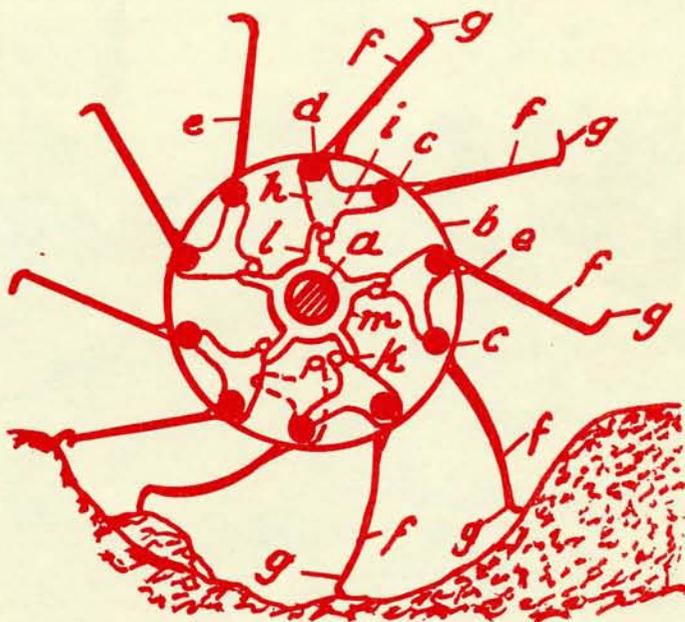
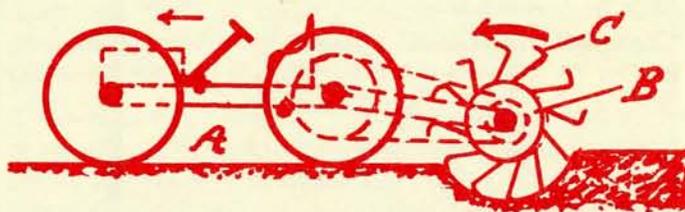
In the von Meyenberg design, each small cutting element would dig through only a small area of the soil and would have some “give” over rocks or hard places. Consequently, the amount of power consumed by each tool was small compared to the power required by the heavy cutting edges of earlier designs. This allowed for the construction of light, efficient machines in which the tilling action could actually help to propel the machine.

The modern rotary tiller began to take shape with the development of the von Meyenberg design. In contrast to earlier tillers, the von Meyenberg machine was small. The operator walked behind it rather than riding on it, as it ran on two self-powered wheels and had its tilling unit in the rear.

Von Meyenberg explained the principle of his design in his patent application:

“The power of earth cutting by edge tools depending mainly upon the sharpness, section and surface of the tools and their free cutting, I make them of small section and surface, preferably self-sharpening, elastic and independent; so that each edge, also rotated mainly in a circle, may give way laterally and backwardly, like the claws of a scraping animal, and follow the way of least resistance upon a trembling or shivery curve.”

(translated from the original German)



A diagram from Dr. Konrad von Meyenberg's patent application of 1910 portrays the flexibly mounted tines, which make the rotary tiller a practical implement.

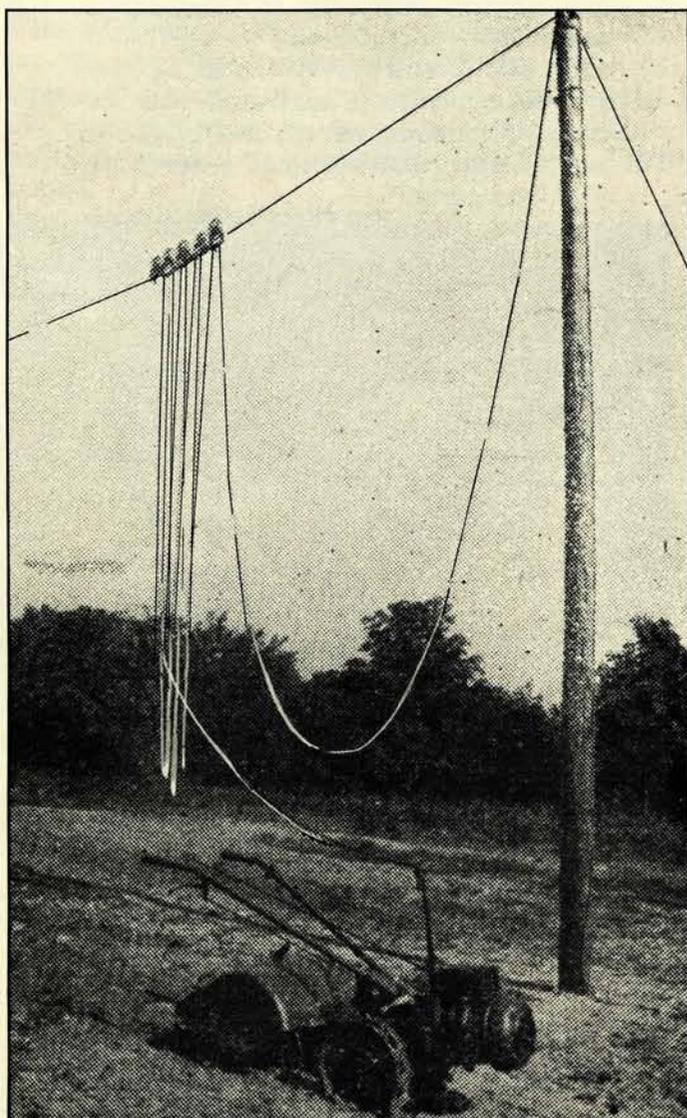
The Path of Least Resistance

Manufacturing Begins In Europe

The following year, von Meyenberg licensed the *Siemens-Schuckert-Werke* company of Germany to begin manufacture of machines based on his patent.

Siemens was a large company which specialized in the manufacture of electrical products. Their earliest tillers were powered by electric motors and worked quite well—provided that they were plugged in to an electrical outlet.

Rather than supply a very, very long extension cord with each machine, *Siemens* planned to erect utility



The first small, walk-behind rototiller was manufactured in 1911 by the *Siemens-Schuckert-Werke* Company of Berlin, Germany, a manufacturer of electrical equipment. Their original tiller was powered by an electric motor. However, German farmers rejected the notion of being tied to utility poles and it wasn't until the electric motor was replaced by gasoline engine that the tiller became popular in Europe.

poles and string power lines throughout the fields of Europe. German farmers, however, did not like the idea of being tied to poles and the idea was abandoned.

Siemens did not give up on the tiller. When they replaced the electric motor with a gasoline engine, they found that there was a liking and demand for their product which was called a *boden frasen* or “earth grinder”.



Early rotary tillers were known as *boden frasen* or “earth grinders”. The name “rototiller” was coined when they were introduced to Europe in the 1920's.

In 1918, the *Simar* company of Switzerland began manufacturing a similar machine. Altogether, these two companies spent over six million dollars on research and design for their rotary tillers in the initial stages.

The rotary tiller filled a genuine need in Europe by providing mechanization for the small-scale growers who were passed over by the Industrial Revolution. Because the large tractors and farm equipment of the time were not practical for operations of fewer than 20 acres, the small farmers still had to rely on hand labor and animal-power in the same way their ancestors had for thousands of years.

The invention of the rotary tiller brought these small-scale growers into the Twentieth Century and enabled them to keep pace with large-scale, industrialized farmers.

The Man behind the Wheel

The Man to be at the Tiller

Automotive pioneer Cadwallader Washburn Kelsey spent more than 30 years manufacturing, selling and servicing automobiles before establishing the Rototiller Company in 1930.



It would take several years for the European rototiller to reach America but, when it did, Cadwallader Washburn Kelsey would be ready for it.

Kelsey seemed to be an unlikely prospect to play the role of rototiller pioneer in the U.S.A. Before establishing the original Rototiller Company in New York City in 1930, he had virtually no experience with agricultural machinery and probably wouldn't have believed he'd spend the next 27 years designing, manufacturing, refining and promoting rototillers. Yet, that's what happened.

C.W. Kelsey was born in Clarens, Switzerland, on July 30, 1880, while his parents were touring Europe. Back home in Philadelphia, the young Carl displayed a keen interest in machines and engines early in life. He attended Central Manual Training High School and apprenticed himself out to a machine shop during the summers rather than vacationing with his parents.

By the time he was 17 years old, Carl had a complete machine shop in his home. There, starting with castings he bought from a local gasoline engine firm,



he built a 5 HP 2-cycle engine by himself. Once the engine was constructed, he decided to build an automobile around it. This was in 1897 when there were only about 90 automobiles in all of the United States and Kelsey had never even seen one. By the end of the year, however, he had not only seen one and ridden in another, but also built one. The "Kelsey No. 1", as it was dubbed, unfortunately never ran. It was, in Kelsey's words, "A flat failure".

It was his first failure and it wouldn't be his last; but Kelsey was hooked. The following year he and a friend, Sheldon Tilney, each invested \$500 and built a 3-wheeled automobile which they called the *Autotri*. Though Kelsey never realized his dream of establishing an Autotri company, their invention did run and they logged over 2,000 miles in it. Today, it is in the possession of the Smithsonian Institute in Washington, D.C.

Over the course of the next few years, Kelsey constructed several more experimental models. To support his tinkering habit during that time, he operated dealerships for several makes of automobiles including the *Autocar*, the *Locomobile* and the *Maxwell*. It was while he was managing the Philadelphia *Maxwell* franchise that his flair for promotion became evident.



From his very early teens, C.W. Kelsey was always working on an automobile or engine design, starting in his own well-equipped home workshop (left). His passion for the things mechanical continued throughout his life. The above photo taken shortly before his death has him posing with a trophy won at an exhibition of classic cars for this then-vintage Kelsey Motorette.

Kelsey The Promoter Rides Again

In order to demonstrate the power and durability of the *Maxwell* automobile, Kelsey drove one up the steps of the Philadelphia Mercantile Club in 1905. Neither the police nor the club members were amused by this, but Kelsey was undaunted. A couple of days later, he repeated the climb on the steps of the First Baptist Church in Germantown, PA. Fortunately for both establishments, Kelsey had not yet gotten his hand on a rototiller.

Even as Siemens was tooling up for the "earth grinder" (*boden frasen*) business in Europe, Kelsey was still a few thousand miles and one wheel away from the rototiller business in America.

From Dealer to Three-Wheeler

In 1910, he leased an old factory in Hartford, Connecticut, and began manufacturing another 3-wheeled car; the *Motorette*. With a single wheel in the rear, early prototypes of this model had a tendency to tip over when rounding a curve. To correct the problem, Kelsey invented a stabilizing anti-sway bar which is now used by the entire automotive industry.

The future looked promising for Kelsey and his *Motorette* by 1912. About 200 of them had been sold worldwide, including a dozen or so *Motorette Rickshaws* which were sold in Japan. Unfortunately, the engines which had been purchased for and installed in the 1912 models were all defective. Across the country, scores of *Motorettes* "froze up" almost simultaneously. Kelsey replaced the defective engines, of course, but the damage had been done. The *Motorette* Company couldn't recover from the bad name it acquired from the incident and production ceased at the end of the year.

Though Kelsey's *Motorette* venture was shortlived and disappointing, it was not a total failure. An acquaintance was made during those years which would eventually lead Kelsey into the rotary tillage field and on to his greatest success.

When the *Motorette* was introduced in 1910 it sold for \$385.00. Kelsey's advertising proclaimed the *Motorette* to be "an entirely new type of car developed to meet the need for a finely built, able car that will carry two people anywhere at a fraction of the usual yearly expense." Powered by a 10 horsepower motor, with two forward speeds and reverse, the *Motorette* had a top speed of 25 mph.

The Greatest 1000 Mile Endurance Run Ever Made

Almost Entire Trip Made in a Heavy Rain



C. W. Kelsey John A. Cassel
Taken by North American photographer during the rain journey.

Route, Broad Street, Philadelphia Round Trip, 17.4 Miles

CROSSINGS IN ROUND TRIP { 62 Single Trolley Tracks
24 Double Trolley Tracks
2 Squares Belgian Blocks
2 Double Track R. R. Crossings

Motor was stopped momentarily twice; in both cases motor being stalled by engaging clutch to fast.

STATISTICS	
Runs 1000 Miles	72 hours
Stopped for gasoline, etc.	4 1/2 hours
Actual Running	67 1/2 hours
Average Speed	15 miles an hour
Gasoline used	53 gallons
1 gallon used every	19 miles
Oil for the entire trip	3 1/2 gallons
Grease for the entire trip	1 1/2 lbs
Gasoline, 53 gallons, @ 13c	\$6.89
Oil, 3 1/2 gallons, @ 75c	2.52
Grease, 1 1/2 lbs., @ 15c	.23
Punctures 3, @ 50c	1.50
	\$11.14
Cost per mile, including time the engine was running, when car was stopped for gasoline, etc.	11-10c

MAXWELL \$750.

MAXWELL \$750.

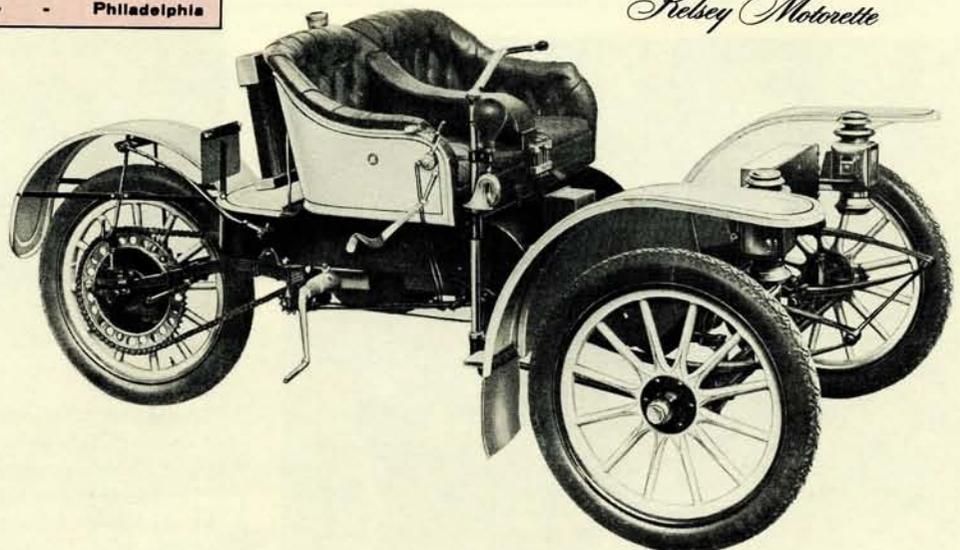
Let us verify these figures by showing you the officially attested report.

KELSEY MOTOR CAR COMPANY

204 North Broad Street Philadelphia

1910

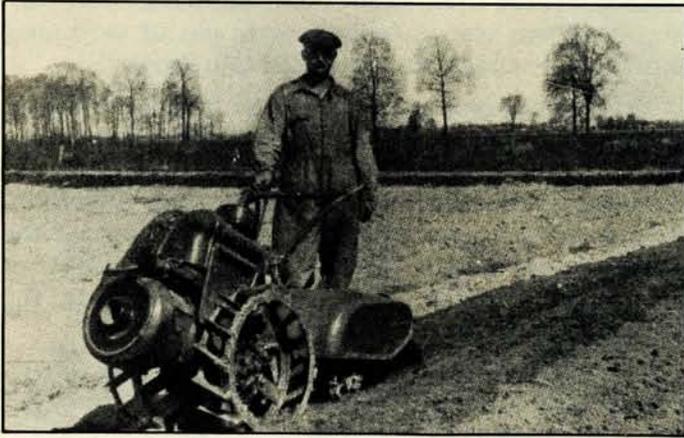
Kelsey Motorette



In 1904 C.W. Kelsey staged "The Greatest Endurance Run Ever Made" when he drove a Maxwell 1000 miles through the streets of Philadelphia. The auto was stopped only twice, when the engine stalled.

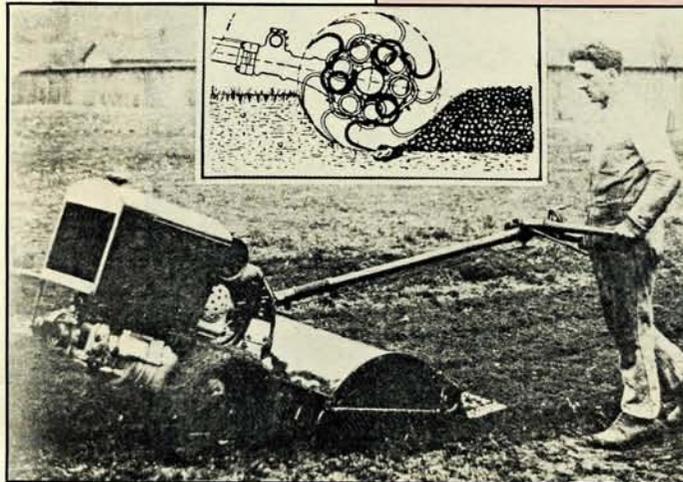
Rotary Tillage Arrives in America

In the 1920's, the idea of rotary tillage was just beginning to attract attention in America. In 1923 the *Scientific American* magazine ran a short article entitled "Chewing Up the Soil for Better Crops". It called the European rototiller "a garden tractor which differs radically from the American variety in that the soil is worked by a revolving member called a miller". But apparently it took another four years for an example of the tiller itself to reach American soil.



The Simar Model C-5 was the first type of rotary tiller demonstrated in America. It was a fairly heavy 5 HP machine which was estimated to sell for about \$450 when available in this country. According to the Dec. 1927 issue of *Market Growers Journal*: "On European soil which has been cultivated for centuries and is free of rocks, pebbles and other foreign material, this machine churns up the soil and works it to a considerable depth." But, they wondered whether it would "...work as well on average (U.S.) farm land in which heavy stones are occasionally found."

In a story headlined "Shows New Machine Today", the *New York Times* announced the first demonstration of a Simar rototiller in this country. The accompanying photograph shows a machine similar to the one above. Simar was another European pioneer in rotary tillage which manufactured under the von Meyenburg and Leon de Four patents after 1918.



