

HARDIE SPRAYERS

•

YOU CAN'T MISS

Effective spraying begins and ends with a Hardie . . .

Just what kind of a sprayer do you need? . . . Well, whatever type, size, model or application, you can bet that Hardie . . . the "Sprayer-People" have it.

Without any obligation on your part, drop Hardie a line today . . . and tell them what you want to spray . . . and how much you have to spray.

We'll tell you just what you need, and we'll send you literature that will fully illustrate and describe the unit, or units that will do the job right and the price will be right too . . .

If you'd like a salesman to call, or if you'd like the name and address of the Hardie dealer nearest you, just let us know. Hardie Sprayers . . . 4200 Wissahickon Avenue, Phila. 39, Penna.

HARDIE
DEPENDABLE EQUIPMENT
• SOLD AND SERVICED ALL OVER THE WORLD

A DIVISION OF UNIVERSAL AMERICAN CORPORATION



MONEY SAVER!

**Why you save money
controlling mixed brush
with an AMCHEM aerial
application program.**

Labor and maintenance expenses can be kept low even where brush is too tall to spray with ground equipment on electrical and pipeline rights-of-way. Amchem has a scientific aerial application program that gives you maximum results at minimum costs in rough or inaccessible terrain. ■ Amchem's thick Enverts (water-in-oil emulsion formulas) give highly effective brush and vegetation control and precision application with minimum drift when [\(please turn page\)](#)

(continued from front) applied through Amchem's Spra-Disk® applicator mounted on a helicopter. Many franchised contractors are experienced in the use of these formulas and application methods. Amchem's low drift system is the only proved method that, with skilled pilots, can provide outstanding brush control plus overhead side clearance of encroaching limbs without damage to nearby crops or desirable foliage. ■ Amchem has a complete line of proved selective herbicides for every brush and weed control job on rights-of-way. Write for complete FREE facts on Amchem's aerial and brush control programs.

**New exclusive AMCHEM
METER-MISER™ automatically applies the
exact amount of herbi-
cide for maximum
vegetation control.**

No measuring — Just add contents of Meter-Miser herbicide container to water in 5 gallon applicator tank. Machine applies right amount of spray on every square foot — when pushed at normal walking speed.

Safe, drift-free operation — Special applicator disc sprays coarse droplets under hood close to ground. (Same principle used in Amchem Spra-Disk®.) Instant positive on-off control.

Lightweight and mobile — Pushes easier than lawn mower. No hose to drag, no weight to carry. One tankful covers 4,840 square feet. Full 36-inch swath. Special accessory 18-inch applicator disc attachment available for 72-inch swath or for through fence spraying.

Low cost operation — No waste... Save money with liquid herbicides. Maintenance free... corrosion-proof materials.



CHEMICAL FORMULATIONS EXCLUSIVELY PREPARED FOR METER-MISER APPLICATION:

A. FENAMINE herbicide—top kills growing vegetation and prevents regrowth of germinating weed and grass seed for a full season or longer. Kills Russian thistle, puncture vine and kochia.

B. SUPER-D WEEDONE®— Latest and most effective combination of herbicides for broadleaf weed control on turf.

C. AMIZINE herbicide— Full season or longer control of germinating weeds and grasses. Top kill growing vegetation plus residual action in soil. Apply any time during growing season.

Meter-Miser herbicide formulations are fast-acting—kill tops and roots. Cleaner to handle than granules, or liquid concentrates for high pressure applications. Costs up to 50% less than dry-applied formulations. Hundreds of uses in grounds maintenance — substations, parking lots, storage areas, fencelines, drive-ways, turf, etc.

**Write now for
new FREE brochure
and complete
information on
Amchem's Meter-Miser
applicator.**



First Name in Herbicide Research

AMCHEM PRODUCTS, INC.
Ambler, Pennsylvania

"Now that we're using Copper Sulfate, our water problems are very few"

reports Mr. John Courchene,
Director of Water Quality for the Seattle Water Department



Constant sampling is one of the safeguards insisted upon by Mr. John Courchene, Director of Water Quality for the Seattle Water Department.

Seattle uses copper sulfate to treat not only the 725 acres but also the 7 mile shoreline of its primary storage and sedimentation reservoir. "Our primary objection to using other algae control chemicals is the difficulty of application," Mr. Courchene says. "When you total the cost of chemical purchase and application, copper sulfate is less expensive."

