January), 1949 I Hereby Lesolve: 1. That I will make every effort to work safely in 1949... 2. That I will be safety-conscious not only for my own benefit, but also for the welfare of my fellow 3. That I will observe the prinworkers). ciples of safety at home and on the highways as well as in the plant). 4. That I will

THE SCINTILLATOR

PUBLISHED MONTHLY BY

SCINTILLA MAGNETO DIVISION, BENDIX AVIATION CORPORATION SIDNEY, NEW YORK

G. E. STEINER, GENERAL MANAGER

OFFICERS OF BENDIX AVIATION CORPORATION

M. P. FERGUSON
PRESIDENT

W. H. HOUGHTON TREASURER H. A. GOSSNER
SECRETARY

N. C. MEAGLEY

VOL. 7

JANUARY, 1949

No. 7

MANAGING EDITOR—E. M. VAN NAME STAFF ASSISTANT TO THE GENERAL MANAGER



ASSISTANT EDITOR—D. R. CRANDALL

PHOTOGRAPHERS-H. C. EARL

EDITOR-P. J. DU BOIS

CONTRIBUTORS

The Employees of Scintilla Magneto Division, Bendix Aviation Corporation



So long 1948 — Hello 1949!

This, again, is the year of the FORTY-NINER. As of this writing, on the last day of the old year, we're having delivered to our front door 365 golden "nuggets" of opportunity. FORTY-NINERS everywhere will find the New Year packed with a lot of promising material, but the important thing about 1949 . . . or

any New Year . . . lies in making each "nugget" count. Too often, time is wasted away a day at a time until a whole year is lost. The New Year, 1949, provides a fresh opportunity, a fresh start toward making each day a day of accomplishment.

The old FORTY-NINERS of the California gold rush days opened a new era in the history of the United States. FORTY-NINERS of today, this year, face even greater challenges in opening an era of peace and understanding among world nations. Although such an era may seem far distant, 1949 could be the turning point. As we enter the New Year, we enter into a year of destiny . . . for the whole world today stands at the crossroads. Before 1949 is a year old, the paths of all nations will be more clearly defined than they have been at any time since V-J Day. We, as Americans, will be called upon to exert every influence in assuming the role of world leadership for peace and understanding among nations.

We're not much of a hand at making New Year's resolutions, but we do have a New Year's wish that we'd like to get off our chest: "May each and all of our readers strike a rich vein of happiness in 1949 . . . the year of the FORTY-NINER."

100 YEARS SINCE GREAT GOLD RUSH



great gold rush. One hundred years ago, gold was discovered at Sutter's mill and the Forty-niners rushed West to the California gold fields in hopes of striking it rich.

Well, pardner, this too is the year of the Forty-niner, the modern day Fortyniner of 1949. Then, too, this is the age of industrial power, great machines and high speed. No pack animals and saddles . . . this is a year of streamlined autos, fast-moving planes and trains.

We agree with the historians that the old time Forty-niners faced plenty of hazards, but compared to the hazards of today, their worries were few. All they had to worry about was claim jumpers, outlaws and a stray renegade or two. They didn't have to worry about nipping their fingers off in a punch press, having an arm wound around a drill, or getting a toe-smashing hunk of metal across the foot.

No sir, pardner, they didn't have a worry on that score. Still you've got to give the old Forty-niners credit. They were well aware of the hazards they faced, and they — the smart ones, that is — took steps to protect themselves. Guess that's what we, the Forty-niners of today, need — a deeper understanding of our modern day safety hazards and closer observance of the common sense rules of safety.