Kelsey Looking Elsewhere

Chances are that Carl Kelsey paid little attention to these developments. He was still trying to find the road to automotive success. From 1921 to 1924 he manufactured and sold his friction-drive *Kelsey Car* and another model called the *Kelsey Vibrationless Four*.

Good fortune wasn't exactly on his side and, after being swindled out of these endeavors, Kelsey turned to more conventional employment. He worked first for an advertising agency in New York, then for a brokerage firm in Philadelphia. Still, Kelsey did not give up his grandiose schemes.

Among his projects at the time the first rototillers were being shown in America were plans for a trans-Cuba highway and the construction of what would have been the largest building in the world; the *Com-munitorium*, a "private club" for two million members built atop Grand Central Station.

Nonetheless, the wheels and the tines were in motion for Kelsey to make a connection which would revolutionize American gardening within a few short years.

DECEMBER, 1923

SCIENTIFIC AMERICAN

Chewing Up the Soil for Better Crops

On the American market today there are several different manufactures of garden tractors, and now from England comes the description of one which differs radically from the American variety in that the soil is worked by a revolving member called a miller, instead of by the common toothed cultivating attachment. The function of the miller is to chew up the soil, mixing, lightening and incorporating it thoroughly with the fertilizer that has already been spread over it.

The rototiller is driven by a two-cycle, 8 to 10 horsepower engine. Lubrication is provided by mixing the oil with the gasoline in the tank, as in small engines used on motorboats. The engine cooled by means of a radiator of two gallons capacity and by a fan running on ball-bearings. Ignition is by high-tension

magneto. As in the case of the garden tractor, the controls are led to the handle-bars. The motor is equipped with an air-cleaner working on the labyrinth principle.

The bull-wheel shaft is driven by a steel worm working on a phosphorbronze worm wheel. The gears are of hardened nickel steel and run in an oil-bath. Two speeds are provided for, the high speed corresponding to over 1½ miles per hour and the low speed being ¼ mile per hour with engine running at 14000 r.p.m. The bull-wheels are 18 inches in diameter and the extreme width over all, without the regular 36-inch miller, is 24 inches.

The miller is driven by a bevel pinion and crown wheel enclosed in an extension of the gear-box, which forms part of the body, and these run in oil. The miller drive is independent of that of the bull-wheels, permitting the rototiller to be moved. The latter revolves at 150 r.p.m. and carries twenty coil springs on whose extremities are fitted twenty semi-circular hooks of steel. These are the tools which attack the soil. The total weight of the machine is 650 pounds and its height is 37 inches.

One of the most satisfactory qualities of this cultivating device is its low speed. In order to do good work a garden tractor should not be geared so as to run as fast as three miles per hour—a speed at which the control of the tools is erratic, especially in rough or lumpy soil, therefore the low speed of the rototiller is an advantage.

An article from *Scientific American* in 1923 discussed an 8 HP rotary tiller powered by a two-cycle aircooled engine of a type then being used in Europe.

Mr. Hiller and the Tiller Connection



H.B. Hiller in early 1930, from a photo which was taken on the boat bringing him back to America to offer Kelsey the *Siemens* distributorship.

H.B. Hiller immigrated to the United States from Germany in search of a new and better life for himself. When he had completed his studies in engineering at M.I.T., he applied for work at the *Motorette* factory in Hartford, CT., and was hired by Kelsey as a test driver. The two eventually became good friends.

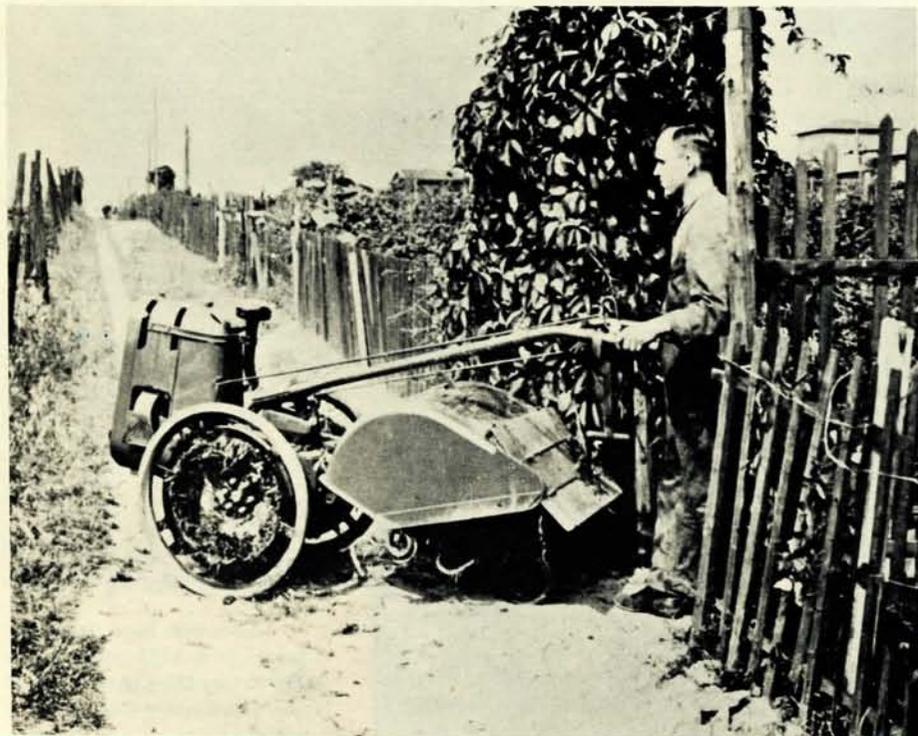
After the *Motorette* Company went under, Hiller bought a farm in nearby Unionville and later became an American citizen. On a visit to relatives in Germany in 1921, Hiller was kept from returning to America by the serious economic conditions of the time. So, he found employment in the *Siemens* factory, in the *boden frasen* division.

Siemens, meanwhile, had decided to make a major effort to introduce their rototillers to America. They sent H.B. Hiller back to the U.S. with a *boden frasen* and the authority to offer a distributorship to his old friend, C.W. Kelsey.

1930 was not the best time to establish a new business, especially one selling an untried and expensive imported agricultural implement. America was by then sinking into the Great Depression. Businesses were failing, food was scarce, millions were out of work and farmers were abandoning their fields in droves.

Kelsey was never one to shy away from a challenge, no matter how formidable. He was intrigued by the new machine Hiller showed him. He saw, also, an opportunity to pioneer in a whole new field of mechanization. He accepted Hiller's offer. They loaded the *boden frasen* into a pick-up truck and headed out across the country, stopping to demonstrate the machine and set up dealerships along the way.

Upon their return, Kelsey rented an office on Broadway in New York City and established *The Rototiller Company* to import and distribute "earth grinders". Hiller had also enlisted Henry R. Jahn, a lawn equipment distributor in New York, as an importer of the *Siemens* tillers. Jahn and Kelsey formed a short-lived business partnership but, after a falling out between the two, Jahn made arrangements to import the Danish *Tillavator* instead. That machine did not prove to be successful in the American market, however.



A *Siemens* "earth grinder" of the type brought over to America by H.B. Hiller, shown here in a typical European garden area in a photograph supplied by Werner von Siemens.

Earth Grinders On Broadway



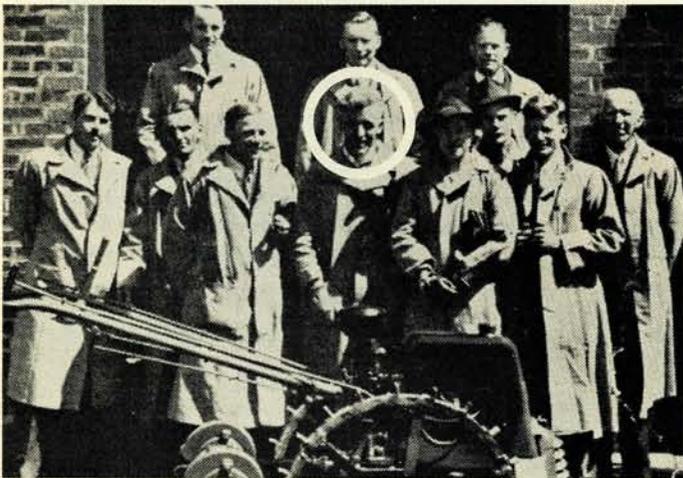
THERE IS
ONLY ONE ROTOTILLER

Exclusive manufacturers, importers and distributors for
North & South America & American possessions.

In the first months of business on Broadway in New York City, Rototiller sales were few and far between. The machine was expensive. In the days when a Chevrolet truck sold for \$650, the *Siemens K-5* carried a price tag of \$695. Obviously, it was not a mass-market product. The early tillers were for a very select market; professional growers, farmers and nurserymen; but even they were not eager to gamble on the new machine.

One of the Rototiller Company's early dealers was Ray Riddle of Springfield, Massachusetts. He covered most of New England for the company, hauling a tiller or two around in his station wagon and stopping at every farm and greenhouse.

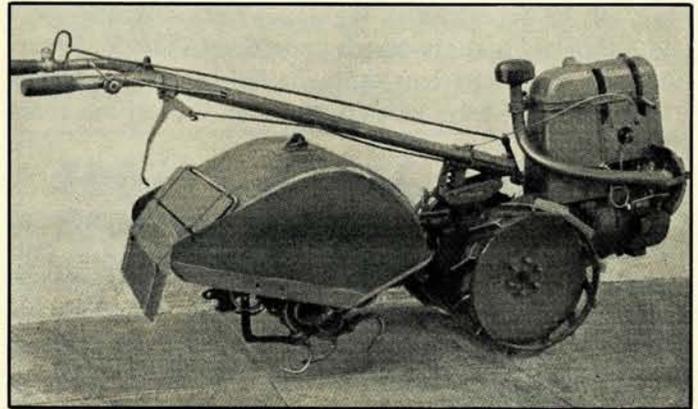
According to Riddle, who was a farmer himself, "I'd unload the machine, tell the fellow I'd dig up his garden for him, and then try to sell the machine. All the folks who knew good ground were interested."



Ray Riddle (center) and his agents covered all of the New England territory for Rototiller, Inc.

Some, though, were skeptical. "More than one oldtimer believed that the machine would 'poison the ground' ", he says. Even after their fears were allayed, the sales came slowly. It sometimes took Ray Riddle four or five years to make a sale to a particularly obstinate customer, but he wouldn't quit. To supplement his income, Riddle hired himself and his machine out as one of the first Custom Tillers.

Although the *Siemens* tillers were well-made, some American growers had problems with them. The *Siemens* had been designed for use in the well-



The *Siemens K-5* was the first rotary tiller sold by the Rototiller Company in America. It was a 650 pound machine, powered by a 5 horsepower engine. Gear driven tines tilled the soil to a depth of 12 inches and up to 27 inches wide. In the early thirties the *K-5* sold for over \$600.00, or about as much as a new truck.

cultivated farmlands of Europe; it was not equipped to handle the rough and often rocky American soils.

Kelsey soon recognized that some changes would have to be made in the machine. At his urging, the European manufacturers made several improvements: modern oil seals and American-type air filters among them. The greatest problem however, was tine breakage. Even though they were spring-loaded, the European tines couldn't withstand the shock produced by hard or stony ground. This problem was remedied in 1932 when Kelsey designed and patented his tine shock-absorber to install on the imported tillers.



Rototiller, Inc. began importing Simar tillers from Switzerland 1932. The Simar line included small tiller, like the *C-3* above, which weighed only 240 pounds.

Moving Right Along

In 1932, Kelsey expanded his business when he made an agreement with the *Simar* Company of Switzerland to import and distribute their tillers in addition to the *Siemens*. The *Simar* line included several smaller and less expensive models.

In order to accommodate his expanded business, Kelsey moved from the Broadway office to a warehouse in Long Island City, New York, and incorporated his operation as ROTOTILLER, INC. At this time, he also registered the trademark "Rototiller" and published a study which concluded that the Rototiller was more efficient than the field tractor, garden tractor or horse team when used on an area of less than 20 acres.

ROTOTILLER'S early customers found that a Rototiller offered many advantages over conventional methods of working the soil. It could perform in one operation what previously required three separate operations of plow, disc and harrow. A Rototiller required less power, left no plow-sole, and could be used for cultivating, mixing in fertilizer or additives such as lime, sand and peat, and turning under cover crops as well as preparing seedbeds.

With the addition of the *Simar* Rototiller to his line, Kelsey had moved closer to making these advantages available to the average home gardener.

Kelsey realized, however, that regardless of the efficiency of the Swiss and German machines, in time an American Rototiller would have to be designed to meet uniquely American needs. It was a challenge which Carl Kelsey eagerly accepted.



Kelsey's earliest sales literature was geared towards professional growers and emphasized the advantages of rotary tillage over previous means of working the soil. In 1932, the Rototiller Company was incorporated, becoming ROTOTILLER, INC. with the "rototiller" trademark used in the stylized logotype design shown above.

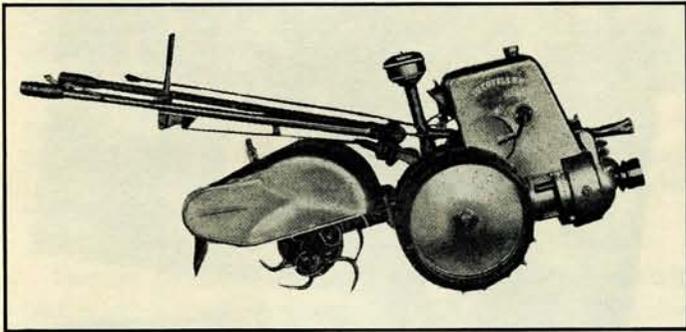


Ever the promoter, C.W. Kelsey introduced his Rototillers to the professional growers, greenhouse operators and nurserymen at the prestigious Rutgers University Field Trials in 1932. This demonstration aroused much interest in the equipment which provided a better method of tillage.

Rototiller Turns To Troy

By the early 1930's the rest of the world was beginning to catch up with Germany and Switzerland in the rotary tillage field. Besides ROTOTILLER, INC. a few other American companies had entered the field and were experimenting with tiller designs. For the most part, these machines were still very large; being either tractor-drawn attachments or heavy walk-behind models.

Kelsey believed there was a greater need for a small tiller which would be durable, inexpensive and easy to operate. In 1934, he designed and made a 4½ HP Model AA *All-American Rototiller*. The first AA was on the market early in 1935, but full production of these machines was held up by lack of funds for a complete manufacturing facility. Then, for the first time, good fortune was to smile on one of Kelsey's business ventures.



The 1934 Model AA All-American was the first tiller manufactured by Rototiller Inc. One of its features was tine shock absorbers, for which Kelsey had been granted a patent in 1934.



George B. Cluett II provided the financial backing to bring Rototiller, Inc. to Troy, New York. He was a "silent partner" in the company until the late 1940's.

In the mid-1930's, a wealthy industrialist from Troy, New York, George B. Cluett was trying to revitalize that city's sagging economy by attracting new industries. At the same time, he was building a new house in Troy. There in 1936, he saw a landscaper with a Rototiller on the grounds and was intrigued. The landscaper, Warren Huntley, praised the machine's abilities to Cluett, who immediately recognized it as a product around which a growing industry could be built. He wanted that industry in Troy!

Cluett approached Kelsey with an offer of a partnership and the promise of financial backing. Though Kelsey needed the money to get into production, he was hesitant about accepting a partner and said he would consider the offer only if he could retain complete control of the business. Cluett found that acceptable, provided that the business be moved to Troy as soon as possible. The deal was struck.

On April 5, 1937, ROTOTILLER, INC. purchased the former Draper Cordage factory on 102nd Street in Troy and began tooling up for full production of American-made Rototillers. Early in the following year the first "Troy-built" tillers rolled off the line.



In the spring of 1937 Rototiller, Inc. purchased the former Draper Cordage Factory at 102nd Street and Ninth Avenue in Troy, and moved its operation there from Long Island City, New York.

The first Rototiller manufactured in Troy was an improved version of the Model AA; the A-1. It was a 400 pound, 4¼ HP machine with cleated steel wheels, designed to be sold primarily to nurserymen and greenhouse growers. Among ROTOTILLER, INC.'s customers at the time were the Botanical Gardens of New York and Montreal, several major seed companies, state universities and municipal parks departments.

The A-1 was the first Rototiller manufactured in Troy. It was a 4¼ horsepower, 400 pound machine.



Halfway Home

Once in Troy, the tiller business began to grow steadily from year to year. Thanks to Kelsey's flair for promotion and salesmanship, farmers throughout the country were beginning to know and appreciate the Rototiller. However, Kelsey wasn't entirely satisfied as rotary tillage still had not caught on with the general gardening public. He thought it was about time for someone to bring the advantages of rototilling to the home gardener.

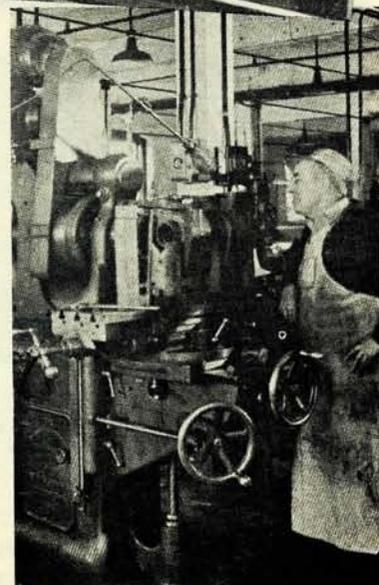
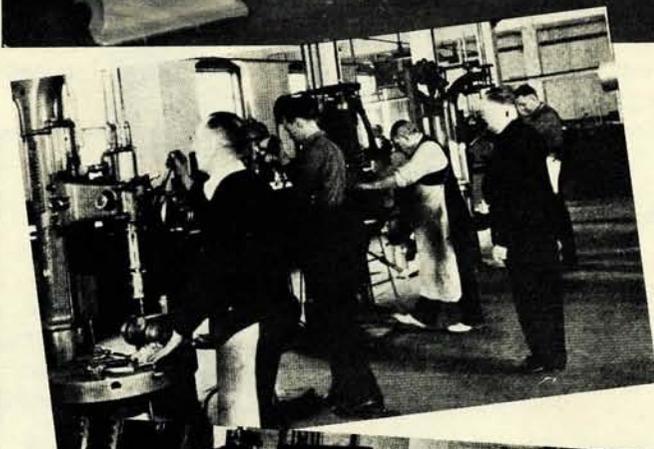
In 1938 ROTOTILLER, INC. unveiled the *Wheelbarrow Cultivator*, a remarkable machine designed exclusively for use by the home gardener. Later models were, in fact, called *The Home Gardener*. They were one-wheeled Rototillers which were light and easy to operate; a 1 HP engine being all that was needed to till six inches deep. In addition, they were versatile in that the tiller unit could be removed and a reel lawnmower unit attached. Plus; at \$195 they were priced hundreds of dollars less than any other tiller available at the time.



