

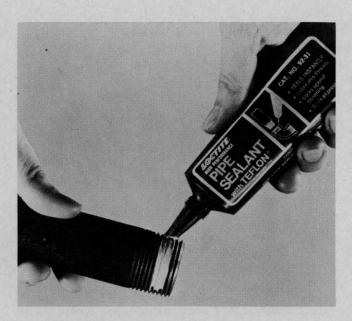
FREEHAND ELECTRIC CHAIN SAW SHARPENER: Granberg Industries, Richmond, Calif.

Small, lightweight tool, only 2½ pounds, sharpens chain saws fast and easy. Engineered with angle and height guides. One adjustment and tool is set to start sharpening. The correct thirty-five degree angle is already set. Sharpens both sides of the chain from one side. For on the job sharpening, 12-Volt system can be by car, truck or tractor battery. Produced for shop work in 110-Volt. For more details, circle (706) on the reply card.



AERIAL TOWER: Mobile Aerial Towers, Inc., Fort Wayne, Indiana.

Personnel tower that elevates workmen in an insulated platform "bucket" up to 40 feet has for the first time been mounted on a track vehicle capable of travel and work over all terrain. Large combinations of tower and track vehicles are available for working heights to 57 feet. Towers are identical to those manufactured for 20 years by Mobile Aerial Towers, Inc. For more details, circle (705) on the reply card.

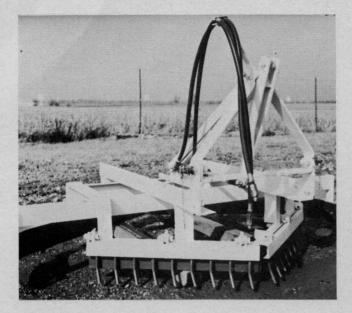


NEW PIPE THREAD SEALANT: Loctite Corporation, Newington, Cann.

A new anaerobic thread sealant with Teflon is listed by Underwriters' Laboratories as suitable for sealing propane, butane and natural gas joints. Material is impervious to lubricants, coolants, fuels, refrigerants and other machinery liquids. According to manufacturer, Pipe Sealant with Teflon seals joints instantly, then hardens in 48 hours to a solid joint that also locks the parts against vibration loosening. For more details, circle (708) on the reply card.

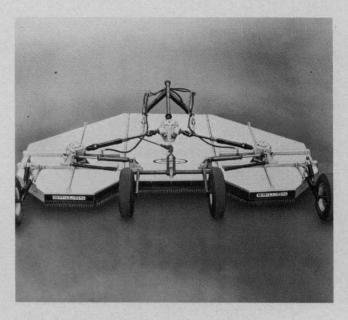
TELESCOPIC POLE PRUNER: Village Blacksmith, Watertown, Wisconsin.

Telescopic aluminum Pole Pruner Model #3981 easily reaches to 12 feet when in use to easily cut limbs and groom trees. To extend or retract the length, just twist lightweight aluminum poles to lock or unlock. Pruner head features free action pulley and spring, austempered cutlery steel blades. Retails for under \$14.95. For more details, circle (707) on the reply card.



HEAVY DUTY EQUIPMENT: DriAll Driers, Inc., Attica, Ind.

New levler has been added to the existing line of DriAll, Inc. Heavy duty leveling tool has reversible and replaceable scraper blades, as well as ripper teeth. Unit levels by cutting off and then carrying the excess soil for fill; thus, eliminating windrows, depressions and ridges. In addition, the ripper teeth will loosen the ground that has been packed by tractors, trucks or the like. Levler which fits standard 3 point equipment is $7\frac{1}{2}$ feet wide. For more details, circle (710) on the reply card.



THREE-SPINDLE, FLEXIBLE MOWER: Brillion Iron Works, Inc., Brillion, Wis.

A 15-foot, three-spindle flexible wing mower has been introduced by Brillion. New VersaMower, designated the IR-180, is for maintaining extensive turf areas, such as rightof-ways, airports, recreation sites, golf courses and industrial sites. It can be used with minimum horsepower tractors (above 45 hp). Wings raise hydraulically from the tractor seat. All wheels travel inside the mowing swath. Drawbar is controlled hydraulically. Cutting height adjustable from one to 14 in. For more details, circle (709) on the reply card.



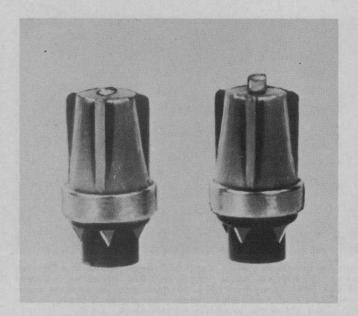
ROCK PICKER: HMC Corporation, Contoocook, N.H.