Seattle has been using copper sulfate for water treatment since 1940. At that time, they used approximately 20,000 pounds per year; in 1963, they used 70,000 pounds; in 1964—92,000 pounds. Mr Courchene says, "We usually treat the entire lake in fall, winter and spring. During the other months we generally make shoreline applications. At one time we had a problem with Isoetes, an aquatic

rooted plant which rises to the surface and drifts over the lake. Before using copper sulfate we had to rake the shoreline, which proved expensive. Now that we apply copper sulfate from winter through spring, this problem is virtually eliminated."

While water can be treated by simply dragging a burlap sack of copper sulfate crystals behind a rowboat, labor costs frequently suggest more efficient procedures. The Seattle Water Department has designed and built two specialized pieces of distributing equipment. For the treatment of the lake itself, a large, bronze, mesh-screened hopper was constructed. Copper sulfate is fed into the submerged screen hopper which is mounted on the stern of a power launch. The boat is steered over parallel courses approximately 100 feet apart. Prop wash spreads the copper solution out over an area ap-

proximately 100 feet wide. For shoreline application, a portable blower is mounted on a truck and a belt of copper sulfate 30 to 50 feet wide is blown out over the shoreline from the truck as it is slowly driven along the top of a dike that encircles the lake.

The Seattle reservoir, when full, holds about 11 billion gallons of water, of which about 4.6 billion gallons are available to intake. "We use the available water figure when determining how much water we wish to treat. The amount of copper sulfate is determined by the quantity of water, water temperature and number and types of algae present. Both shallow and deep samples are collected each week from six sampling stations, as well as from the reservoir's source of supply and its distribution system. There is no industrial contamination and, now that we're using copper sulfate our water problems are very few."

For assistance on your water problems, Phelps Dodge Refining Corporation — one of the world's major producers of copper sulfate — can supply the following: Information on systems and equipment developed and used by water works and commercial applicators; literature, containing data and chemical formulas; technical assistance in algae and water weed control. Write: Phelps Dodge Refining Corporation Information Service, 300 Park Avenue, New York, N. Y. 10022.



Seattle designed and built simple, efficient equipment for distributing copper sulfate by power launch.

PHELPS DODGE REFINING CORPORATION 
300 PARK AVENUE, NEW YORK, N.Y. 10022

Save your horse, Paul...AZAK® was used!

Apply Azak® pre-emergence herbicide to established turf while crabgrass seeds still are sleeping, and not even Paul Revere could arouse them. Azak penetrates the seeds when germination begins, and stops initial growth. Nonleaching, one application lasts through the germination period.

Azak is economical. A 12.5-lb. bag of wettable powder covers one acre, or 43,560 sq. ft. Azak is safe for established lawn and other ornamental turf. And, Azak is low in toxicity to warm-blooded animals and is practically odorless.

Produced as an 80% wettable powder (Azak 80-WP), it can be sprayed in conventional equipment. Azak is formulated as a granular product for use in mechanical spreaders. It is also combined with other pesticides and fertilizers for multi-purpose products.



AND USE NITROFORM® TO FEED TURF

Nitroform® slow-release ureaform feeds turf and solves storage problems, too. Unlike low-analysis organic fertilizers, Nitroform contains 38% nitrogen. Stored in the soil, it doesn't leach away, but goes to work when turf and plants need nourishment. Nitroform is available as granular Blue Chip® for conventional spreading, and as Powder Blue* for spray application. And, it won't burn when applied as recommended.

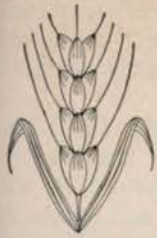


HERCULES TURF AND HORTICULTURAL PRODUCTS

FOR FURTHER INFORMATION WRITE: AGRICULTURAL CHEMICALS, SYNTHETICS DEPT., HERCULES POWDER COMPANY, WILMINGTON, DEL. 19899, OR CONTACT THESE SALES OFFICES: BOSTON, MASSACHUSETTS • BROWNSVILLE, TEXAS • CHICAGO (OAK BROOK), ILLINOIS • DALLAS, TEXAS • FRESNO, CALIFORNIA • GREENVILLE, MISSISSIPPI • LOUISIANA, MISSOURI • MONTGOMERY, ALABAMA • ORLANDO, FLORIDA • PHOENIX, ARIZONA • RALEIGH, NORTH CAROLINA • SAN FRANCISCO, CALIFORNIA • VANCOUVER, WASHINGTON.