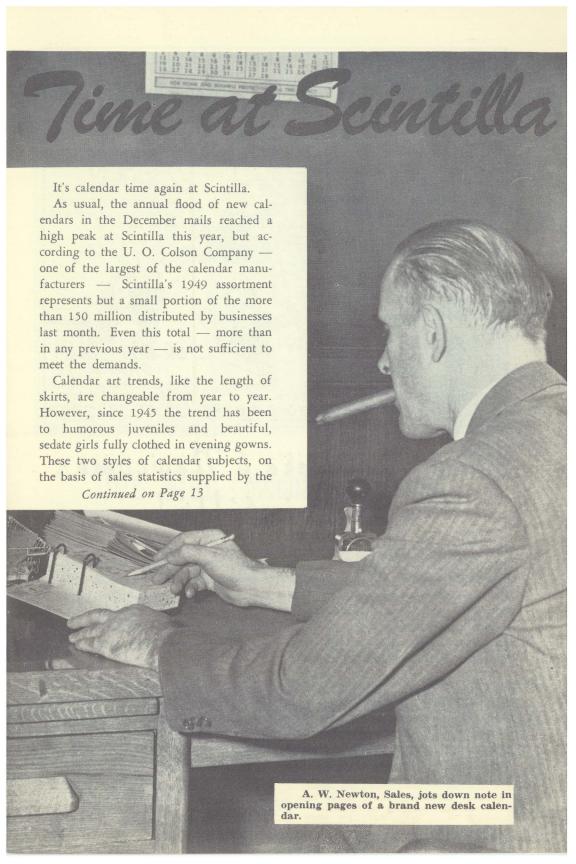
Pardner, we think you will agree with safety as well as ours!

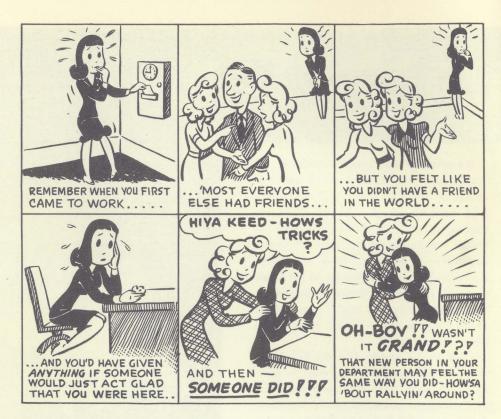
This is the 100th anniversary of the us when we say, "There's Gold in Safety" . . . for what could be more important, more priceless than our own health and welfare? Somehow or other, we've got a hunch that 1949 is going to be a "golden year of safety at Scintilla"! Don't forget, there's a rich vein of it - safety - just waiting to be uncovered. All it takes is a little prospecting on the part of every Scintilla Forty-niner.

> We're going to do a lot of prospecting for safety this year, pardner. Hope you'll join in on our "gold rush" to the best safety record ever uncovered at Scintilla. We've got a perfect setup for such a record . . . for Scintilla throughout the years has taken every step possible to provide the protective equipment and safety devices necessary for safeguarding your health and safety. All it takes, pardner, is your complete cooperation. We'd hate to have you be the one Forty-niner in your department who keeps Scintilla from holding the line in '49!

Safety is a big thing at Scintilla, Fortyniners, but we need your help. We hope we'll be able to list all of you on our Forty-niner Honor Roll at the end of the year. With all of us prospecting for the gold in safety, we haven't any doubts but what we'll strike it rich in '49. Start digging, pardner - it's your health and







When You Were a Newcomer at Scintilla!

Whenever we catch sight of a new face hereabouts, we can't help thinking back to our own "freshman days" at Scintilla. The thought always strikes us that — at one time or another — everyone on the job was a newcomer; even the old timers! Looking backwards, it all seemed kinda strange — didn't it? There we were, on a new job, working among strange faces and trying desperately to fit in with the crowd. We didn't know a soul, but a friendly nod or a warm smile made us feel more at ease. Remember that day, partner?

The point we're getting at is that new faces pop up every now and then in your department. Don't forget that they are feeling the same way you did when you first came to Scintilla. A friendly gesture, a nod or a smile, goes a long way with that new somebody . . . so do your part in helping the new fellow or girl feel at home. They'll remember you for it.