The Wheelbarrow Cultivator was introduced at the 1938 Rototiller Field Day. It was the first American rotary tiller designed exclusively for use by the home vegetable gardener.

Kelsey thought the *Wheelbarrow Cultivator* would surely carry rotary tillage into the backyard gardens of America but, apparently, it was not yet time. Sales lagged, and for the next few years ROTOTILLER concentrated on manufacturing the larger, commercial B-Model machines.

Kelsey would not give up on his idea of a small home garden tiller, however. He continued to refine his design of the one-wheeled machine, confident that the American public would soon be ready for it.



In the first year, with only about a dozen employees, the Rototiller factory in Troy advertised that it was capable of producing 10 complete tillers a day. These photos from the first issue of "Rototiller News" in October, 1937, show some of the new and then-modern production facilities. *Rototiller News* was sent mainly to dealers to help promote sales.

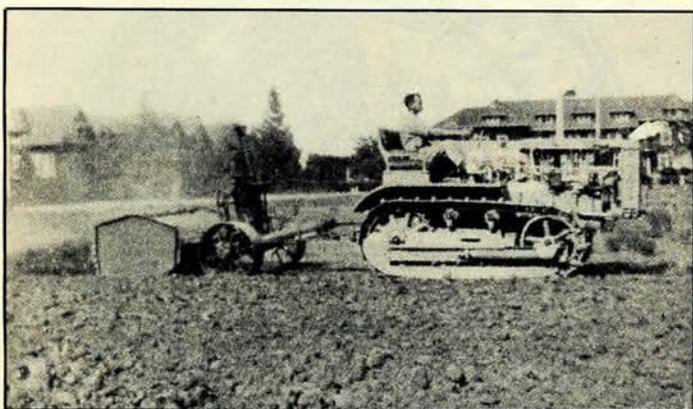
Rototiller Paves The Way

At the other end of the scale, the principle of rotary tillage could also be successfully applied to large agricultural operations. Kelsey knew this and in 1933 had written: "The future of agriculture, we believe, will largely depend on rotary tillage."

That year, he had designed and built a Rototiller attachment which tilled a 6-foot-wide swath behind a farm tractor. Three years later, ROTOTILLER, INC. made a complete 8-speed tractor-tiller powered by a 45 HP engine. While the agricultural industry was slow to see the value of this machinery, another application was soon discovered for the equipment.



Above a Rototiller Tractor was used to make the concrete streets in Granville, NY, north of Troy. Below, Carl Kelsey himself waters a soil-cement driveway being constructed in the alley behind the Rototiller Factory, putting product-testing to practical use.



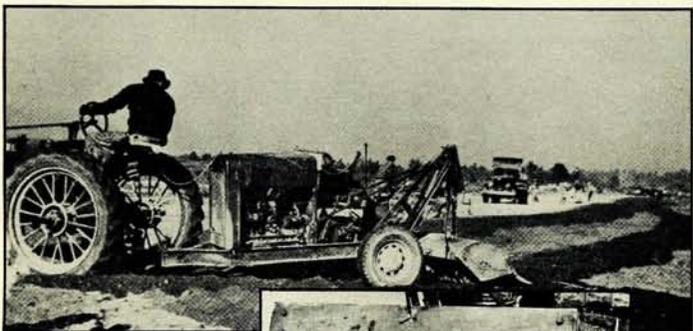
Shortly after establishing the Rototiller Company in 1930, Carl Kelsey imported a six foot wide rotary tillage attachment from Germany and began redesigning it to meet American conditions.

Portland Cement Company started experimenting with methods of constructing economical concrete roadways in the mid-1930's. They discovered that, under many conditions, dry cement could be mixed directly into the soil and, after watering and rolling, a satisfactory concrete road would be in place.



In 1937 Portland Cement acquired several of Kelsey's walking-model C-8 Rototillers for use in the process. They were found to be ideal for mixing cement with the soil and, in 1938, were used to lay 17 acres of concrete at the Golden Gate Exposition in San Francisco. When Portland Cement Company heard about Kelsey's larger tractor-drawn unit, they ordered a number of those for use in the construction of soil-cement runways at airports throughout the country.

ROTOTILLER, INC. began manufacturing units specifically for soil-cement roads and runways in 1940. The *Rototiller Road Maker* tilled a 72-inch-wide swath up to 12 inches deep and was powered by a 95 HP engine. It was designed to be drawn by either a tractor or a bulldozer. In 1941 the U.S. Government ordered 128 for use on military airfields overseas; the following year it ordered 150 more.



Rototiller Roadmakers were used to construct runways at airports throughout the country. The Roadmaker was powered by a 95 horsepower engine and was capable of tilling a 6 foot wide swath. In 1932 this rotary tillage attachment was manufactured by Rototiller, Inc. It was designed to hook up to the power take off of a farm tractor.

The country would soon thereafter be at war, and the Rototiller factory would be turned over to defense production for the duration.

The Home Gardening Machine Comes of Age

By the end of World War II rotary tillers had become quite popular with commercial growers. There were, by then, at least five American firms manufacturing the large, walk-behind tillers used in greenhouses and nurseries. Still, no-one had yet brought the benefits of rototilling into the home garden.

ROTOTILLER, INC. had tried before in 1938 with the introduction of its *Home Gardener* Model, but sales of that one-wheeled wonder were so limited that the company had to stay with the large commercial Rototillers.



The Roto-Ette Home Gardener brought the benefits of rotary tillage to the backyard vegetable garden for the first time.



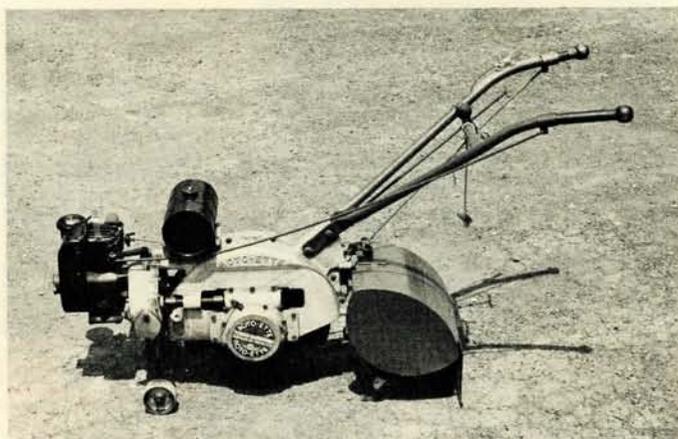
The Graham-Paige Rototiller was modeled after the B1-3 built in Troy. Graham-Paige was licensed to manufacture these large machines according to Rototiller designs. The original Rototiller company then converted to the manufacture of smaller machines for home gardeners in 1945.

C.W. Kelsey never wavered in his conviction that a small, well-built tiller would win acceptance from the American public. Therefore, in 1944, ROTOTILLER, INC. made plans to convert to exclusive manufacture of the *Home Gardener* and discontinue the production of the professional B-Model series.

An agreement was made with the *Graham-Paige Motors Corporation* of Detroit which licensed Graham-Paige to manufacture tillers based on the ROTOTILLER, INC. design and sell them under the *Rototiller* trademark. ROTOTILLER, INC. would still do business under that name in Troy, but would market its tillers under the Roto-Ette trademark.



Graham-Paige Motors became *Graham-Paige-Fraser* and then *Kaiser-Fraser*, distributing and selling its Rototillers through their automobile dealerships. Kelsey's ROTOTILLER, INC. meanwhile, produced the result of seven years' experimentation and refinement. The first *Roto-Ette Home Gardener* rolled off the production line in Troy in 1945.

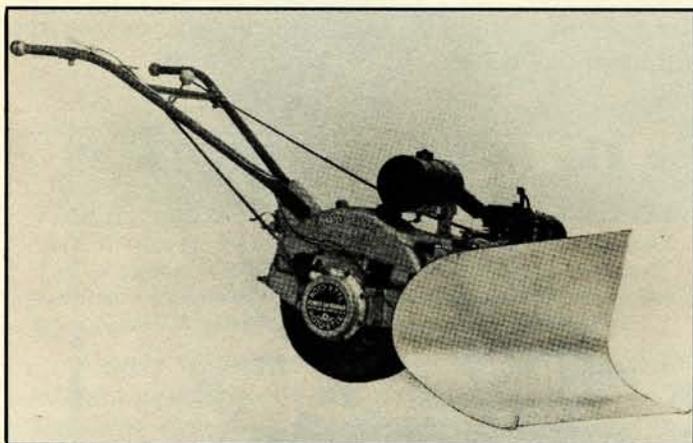


The Roto-Ette was much more than a tiller. With optional attachments it could be converted to lawn mower, field mower, furrower, hay rake, power wagon, sprayer, seeder and snow plow.

The One-Wheel Appeal

Kelsey had instructed his engineers to build the best possible *Roto-Ette* without regard to cost. It was a precision piece of machinery with 228 parts including 36 bearings. All exposed metal was treated with a permanent anti-rust finish, even the small, fold-up stabilizing wheels in front.

Because it was made largely of aluminum, the *Roto-Ette* was light enough to be used by almost anyone. A 1½ HP engine provided sufficient power for the largest jobs. In addition, eight different attachments made the one-wheel *Roto-Ette* capable of nearly every yard and garden task from tilling, cultivating and furrowing to lawn mowing, log sawing and snow plowing.

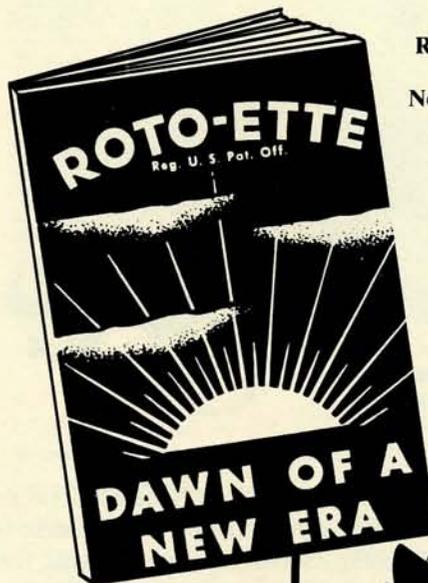


The *Roto-Ette's* versatile V-style snowplow blade doubled as a furrowing plow in previously tilled soil and could also be used as a hilling attachment for row crops.



The usefulness of the *Roto-Ette* around the home was enhanced by a riding-cart attachment called a Power Wagon which could haul hay, mulch, leaves, brush trimmings, firewood, and various home improvement materials or tools.

With a list price of \$330, the *Roto-Ette Home Gardener* was not inexpensive, but it still cost less than most of the large rotary tillers on the market. Sales started slowly, then increased rapidly until, by 1948, the *Roto-Ette's* success seemed assured. However, ROTOTILLER was about to be confronted by serious competition from a different type of gardening contraption.



Rototiller ads proclaimed "The Dawn of a New Era." The *Roto-Ette* fulfilled that promise, making the advantage of rotary tillage available to the home gardener.

Simple diagrams such as this immediately made clear the power-composting and mixing advantages of rotary tillage.



A *Roto-Ette* lock-reel mower attachment had a "floating head" feature which let the user mow over rough or uneven terrain without skips or "scalping".

A Backward Step with the Front-Ender...

Typical front-end "tiller" design, with tines doing both the digging and propelling and no power to wheels. ROTOTILLER made a few, but no matter how well-made, their performance was always less than satisfactory.



The original design of all rotary tillers had the tilling unit in the rear of the machine and powered wheels to propel it forward. In 1936, a machine which was just the opposite was designed. The front-end tiller had no power to its wheels and depended upon the action of its front-mounted tines to pull the machine along the ground.

For some twelve years after their invention, front-enders were made in very limited numbers. Lighter and less powerful than rear-end rotary tillers, front-enders were used primarily for cultivation of light soils and in strawberry beds. They could not compete with rear-end tillers in performance.

However, front-enders could be manufactured cheaply and sold for hundreds of dollars less than their rear-end ancestors. In 1948 another company began production of front-end tillers in earnest, promoting them heavily to the home gardening market. This had an immediate effect on *Roto-Ette* sales and, in late 1948, the ROTOTILLER business plummeted.

Fortunately for the gardeners of America, a gentleman named George Done was prepared to meet this challenge with a competitive machine which offered a better alternative in rotary tillage.



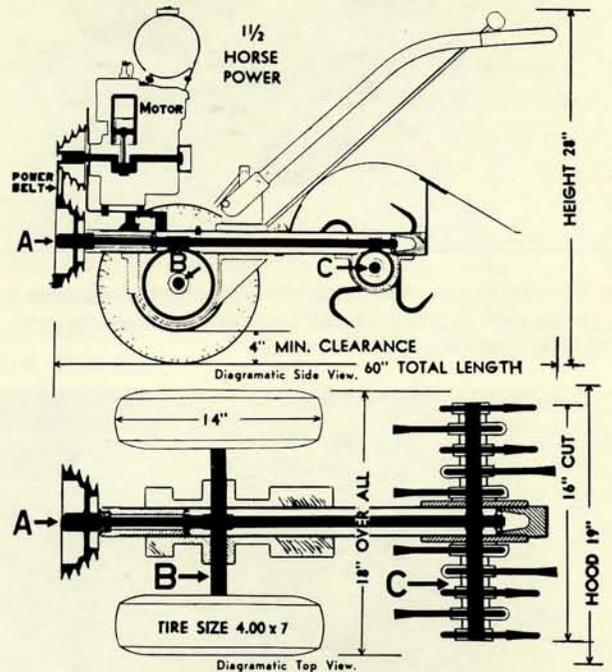
Sketch showing the effect of front-end tiller use upon the operator: "Torture!" A telling point against the front-ender in later ads.

Back to Basics

As ROTOTILLER, INC.'s chief engineer, George Done knew that the front-ender was not the answer to the need for an inexpensive, quality rototiller. To his mind, the front-ender did not even qualify as a legitimate rototiller. The front-end cultivator sacrificed two components which an engineer would recognize as crucial to rotary tillage: powered wheels to both propel the machine and hold it back, and rear mounted tines whose only function was to till the soil.

Done believed he could design a rear-end tiller to compete in price with the cheap front-enders. Carl Kelsey wouldn't hear of it. He thought the one-wheeled *Roto-Ette Home Gardener* was the best machine that could be built and he was staking the future of the ROTOTILLER business on it.

The MODEL T ROTOTILLER



Simple, Rugged Construction For Years and Years of Hard Use!

OTHER than the motor, the Model T ROTOTILLER has only three moving parts—the shafts A, B and C. Everything is enclosed, runs in a bath of oil, completely protected from dust, dirt, and water. This utter simplicity of design, plus automotive standards of material and precision manufacture are the main reasons for the remarkable efficiency and dependability of all the ROTOTILLER models.

As the competition from front-enders stepped up, Done realized that Kelsey's *Roto-Ette* was priced too far beyond the reach of average home gardeners. So, working at home, George designed the simplified rear-end tiller (above) which had all the best features of previous Rototiller models but which could be made and sold for about half the price of the *Roto-Ette*.

with the Model T

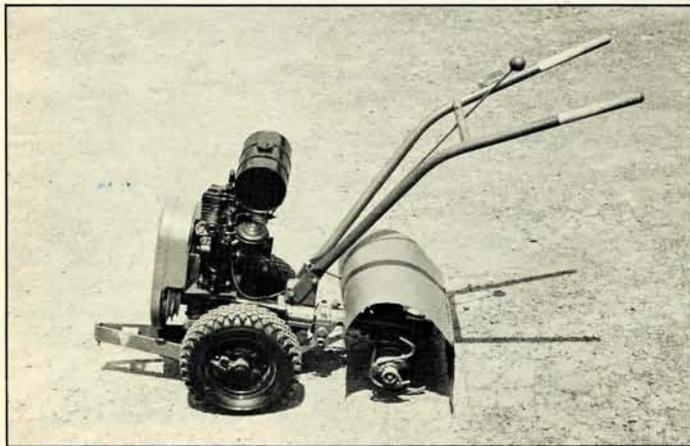
George Done



Chief engineer George Done believed that the Roto-Ette Home Gardener was "over-designed". He was convinced that the tiller could be simplified without sacrificing performance, and the new Model T proved him correct.

Early in 1949 orders for Roto-Ettes stopped coming in. When the bottom fell out of the business, Carl Kelsey was finally ready to listen to George Done's ideas on a simplified, competitive tiller.

Kelsey was impressed when he saw the design for Done's new machine; and when he heard Done's estimate of production costs, Kelsey was convinced. He ordered a prototype constructed. Three weeks later it was completed and tested. When it performed as well as Done had promised, Kelsey ordered immediate production. All that was left was to name it and put a price on it.



The Model T was noted for its ease of operation. Powered by a 1½ horsepower, 4-cycle engine, it could be operated in four speeds: Low-Low for breaking sod, Low for tilling and cultivating, Second for lawn mowing, and High for hauling and running from one job to another.

To Kelsey, the new rototiller represented a technological breakthrough; making a high-quality product available at a low price. George Done called it "the poor man's machine". For these reasons, they likened the tiller to Henry Ford's Model T automobile. So, it was named the *Model T Rototiller*. They priced it at a dollar a pound, \$194.50.

About the same size as the *Roto-Ette*, the *Model T* had two wheels instead of one. Whereas the *Roto-Ette* had 36 bearings and as many gears, the *Model T* had 3 bearings, 2 gears and three major moving parts aside from the engine. It was so simple to operate and maintain that it made good rotary tillage available, easy, affordable and enjoyable for practically everyone.



The Model T was an immediate success and dealers ordered them by the truckload.