* HERCULES TRADEMARK

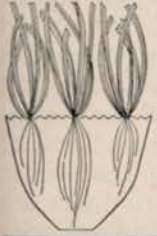
5TH66-1



SEED TREATMENTS

mercury based disinfectants for wheat, oats, barley, flax, sorghum, rice and cotton

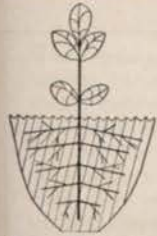
METALSALTS



TURF FUNGICIDES

standard and custom fungicides — PMA, thiram, calomel, and cadmium formulations

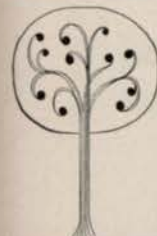
METALSALTS



SOIL FUNGICIDES

oxyquinoline sulphate, benzoate and organo sulphur temporary soil sterilants

METALSALTS



FOLIAR FUNGICIDES

organo mercurials for apple scab and ornamental foliage diseases

METALSALTS

Quality insured with 20 years of research and manufacturing Know-how



METALSALTS CORPORATION

200 WAGARAW ROAD, HAWTHORNE, N. J.

PHONES:

New Jersey (CODE 201) HA 7-6000

New York (CODE 212) PE 6-2626

Metasol Canada Ltd. (Ltee.), Lachine, Quebec

WEEDS TREES and TURF

FORMERLY WEEDS AND TURF

February 1966

Volume 5, No. 2

Features:

Tricks of the Tree Trade By Horace P. Bryan	8
Electricity Warms Soils for Sport Turf By Dr. William H. Daniel and John R. Barrett, Jr.	14
Turfgrass Photo Pointers By Tom Mascaro	18
How Cal-Turf Plants and Grows Bermuda Stolons By Dick Morrow	22
Expanding Overseas Market Competing for Chemicals, Manpower, 20th Northeastern Weed Meet Hears in New York Last Month	28
Municipal Pest Control Problems Subject of New England Agricultural Chemical Conference By T. R. Flanagan	40

Departments:

Editorial: Minimum Prices, Too?	6
Knowing Your Species: Common Mallow	36
Meeting Dates	40
Classified Ads	45
Advertisers Index	45
Trimmings	45

Advertising Representatives

National Headquarters
1900 Euclid Avenue
Cleveland, Ohio 44115

Phone: Area Code 216+771-4169

JAMES A. NELSON
Editor and Publisher

DONOVAN E. HENDRICKS
Staff Biologist

MICHAEL I. LAH, JR.
Production Manager

D. BUNKIN
Circulation Supervisor

Chicago 60601

Peck & Billingslea, Inc.

185 North Wabash Ave., Suite 1809
Phone: 312+DEarborn 2-0292-93

New York City 10017

Billingslea & Ficke

420 Lexington Avenue
Phone: 212+532-1632

WEEDS TREES AND TURF is published monthly by Trade Magazines, Inc. Executive, editorial, and advertising offices: 1900 Euclid Ave., Cleveland, Ohio 44115. Publication office: Corner of East North St. and Cadwallader St., Fostoria, Ohio. Send all correspondence to WEEDS TREES AND TURF, 1900 Euclid Ave., Cleveland, Ohio 44115.

Single Copy Price: 50 cents for current issue; all back issues 75 cents each. Foreign \$1.00.

Subscription Rates: U.S. and possessions, 1 year \$3.00; 2 years \$5.00. All other foreign subscriptions, 1 year \$4.00; 2 years \$7.00. Change of Address: Three weeks advance notice is necessary for change of address. Both old and new address must be given. Post Office will not forward copies. Third Class postage is paid at Fostoria, Ohio.

Contents of this Issue © Trade Magazines, Inc., 1966

Minimum Prices, Too?

Legislation recently passed by Congress, which became effective January 20th, will have its effect on contract applicators. Under the new law, contractors must also abide by minimum wage, fringe benefit, and working conditions rules set by the Secretary of Labor.