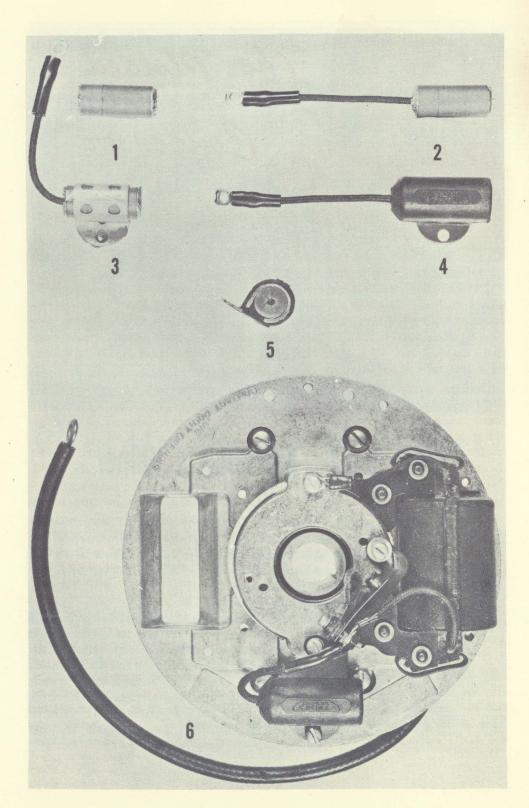
JOE GILL, Mechanic's Helper

By the time 1949 has rolled through 12 months, Joe Gill, Maintenance Dept., personally will have used more than 300 pounds of grease in his work at Scintilla. As a Mechanic's Helper, it becomes his task to keep up with the oil and grease requirements of some 3,000 motors, 150 gear boxes and 200 fans. Needless to say, a job of this nature keeps Joe on the move and he is seldom seen in the shop without an oil can or a grease gun.

Joe informs us that oil motors are oiled every other week; grease motors are greased every third month. Fans are oiled and greased twice a year and gear boxes are oiled every 45 days. Consequently, by the time he has completely made the rounds of the shop, it is time to start all over again. "A never-ending job," Joe explains.

Altogether, Joe has worked at Scintilla 12 years. He has been at his present job nine years. When he first started on the oiling job, Scintilla still had the old shafts. The present setup is much easier, according to Joe, because no climbing is involved.

Four different greases and six grades of oil are used by Joe in keeping Scintilla's motors properly lubricated.





7he Molded Condenser

By Tullio Tognola, Chief Research Engineer

The condenser, which is connected across the contact points in all types of magnetos, is one of the most important parts of the ignition system. Its function is to suppress the arc which takes place between the two contacts at the moment the points open, thus allowing the primary current to be instantly interrupted. This causes a rapid change in the magnetic flux which in turn produces a high voltage spark capable of igniting the mixture of fuel and air in the cylinder of the engine.

There are basically two types of ignition condensers: The so-called mica condenser consists of a large quantity of very thin mica plates, the duty of which is to insulate the condenser's electrodes. These are generally made of tin or aluminum foil. During the manufacture of a mica condenser the mica films and the tin foils are stacked one upon the other until the proper number is reached, then the stack is dried, mounted rigidly into a container and impregnated.

The second type of condenser is called a tubular condenser; here the mica sheets are replaced by special paper films, which, like the aluminum foils, are purchased in the form of a roll. Two or more papers are used to separate the electrodes which generally consist of aluminum foils. Special machines are used to wind both the papers and the foils into a cylindrical spool. After attaching the proper terminal strips, the spools are impregnated and inserted

into a metallic shell for protection and mounting.

Thousands upon thousands of mica condensers were manufactured by Scintilla prior to and during the war, and shipped in aircraft magnetos all over the world. For the relatively small quantity of commercial magnetos, we bought from outside sources the complete tubular condensers; and for some types of aircraft magnetos we procured the condenser spool proper, which in turn we mounted into the housing.

With the termination of hostilities Scintilla began the manufacturing of small magnetos of one- and two-cylinder types for such applications as outboard motors, auxiliary power engines, etc. Our facilities, however, were not sufficient to produce the required number of condensers necessary for these new products, and we were obliged to secure all of these units from the open market.

Continued on Page 18

7welve Reminders 7











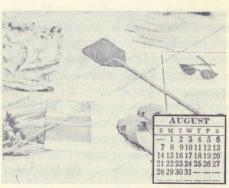


at Safety is Golden













KEY TO CALENDAR

JANUARY — Safety Glasses — Your eyesight is precious; protect it with Safety Glasses. Many employees are taking advantage of Scintilla's full time program on Safety Glasses. How about you?

FEBRUARY — Safety Shoes — Tired feet tire the entire body. Safety shoes give solid support and guard against foot injuries caused by falling objects — reduce fatigue. The number of men and women taking part in Scintilla's Safety Shoe Program is increasing every day.