In the late 1940's there was a great upsurge in home gardening. the *victory gardens* of World War II had inspired an interest in vegetable gardening and this interest had carried over after the war. Also, thousands of families had moved to the suburbs and found themselves with more land and more potential gardening space.

The *Model T* offered these new gardeners the chance to grow more food, with less work in less time than ever before. Only 3 months after the *Model T* went into production, ROTOTILLER, INC. was turning out a new machine every 9 minutes and they were selling just as fast.

Kelsey felt that the company had a responsibility to do more than offer a good machine. He knew the people needed information and instruction on good gardening as well. Realizing that the more people knew about gardening techniques, the more they would appreciate the *Model T*, Kelsey began looking for someone to spread the word about home gardening.

The Robinson Plan to Have More

Back in 1943 while Kelsey was planning to change the course of the ROTOTILLER, INC. business with the introduction of the *Roto-Ette*, Ed Robinson was making a move which was just as drastic and significant.



An advertising copywriter from New York City, Ed Robinson wanted more out of life than an apartment with "conveniences" that turned out to be less convenient and more of a burden every day. To have more, he looked for and found "a little land" for the homestead shown below.

As a successful copywriter for a major advertising firm in New York City, Robinson was in the prime of his career. Yet, he was dissatisfied.

"We Robinsons lived in a big apartment house in New York," he explained. "Far from having all the conveniences and easy living you are supposed to have in a big city, we found we had very little." Ed and his wife, Carolyn, began to explore alternatives to that lifestyle. According to them; "We wanted to add the security and fullness that seemed more likely to come if we owned our own home and some land. Not much land, necessarily, but good land and enough of it to raise our own food."

When they began to investigate, the Robinsons found that there was little information available to help them. They read hundreds of books and pamphlets but most were aimed at large-scale commercial agriculture, not small-scale homesteading.

Eventually, Robinson pieced together enough information to establish his homestead on two acres in Connecticut. By trial and error, he and Carolyn established a formula which enabled them to produce 75% of their family's food in just a few hours a week.

It then occurred to Robinson that his experiences could be helpful to others, and he began to think about publishing a magazine for homesteaders. He discussed this idea with a friend, Lyman Wood, who operated a publishing company in nearby Noroton. Over a glass or two of strong cucumber punch during a barn-warming party, Robinson and Wood decided that a magazine was not possible due to the paper shortage at the time. Instead, they would publish a booklet.



Wally Boren, Lyman Wood and Ed Robinson review the progress on the Have-More Plan booklet at the offices of the Noroton Publishing Co. in Connecticut. The headquarters building was known as "the Dutch Oven" (at left).

The Wonderful New 20th Century Way to Live!

"A Little Land—A Little Power—A LOT OF LIVING!"

Ed Robinson did not want to become a full-time farmer, but neither did he want to be a weekend gentleman farmer. What he wanted was a way to live in the country, raise a significant portion of his family's food, yet still maintain his job in the city.

The Right Place – The Right Time

Carl Kelsey read *The Have-More Plan* and thought it would be just the type of thing to spread the word about home vegetable gardening with a rototiller. In 1949 he invited Ed Robinson and Lyman Wood to come to Troy to see the new *Model T Roto-Ette*.

Robinson and Wood were familiar with the works of Louis Bromfield and Edward Faulkner, so they immediately recognized the *Model T* as perhaps the most important homesteading tool ever invented for the purpose of "green manuring" and soil enrichment.



Lyman Wood and Ed Robinson look on from the bed of a truck while C.W. Kelsey (right) clinches a deal with a Rototiller Dealer in the late 1940's.

Green manuring was the practice of growing cover crops for the purpose of turning them back into the soil to add organic matter. It was not a new concept, having been practiced for centuries in one way or another. However, in his book, *Plowman's Folly*, Faulkner had theorized that turning in a green manure crop with a moldboard plow was actually detrimental.

According to Faulkner, the plow simply buried the organic matter and compressed it in a single layer beneath the topsoil, thus reducing available nitrogen and preventing moisture from draining or rising in the subsoil. He and Bromfield believed that green organic matter should, instead, be chopped and mixed into the topsoil where it could readily absorb moisture and decompose rapidly.

Robinson and Wood agreed that the *Model T* was ideally equipped to do just this. In one operation, the *Model T* was capable of chopping up a standing green manure cover crop and mixing it into the topsoil. This, they felt, was particularly valuable to the home gardener who needed to keep his soil in excellent condition for growing the maximum amount of vegetables in the garden space available.



On one of his many visits to Troy, Ed Robinson has the various mechanical features of the *Model T* pointed out by Kelsey.



In 1949 Robinson and Wood wrote this informative booklet on self-sufficiency and green manuring for Kelsey's *Roto-Ette* sales efforts.

Prior to rotary tillage, green manuring had not been practical on a small scale. It had to be done by hand with a spade or a fork and was a back-breaking, time-consuming job. Because of this, it seldom got done and the soil suffered depletion. With the *Model T*, however, it could now be done easily and quickly and inexpensively.

ROTOTILLER, INC. enlisted Robinson and Wood to get this message across. From 1950 through 1955 they wrote several booklets on the subject of better gardening through rotary tillage and, with their help, *Model T* sales increased steadily.

Early Ads Mark Rototiller Development

Perhaps even more important than the design, research and testing of machinery were ROTOTILLER's efforts to promote the idea of rotary tillage in America. Kelsey knew that no matter how great a machine was, it wouldn't do any good unless people knew about it and were willing to buy one. In the early days, most people weren't. They first had to be informed of the benefits of gardening with a rototiller, then educated as to why they should select one particular brand or model.

By the early 1950's, ROTOTILLER was beginning to get the message across to the home vegetable gardener and sales of rotary tillage equipment increased dramatically across the industry.

YEARS AHEAD
In All Around Utility

ROTO-ETTE
THE ALL-PURPOSE POWER GARDENER

Brings Joy to Home Owners... Profit to Professional Growers

DESIGNED AND MANUFACTURED BY
ROTOTILLER, INC., TROY, N.Y., U.S.A.

Attachments shown: HILLS, POWER, FURROWS, HAULS, CUTS, DITCHES, MOVS, SPRAYS, TILLS, SEEDS, DUSTS, PLOW-SNOW, HILLS.

ROTOTILLAGE YIELDS GREATER PROFITS

ROTOTILLER

A LITTLE POWER—A LOT OF LIVING!
WITH THE NEW 1952 ROTOTILLER

by ED ROBINSON

ROTOTILLER, INC.'s earliest advertising was aimed at the professional market but, as the tiller evolved, the advertising changed along with it. With the *Roto-Ette Home Gardener*, the tiller became a multi-purpose gardening machine. Later, with the *Model T*, ads stressed the tiller's versatility, ease of operation and benefits to both soil and productivity.

12 Wonderful Lawn and Garden Machines... ALL-IN-ONE!

NEW 1953 GASOLINE-ELECTRIC, Lightning Change

ROTOTILLER

PERFORMS MIRACLES IN MINUTES—THE YEAR 'ROUND!

MAIL COUPON FOR FREE BOOK
To Get the Whole Wonderful Story

Registered from Saturday Evening Post, August 6, 1953

365 Reasons Why RIGHT NOW is the Time to Get that ROTOTILLER!

DOES ALL THESE JOBS WITH EASE
Switch Lightning Change Attachments in Seconds!

RIGHT NOW—This Month—This Week—ANY Day of the Year—Your Lightning Change ROTOTILLER CAN Save You Time, Work and Money!

MAIL COUPON FOR FREE BOOK
It Tells You the Whole Wonderful Story!

THERE IS ONLY ONE ROTOTILLER—IT'S MADE BY ROTOTILLER, INC., TROY, N.Y.
"If You Want a ROTOTILLER at all—YOU WANT IT NOW!"

Does as Much as 8 Hired Men
—works for only \$1.00 a Day!

NEW 1953 GASOLINE-ELECTRIC

ROTOTILLER
PERFORMS MIRACLES IN MINUTES!

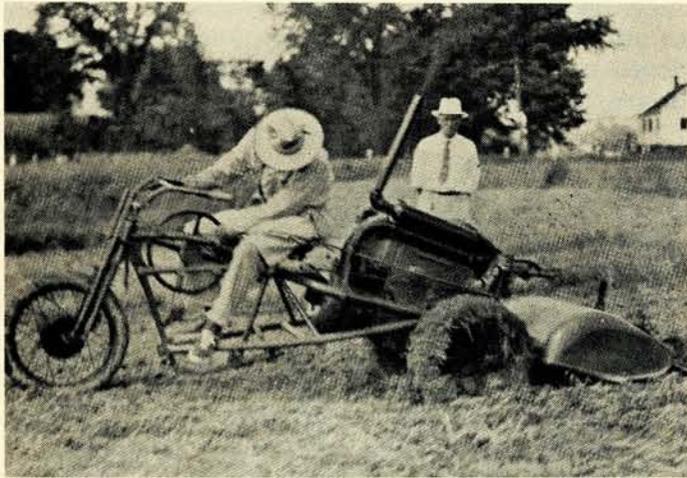
Lightning Change
DOES ALL THESE JOBS WITH EASE
Switch Lightning Change Attachments in Seconds!

MAIL COUPON FOR FREE BOOK
It Tells You the Whole Wonderful Story

ROTOTILLER, Inc., Dept. 74, Troy, N.Y.

Advertising and brochures like these were largely responsible for the education of the American gardening public to the advantages of rotary tillage. The success of ROTOTILLER's informational efforts was nowhere more apparent than in the competitive marketplace, as other advertisers benefited from the promotional groundwork done by Kelsey and his associates.

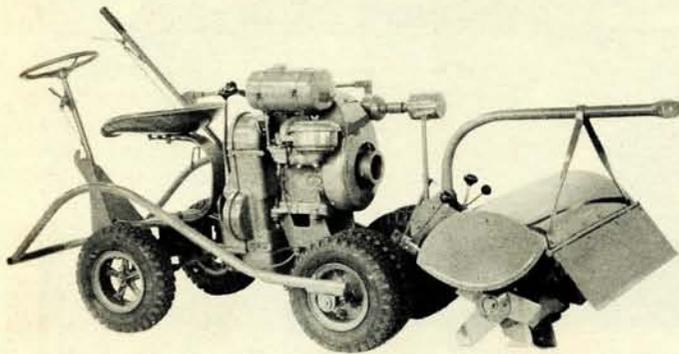
Rototiller Promotion: Design,



The Starkweather Brothers, Massachusetts Rototiller Dealers, converted a Simar tiller into a riding model and tested it at the 1939 Field Day.



In 1939 a log saw attachment was developed for the A-1 Rototiller.



Some 14 years after seeing the Starkweather's conversion, Kelsey designed his own riding tractor-tiller and manufactured a few Model 2 Rototiller Tractors in 1953.

In its first twenty years of operation, ROTOTILLER INC. had sold and serviced over twenty different Rototiller models. Some of the model-changes were due to Carl Kelsey's automotive orientation and his feeling that there had to be a new model every year; many were definite improvements in the original designs. In any event, what landed in America in 1930 as a complex implement for a specialized field became a valuable tool for hundreds of thousands of home gardeners by 1950.

ROTOTILLER's constant research and experimentation over these years had propelled it to the forefront of the rotary tillage industry. The company, under the direction of Carl Kelsey and chief engineer George Done, had always seemed to be able to sense the needs of the coming times and design a machine to meet those requirements.



Dealer Ray Riddle's display at the Eastern States Exposition in Springfield, Mass., was always one of the showcases for Rototiller's latest models, as shown above in a photo from the early '50's. Throughout his career, Kelsey was firmly oriented towards doing business through dealer sales.



Only a very few of the Model 5 tillers were made in 1956 and, unfortunately, none remain in original condition now. They were unique in that the tine and hood assembly was removable for the attachment of other powered accessories at the rear of the machine.

Development, Dealers...



The Duplex Rototiller (shown above with hood removed for the demonstration) was presented to the dealers at the 1950 Field Days. Having two tiller units which rotated simultaneously in opposite directions, the Duplex was over 25 years ahead of its time and was too much of a novelty to win wide acceptance.

ROTOTILLER, INC.'s *Annual Field Day* played an important part in the development of the Rototiller. This event was attended by Rototiller Dealers from around the country who came to Troy every Fall to test the latest models and place their orders for the coming year. Many of the Dealers brought suggestions for design improvements or ideas for new attachments and accessories with them.

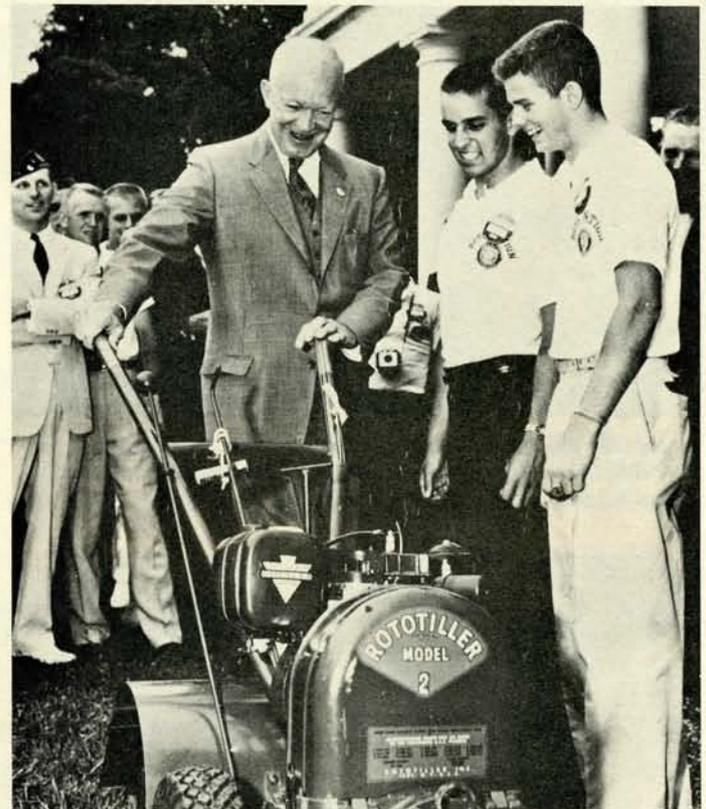
Because the Rototiller Dealers were his link with the customers and users of the machines, Kelsey listened carefully to their suggestions about things which would help make the tiller better and more salable. This information enabled ROTOTILLER, INC. to fully Americanize the Rototiller and turn it into a practical home gardening tool.



To educate his Rototiller Dealers and keep them inspired, Kelsey arranged for speakers at the Field Day banquets. Dr. T.H. Everett, horticulturalist at the New York Botanical Gardens and one of the first and foremost advocates of rotary tillage in America, got the message across in 1950.



"With deep appreciation for all you have done..." Kelsey presented a 20-year service award to Mr. P.E.G. Neilson of Glen Rock, NJ, at the 1950 Dealer Banquet. Neilson was ROTOTILLER's first dealer in the U.S., sticking with the business through thick and thin out of a belief that rotary tillage was, indeed, "the better way" to garden.



In July of 1955 a delegation from the Future Farmers of America presented a Model 2 Rototiller to President Dwight Eisenhower for use in the garden at Ike's Gettysburg, Pennsylvania farm. This photo, printed in hundreds of newspapers across the U.S., helped heighten awareness of rototiller gardening among the American public.

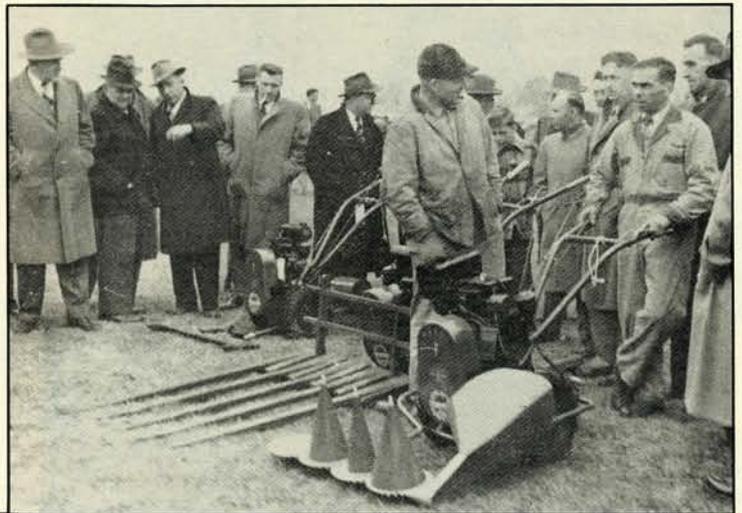
...and Demonstrations. They All Helped



Carl Kelsey's Rototillers had stolen the show at the Rutgers University Field Trials from 1932 on; outperforming all standard garden tractors and impressing the assembled scientists and agriculture professionals with their practicality. The Rutgers' tests gave Kelsey the idea for holding his own Rototiller Field Days in later years.



At his 1950 Field Day, Kelsey (facing the camera) unveiled a new Rototiller Tractor Attachment for larger-scale rotary tillage farming.



Dealers attending the '50's Field Days were more particularly interested in attachments for the Model T. Shown here are a Sickle Bar Mower, Buck Rake, and Rotary Cone Mower.



A Field Day demonstration of a Rototiller-powered water pump-sprayer attachment received attention for being especially useful to market growers and orchardists. The circled child in the photo is Allen Cluett who decided to go to work for ROTOTILLER when he grew up, and who still works at the Tiller Factory in Troy.

“IMPROVE! – The Rototiller Creed.”



The Rototiller Model 2 was an improved version of the Model T. With its patented “Lightning Change Front”, many lawn and homestead accessories could be attached in just a minute or two. Here, Lyman Wood tries out the rotary mower attachment.

At every Rototiller Field Day banquet there was a big banner above the dias reading: *Improve! — The Rototiller Creed*. Therefore, it was only natural that, despite the commercial and technological success of the *Model T Roto-Ette*, Carl Kelsey was not satisfied. He rarely was. He believed there was room for improvement in even the best machine. So, as soon as the first *Model T* rolled off the assembly line, he put his engineers to work on refining the design.