HMC's Rock Picker finds rocks and removes them while leaving the soil in the field. Features replaceable tines and weldon connections that fit any size tractor. Manufactured in 4 and 5 foot widths. The five-foot wide model is pictured here. For more details, circle (711) on the reply card.



SMALL PUMP OPERATION: Colt Industries, Kansas City, Kansas.

Faster clean-ups of drives, buildings, grounds, equipment and jobsites as well as fire protection are offered by a new Fairbanks Morse portable high pressure booster pump. Adds 80 psi to service pressure at a discharge rate of 7 gallons per minute. New 58 magnum high pressure utility pump connects with standard hose to existing water supply or draws water from shallow wells, ponds or tanks. A nozzle with feeder is supplied for applying disinfectants, insecticides, plant nutrients and other chemicals. For more details, circle (712) on the reply card.



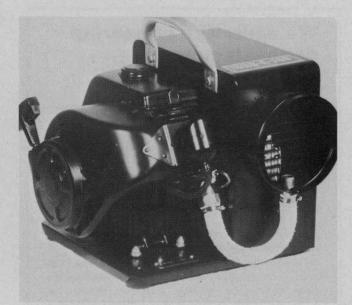
TIRE PRESSURE INDICATOR: Engler Instrument Company, Jersey City, N.J.

Tire pressure indicator, called the INDICAP fits on the tire, replacing the conventional air cap. Small, bright yellow indicator protrudes above the head, showing when the tire pressure is normal. When the yellow does **not** show, the tire is down approx. 10% or more below normal and should be checked immediately. Wide range of tire pressures are available for all equipment. Can be checked in the dark merely by running a finger over the head. For more details, circle (715) on the reply card.



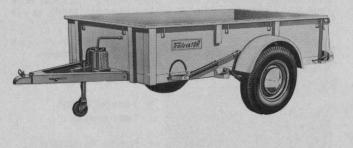
SOD HARVESTING ACCESSORY: Beck Mfg. Company, Birmingham, Ala.

New, low cost cut-off attachment to fit the Beck Sod-O-Matic laying and harvesting system allows operator to cut three 16" wide blocks of sod at a time, and still roll big rolls with the same machine. Easy to change the cutting length from 18" to 81", just by changing sprockets. Cut-off connects to the Sod-O-Matic through a swivel hitch that permits turning or backing. A hydraulic cylinder lifts the blade for transporting or removing from cutting area. Sod-O-Matic is also available in a model that will leave strips of sod for regrowth, and in a model that will cut three 18" wide strips. For more details, circle (714) on the reply card.



SELF-CONTAINED FOGGER: Middle West Marketing, Inc., Chicago, III.

Turb-A-Fog generator is a completely self-contained, hand carryable, portable fogger. Has a "dead-calm" insecticide dispersion range in excess of 200 feet. This is 5 times greater, or further than the pulse-jet engine fogger. Even greater drift ranges can be attained with just slight wind conditions as low 5 MPH. Insecticide vaporization takes place at an operating temperature of approximately 600° F. At this temperature there is no breakdown or weakening of the insecticide. For more details, circle (713) on the reply card.



HYDRAULIC TRAILER: Trailevator, Pinconning, Mich.

Trailevator is a self-lowering, self-elevating hydraulic trailer. Advanced design lets one man handle heavy, bulky items. Equipped with mechanical-hydraulic system which lowers the trailer bed to ground level for easy loading, then lifts and locks in hauling position. Tailgate serves as a heavy-duty loading ramp as well as a secure box closure. Available in several models, with various widths and lengths. For more details, circle (716) on the reply card.



Riggin' buddy.

Tree Surgeon Invents Device for Safe Tree Work

A veteran tree care man, Howard F. Harvey, Jr., has invented a lightweight, compact device which almost eliminates complicated knot work for tree surgeons and riggers.

A special 2-ring slide is used to guide ropes for rigging, overhead lifting, etc. A flat nylon strap (6000



Golf Course Scholarship — Donald R. Viands (right) of College Park (Prince Georges County) gets a close-up of perpetual honor plaque on which his name has been inscribed as one of two 1971-72 winners of \$500 agronomy scholarships sponsored by the Maryland State Golf Association. Holding the plaque is Dr. H. Palmer Hopkins, director of student aid at the University of Maryland.

pound test) conforms to and grips securely any shape or texture surface. A special safety belt knuckle can be released with one hand even when under tension. No knot, Harvey says, will do that.