Any CA now servicing federal property, or contracting to do vegetation maintenance and control work at new federal building sites, will fall into this category. This is true, however, only for contracts in excess of \$2,500.

Wage scales will likely be determined by the highest union rate in the area, or lacking that, by the Federal Minimum Wage Law.

Fringe benefits will be set by the Secretary of Labor. Working conditions cannot be dangerous to either the health or safety of employees.

This law also states that contractors must post a notice of compensation required under the law at work sites.

Failure to abide by the wage or fringe benefit laws will make a contractor liable for all payments to employees. Contracting agencies will have the power to either withhold funds due the CA for payment to the employee, or be able to cancel any contract. The government will also be able to bring suit against contractors to recover remaining amounts of underpayment.

The National Labor Relations Board and the

Secretary of Labor will establish provisions which the new Service Contract Act requires. These requirements must be followed and clearly outlined in all new contracts.

Many contract applicators fall under the jurisdiction of the NLRB, and are already required to pay the Federal Minimum Wage. Generally, the NLRB will cover you if you buy or sell goods in excess of \$50,000 per year out of state.

Add these newest requirements for doing business to the higher Social Security taxes, as a result of Medicare, which became effective last month, to the detail required by increased federal and state pesticide use and licensing regulations, and you may wonder when you'll have any time and money to actually get out to do any of the vegetation work all these laws apply to. In addition, of course, the added expense of doing business is either going to come out of profits (if there are any left), or prices must be raised. And yet price cutting still prevails. Wonder if they'll ever get around to establishing minimum prices? But . . . that's against the law, too!

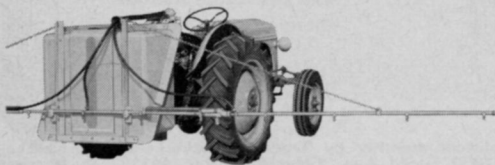
WEEDS TREES AND TURF is the national monthly magazine of urban/industrial vegetation maintenance, including turf management, weed and brush control, and tree care. Readers include "contract applicators," arborists, nurserymen, and supervisory personnel with highway departments, railways, utilities, golf courses, and similar areas where vegetation must be enhanced or controlled. While the editors welcome contributions by qualified freelance writers, unsolicited manuscripts, unaccompanied by stamped, self-addressed envelopes, cannot be returned.

Myers[®]

SPRAYERS



USED, TESTED, ACCLAIMED BY SPRAYING SPECIALISTS



100TM TRACTOR-MOUNTED PTO SPRAYER WITH CORROSION-PROOF GlasStran SPRAY TANK. Compact, versatile unit is highly adaptable to many professional maintenance applications. Choice of 12, 6 or 3 gpm capacities.

Versatile Myers 6310 series Sprayers are specifically built for professional spraying jobs. Special dual track running gear floats sprayer on "pillows of air." Rides *even* over *uneven* terrain . . . results in less ground compaction. Goes practically anywhere, does almost any spray maintenance job. And they have earned a reputation for long lasting, low maintenance service. Heavy duty pumps, 2-15 gpm, pressures to 600 psi . . . triple Epoxy-protected 150 or 200 gallon tanks . . . tough, heavy duty, arc-welded frame. See your Myers Sprayer Dealer for complete information.

Myers . . . the finest name in power sprayers

THE F. E. MYERS & BRO. CO.  **McNEIL CORPORATION**
400 ORANGE STREET • ASHLAND, OHIO 44805

Here's how easy it is to get long-lasting control of nematodes and soil insects that ruin turf

- A single spray of Nemagon® Soil Fumigant kills root-choking nematodes all season.
- A single application of dieldrin insecticide controls root-pruning insects for years.

THE FACTS that follow quickly explain the essential value of controlling soil pests with Nemagon and dieldrin; their flexibility and ease of use; why the root protection they provide far outweighs the cost of treatment.

Nematode control with Nemagon

Nemagon works as a pre-planting application or on established turf. It fumigates the root zone to kill the nematodes (microscopic worms, not insects) that can infest soil in fantastic numbers. All damaging species are controlled and reinfestation will normally not occur for a year or more.