In 1952, ROTOTILLER, INC. began production of two new models based on the Model T. The *Model 2* was a 2 HP, 4-speed tiller; the *Model 3* had four speeds and reverse powered by a 3 HP engine. Both were



Improvements to the machine were accompanied by improvements in the manufacturing process. By the mid-fifties, the ROTOTILLER factory was capable of turning out a new tiller every 6½ minutes. In the photo above, Joe Zakrzewski checks final assembly. Four members in two generations of the Zakrzewski family are still turning out Tillers in Troy.



Another “Lightning Change” attachment to the Model 2 Rototiller was this earth grader/snow plow.

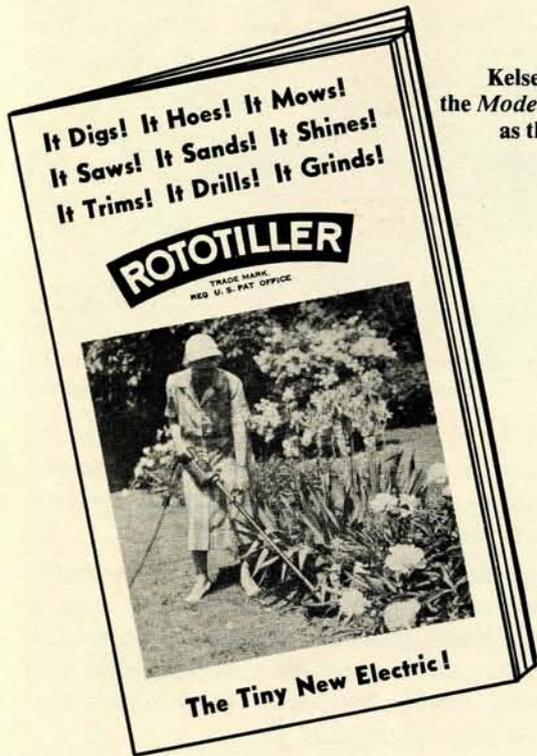
equipped with a “Lightning Change Front” which permitted almost instantaneous attachment of various accessories such as a lawn mower, snowplow, generator, water pump and cart.

Then, having established a solid line of versatile rototillers, Kelsey went on to experiment with the germ of an idea he’d been given many years before. The result, unveiled in 1953, was the radically different *Model E*, a very small, hand-held tiller which had taken close to 20 years to develop.



Mrs. Kelsey used the most unusual Rototiller, the *Model E*, for trimming, mowing, cultivating and spot-tilling in and around her flower beds. Everywhere, in fact, the extension cord would reach.

When Kelsey had first opened the Rototiller Company in 1930, he had taken an imported Rototiller to the State University of New York at Farmingdale. There it had been tested by Professor Arche Stone who was quite enthusiastic about the machine. A few years later, Professor Stone asked Kelsey if he could develop "a little tiller on the end of a stick. Something you can just poke around under the plants with."



Kelsey's promotion of the *Model E* made it sound as though it could do everything but milk the cows.



The Mow-Tiller, Rototiller's entry into the front-end market was a combination rotary tiller and lawn mower. It sold for \$108.50 complete.

After the *Model E*, ROTOTILLER's sales began to slip in the area of its standard tillers. By the mid-1950's, Dealer territories were becoming saturated and the front-end machines were making ever deeper inroads into the business.

Finally, ROTOTILLER, INC. decided to meet the competition on its own ground with the production of a front-ender. Called the *Mow-Tiller*, it was a dual-purpose machine with a rotary mower attachment as standard equipment.

However, Carl Kelsey, George Done, and the others at ROTOTILLER knew that no front-ender would perform as well as a rear-end tiller, so their hearts weren't in the promotion of the *Mow-Tiller*. The company's main product continued to be rear-end rototillers.

Kelsey filed the idea away until some 15 years later when his wife, Marion, suggested the same thing. She asked for a little tiller for her flower beds, something small and light like a vacuum cleaner. Then and there, Kelsey stole the household vacuum cleaner and converted it into a rototiller.

**Back to Being Tied to Power Poles,
But Still 20 Years Ahead of Time.**

The *Model E* really was a "a tiller on the end of a stick", weighing only 15 pounds and powered by a 3/4 HP electric motor. With optional attachments, it could also be a chain saw, drill, lawnmower, trimmer, edger, auger, grinder, floor polisher and even an electric snow shovel which threw snow up to 10 feet.

When it was introduced in 1954 at a list price of \$89, it appeared that the *Model E* had brought the benefits of rotary tillage within reach of even the smallest scale gardeners. Unfortunately, this was not the case. The *Model E* was too far ahead of time and did not sell well. It was manufactured for a few years, then discontinued. Not until the mid-to-late 1970's did the idea return to wide acceptance in a market that was finally ready for it.



Despite having made a front-end model, the company continued to sell the advantages of rear-end rotary tillage over front-enders in booklets such as this.

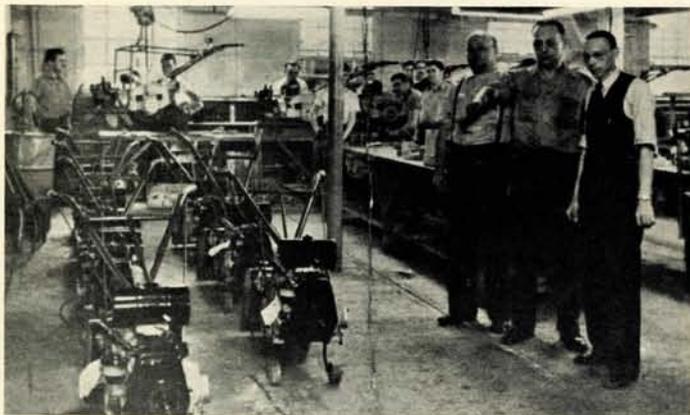
Then...New Hands at the Tiller

After overseeing the production of the *Mow-Tiller*, Carl Kelsey began making plans to retire at the age of 76. He had been almost all alone in the rotary tillage field when he started the Rototiller Company in 1930; in 25 years he had been joined by twenty other American rototiller companies with a combined production of nearly 200,000 (mostly front-end) machines a year. ROTOTILLER, INC. was still at the forefront of the industry.



John Winthrop Wright was enlisted by Carl Kelsey to reorganize Rototiller's financial structure. Upon Kelsey's retirement Wright was named Chairman of the Board of Directors and later Chief Executive Officer of Rototiller Inc.

Kelsey planned to turn the company over to the people who had worked with him through the years. In 1956 he enlisted the services of John Winthrop Wright, a financial consultant, to assist in this transition. In April of 1957 C.W. Kelsey retired. ROTOTILLER, Inc. was reorganized with Wright as Chairman of a seven-man Board of Directors and Penry Price, Kelsey's son-in-law, as President.



This photograph from the mid-forties shows (left to right) shop superintendent Pete Maraj, quality control supervisor Dave Done and chief engineer George Done examining a day's production of ROTO-ETTES. Pete and George founded *Watco Machine Products* with Myers Henderer some fifteen years later.

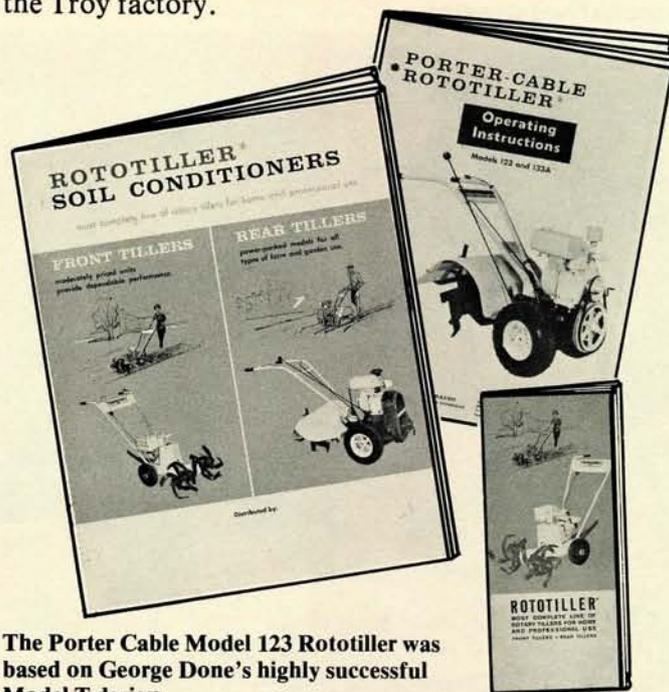
The transition was not smooth. For 26 years, Kelsey had run the business singlehandedly, and it hadn't always run well. His insistence on having a new model every year as the automobile business did had cost the company money.

Constant retooling also consumed a lot of capital. By the time of Kelsey's retirement, ROTOTILLER, INC. was operating under deficit spending; borrowing

money in the winter to finance production and repaying the loan after the Dealers had paid for their tiller orders.

ROTOTILLER's Board of Directors decided to re-finance by selling stock. In 1959 they began negotiations with the *Porter Cable Company*, a manufacturer of lawn and garden equipment based in Syracuse, New York. Later that year, *Porter Cable* purchased a controlling interest in ROTOTILLER, INC.

After making some cosmetic changes in the machines, they began marketing them as *Porter Cable Rototillers*. Eventually, the whole Rototiller operation was moved to Syracuse, leaving only a skeleton crew at the Troy factory.



The Porter Cable Model 123 Rototiller was based on George Done's highly successful Model T design.



While the management and administration for Rototillers moved to Syracuse, most of the original manufacturing equipment stayed in Troy along with a resource pool of experienced and loyal former ROTOTILLER employees who were available for what came next.

The *Porter Cable* business in Syracuse had also been hurt by the decline in the rear-end tiller market and was hoping that the ROTOTILLER name would pull them through. It didn't. In 1960 the company was sold to *Rockwell Manufacturing Company* of Pittsburgh. They didn't keep it long either; both is *Porter Cable-Rototiller* holdings and its gasoline engine division were sold to *Moto Mower* of Detroit the following year.

As a condition of the sale, *Rockwell* was obligated to supply replacement parts for previously manufactured Rototillers for a five-year period. *Rockwell* didn't want the parts business and began looking for another company to handle it for them. Knowing that much of the original machinery was still in Troy and that George Done had the requisite experience, *Rockwell* offered to sell him the parts concession and all the necessary equipment.



First as Chief Engineer of ROTOTILLER, INC., then as president of *Watco* and Co-Chairman of the Board of *Garden Way Manufacturing*, now the Senior Vice-President of *Garden Way Incorporated*, George Done has been at the same desk in his corner office of the original Tiller Factory from practically the beginning of the American tiller industry.

Getting Watco Off the Ground

George Done had had other job offers, but he jumped at the chance to stay in Troy and reopen the tiller factory. He and ROTOTILLER's former shop foreman, Pete Maraj, scraped together as much money as they could. Then they contacted Myers Henderer, owner of the Watervliet Iron & Brass Works and former supplier to ROTOTILLER. With his help, they made the down payment on the equipment.

The factory building itself was owned by a local construction supply businessman, Carl Grimm, who allowed the men to occupy it for only a token rent. On October 1, 1961, *Watco Machine Products, Inc.*, a name combining *Watervliet* and *Troy Company*, established itself in the original ROTOTILLER, INC, factory to manufacture replacement parts for Rototillers.



DO YOU NEED SERVICE PARTS FOR DISCONTINUED
ROTOTILLER MODELS

Send your orders and inquiries to
WATCO MACHINE PRODUCTS
 29 — 102nd St., Troy, N. Y.

THE SAME PEOPLE — SAME FACILITIES — SAME PLANT
 that has produced Rototillers and parts for over a
 quarter of a century — only the name is different.

GEORGE W. DONE I. P. MARAJ MYERS HENDERER, JR.

The name of the company was different, but most of the people were the same. Above *Watco* shop foreman Pete Maraj discusses some detail of production with machine operator Frank Banker.

Carl Grimm first became involved with Rototillers when he constructed a factory addition for C.W. Kelsey in the early 1950's. He became a stockholder in *Watco* and later in *Garden Way* as owner of the factory buildings. In addition to gardening with the latest model tiller, Carl is best loved as "Santa Claus" for the annual *Garden Way* children's Christmas party and well-known for his redevelopment of downtown Troy with the Uncle Sam Mall.



Harnessing the Horses in Troy



George Done's home workshop and backyard garden may have produced and tested more rear-end tillers than any other. Above, George poses with his prototype *Trojan Horse*, introduced in 1962 with the sales brochure at right.

George Done was not satisfied for very long with just making replacement parts for tillers. As President of *Watco*, and still Chief Engineer, he was eager to get back to making whole machines. Working at home in the evenings, Done designed another new rear-end tiller; the *Trojan Horse*.



Two other who have been instrumental in the development of the tiller and the business over the years with George are his brother, Dave Done (center) and Phil Carabis (right). Dave is now Vice President of Production for *Garden Way Manufacturing*, still keeping a close eye on quality control. Phil although "retired", is more often than not at the Tiller Factory, "consulting" with the engineering and service departments whenever necessary.



"I had all the background experience of what had worked and what hadn't worked in the past," George explained, "so I designed a machine which had the best features of those 26 or 27 years of experience. I *knew* when that machine went out that it would work!"

The 4½ HP *Trojan Horse* was heavier and more powerful than the Model T which had come out of George Done's home workshop several years earlier. Its better balance made it even easier to operate and, unlike earlier Rototillers, the *Trojan Horse* was strictly a single-purpose machine.

"When I designed the Horse," George said, "I designed it just as a tiller. That's what I felt people needed and what the market was ready for."

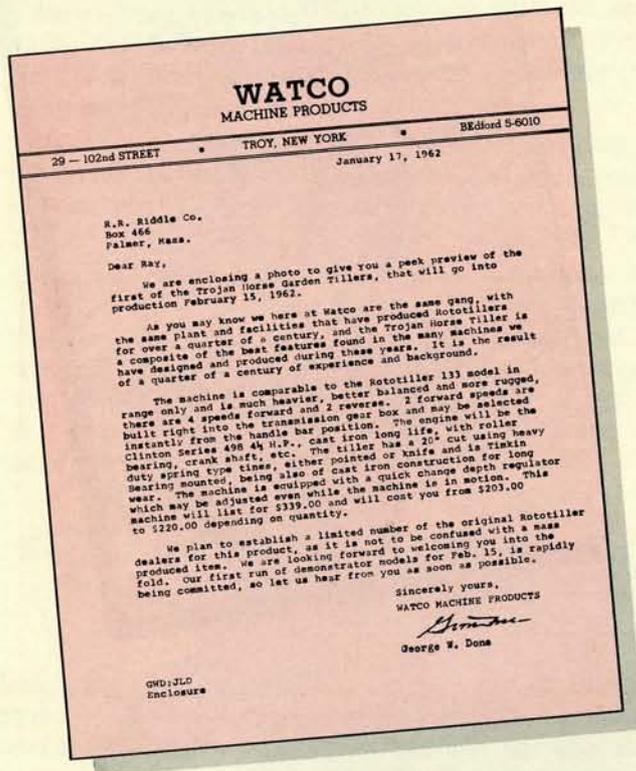
The first *Trojan Horse* rolled off the assembly line in February of 1962, and with it another new era dawned at the Tiller Factory in Troy.

Putting the Horse In Gear

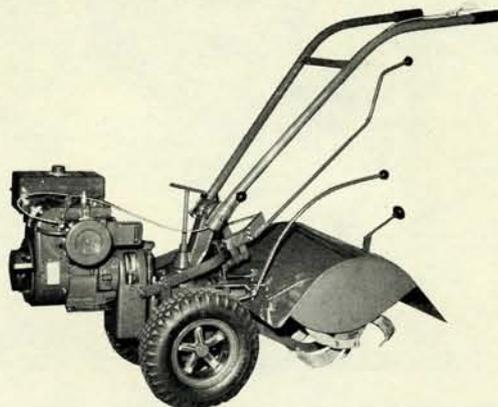
With the production of the *Trojan Horse*, George Done and *Watco Machine Products* now had the most advanced rear-end rotary tiller in America. However, they had little else. *Watco* had no dealers, no sales force, little operating capital, and had lost what had been their singlemost important asset: the *Rototiller* trademark. These minor details were not about to stop George Done.

Even though *Porter Cable* had abandoned the dealer network when it took over the ROTOTILLER business, George still knew them all. He sent each of them a letter announcing the *Trojan Horse* "by the same gang, with the same plant and facilities that have produced Rototillers for over a quarter of a century."

Wood immediately saw limitations in marketing the *Trojan Horse* exclusively through a dealer system. *Watco* could only sell as many machines as the dealers ordered, and only at one time of year. To even out production and increase sales year 'round, Wood proposed that *Watco* use direct marketing techniques and sell the Horse through the mail.



George Done's letter to the dealers (left) started the mail-order tiller business, although he didn't realize it until Lyman Wood stepped in to market this 400-pound, \$350 *Trojan Horse* gardening machine (below) by direct-mail marketing techniques.



The proposal was greeted with skepticism. At the time, it was most unusual to sell a \$350, 400-pound machine by mail, sight unseen. George Done argued that *Watco* couldn't afford to gamble on the attempt.

Several of the old Rototiller Dealers had enough faith in George to order his *Trojan Horse* sight-unseen, but orders did not exactly come pouring in. During the peak period of the Spring of 1962, fewer than a hundred machines were sold.

Wood, however, was convinced that his method would show the best results in the shortest period of time. In addition, he felt that mail order would benefit gardeners who had no access to a dealer. Also, since there would be no middleman, the price could be kept low enough to be very attractive.

Done realized then that he needed help with promoting the *Trojan Horse*, and he remembered Lyman Wood. Wood had coordinated the advertising for Rototiller during the late 1940's and early 1950's when the company had experienced its greatest growth, and that was recommendation enough. George got in touch with him.

Believing that this was a better way to do business, Wood offered to pay all the expenses out of his own pocket, to be reimbursed only if the technique showed results. As with Cluett's earlier offer to Kelsey which brought the tiller business to Troy, it was hard to refuse. George Done accepted.

Out of the Woods

In the interim, Lyman Wood had forged a successful career in direct marketing and mail order sales with *Noroton Publishing* in Connecticut and with *Home, Farm and Garden Research Associates* in Vermont. He had always liked gardening and already believed in the benefits of rotary tillage from his earlier involvement with ROTOTILLER, INC., so he was eager to help when George Done contacted him.