The device can be used to hook up a pulley or hoist any place, for quick tieup and release for a boat, for rope guide in any rigging operation, for quick hookup and release in material handling and jobs of like nature. Retail price is \$17.98 from Product Development International. (For additional information, circle reader card No. 718).

Bulk Shipping In A Package! HANDLE-SHIP-STORE "CONTAINERIZED" BULK FERTILIZER IN TAICON® PVC COATED BAGS

TAICON "Super-Sacks" are reusable bucket-shaped bags of PVC coated polyester fabric that protect contents from contamination or weather, in or out of plant. Many in use 8 years. Guaranteed 2 years.





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FRANCIS J. GUSCIO, just retired from the South Atlantic Division of U.S. Army Corps of Engineers, after 38 years of service. Provided leadership and direction of Federal government's expanded aquatic plant control programs, advancing chemical and biological research programs now underway.

EDDY B. JENNER, operator of Expert Tree Service carrying his name; dead at 65. Had operated tree care company since 1932 until sale to Davey early this year.

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PHILIPPE STABLE, to manager of Sabre Saw Chain's new European subsidiary in Brussels, and responsible for European and Middle East sales. SABRE EUROPE, S.A. becomes third subsidiary of Sabre Saw Chain.

KNIEP ASSOCIATES. Dover, N.J., a marketing and advertising agency, expands to include services to agribusiness. Executive Vice-President for the new venture is Dr. E. Peter Griffin, previously with Enjay Chemical, and prior to that with Standard Oil of New Jersey.

THOMAS R. VAUGHAN, chairman of Freeport Minerals, named chairman of the executive committee of The Sulphur Institute, succeeding P. Guillaumat, Societe Nationale des Petroles d'Aquitaine, France.

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CARL HENDRICKSEN, long-time staff member of ETAMCO Industries, Belleville, N.J., to corporate treasurer.

DR. ROBERT W. CAIRNS, v-p at Hercules retired July 1, accepting appointment as Deputy Assistant Secretary for Science and Technology, U.S. Department of Commerce.

* *

JAMES W. CARROLL, named national accounts sales manager for Plant Food Department of Allied Chemical. He replaces retiring John Ritter.

* * *

BOARD CHAIRMAN ARTHUR C. TRASK — announces consolidation of Chemicals and Equipment Divisions for Arthur C. Trask Corp. in new headquarters at 7666 West 63rd St., Chicago.

JULES GOLDBERG, named sales manager for Underground Sprinkler Systems division of Melnor Industries.

DR. JAMES R. WATSON, named vice-president of Toro. With Toro since 1952, Watson has become nationally known as a turfgrass specialist.

JAMES J. GALVIN, rejoins W. R. Grace & Co. as v-p of Agricultural Chemicals Group. Previously affiliated with Grace through 1968, he has most recently been v-p for Plumbing and Heating Group of American Standard, Inc.

JAMES W. FRASIER, to Manager of Sales for Rain Jet Corporation's line of underground lawn sprinklers.



Keeps turf "snuggly" thru any winter

New Conwed Turf Protection Blanket

As a grounds pro you know the effects of desiccation and low temperature on intensively cultured turfs. And you know the time and expense involved in repairing that damage.

Conwed Turf Protection Blanket helps prevent injury to golf greens and tees, bowling greens, lawn tennis courts, display gardens ... any cool or warm season turf that's worth protecting.

Apply new Conwed Turf Protection Blanket this fall. It insulates against both winter cold and early spring heat. Protects against dry-out. Helps resist snow mold spread.

Lightweight, easily handled, the blanket comes in 6 x 200-foot rolls weighing 18 pounds.

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Heavy duty articulated knuckle boom loader with 20-foot reach and 400 degree swing along with powered crushing rolls constitute the heart of Precision Chipper's new Tree Destroyer.

Precision Builds New Unit A Major Model Chipper

Precision Chipper Corporation, Birmingham, Ala., has introduced a new chipper for the market. It is a 67,000 pound unit which handles trees up to 22" in diameter.

Previously the company has built big, stationary chipper units for the forest products industry. With the new restrictions on burning of waste wood products, the company has foreseen a demand for the larger chipper units by municipalities, parks, and tree care companies.

The Tree Destroyer now being marketed is a 75", 3-knife unit powered by a Cummins 310 hp diesel engine. It is the first of three models now on the market and in the planning and construction stages. A second model will be a 48" unit, and the third unit will closely approximate the smaller units which are now standard for the industry.

Bob Smith, vice-president and in charge of marketing for the company, says that the new unit at 67,000 pounds is 19,000 pounds heavier than any other unit on the market. The weight, he says, is important in that it (along with four hydraulic stabilizers) keeps the unit stable under the repeated pounding of heavy loads.