MARCH — Good Housekeeping — There's a safety message in good housekeeping. Help keep your work area clean, and remember that good housekeeping is a year-'round proposition at Scintilla.

APRIL — Office Hazards — Safety is a full time job in the office as well as the shop. Hazards lurk in every office, lie in wait for someone to make a careless move. Even though April Fool's Day does usher in this month, don't risk someone's neck with a foolish prank.

MAY — Protective Equipment — Scintilla is always on guard to make sure that the proper protective equipment is on hand to do a job in a safe manner. You can cooperate by using the protective equipment provided for your job.

JUNE — First Aid — Never attempt to treat an injury yourself. Go to First Aid where you will receive the proper treatment. Failure to do so may cause an infection.

JULY — Over-exertion — July heat plus hard work sometimes brings on over-exertion. Salt tablets are available near all drinking fountains for use during the hot, summer months. Follow the directions.

AUGUST — Vacation Time — Safety can be applied off the job as well as on. Va-

cation time brings on many additional hazards such as swimming, boating, travel, etc. Work Safely — Play Safely. It pays!

SEPTEMBER — Fall Falls — This month brings us a reminder that we should be extremely careful to avoid slips, strains and falls. When lifting, use your legs . . . not your back.

OCTOBER — Fire Prevention — During October we celebrate Fire Prevention Week. Sixteen lives are lost every day in American homes due to fires. Remember, fire prevention is the best means of fighting fire. In other words stop them before they start.

NOVEMBER — Driving Hazards — Our parking lots are no exception to the hazards of winter driving. Let's not forget that the speed limit is 15 m.p.h., and remember, courtesy is a virtue.

DECEMBER — Safety Rules and Regulations — The best teacher of these rules is our old friend, Santa Claus (You). In giving your youngsters the best in life, don't neglect to give them the rules of safety. Lessons in health and safety, learned while young, pay big dividends in happiness.

SIXTH ANNUAL POLIO DANCE

The Sixth Annual Polio Dance, sponsored by the Sidney Business and Professional Women's Club, will be held Friday evening, January 28th, at the Recreation Center. The dance is held each year as a climax to the March of Dimes campaign, and all proceeds are turned over to the Polio Fund.

Following the established custom of previous years, two types of tickets will be sold . . . a regular admission ticket and a special sponsor's ticket for those who wish to contribute more than the regular price of admission. The committee has booked

calendar time

(from Page 11)

calendar industry, are nip and tuck for first honors in 1949.

Next in the calendar parade for 1949 are the ever-popular scenics — quiet, peaceful mountains, snow-covered cottages, autumn harvest scenes, etc. Also vying for high honors in universal popularity are sporting pictures which show hunters, dogs, pheasants, bears and other animals. At Scintilla the new 1949 calendars on shop and office walls provide a generous sampling of all the various subject types.

Calendars are definitely in the big business category, complete with a research division to gauge public taste. Whatever your particular whim in the way of a picture selection for your favorite calendar spot may be, look around — most likely you will find it. If the butcher or the baker doesn't have it, someone in town will.

In order to stay abreast of the times, calendar manufacturers have to work five years ahead. While you are hanging your 1949 calendar, the salesmen are soliciting orders for the 1950 models, the big offset presses are grinding out samples for the 1951 calendars, and commercial painters the world over are working on the creations that will adorn the calendars of 1952. Creative artists and statisticians will be making rough sketches to submit for the 1953 calendars.

Malcolm P. Ferguson, President of Bendix Aviation Corporation, has been elected President of the Automotive and Aviation Parts Manufacturers for 1949. Vice-president is R. H. Daisley, Vicepresident of Eaton Manufacturing; and Secretary-Treasurer is J. L. Myers, President of Cleveland Graphite Bronze.

Bendix President AIA Official

The Board of Governors of the Aircraft Industries Association announced today that Major General Oliver P. Echols (U.S.A.F., Ret.) was reelected President by the Board at its annual meeting December 4th to serve until a successor is chosen. The Board stated that Captain Leland D. Webb (U.S.N., Ret.), who is Vice-President in charge of the AIA Western office, will become acting General Manager of the Association on February 1st.

The statement also said that during Webb's period of duty in Washington the West Coast office would temporarily be in charge of Captain Webb's assistant, John M. Richards, operating under Webb's supervision.