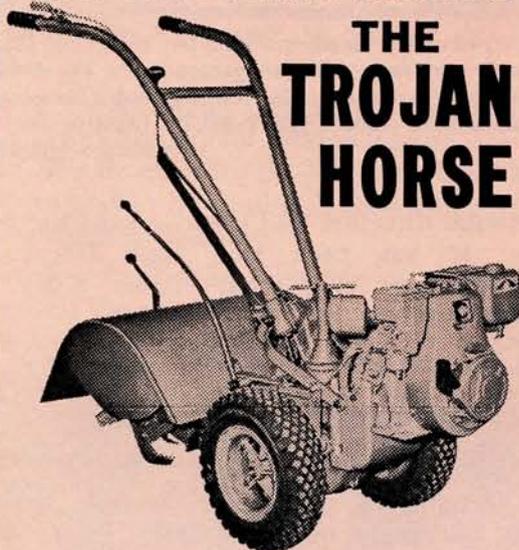


Requests for information as well as all mail order sales were handled individually by a small staff of people in the office at the Tiller Factory. This picture from the late 1960's shows their close quarters prior to expansion.

Growers!
Nurserymen!

Serious
Home Gardeners!

Here is the Wonderful NEW Rotary Tiller Especially Designed for YOU and for Everyone Who Wants a Real Tiller — Not Just a Surface Scratcher!



**THE
TROJAN
HORSE**

The More You Know About Tillers The More You Will Appreciate These Wonderful Features:

- Rear-Mounted Tiller!
- Powered Wheels!
- 4½ H.P. Heavy Duty Clinton Engine — 4 Cycle, Roller Bearings, Long Life Cast Iron!
- Instant Control from Handle Bar Position — Two Speeds Forward and Reverse, and Depth Control!
- Great for Cultivating as Well as Tilling!
- 20" Tilling Width, Timken Bearing Mounted; Chopper Blades or Tines!
- Perfect Balance — The Easiest-To-Handle, Honest-To-Goodness Tiller Ever Designed!
- Built in Troy, N. Y. By People With More Than 26 Years' Experience Building Rotary Tillers!
- Low, Low Price — At Least \$100 Less Than You'd Expect For A Tiller of This Quality and Capacity!

Come See . . . Come Try . . .

The Great New

TROJAN HORSE!

We Also Have PARTS For Old-Model ROTOTILLERS

**DEALER NAME
AND ADDRESS**

A big Boost for Tillers

While George concentrated on building *Trojan Horses* and rebuilding the Dealer network, Lyman launched his sales program. Early in 1963, ads were placed in national gardening magazines inviting prospective buyers to write for more information. Those who responded were sent brochures describing the *Trojan Horse*. Likely buyers were sent the name of their closest Dealer, and the Dealer was given the name of the prospect to follow-up with the sale. If there was no Dealer in the area, the prospect was encouraged to order directly from the factory.

TROJAN HORSE

The Wonderful NEW IDEA in TILLERS — designed to guide with just ONE HAND —

So You Don't Have To Walk On The Nice, Smooth Soil You Just Tilled or Cultivated! Plus Other Important Advances Over All Other Tillers! Ask for FREE BOOKLET Which Tells The Whole Wonderful Story.



Write Now to **TROJAN HORSE TILLERS**

Dept. 2108, 29 102nd St., Troy, New York 12182

DEALER INQUIRIES INVITED. Also: Parts for older model ROTOTILLERS. Ask for FREE Parts-Price List.

Lyman Wood's marketing strategy for the *Trojan Horse* included Dealer advertising such as the example at left, plus ads inviting inquiries directly to the factory (above) placed in such national gardening magazines as *Horticulture* and *Organic Gardening*. Respondants to these ads were mailed informational literature and sales brochures he designed, shown in the examples here.

In the first two years, Lyman invested close to \$10,000 in this program. Sales slowly increased but it was not clear how much of the effect was due to the mail-order plan. By 1965, he had decided that he couldn't afford to sink any more of his own money into *Watco* and was almost ready to bow out.

Before Lyman left, he and George went over the sales figures one more time, trying to analyze the results of Wood's direct marketing campaign. They found over forty orders attributable to the direct mail efforts; the plan was working after all! Instead of leaving, Wood decided to redouble the effort and accepted stock in the company as compensation for the money he had invested in advertising.

Adding Up and On

Demand for the *Trojan Horse* increased and a new model was added to the line. In 1965 a 6 HP model was introduced and, for the first time, electric starting was offered as an option.

The following year, some much-needed operating capital came into the company when *Watco* stock was sold to Dick Denholtz, John Keane and Eric Lundberg, associates of Lyman Wood's at Noroton Publishing Company in Connecticut. These new stockholders soon formed *Precision Marketing Associates* in Norwalk in order to fill *Watco's* needs for advertising, printing and mailing.

PMA, as the group came to be known, was much more than simply a service agency for the tiller business. Its importance in the successful selling of *Watco's* gardening machines was crucial from the beginning of the association, as they supplied both



Lyman Wood coined the phrase "Just One Hand!" in 1965 after using the *Trojan Horse* in his own garden above. The description of the tiller's ease of operation has appeared in the advertising ever since, and the modern TROY-BILT® logotype was created from this original photo.



Precision Marketing Associates of Norwalk, Connecticut, was formed by principals of the Noroton Publishing Company to handle *Trojan Horse* advertising and literature. Above; Eric Lundberg, freelance writer Annie Marsh, Lyman Wood and Dick Denholtz pose in a picture taken by John Keane during work on a *Watco* mailing at Lyman's Vermont "office". (P.M.A. later became *Garden Way Marketing Services* as the company evolved.)



Dean Leith, Jr. joined *Watco* as its first Sales Manager in 1966. "I liked gardening and I liked gardeners," he recalls, "and I knew I wanted to work at something I like, so I took the job." Thousands of gardeners know Dean today as their "Friend in Gardening" at *Garden Way Manufacturing*.

organizational direction and creative expertise to the company. It has been said that Tillers were manufactured in Troy, but Tiller Sales were manufactured in Norwalk.

As the business grew, the small office staff in Troy needed help to keep up with sales correspondence and mail orders. In 1966, Dean Leith, Jr. was hired as *Watco's* first full-time advertising and sales manager.

Dean brought his own touch to the company, personally answering questions from Tiller Owners and prospective buyers. In letter after letter, he explained the advantages of the *Trojan Horse* and how it could best be put to work in the garden. Dean also wrote regularly to customers after the sale, insuring that they received top-notch service.

At about this time, *Watco* began offering a seasonal discount. Although *Trojan Horse* sales had increased five-fold from 1962 to 1966, most of the business was concentrated in a 3-month period in the spring of each year. After that, orders slowed and the production work-force was reduced.

To even-out sales and keep production going throughout the year, buyers were offered from 10% to 20% off during the off-seasons. Besides making the *Trojan Horse* available at a lower price, this plan offered another benefit to the buyer. Because production was devoted exclusively to tillers the whole year around, quality and workmanship could be kept at a consistently high level by a full-time work-force.

The *Trojan Horse* was continually improved. In 1967 alone several changes were made including a redesigned clutch, a better placement of the gas tank, and the offering of bar-tread tires as an option. But the most significant changes were still to come, both on the tiller and within the company which made it.

Garden Way's Guiding Hand

Lyman P. Wood



By the time he joined *Watco* in 1962, Lyman Wood had already established a reputation as an astute and innovative direct-mail marketer. As his mail order marketing plans for the *Trojan Horse* proved to be successful, he assumed an increasingly important role in charting the course of the company.

Throughout his career, Wood had been as much of a pioneer in the direct marketing field as Carl Kelsey had been in the rotary tillage industry. Like Kelsey, Wood was an entrepreneur who had launched a number of business ventures along the way. Also like Kelsey, he had been willing to take a chance on a mid-career change to a fledgeling rototiller business. The similarity ends there, however, as Lyman Wood had a history of business successes behind him when he joined forces with George Done at *Watco*.

At just about the time Kelsey was making plans to leave New York City and move his ROTOTILLER company to Troy, Lyman was moving to the city. After graduating from the University of Vermont in 1936, Wood had been hired by the J. Walter Thompson advertising agency. There he spent four years honing his marketing skills. There, also, he met his friend, Ed Robinson.

After working in the city, Lyman came to the conclusion that there had to be a better way to live. He came to believe that too much of man's independence was eroded in the cities. He decided that people needed more space, more contact with the natural environment, and more meaningful activities directed at self-reliance. These conclusions shaped a philosophy which would significantly affect Wood's career and business associations thereafter.

In 1940, he left the advertising agency and founded a non-sectarian organization, *Life-Study Fellowship*, with co-worker Wally Boren. Within a few years they had been joined by Keane and Lundberg and had established the *Noroton Publishing Company*.

When the company printed the Robinsons' *Have-More Plan* in 1944 it proved to be such an immediate success that *The Country Bookstore* was established to distribute it and to offer other gardening and self-sufficiency books through the mail.



The *Noroton Publishing Company* headquarters in Noroton, Connecticut, home-office for *The Country Bookstore* established in 1944 by Wally Boren, Ed Robinson and Lyman Wood.

A Way of Life Emerges

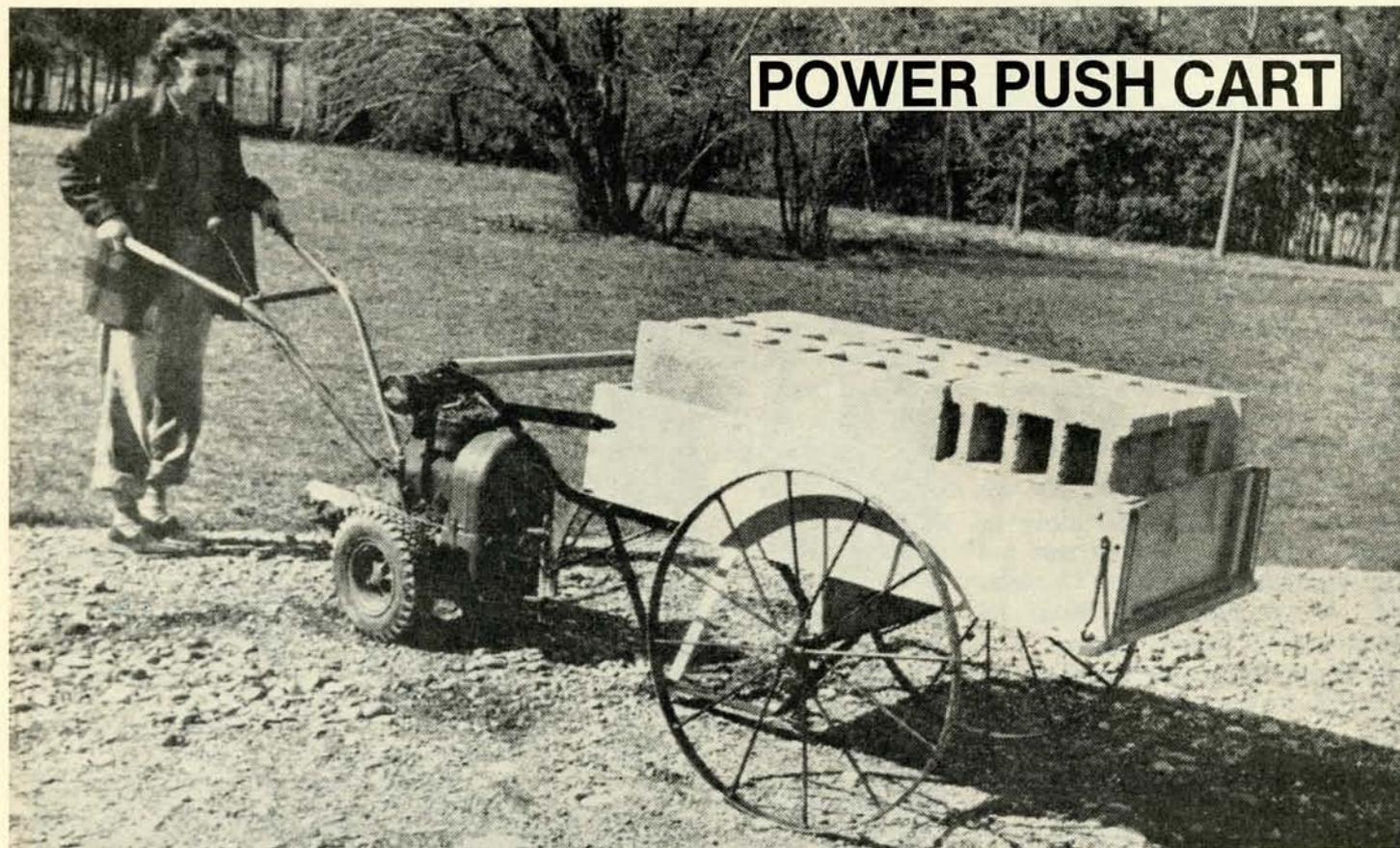
Through *The Country Bookstore*, Lyman was able to marry his professional career with his personal beliefs. With the wide acceptance of *The Have-More Plan*, he and his associates began publishing books on such currently popular subjects as edible landscaping and solar energy, plus perennially favorite how-to booklets on almost all forms of food self-sufficiency.

By this time, the advancement of self-sufficiency through gardening had become something of a crusade for Lyman Wood. His association with ROTOTILLER, INC. in the late 1940's and early 1950's gave him the opportunity to get the message across to even more people.

In the early 1950's Wood ended his association with C.W. Kelsey and moved to Vermont to live the kind of life he had been advocating to others. There he established *Home, Farm and Garden Research Associates* to market the "Countryman's Carryall", a large-wheeled, well-balanced delivery cart, forerunner of the Garden Way Cart to come.

Then came his re-entry into the rototiller business with George Done and *Watco* which was to bring Lyman Wood his greatest success and allow him to see his personal philosophy become a way of life for hundreds of thousands of gardeners.

This log cabin on the shore of Lake Champlain in Charlotte, Vermont was built as Lyman Wood's office. Its garden has been featured in countless tiller advertisements and literature. It is now the "corporate headquarters" for *Garden Way, Inc.*



An early prototype of the *Countryman's Carryall*, shown here being powered by a *Model T Roto-Ette* operated by Mary Wood, was the forerunner of the famous *Garden Way Cart*. Lyman's *Home, Farm and Garden Research Associates* has since evolved into the present *Garden Way Research* business in Charlotte, Vermont.

Garden Way Gets Down to Earth

Lyman viewed George Done's request for help with the rototiller business as a challenge to his marketing skills. He felt that, with the right formula, nearly anything could be sold through the mail and this would be the opportunity to prove it.

More important than that, Lyman believed in the product itself. George's *Trojan Horse* was, like the Model T before it, the right machine for the time. A back-to-the-land movement was afoot and building through the late 1960's. Lyman didn't need to go back to the land because he was already there. But he knew the *Trojan Horse* would help other people get there, faster, by enabling them to grow more of their own food with less work. The way was clear.

This Trademark and Company Name:



Have Become:



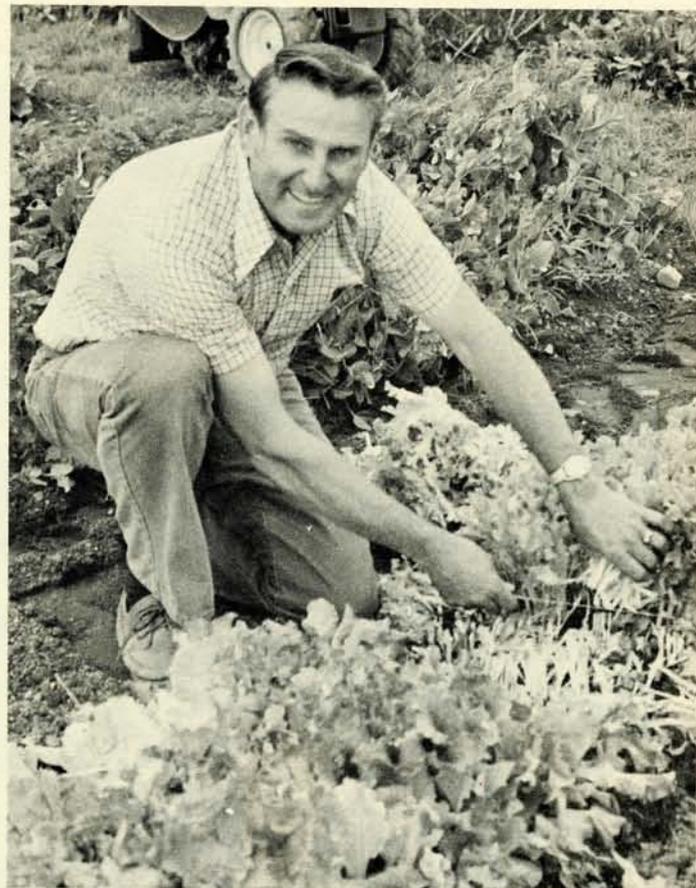
Although the name changed, the design of the Tiller remained the same. Gone forever was Kelsey's practice of introducing a new model every year as *Garden Way* decided to stick with George Done's proven design and concentrate its attention on providing new and better service to its customers.

In 1968, a trademark challenge from the manufacturer of huge earth-moving machinery necessitated changing the name of the *Trojan Horse*. It became the TROY-BILT® Roto Tiller, in honor of its home town. At the same time, *Watco* was renamed *Garden Way Manufacturing Company, Inc.* to better reflect the underlying philosophy that gardening was a way of life.

With the TROY-BILT at the heart of a growing company, Lyman recognized *Garden Way's* dual opportunity and obligation to further the cause of gardening in America. Like Kelsey had before him, he realized that the more people knew about good gardening, the more they would appreciate the benefits and want the advantages of the TROY-BILT Roto Tiller. Then, of course, as the gardening population grew, so would *Garden Way's* potential market.

Just as Carl Kelsey had enlisted Ed Robinson 20 years earlier to spread the word, Lyman added Dick Raymond to the staff as a gardening consultant. A life-long gardener, Dick was a firm advocate of green manuring or turning under cover crops to enrich the soil. Plus, as an independent Vermont Yankee market-grower, Dick knew just what he wanted from a machine that had to be simple and easy to operate, fast and efficient in performance.