Without the root knots and lesions caused by nematodes, water and soil



A Nemagon spray knocks out nematodes fast, and thoroughly. Turf isn't disturbed. And nearby plants won't be injured.

nutrients can pass freely through roots. Turf can respond fully to fertilizer and irrigation. Risk of stunting, poor appearance and dead patches is eliminated. So is the risk of a reseeding or



Protecting a golf green with Nemagon eliminates any chance of unsuspected nematode infestation causing costly damage and disrupting play.

resodding.

Nemagon is easily drenched into soil following a spray application. There's no need for special equipment and grass isn't disturbed. Easy-to-follow directions are printed on every package.

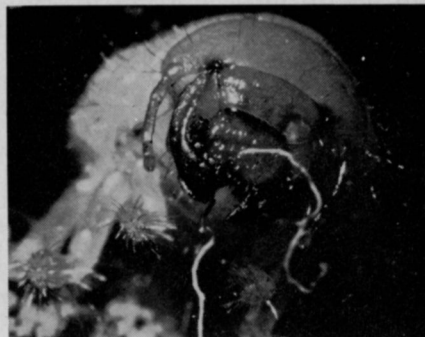
Soil insect control with dieldrin

Dieldrin controls all species of grubs, including the larvae of Japanese and June beetles. It can be used ahead of time to prevent damage from ever starting. Or you can apply dieldrin to stop an infestation when discolored turf indicates that soil insects are pruning roots and limiting the crop's access to fertilizer and water.

Dieldrin can be applied any time after soil warms up. Effectiveness usually lasts 3 to 5 years. Control is so thorough that grub-eating moles and rodents can't find food in the treated area and leave.

Dieldrin can be put on in fertilizer, or in granular form. Liquid concentrates and wettable powders are available for spray use and drenching.

Full details on using dieldrin for



This root-chewing white grub can kill turf or make it look sick. So can a host of other grubs and soil insects. Dieldrin stops them all.

control of soil or surface insects are on every package label.

Nemagon and dieldrin are both available as branded products of well-known manufacturers and sold where you normally buy insecticides, and other turf maintenance products.

For more information, write Shell Chemical Company, Agricultural Chemicals Division, 110 West 51st St., New York, New York 10020.

Follow label directions carefully when using any pesticide.

Shell Chemical Company
Agricultural Chemicals Division



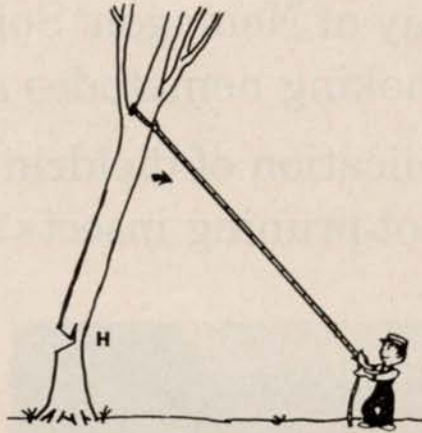
Tricks of the Tree Trade

THE TREE TRADE has more than its share of "tricks." By tricks we refer to things more of a physical nature than to the scientific knowledge which every man engaged in tree care should have.

Country Boys: Instinctive Climbers

We prefer country boys, though the breed has about run out. They climb as if it were instinct. It is said that a veteran woodsman is recognized by the way he uses his feet. He never puts a foot down without knowing where he is putting it. He is not conscious of watching his feet; it's instinctive. So these good climbers use both their hands and feet.

Secondly, country boys know how to use a saw and fell a tree. The same sure-footed principles are applied to removal of a limb or treetop. And, of greater importance, good country climbers know trees and the qualities of



Hinge cuts (H) allow workmen to guide a tree's fall by pulling the treetop with a rope. Cut is made opposite the fell side of the tree which stands upright until the surgeon gives it a jerk in the right direction.

their wood in all stages of growth from sapling to giant when they are green or dead.

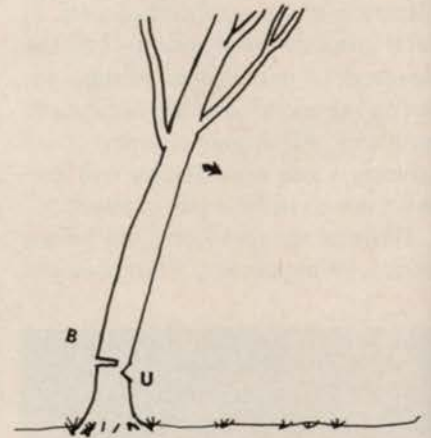
Use Tree Virtues

Quality of wood, as it relates to strength characteristics, is of prime importance in tree operations and safety maintenance.