In addition to reelecting Echols, the Board also reelected Eugene E. Wilson as Chairman of the Board and named the following vice-presidents: J. H. Kindelberger, board chairman of North American Aviation, Inc., and Malcolm Ferguson, president of Bendix Aviation Corporation. Leland D. Webb was reelected Vice-President, and Harrison Brand, Jr., was reelected Secretary-Treasurer.

New members of the AIA Board of Governors named at the Arrowhead Springs meeting were LaMotte T. Cohu, president of Consolidated-Vultee Aircraft Corp.; Chester H. Lang, vice-president of General Electric Corp.; Frederick C. Crawford, president of Thompson Products Co., and C. J. Reese, president of Continental Motors Corp. Cohu replaces Harry Woodhead, former Convair president now with Douglas Aircraft Co., and Reese replaces Dwane. L. Wallace, president of Cessna Aircraft Company.







PLEASEDTAMEETCHA—Blanche Davidson introduces "Spark Plugs" to Ada Ruling during get-acquainted session. Second photo shows "Spark Plugs" in chummy mood. Blanche made the stuffed horse for Ada's little girl at Christmas-time.

SOUTH AMERICA—Representatives of Z.O.N.D.A., Buenos Aires, Argentina. attended the Service School last month. From left to right: Francisco DePalma, Chief of the Electrical Division; Lino Chera, Electrician; and Francisco Tamburelli, Inspector. Robert Wickham of Scintilla's Service Dept. is at the extreme right.





XMAS PUP—X marks the spot where Mr. Pup Dog sneaked in on this photo of the Ihrie's X-mas tree. Merle (he's in Dept. 32) says the pup is a "camera hog" through and through...can't resist sticking his nose into a picture every time the camera is aimed.





CHRISTMAS HAM—Louise Dickson of Payroll smiles pretty-like for the Scintillator man. No wonder...she's all ready for the holidays with one of Scintilla's gift hams to employees tucked in her arms.



HOBBY LOBBY—Design and construction of desk sets, like one in picture, occupies a great deal of Rene Pittet's spare time at home. Expertly finished, the sets are made from cedar. Rene is Supervisor of the Assembly Dept.

SNOW MEN—When summer rolls around, we'll wager that these snow men will stay as fresh as January snow balls ...'cause they're made of good, durable cotton; no snow involved. Martha Dwyer, R. N. Supervising Nurse of Scintilla's Medical Dept., is responsible for this novel touch to the Holiday scene.





Your social security card means you have an insurance account with Uncle Sam. When you work on a job covered by social security you are building protection for your old age and protection for your family if you die.

For this Federal old age and survivors' insurance you now pay 1 per cent of your wages, and your employer pays the same amount. It doesn't matter if you are 8 or 80.

Your social security card represents an actual ledger record kept for you by the Social Security Administration at Baltimore, Maryland. There are more than 89,000,000 social security accounts. To get full credit for your work under social security you must be sure to report the number of your social security account to your employer so he can send in a complete and correct report of your earnings under social security.

Every state has an unemployment insurance law which will provide income for you when you are out of work through no fault of your own, if you are covered under the terms of the State law. You pay nothing for this in New York State because your employer pays the entire bill.

In these articles we are going to discuss only Federal Old-Age and Survivors' Insurance. Information concerning unemployment insurance is available through local offices of the Unemployment Insurance Division.

I wish to thank my many friends at Scintilla for their cards, sunshine basket and kindnesses during my illness. Walter Meiner, Dept. 12

Meet Your Foremen



A native of Switzerland, Foreman Fred Wuthrich of Department 28 came to the United States in 1929. He received his early schooling in Switzerland where he also learned a trade as a machinist. Before coming to the United States he worked in machine shops for three years, then as a Chief Engineer in two power plants over a period of 12 years.

Upon his arrival in this country he went West to Portland, Oregon, where he worked on his brother's farm and also attended Night School. He came to Sidney in 1931 and started work at Scintilla. Appointments to setup man and foreman followed, and during World War II he was a general foreman.

Fred maintains that "the world is a small place." He hadn't been working at Scintilla very long before he met Fritz Scheidegger, a former Chief Inspector. It was a renewal of old acquaintances, for the two had worked together in a machine shop in Aaran, Switzerland.