Dick pointed out that the "chopper tines" on the TROY-BILT had trouble turning under standing vegetation without tangling. Lyman passed along Dick's suggestions for an improved design and the engineers in Troy adapted the self-cleaning Bolo Tines which became standard equipment in 1969.



Dick Raymond in his Garden Way Test Gardens in North Ferrisburg, Vermont.

Know-How and How-To

Dick Raymond's gardening knowledge and tireless experimentation led to the development of special *Troy-Bilt* tilling and gardening techniques. Among them were some based on old, almost-forgotten ideas like raised-bed and wide row growing.

In a natural extension of his well-attended gardening lectures, Dick's expert advice has been collected in several books, including *Down-To-Earth Vegetable Gardening Know-How*.



Garden Way Publishing's how-to books and bulletins have helped millions to a happier, more productive life.



The following year, *Garden Way Publishing* was founded alongside *Research* in Charlotte, to print and distribute books on gardening, alternate energy, basic self-help instruction and techniques for self-sufficient living.

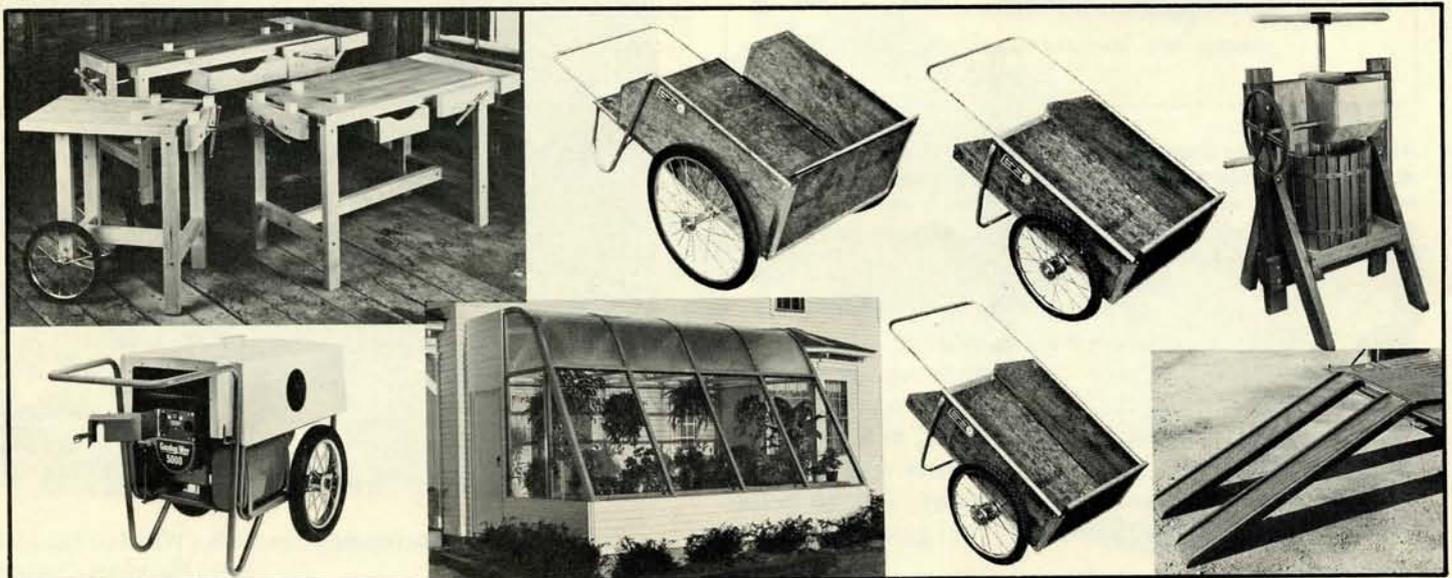
In time, the concept of *Garden Way Living* began to emerge as the idea which guided the *Garden Way* companies in all their business activities.

Inspired by Lyman, *Living the Garden Way* came to mean a life in harmony with the environment, conserving resources, raising as much as possible of one's own food, making the most of home-centered crafts, skills and entertainments, and becoming more self-reliant in every way possible. As a way of doing business, *The Garden Way* meant providing needed products and services in a responsible manner and at a reasonable price.

As the company grew ever stronger, Lyman Wood seized the opportunity to bring two of his earlier ventures in under the *Garden Way* name. In 1969, *Garden Way Research* was established in Charlotte, Vermont, to manufacture and market the redesigned homestead-and-garden cart now known as the *Garden Way Cart*. Other early *Research* products were fireplace grates and loading ramps, the latter of which were promoted to encourage the practice of *Custom Tilling* among TROY-BILT Owners.

The product line has since been expanded and today *Garden Way Research* offers Cider Presses, Home Workbenches and Kitchen Worktables, Home Generators, Solar Greenhouses, and a number of other useful self-sufficiency items.

Practical, durable and useful down-to-earth products such as those below have made many home and garden chores easier and more enjoyable for hundreds of thousands of *Garden Way Research* customers.



The Garden Way

In 1972 Garden Way further underscored its commitment to gardening in general by funding a national non-profit organization to be quite independent of the business. *Gardens For All*, the National Association for Gardening, was established to encourage the practice of gardening throughout America and provide advice and information to anyone and everyone who wanted or needed a food garden.

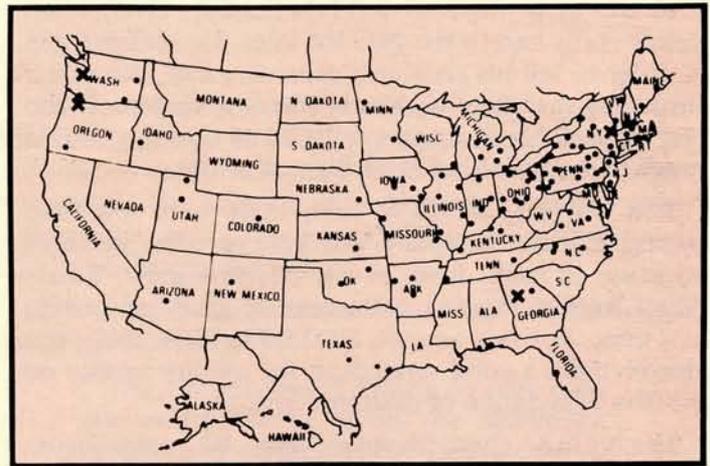


The *Garden Way Living Center* in Burlington, Vermont, first of several retail stores which made TROY-BILT Tillers and products for *Living the Garden Way* accessible to people who liked to “kick the tires”, see and try things out before buying.

Providing access to both tools and information continued to be the primary thrust of the business. In 1973 the first *Garden Way Living Center*® was opened in Burlington, Vermont. There under one roof was collected thousands of books and tools needed for gardening, cooking, home food preservation and alternate energy sources.



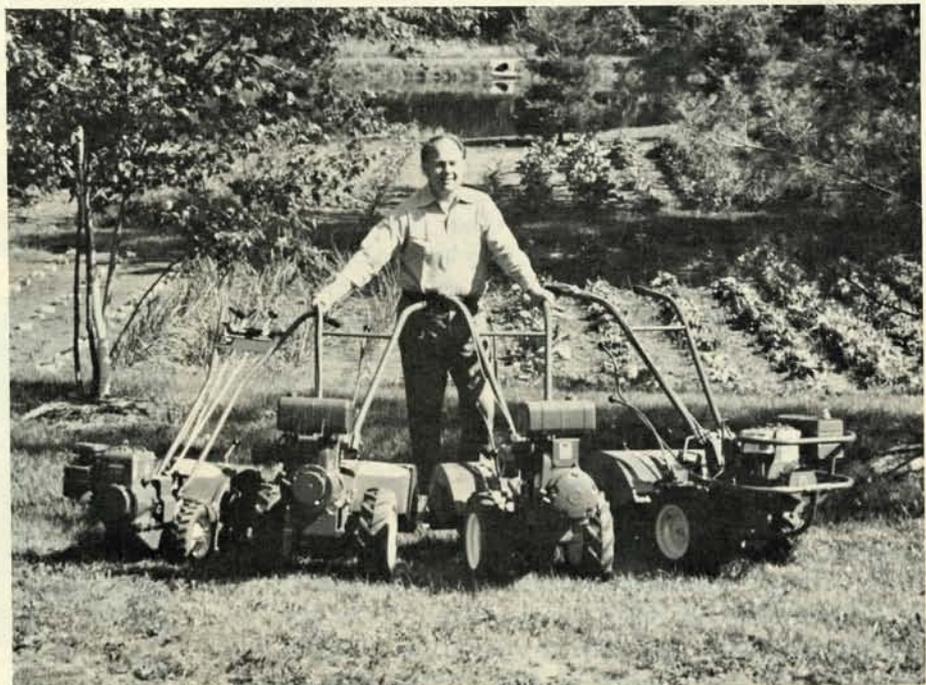
All TROY-BILT Roto Tillers, and only rear-end tillers, are still manufactured in the original Factory in Troy, NY. Today, four models are available: the 5 HP Pony, the 6 HP Horse, and the 7 and 8 HP Professional Models. They are available by mail, Direct-From-The-Factory, through catalogs and from Garden Way retail Stores and Key dealers as shown on the map above.



Later, many of these hard-to-find products were made available by mail through the *Garden Way Catalog* and the *Garden Way Marketplace* publications.

Public acceptance of the Burlington *Garden Way Living Center* was so great, other *Living Centers* were opened in Portland, Oregon; Seattle, Washington; Atlanta, Georgia; and at the Factory in Troy, New York, by 1979. In order to serve the non-mail-order gardening public by making local access available, *Garden Way Retail* was then created.

Dealers, too, are again an important part of *Garden Way*; about 150 Regional Key Dealers form a network across the country to make TROY-BILT Roto Tillers, factory-trained service, and other Garden Way items readily accessible to gardeners in their areas. Many of these Key Dealers well-remember their old ROTOTILLER days and still provide parts and service for earlier machines, as well.



After 50 Years in the Field...

In the early days of ROTOTILLER, INC., Carl Kelsey really had to struggle for sales. He realized that in order to sell his relatively expensive and unfamiliar gardening machines he would have to keep each and every one of his customers satisfied so that they would speak favorably about Rototillers to others.

This was easy to do at first; there were few tiller owners and the company was able to offer personal attention to each. Even as the business grew, Kelsey didn't neglect existing customers in favor of getting new ones. For that reason, ROTOTILLER, INC. was able to build a solid reputation for quality service on the firm foundation of customer loyalty.

Much has changed over the 50 years from ROTOTILLER to Garden Way, but that has not. Many, many owners of old *Rototillers* and *Roto-Ettes* are still receiving attention and service from "the same gang, the same plant and facilities" in Troy. And, even though there are now over half a million TROY-BILT Tiller Owners in America, each one receives the same sort of personalized service from the folks at the Tiller Factory.



TROY-BILT Owners just naturally take every opportunity to show off their Tillers for friends, relatives, neighbors; anyone with an interest in gardening.

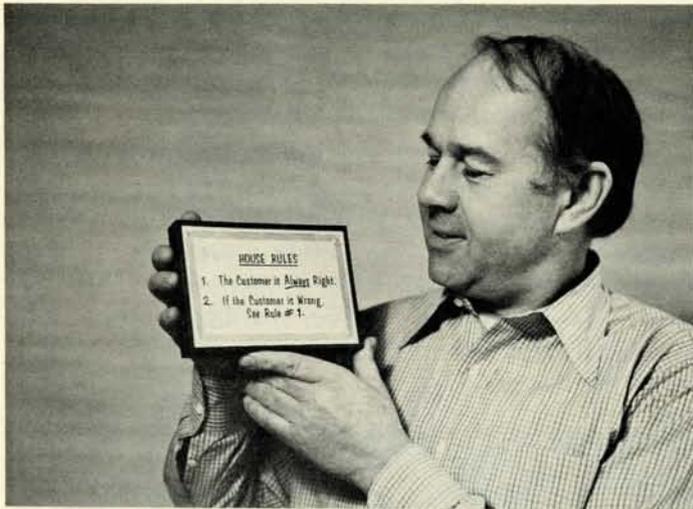
since C.W. Kelsey imported the first "earth-grinders" in 1930, the two most important features of the original have been maintained: rear-mounted tines and power-driven wheels. These are the features which make the TROY-BILT Tiller a *joy* to own and operate.

Equally important to product quality is the quality of service after the sale. When *Watco* began selling tillers through the mail, they went to great lengths to assure potential customers of the best possible service, direct-from-the-factory.

Rototillers remain the keystone of the Garden Way product line. The TROY-BILT Roto Tiller/Power Composter is the foundation on which other Garden Way operations rest. Although over 100 improvements have been made to it, George Done's original design has been proven in the field.

Likewise, Lyman Wood's fundamental marketing strategy has stood the test of time through various evolutions. Moreover, the *Garden Way Living* philosophy has been moving more and more into the mainstream of American thinking about the necessity for a simpler and more self-reliant lifestyle. The combination has provided a sound basis for the company as it expands into other fields.

Regional Key Dealer Web Snyder of Watsonstown, PA, tells a Tiller Owner, "I've got every part the Factory makes, and then some. Take your pick."



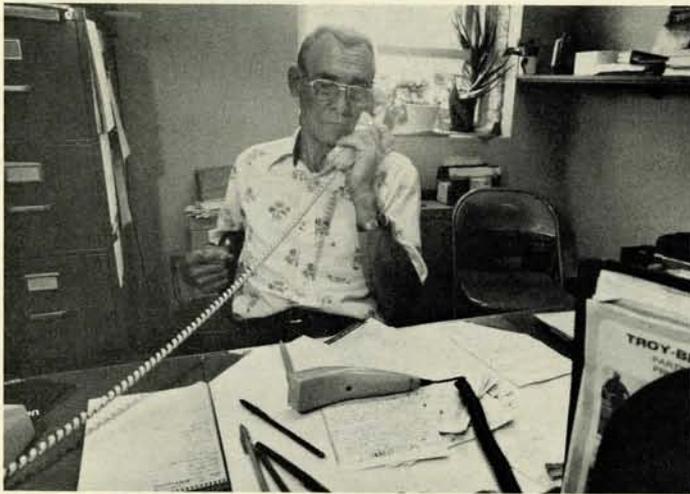
Dean points to the sign he asked his fellow workers to put in every single office and work-space at the TROY-BILT Tiller Factory.

As a result, TROY-BILT Owners are Garden Way's best and most loyal friends, and the company's greatest asset. Knowing that the very best salesperson is a satisfied customer, Garden Way does all it can to keep in touch with TROY-BILT Owners and insure their continued happiness with the Tiller. For their part, TROY-BILT Owners love to talk about gardening and tillers with friends and neighbors; often praising and even going out of their way to demonstrate their machines.

One way to truly satisfy a customer, of course, is to provide an outstanding product. With 50 years of rotary tillage experience behind it, the TROY-BILT Roto Tiller has been able to stay ahead of the field in design, durability and ease of operation. Despite the hundreds of improvements which have been made



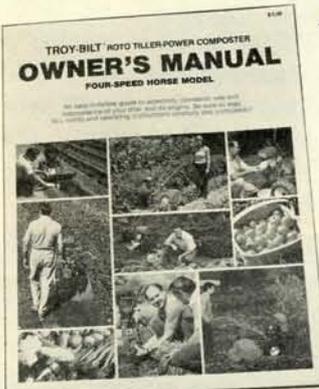
...Over 500,000 Family Members



Ernie Green is one of the Owner Service Representatives at the Tiller Factory in Troy who answers questions and expertly solves problems for TROY-BILT Tiller Owners.

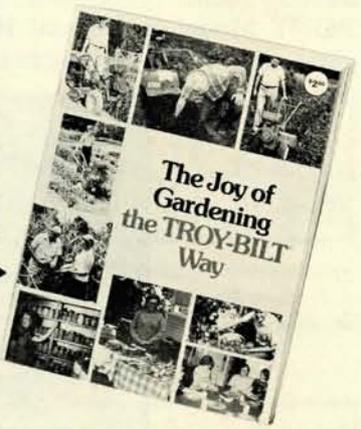
The TROY-BILT Tiller is a simple, sturdy piece of equipment which rarely needs major service. It is engineered so that routine maintenance and most repairs can be performed by the Owner, without any special tools or skills required.

A thorough, detailed, "How-To" Owner's Manual goes with each Tiller and Owner Service Representatives are on-call at the Factory to give extra help as needed. About 150 TROY-BILT Key Dealers across the country also offer factory-trained service and a complete stock of parts for the machine.



◀ The Horse Model TROY-BILT Owner's Manual is 216 pages of information with over 600 pictures and illustrations.

▶ Other free literature includes books like the 112-page *Joy of Gardening the Troy-Bilt Way* which details all the things the Tiller will do in the garden.



In addition, TROY-BILT Owners themselves are usually more than willing to help out a fellow gardener in their area. In fact, the fraternity of TROY-BILT Owners has grown into something of a phenomenon, with *Good Neighbor Gardening Clubs* springing up everywhere in all 50 states. There were more than 600 clubs in 1980.

In order to draw the family of TROY-BILT Friends closer together, Garden Way publishes the *Troy-Bilt*

Owner News, a tabloid newspaper mailed regularly to all Tiller Owners. It is part of what is called the "continuing free course in gardening" which every buyer receives after the purchase of a machine. The T-BON gives gardening information, tiller maintenance and service tips, recipes and food preservation hints, and the latest news from the Factory. Club listings and letters from Owners help put Troy-Bilt folks in touch with each other, too.

Subscription
Rate Table
U.S. POSTAGE
PAID
Troy, NY

TROY-BILT OWNER NEWS
for
Garden Way Living

Garden Way Mfg. Co., Inc. 102nd St. & 9th Ave., Troy, NY 12180

FALL 1979 VOL. 6 NO. 5

HOME GARDENING GETS A BIG BOOST IN 1979

TROY-BILT Owners help spread the joys and rewards of gardening to more people than ever before.

This has truly been a banner year for home gardening in America. The renewed drive toward energy conservation and the increasing concern for our natural resources have encouraged more and more people to rediscover the joys of home food production and the satisfaction of increased self-reliance in many other areas as well.

We have certainly felt the effect of this latest resurgence of gardening here at the Tiller Factory. Although production has been steadily increased, we can still barely keep up with the demand.