For example, never trust a dead pecan limb as a foothold when climbing, regardless of its size. Even though pecan limbs are very strong when alive and green, dead pecan limbs snap and break easily and offer very little, if any, support. Galls and hollows, and other faults affect the strength of wood in many trees. The criterion then, is: know your tree before you climb it; use its virtues; avoid its hazards.

Tree Hinge Cushions Fall

The "hinge cut" is the most useful trick available to tree workers. Though widely used, there are still many good operators who do not understand and



Fall cuts are made where a swift and hard impact on the ground is allowed. A back cut (B) is made first nearly through the tree's trunk. Then a smaller undercut (U) is chopped just below the back cut on the fell side of the tree.

use it fully. A tree worker's "hinge" is the bark and sapwood of the tree, and its strength varies with every tree as well as with its size and age.

Use of the hinge begins with tree felling. A tree or limb will swing on a hinge just as a gate swings on a hinge, the only difference being that a gate swings horizontally and a tree swings vertically when cut. A hinge is

Trees hinge during a fall after cut is made partially through their trunks. A thick sapwood and bark strip left intact by the tree surgeon restrains tree's fall for an easy landing on lawns, driveways, or other protected areas. Cut is not made so deep that trees fall by themselves; the hinge is thick enough so worker must pull the tree over.



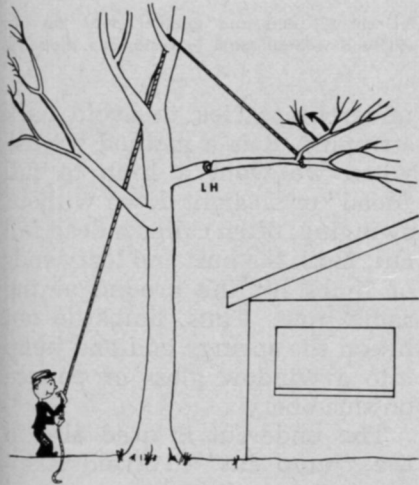
By
HORACE P. BRYAN
 Bryan Tree Service
 Dallas, Texas

formed when a single, incomplete cut is made in a tree or limb.

The traditional method of tree felling is a "fall cut"; a cut made on the "fell" side of the tree a little below a cut made on the opposite side. The fall cut helps to throw and direct the tree's fall. When the fall cut is used, a tree falls free with the impact of all its weight. This can be hard on



Tree surgeon, David Barnes, uses a guy rope to swing a limb sideways on its hinge at the cut.



Limbs are hinged (LH) horizontally if their direct downward fall might damage structures, flower beds, driveways, or shrubs. At the cut, a small portion of sapwood remains attached. The tree surgeon swings the branch on a rope either to the right or left until it can be cut free and fall without causing property damage.

the customer's lawn, walk, or driveway.

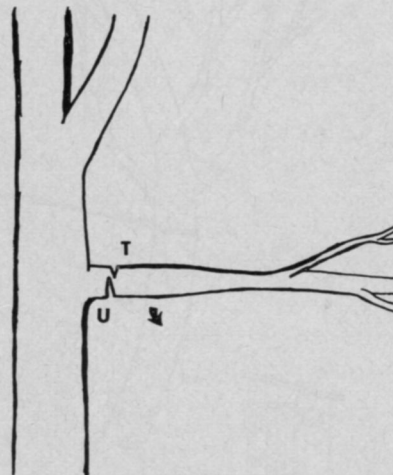
With the hinge, a fairly large tree can be laid down like a lamb. The ease with which a tree or limb may be leveled to the ground by a hinge, depends upon the tree and tensile strength of its wood. Hinge cuts should not be tried on trees which have been dead so long they are rotten or "bone brittle." Green hickory, pecan, American or Chinese elm, hackberry, maple, and oaks, one inch or more in diameter, can be pulled over on a hinge and laid down without damage even to shrubs or flowers. Any

tree, except a brittle dead tree, even a giant tree can be felled on a hinge with only a slight impact if a fall cut is used.