Fred is married and has four children. A member of several gun clubs, he likes to hunt, fish and bowl. He has four brothers and sisters in Portland and an older brother in Switzerland.

Scintilla

* service anniversaries







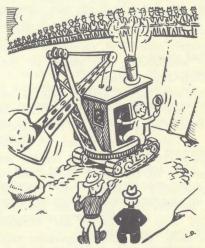
DECEMBER

Guy Fitch 20 Years

20 Years Department 12 Department 30

Earl J. Brundage Charles H. Sherman 20 Years Department 15

15 V	
15 Years	
Fitzgerald, Kenneth	11-572
10 Years	
Bishop, Charles	31-1880
Wagner, Raymond	32-1574
5 Years	
Allen, Ralph	16-44
Benedict, George	
Clark, Beatrice	35-5077
Colton, Bert	7-323
Curtis, Alice	99-5101
Drake, Gladys	47-5133
Dunham, Reginald	11-490
Fuller, Dorothy	99-5170
Hoover, Roger	
Hurlburt, Irma	



THE JOB WAS FINISHED LAST WEEK-HE'S JUST GIVING AN ENCORE NOW.

SERVICE SCHOOL-Group below, from Chanute Air Base, Chanute Field, Ill., received a course of instruction on jet ignition here last month. Don Gray, standing, was the instructor.



CONDENSER (from Page 9)

The available condensers, while satisfactory at the beginning, soon showed that they had certain shortcomings, particularly with regard to their ability to give satisfactory service under such conditions as high humidity and severe vibration. It was therefore decided that we should build our own condensers and take steps to make them meet the severest conditions to be encountered. Various approaches to this problem were tried and evaluated. This problem was ultimately solved by a novel manufacturing process which assures a completely sealed unit, capable of successfully withstanding the effects of both humidity and vibration.

This new unit, a molded type of condenser, derives its name from the fact that the outside metallic shell of the orthodox type is completely eliminated. A special molding compound is used for the impregnation of the spool proper and to simultaneously envelope the complete unit, together with part of the mounting bracket, into a moisture and vibration proof body. The molding operation takes place while the spool and bracket subassembly is under a high vacuum and securely located in a special mold; therefore, even the smallest cavities are completely filled with molding compound.

In order to set the compound, which during the molding operation is in a liquid state, the molds are baked several hours in specially built ovens which are heated to a very uniform temperature.

After removing them from the molds the condensers are further processed and subjected to rigid inspection tests, then installed in the magnetos.

The process of manufacturing the molded condensers is easily followed by referring to the accompanying photogaph. No. 1 _ The condenser spool as it is wound No. 2 _ The condenser spool with attached

lead and grounding tab.

No. 3 _ The subassembly with bracket and grounding tab welded thereto.

No. 4 _ The finished condenser.

No. 5 _ A sectional view showing the spool surrounded by the mounting bracket and compound.

No. 6 _ The condenser installed into a completed K-type magneto.

The development and testing of this new molded condenser took well over a year. During this period all conceivable tests were run in order to evaluate the merits and shortcomings of the various materials and assembly processes; i. e., the finished units were subjected to endurance, moisture, heat, cold and vibration tests while numerous data were taken of the electrical properties of the molding compound which was selected as the most suitable for this application.

Molded condensers are at present manufactured in large quantities by Scintilla. Due to the fact that all the required operations are performed by us, we are in a position of controlling the quality of the condensers in such a way as to insure excellent operating performance.

Today molded condensers are manufactured for the K-type magnetos only; however, investigations are well under way regarding the adoption of this type of condenser to aircraft magnetos, battery ignition, jet ignition, etc.

Thus, a new unit, the molded type of condenser is added to the list of Scintilla products. The fact that these units are manufactured in a novel manner, which is a complete departure from the standard procedure of building tubular condensers, is a tribute to the ingenuity and perseverance of all the employees who contributed to the successful solution of such an important problem, thus establishing another reason for the superiority of Bendix-Scintilla ignition units.

BARTER COLUMN



A service for employees of Scintilla Magneto Division, conducted without charge. All articles advertised must be personal property of the employee. Ads of a commercial nature are not acceptable.

cial nature are not acceptable.