Naturally we feel a great deal of satisfaction in being able to introduce so many more people to the TROY-BILT way of gardening. But the really great news this year is what you, as TROY-BILT Owners, have been doing. In fact, we honestly believe that no other major group of people are doing more for the basic health and stability of this country than you are. The vital skills and incredible productivity of this nation's gardeners provide a real backbone of strength in today's society. Here is just a small sample of some of your recent accomplishments.

11,889 New Gardens Tilled

Last spring we made a simple request in the pages of this newspaper. We wanted each of you as TROY-BILT Owners, if you possibly could, to till one new garden for us in addition to your own. All of us know people who are not yet able, or who may never be able, to own a good tiller of their own. But that shouldn't prevent them from having their own garden.

Well, to put it mildly, your response overwhelmed us. At latest count there were 11,889 who responded to the request and reports are still coming in!

Can you imagine the combined production of 11,889 gardens? Using the latest statistics for average garden yield it would amount to 6,720,000 pounds of food or over \$4,200,000 worth of produce. Quite an impact. And those are only the ones that were reported to us. We're sure that there are many, many more which went unreported. Thanks for doing such a great job!

Gardens For All Blossoms Out

Also in the spring issue of T-BON we announced a promising new development for the benefit of all present and future home and community gardeners. **Gardens For All**, the National Association for Gardening, opened up as a membership organization. This is the first and only national non-profit association to be devoted exclusively to the spread and advancement of home and community gardening in this country.

Gardens For All believes that home food production and increased self-reliance—the kind of thing you are already doing—can help solve many of our basic social and economic problems. Thus, they are committed to doing everything possible to defend and promote gardening at personal, corporate and government levels.

TROY-BILT Owners were among the very first to be given the opportunity to join the National Association for Gardening. By midyear, thousands had already followed our lead in supporting the goals of this organization.

If you haven't yet become a part of this great crusade, please see page 12 in this issue for membership information and more about the benefits you receive when you join.

(continued on back page)

In This Issue

- How to Control Soil pH p. 8
- Fall Fix-Up for your Tiller p. 8
- Tips, Tricks & Suggestions p. 18
- Vegetable Storage Tips p. 14
- Things to Do in the Fall Garden p. 14

Troy-Bilt Owner News is part of the continuing "free course in gardening", mailed to Owners at least five times a year.

Regular letters from Dean are sent to all TROY-BILT Owners, often enclosing such things as planting charts or step-by-step instructions for some special gardening technique. And, always, each and every Tiller Owner is encouraged to write to the Factory with anything which is on his or her mind. Postage-paid reply forms cover topics like: "What's Your Gardening Story", "Ask Your Owner Service Rep." or "Tell Us Your Problem".

Whether by phone on the special 24-hour toll-free Hot Line, or by mail, all TROY-BILT Owners have a direct pipeline to the Factory. Their needs, suggestions, and even their complaints, are considered to be the very most important element of the product development process. The TROY-BILT family of Tiller Owners has made Garden Way what it is today, and will determine what it will become in the future.



From Rototiller and Roto-Ette...

...to Trojan Horse and Troy-Bilt,

A Heritage of 50 Years – A Tradition of Quality

In the 1980's, home food production takes on a new importance and the needs of American gardeners are being carefully considered. Rising energy costs, spiraling inflation and the urgency of conservation efforts have all made gardening a necessity to more and more American households, rather than a hobby or a passing fad. *Garden Way* today stands ready to develop products and services to fulfill the needs of the times, and the future.

Responding to what its customers wanted and needed in their gardens, attachments and accessories have been developed including a Bumper, Hiller/Furrower, Row Marker, Utility Dump-Cart and All-Weather Cover. And new products are being explored for future introduction.

Down through the years since 1930, ROTOTILLER, INC., *Watco Machine Products* and, now, *Garden Way* have stayed ahead in the rotary tillage field by anticipating the needs of the American home gardener. From *Rototiller*, *Roto-Ette* and *Model T* to *Trojan Horse* and *Troy-Bilt*, the Tiller Factory in Troy has demonstrated its ability to manufacture the right gardening machine for the market.

That market has dramatically increased. In 1970, fewer than 7,000 Troy-Bilt Tillers were produced a year. The start of the new decade saw nearly 97,000 manufactured in one year. Along with increased production came improving quality and designs: the PONY Model, a 4-Speed HORSE with improved reverse, and 8 HP Professional Model.

The Garden Way Engineering and Product Development groups are studying both smaller tillers for backyard gardeners and larger models for local market growers.



Under consideration for making the TROY-BILT Tiller more versatile are both attachments and separate units to join the accessories at right.

A great deal has changed since Carl Kelsey founded the original *Rototiller Company* in 1930. A business which began as an importer of specialized agricultural equipment has evolved into a unique American enterprise for home food production supplies, services and information. From a basically manufacturing orientation to begin with, an entire way of life has grown up around the company and philosophy which emerged; *The Garden Way*.

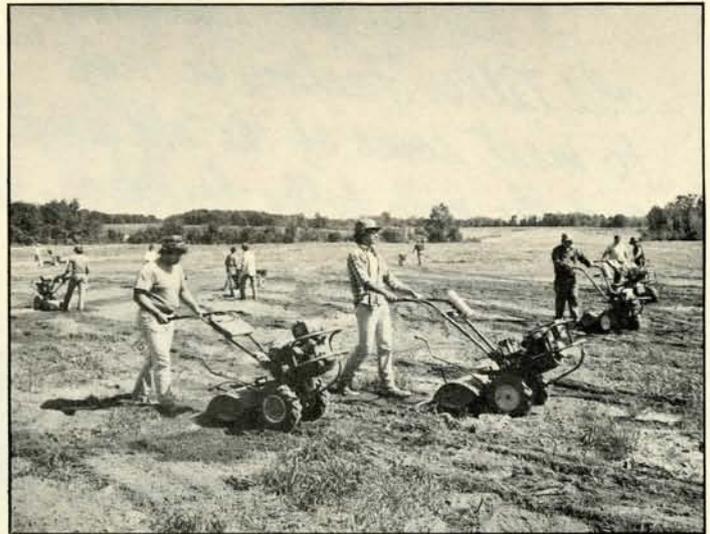
Yet many things remain the same. The constant experimentation, the drive to improve, the innovation and concentration on quality which characterized the original ROTOTILLER business are still alive and strong at *Garden Way* today. The traditions established by Carl Kelsey and George Done, augmented by Lyman Wood and Dean Leith, are now implemented and passed along as many others join the organization.

And Some to Grow On

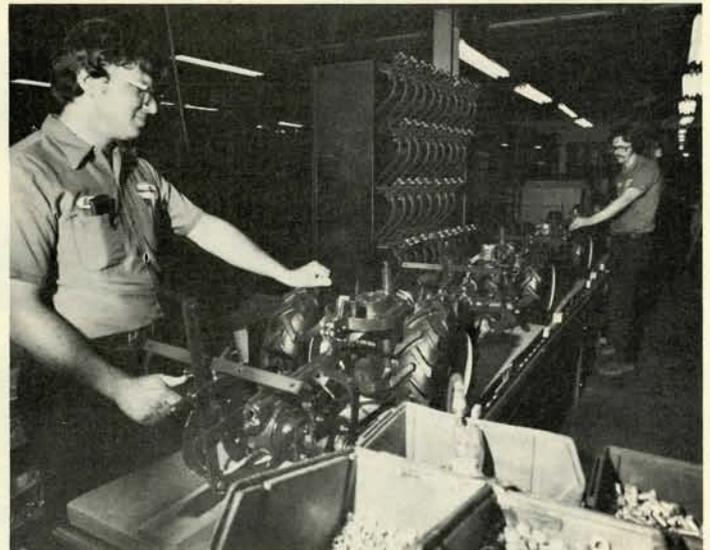
In the first half-century of gardening beyond the plow, the major thrust was to make rotary tillage a practical alternative for the home gardener and to explain and promote its benefits until it became widely known and popular.

In the next 50 years, the challenge is different but no lesser; to make home gardening and soil improvement with a good rotary tiller more universally practiced, and practiced *well*, for the benefit of our American economy and for society in general. *Garden Way* invites and encourages your participation in the 1980's and the future.

Phil Carabis shows that there is "nothing new under the sun" in terms of inventions of rotary tillage at the 1980 Field Days. Participants were urged to invent new ways of putting old ideas to work for home gardeners, instead.

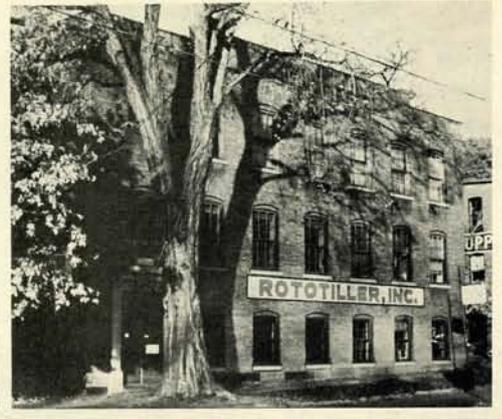


Extensive and exhaustive "in-the-field" testing of every major or minor modification and design goes on (above) before it ever rolls off the assembly line at the Tiller Factory (below).



Service after-the-sale is still the most important product. No matter how used or abused, every Tiller can be completely rebuilt for one-half the price of a new one.

I hope you'll visit the old Tiller Factory in Troy to meet some of the "old gang" and the new folks here, too...



 GARDEN WAY LIVING CENTER AT FACTORY

... and when you come by, be sure to drop in at the new Garden Way Living Center at the Troy-Bilt Factory, headquarters for all those hard-to-find - great-to-have things for good country living.

*I hope to meet you here someday soon. Remember, the Welcome Mat is always out for you! *dean**

FOR YOUR INFORMATION

For your convenience in obtaining additional information about companies, products or services mentioned in this book, here's a list of sources in the order in which they are mentioned.

Siemans: No U.S. sales, parts, service available. Address: Werner von Siemans—des Hauses Siemans—Post Neward Fach 103—D-8000 Munchen 1—West Germany.

Simar: No U.S. parts, service for early models. Some parts, service advice for later models from: Thomas Skolek—RD 1—Whitehouse Station, NJ 08889 (201-594-2749). Importer, new models: E.C. Geiger—Box 285—Harleyville, PA 19438 (215-256-6511). Address: Simar S.A.—Chemin de la Marbrerie—CH-1227 Carouge-Geneve—Switzerland.

Rototiller: Some parts, service advice available from original Factory. Send model type, any identifying marks, serial numbers to: ATTN: Rototiller Service—Garden Way Manufacturing Company—102nd Street & 9th Avenue—Troy, NY 12180 (518-235-6010).

Dealers: Many Rototiller dealers now Troy-Bilt Key Dealers for parts, service in various U.S. regions. Full stock parts, complete sales and service for Troy-Bilt Tillers. To locate Dealer nearest you, write: ATTN: Dealers, at address for the Troy-Bilt Factory above under "Rototiller".

Custom Tilling: Literature, complete kit of materials available for \$7.95. For information, write: ATTN: Custom Tilling at the Factory, as above.

Roto-Ette: Few parts; service available from the Troy-Bilt Factory as per "Rototiller", above.

Graham-Paige Rototiller: Information about parts, service, available from: Fraser Farm Equipment Company—1919-23 South Wayne Street—Auburn, IN 46706—(219-925-2210).

Model T: Some parts, no attachments; service advice, information available from the Troy-Bilt Factory. Write: ATTN: Model T Service, as per "Rototiller", above.

The Have-More Plan: \$2.95 per copy, postpaid, from Garden Way Publishing—Charlotte, VT 05445.

Green Manuring: Booklet, "Improving Garden Soils with Green Manures", \$2.50 per copy, postpaid, from Garden Way Publishing, as above.

Model E: Parts, service, information unavailable.

Mow-Tiller: Parts, service, information no longer available.

Porter Cable-Rototiller: (Also; *Rockwell, Moto-Mower*) No parts, service, available. For information on these tillers, write: ATTN: Service, as per "Rototiller", above.

Watco Machine Products: (Also; *Trojan Horse*) For parts, service advice, information, write: ATTN: Trojan Horse Service, as per "Rototiller" above. Or call the Troy-Bilt Factory toll-free (800-833-6990), in NYS (800-342-7494), and ask for your Owner Service Representative.

The Country Bookstore: For complete listing of all gardening, self-sufficiency, alternate energy books available, write Garden Way Publishing as per *Have More Plan*, above; ask for free catalog.

Countryman's Carryall: No longer available. Replaced by three sizes Garden Way Cart. For information, write: ATTN: Cart — Garden Way Research — Charlotte, VT 05445.

Dick Raymond: Senior gardening consultant; may be contacted directly at: Dick Raymond's Gardens — RD 47, Greenbush Road — N. Ferrisburg, VT 05473. "Down-to-Earth Vegetable Gardening Know-How" book, \$7.95 per copy, postpaid, from Garden Way Publishing — Charlotte, VT 05445.

Garden Way Research: (Also; Loading Ramps, Cider Press, Home Workbench, Kitchen Worktable, Solar Greenhouse, Cart) For information, write to the ATTN: of product desired, Charlotte, VT 05445.

Garden Way Living Center: Information available from the retail store closest to you:

Atlanta: 2744 South Cobb Industrial Boulevard — Smyrna, GA 30080 — (404-433-2487. Toll-free (800-241-9330); in GA (800-282-8965).

Burlington: 1186 Williston Road — So. Burlington, VT 05401 — (802-863-3451).

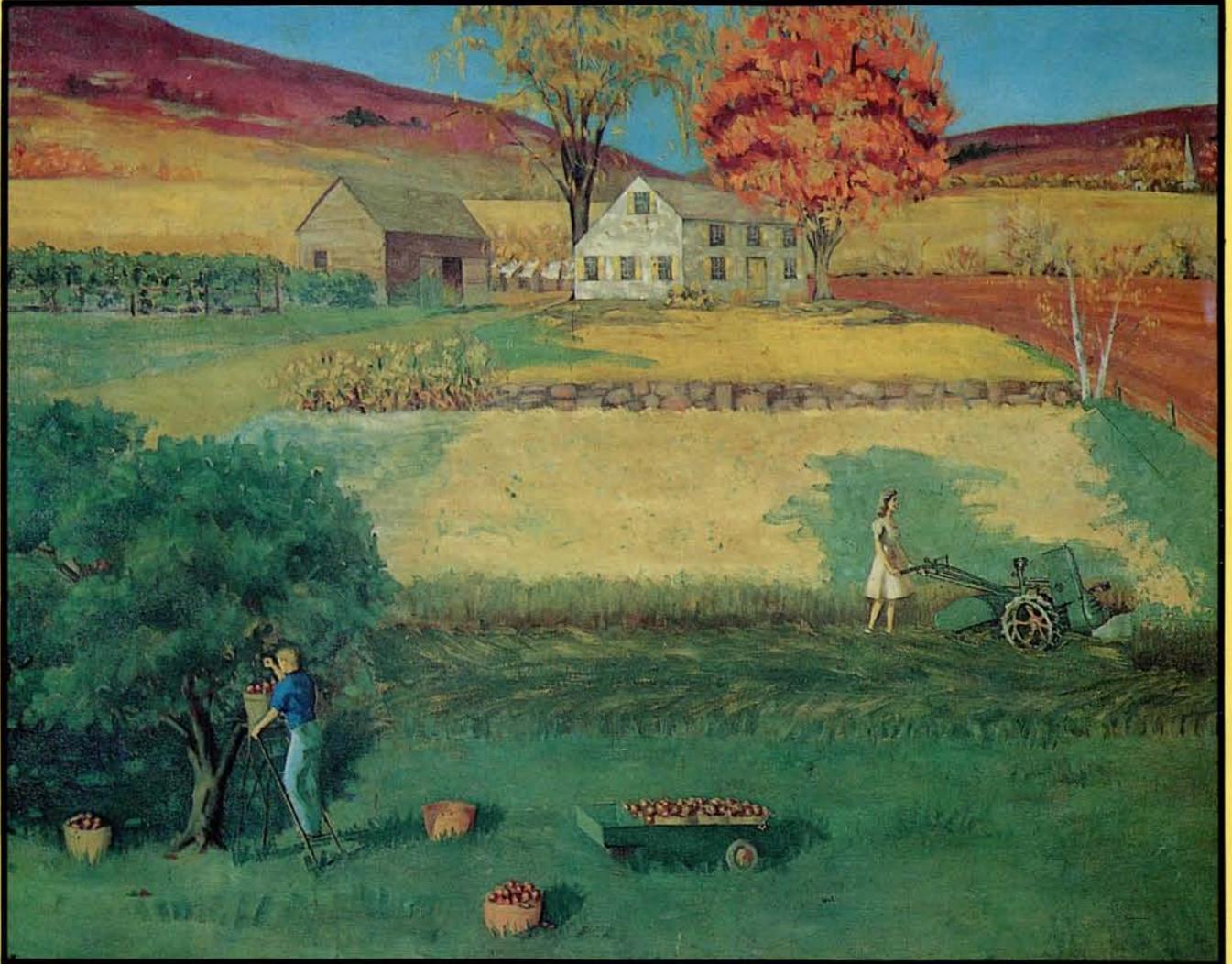
Portland: 1802 Jantzen Beach Center — Portland OR 97217 — (503-283-0124). Toll-free (800-547-5338); in OR (800-542-0777).

Seattle/Tacoma: 4630-C Pacific Highway East — Fife, WA 98424 — (206-922-1700) — (800-562-2430).

Troy: At The Troy-Bilt Factory — 102nd Street & 9th Avenue — Troy, NY 12180 — (518-237-8430) — Toll-free (800-833-6990); in NYS (800-342-7494).

TROY-BILT: Roto Tiller/Power Composters. For free literature and information, write: Dean Leith, Jr., Sales Manager — Garden Way Manufacturing Company — 102nd Street & 9th Avenue — Troy, NY 12180

Gardens For All: (non-profit org.) National Association for Gardening; membership, books, available from: Gardens For All — 180 Flynn Avenue — Burlington, VT 05401 — (802-863-1308).



Published by
GARDEN WAY INCORPORATED
102nd St., and 9th Ave., Troy, NY 12180