Limbs Hinged And Cut For Pinpoint Landing

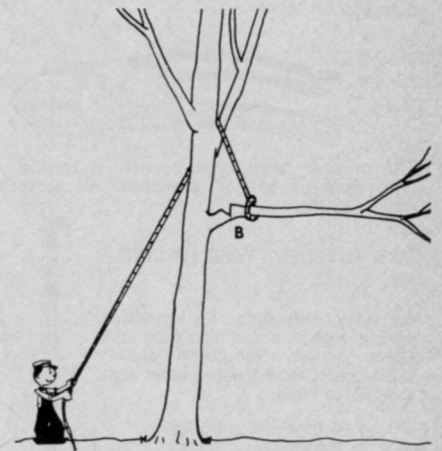
Perhaps the most useful phase of hinging is in the daily job of limb removal over buildings, power lines, and other obstacles. Frequently we have taken down huge limbs piece by piece, or have swung them 45 degrees to the side before they were lowered. We use the hinge if the tree is not too brittle and will hinge.

To rig a limb for hinge cutting, we put a guy rope through a



Undercuts (U) are made about one inch closer to the tree trunk than topcuts (T) to avoid stripping bark from beneath a limb. This method is used when a limb is to fall directly below, butt end first, without hinging.

high crotch in the treetop and tie one end of the rope as far out as possible on the limb to be cut. The other end is anchored to some solid object (stake, tree trunk, or another worker). The



Butt ropes (B) are tied near the hinge cut in a trunk or limb and threaded through a nearby crotch to support the trimmed section and prevent hinge breakage during the fall.

weight of the limb is kept on the rope until we are ready to lower it, and we prevent breaking the hinge until the limb is removed completely. After the "hinge cut" is made and while the limb, still attached by its bark hinge, hangs supported by the guy rope, a snatch rope is used to swing the limb to a position where it can be lowered. Then the limb is lowered with tender guidance and the hinge is finally cut. The whole side of a huge tree often can be cleared by one rigging. Climbers can maneuver limbs

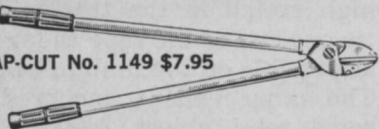
better TREES & SHRUBS

...WHEN YOU USE

SEYMOUR SMITH
SNAP-CUT
GARDEN
TOOLS

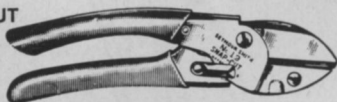
PRUNERS and
LOPPING SHEARS

SNAP-CUT No. 1149 \$7.95



New, light weight, heavy duty anvil type lopping shears. Alloy metal handles. 100% guaranteed. Cuts limbs up to 1 1/4" diameter.

SNAP-CUT
No. 19
\$3.25



The original anvil type pruner. A terrific tool. Cuts up to 3/4" branches. All parts replaceable.

"ALL PURPOSE" TREE PRUNER
(No. 3)

An easy pull cuts 1" branches, spring opens blade for next cut. Lever action. Tempered cutlery steel blade. Heat treated steel head riveted to pole.

6 foot\$5.25
8 foot\$5.95
10 foot\$6.50
12 foot\$6.95



TIFFANY LOPPING SHEARS
No. 528 — \$8.98



Double cut "drawn in" cutting action. All forged, improved bolt and nut joint. Through tang handles.