All ads must be signed by the employee and submitted before the 12th of each month. No telephone number within the

plant may appear in ad.

fOR SALE: Ideal No. 7 Boiler, 590 sq. ft. steam, 945 sq. ft. water. Eight new style steam or hot water radiators with total of 485 sq. ft. Built-in domestic water heater and 40 gal. tank, and Catskill hopper stoker complete with all controls and pipe. John Straka, Phone Bainbridge 4564.

FOR SALE: Zip-in, lined coat, size 15, grey suede. Practically new. Mrs. Thelma House, Office 30.

FOR SALE: One Set of 15 Volumes, "The Standard American Encyclopedia," 1937 edition. Also, 4X Mossberg 'scope and side mount. Merle Ihrie, Prod. Lab., or Phone Sidney 3232.

FOR SALE: New Appleton Spotlight for driver's side. Never been used, will sell at less than regular price. Robert Snowden, Phone Sidney 3361.

FOR SALE: Wringer Type Washing Machine, in excellent condition. Price \$35.00. Contact Tom Gill, 67 Beal Blvd., Sidney.

WANTED: Wood or Steel Kitchen Cupboards. Contact Glenn H. Rice (99-1277), Dept. 30.

FOR SALE: P. A. System, "Premier" 8-Tube with studio mike. Used one year. Price \$150. Frank Leonard, Phone Sidney 3588.

WANTED: Second hand child's tricycle.
Phone Sidney 3311.

Cards of Thanks

I wish to thank The Management of Scintilla Magneto Division for the flowers; also Dept. 34 for the very generous gift sent me during my recent illness.

Ellery Lent

I wish to thank The Management of Scintilla Magneto Division for the lovely basket of fruit which was sent to me while I was in the Hospital recently.

Helen Daniels

I wish to thank my friends and The Management of Scintilla Magneto Division for their many kindnesses to me during my recent illness.

Fred Hinman, Dept. 42

I wish to thank The Management of Scintilla Magneto Division for the sunshine basket and also those who sent cards.

Melvin Griswold

I wish to thank the Management of Scintilla Magneto Division for my sunshine basket of fruit and candy sent to me at The Hospital. Also, I want to thank you for my Christmas ham, which was delivered to me today. What a grand Christmas present, and such a nice surprise. I wish to also thank my fellow workers for their expressions of good will. It all means so much to me. Thanks again to all.

Clara Drachler, Dept. 99

When Winter seizes control of the land and seals the secrets of the earth beneath the white caps of January, it is an ideal time for staying home evenings... especially when the wind sweeps the streets with an icy broom.



ABOUT the time the revelry of the New Year is dying a natural death, the cold silence of Winter sets in and seizes control of the land. The secrets of the good earth are sealed . . . at least for a time . . . beneath heavy, cottony thicknesses of drifting snow. An old, rambling rail fence stumbles through deep snow in the meadow and becomes hopelessly lost in a Gargantuan bog of six foot drifts. Even the creatures of the mill pond are bundled up, 'neath a "storm window" of crystal-clear ice. The outdoor world slumbers, and silently awaits the touch of the first warm fingers of Spring.



JANUARY is an ideal month for staying home evenings. After the excitement of the Holiday whirl, most folks need a little time out to catch their breath, and nothing goes nicer than a quiet evening at home by the fire . . . especially when the wind is sweeping the streets with an icy broom of snow and sleet. The crackle of a burning log in the fireplace harmonizes well with the muffled sound of minor explosions in the popcorn popper. Reflected light from the fireplace does a shadow dance on the living room wall, and the whole family is drawn closer together by the age-old magnetism of an open fire. Christmas cards are passed around once more for a final going over before being filed away for the year.



As THE evening grows older, the younger members of the family invariably will tease their Dad into a story telling session of "once upon a time." This is a signal for Mom to get the cocoa ready. Finally, after a lengthy period of "tell us just one more," the "kids" are packed off to bed. Glowing embers in the fireplace slowly wither away to ashes. Pete, an imp of a blond Cocker, stretches and goes back to the serious business of dreaming "dog dreams" . . . chases an imaginary cat up an imaginary tree. The older folks tune in on the 11:00 o'clock news, and so ends a quiet evening at home . . . in January.