Other features which permit this model to withstand heavy pressure include 20-inch dual-tandem wheels, extra pipes in the curved framing to prevent big tree limbs from hanging up, and a heavy duty articulated knuckle boom loader with a capacity of 7,504 pounds at 15'.



Precision Chipper management team— Bob Smith, vice-president, left, and Harold L. West, president, check hickory chips during demonstration of Model 75 chipper.

USDA Releases New Environmental Bulletin

A new publication by the United States Department of Agriculture, Managing Our Environment, has been released. It has special sections on protecting land, water and waterways, and on management of farm wastes. New areas include recycling food processing wastes. Copies (at 75¢ each) are available from the Superintendent of Documents, U.S. Government Printing Office, Washington, D. C.

Artificial Turf Is Hot Say Agricultural Engineers

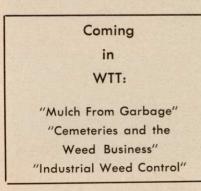
Two Auburn University agricultural engineers, have reported that artificial turf areas will heat up to far higher temperatures than adjacent areas of turfgrass.

Reporting at the recent American Society of Agricultural Engineers annual conference, the Alabama university researchers, J. L. Koon and E. W. Rochester, said they found that surface temperatures of the synthetic material during periods of peak incoming radiation were considerably higher than those of turfgrass. "Maximum surface temperature," they said of syn-thetic material exceeded 150° F. with the corresponding temperatures of turfgrass not exceeding 110° F. "Differences in net radiation above the two surfaces were slight.

Even though the temperature may be only two to three degrees Fahrenheit hotter above the synthetic surface of a playing field in comparison with grass surface, this difference may be important when the temperature is in the critical range.

An area of Astroturf which was installed at Auburn at the edge of a much larger Tifton bermuda grassed field was the site for the studies. "The objectives of the studies were to determine differences in dry-and wet-bulb temperatures, surface temperatures, and net radiation which exists on and above artificial turf as compared with natural turf," the investigators explained.

The Auburn researchers, pointing out that the new surface has required modification of player equipment and playing tactics, offered a table of exercise precautions based on wet-bulb globe temperature. When the temperature ranged between 85 and 90 degrees, all drills in full uniform on synthetic turf should be cancelled, and above 90 degrees all training should be stopped, with "skull sessions" the order of the day.







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U.S. Plant Patent 2887

Like beautiful girls, Fylking Kentucky bluegrass lawns offer so much more . . . beautiful color, texture and easy to love and care for. Abundant sideshoots coupled with a thickly branching root system produce an unusually luxuriant turf of thick, cushiony velvet. More disease and weed resistant, drought and traffic tolerant, Fylking has proven superior in 12 vears of international tests. It thrives cut at 3/4 inch (even low as 1/2 inch) and makes backyard putting greens practical. Ask for the beautiful one, 0217® Brand Fylking Kentucky bluegrass is now at your local wholesale seed or sod distributor.

Another fine product of Jacklin Seed Co., Inc.



Complete materials handling system is in use at Wintermann & Company, Eagle Lake, Tex., where the super sack has been adopted for handling fertilizers.

BAG (from page 27)

economy of bulk shipping. Containers are top-loading with self emptying bottom discharge spouts. Most important is that handling is a oneman operation. The empty bag collapses and folds for return shipping taking up only 10% of the original shipping space.

The ground applicator now being marketed by BAG Corporation is for distribution of fertilizer and/or seed by the broadcast method. It is used in conjunction with a super sack, reusable collapsible container. Equipment in the field is pulled by tractor, jeep, pickup truck, or any type vehicle equipped with power take-off according to the manufacturer. Broadcast rates have varied in actual use from four pounds per a c r e s of material as fine as diazinon to several thousand pounds of fertilizer.



The system was first designed for aerial application of both seed and fertilizers, prior to its new and bigger use in ground application and materials handling.