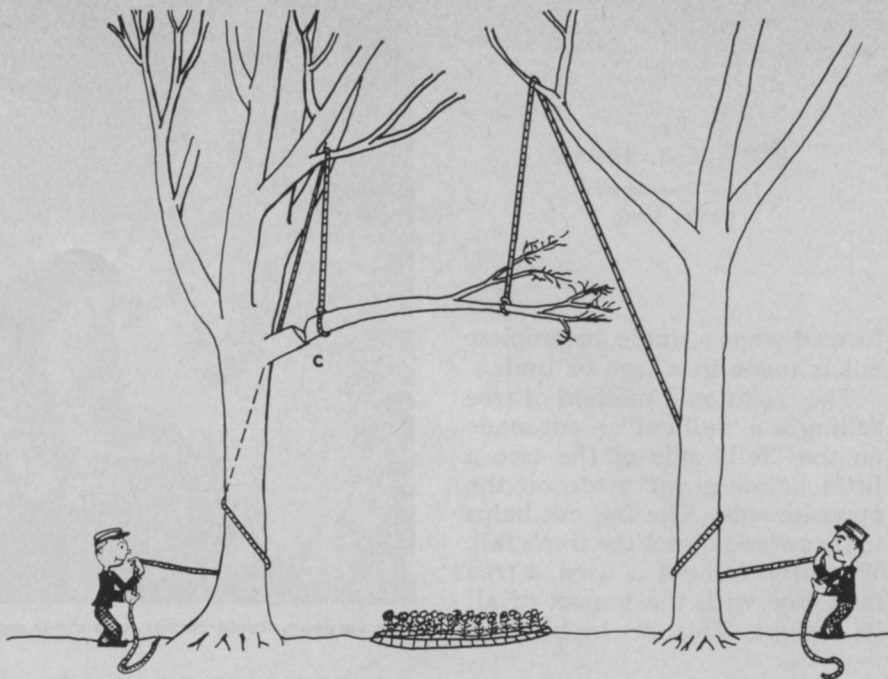
NEW, FINEST EVER PRUNING SAWS



No. 1922 22" blade—\$6.65

Fastest, easiest cutting saws for orchard use. Swedish steel blades. Complete line of 6 models covering all requirements up to chain saw work.

SEYMOUR SMITH & SON, INC.
Oakville, Connecticut



Ropes tied to trimmed branches, one near the cut (C) end and another near the tip, allow tree surgeons to "cradle" a limb's fall so it will land without harm to customer's property, in this case a flower bed.

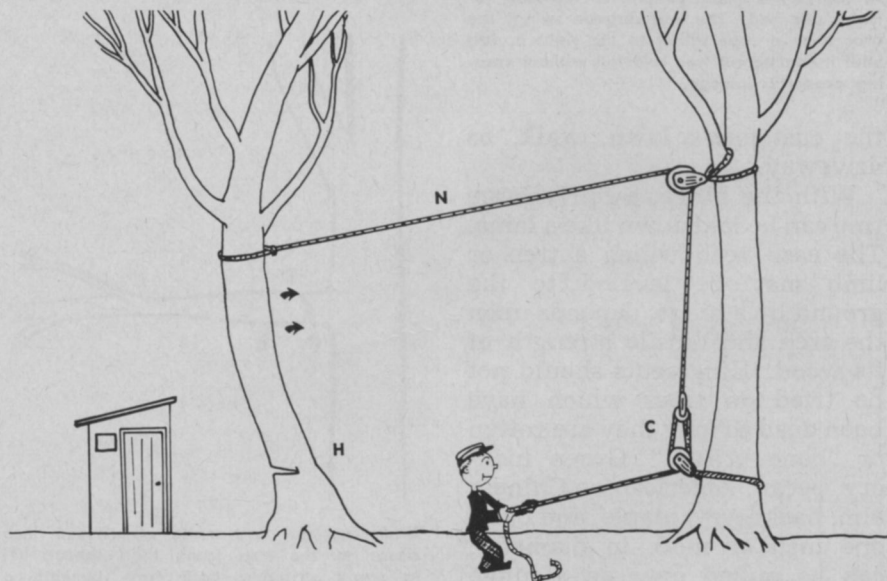
suspended by a rope, with a slight push or tilt, to the most exact landing position. Thus workers and such obstacles as buildings, lines, or flowers are protected.

Undercut To Avoid Bark Strips

Tree surgeons employ the "undercut" to avoid stripping bark from beneath a limb. Hinge cuts always strip and are used where a lower cut is to be made or where stripping does not matter such as when the entire tree is to be removed. Not only is the

undercut a trick to avoid bark stripping, it is a method we use when we want a limb to fall "dead" or straight down without swinging; often called a dead fall cut. Both the butt and leafy ends of limbs hit the ground at the same time. Thus, limbs do not hit on the springy end and jump into a window glass or pounce on shrubbery.

The undercut is used also in the "jump cut" to avoid stripping. An undercut is made as deeply as possible on the underside of a limb about one inch



Nylon rope (N) stretch qualities are used for those big bruisers that lean over structures, fences or lines. A portable pulley system hooked up to a winchlike "come-along" (C) is used by the surgeon to hoist lumbering trees on their hinge (H) in a safe direction away from buildings.