- **Penn State Turfgrass Field Day,** Joseph Valentine Turfgrass Research Center, University Park, Pa., Aug. 11-12. (Note: this is a change).
- American Society of Agronomy, Crop Science Society of America and Soil Science Society of America concurrent meetings in New York City. Aug. 15-20.
- Turfgrass Supplies Irrigation and Equipment Field Day, Fenway Golf Club, White Plains, N.Y. Aug. 24 (1:30 p.m.)
- Rhode Island Golf Course Superintendents Field Day. Turfgrass Research Area, URI campus, Aug. 25.
- Rhode Island Lawn and Utility Turf Field Day, Turfgrass Research Area, URI campus, Aug. 26.
- National Association of Professional Gardeners, Annual Conference, Princeton Inn, Princeton, N.J. Aug. 28-30.
- Virginia Tech Turfgrass Field Days, V.P.I. and S.U. Turfgrass Research Center, Blacksburg, Va., Sept. 8-9.
- Michigan Turfgrass Field Day, MSU, East Lansing, Mich., Sept. 9.
- Alabama-Northwest Florida annual turfgrass short course in cooperation with Auburn University, Auburn, Ala. Sept. 9-10.
- Ohio Turf and Landscape Day, Ohio Agricultural Research and Development Center, Wooster, Ohio, Sept. 14.
- Florida Turf-Grass Management Conference, Pier 66, Ft. Lauderdale. Sept. 19-22.
- Minnesota Shade Tree Maintenance Short Course, St. Paul campus, UM, St. Paul, Minn., Sept. 23.
- Midwest Regional Turf Foundation field day, Purdue University, Lafayette, Ind. Sept. 27.
- **30th Annual Short Course for Roadside Development**, Columbus, Ohio. Oct. 4-8.
- Society of Municipal Arborists, 7th annual meeting, Empress Motel, Asbury Park, N. J. Oct. 6-8.
- Helicopter Association of America western operators management seminar at the Marriott Inn, Belmont, Calif., Oct. 19-23.
- Missouri Turfgrass Conference in the Memorial Union, University of Missouri, Columbia. Nov. 3-4.
- Wisconsin Golf Turf Symposium at the Pfister Hotel, Milwaukee, Nov. 4-5.
- Arizona Parks and Recreation Conference, annual meeting, Holiday Inn, Tempe, Ariz., Nov. 17-18.

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OVER 20 BASIC SIZES & STYLES 18" 24" 32" 38" 48" 60" 72" 74" 88" and Gangs from 7'9" to 19'.



SOD INDUSTRY SECTION

Growers Visit Michigan

Sod Research/Field Tour

More than 150 out-of-state sod growers joined an equal number of individuals from the Michigan growers sod industry for a combined field day and sod tour at Lansing, Mich., this last month.

The event was two-fold—a Michigan State University sod producers field day, and a summer meeting of the American Sod Producers Association.

Michigan, with 150 plus growers producing over 20,000 acres of sod yearly, has research at the MSU station to back the industry. Primary research shown visitors was on muck soil, yet much of the new data presented applied far more widely.

The recently developed Michigan sod strength and sod rooting evaluation tests were stressed in many of the studies. The sod strength test measures the ability of sod to withstand harvesting and handling. In short, the test shows how well a strip of sod will hold together during lifting, moving, and being transplanted.

The sod rooting test shows how

Sod rooting test.

well sod can be expected to root in a new soil when transpalnted. In the rooting test, sod is transplanted and then after 25 to 50 days is pulled up. The force in pounds required to lift the sod is the measure of sod rooting ability.

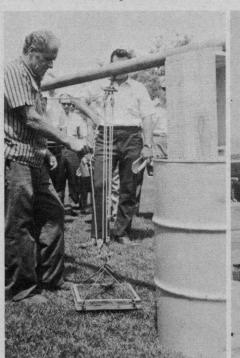
Sod strength tests showed that blends of the newer varieties were generally superior to pure mixes and far better than the older common bluegrass varieties. Yet, rooting characteristics of the older, common Kentucky varieties proved excellent and often better than the new varieties and blends.

However, researchers pointed out that once laid, if sod is managed well (proper fertilizer and moisture) then any of the varieties or blends tested can be expected to perform satisfactorily.

Studies during the past three years show that as little as 5% Merion, on a seed weight basis, can be planted in a mixture with Pennlawn red fescue and still provide adequate sod strength. However, 20- to 30%Kentucky bluegrass is needed to achieve adequate uniformity of stand in terms of leaf texture and nonbunchiness of the bluegrass in the red fescue dominant turfgrass community.

Control of Fusarium blight on Merion Kentucky bluegrass drew the attention of many sod growers. Professor J. M. Vargas, Jr., in his report said that Tersan 1991 (Du-Pont) gave excellent control if applied correctly. Successful treatment, he said, for this and similar products being tested, depend on getting the chemical down into the root zone. This is done by spraying on the sod, and following up with an inch of water to literally "water-in" the chemical. Dr. Vargas stressed the importance of soaking the chemical down into the roots before it has time to dry. Five treatments of this and others tested were applied at bi-weekly intervals. With the benomyl (Tersan 1991), 8 ounces per 1,000 sq. ft. were used. Another promising fungicide for control of Fusarium blight is Pennwalt 1771.

D. P. Martin



Dr. James B. Beard

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