



INCO TRIANGLE

VOLUME 8

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NUMBER 11



Mucking Machine in a Development Drift



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Don M. Dunbar, Editor

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VOLUME 8 FEBRUARY, 1949 NUMBER 11

HOW IS YOUR BRAIN-POWER?

Why no forehead-wrinkler in the Christmas issue?

Well, we had a horrible dream about good old Capstick, sitting there at the Yuletide festive board with the brain-teaser before him, his countenance warped into a mighty scowl and the finger nails of his left hand gnawed right down to the wrist while a big fat turkey drumstick lay unheeded on his heaping dinner plate.

Christmas being a heck of a time to encourage cannibalism, particularly self-cannibalism, we decided to pass up the feature for a month. Besides, we didn't have a good problem on hand.

And by the way, although this may not be quite the place to do it, we'd like to thank all you nice people who telephoned or wrote kind thoughts about our Christmas issue. Being worse than human, we just ate it up.

Now to get back to that last puzzle about the surnames of the girls who bought the Canada Savings Bonds (we should have asked for their phone numbers, too, because Phil Forster added a pensive little P.S. to his solution: "I'll bet they are very nice girls".)

The way it was told to us, the gals are Muriel Trotwood, Sonia Bowling, and Bridget Bailey, and the following were among our puzzle fans who turned in this solution: Phil Forster, Smelter Research; Fred Foote of the Sample Dept. and Brad Ross of the Copper Refinery; Nick Treflak of Creighton, "V.S." Creighton, Doug Thom of Mechanical Engineering, and Mrs. E. Weisenberger, whose husband works at Frood-Stobie (she said the puzzle was child's play). Their answer was that Muriel Trotwood bought 2 and her brother David 4, Sonia Bowling bought 3 and her brother Tom 15, and Bridget Bailey 4 and her brother Bill 16, making a total of 44.

But a group of dissenters, composed of Dave Duncan of Mechanical Engineering, A. E. Corby of Copper Cliff Smelter, and E. H. Capstick of Concentrator, say that the girls' names were Muriel Bowling, 1 bond, Sonia Bailey, 4 bonds, and Bridget Trotwood, 6 bonds. And still other dissenters, like H. S. Lewis of New York and Clifford Sider of Port Colborne, have still other solutions, all of which look okay to us.

So let's forget the whole thing. Where would those kids get all that money, anyway?

Try this one over on the old family nither:

A man gave each of his daughters \$8 to spend on presents for four old ladies. "I want each of you to buy a present for Mrs. Brown, Mrs. Jones, Mrs. Robinson and Mrs. Smith," he said. "Each present must cost one dollar or some multiple of one dollar." "Each must choose a different method of dividing her eight dollars into four separate sums."

"Each old lady's present must have cost the same aggregate sum."



Great Back-Saver

On the front cover of this issue is a picture of the business end of a mucking machine, mucking out a round in a development drift at Garson Mine. The companion photo above shows the machine from the rear after the dipper has been elevated to discharge its load into an ore car. Snorting and snuffling like a mastiff burrowing for a badger, the powerful little air-operated machine with its two-man crew can handle 40 tons of muck in a shift, compared to the 36 tons which three men could get out by the extremely arduous method of mucking into an ore car with shovels.

On the front cover of this issue is a picture of the business end of a mucking machine, mucking out a round in a development

The girls carried out these instructions. Flora spent more on Mrs. Brown than on the other three ladies together. Clara spent as much on Mrs. Smith and Mrs. Robinson as Flora spent on the other two ladies. Maria spent more on Mrs. Jones than on any of the others; and Eva similarly spent more on Mrs. Robinson.

The fifth daughter's name is Sally.
How did each girl allocate her money?

FAITH WORKS WONDERS

On a trip from North Ireland to Eire, an elderly Irish woman was stopped at the boundary line by the customs officer, who asked if she had anything to declare.

"Only a bottle of water," she replied.

"What kind?" asked the official.

"Holy water."

Long experience had taught the officer to take nothing for granted, so he asked to see the bottle. The lady protested, but he snatched it from her and took a whiff of the cork.

"It's whiskey," he cried.

"Glory be," exclaimed the old woman fervently "—a miracle!"

The province of Prince Edward Island has an area of 2,184 square miles, one-sixth the size of Vancouver Island.



PALS IN CONFERENCE

There's serious business afoot here as Horace Bourget, steel sharpener at Frood-Stobie, goes into a deep huddle with his son Buddy, 2. Probably planning that first fishing trip, or sumpin.

Port Colborne Operatic Society Scores Again



Coughlan's Talented Company Presents "The Gondoliers"

Fourth and perhaps most difficult of the Gilbert and Sullivan series produced by Port Colborne Operatic Society, "The Gondoliers" was presented to a capacity house January 25 at Inco Recreation Club.

In their happy acquaintance with Gilbert and Sullivan the young people of the Society have developed a fine appreciation of the light, whimsical touch invariably characteristic of the "book". They have matured musically, too, so that their chorus performed with confidence and zest quite equal to that of a professional company.

It would be difficult to overestimate the pride of the community in this splendid musical organization and its achievements. The resounding applause with which the big audience showed its appreciation of "The Gondoliers" will be repeated, too, wherever Mr. Coughlan and his company take their show, for throughout the district they have won a large and enthusiastic following in the past four years.

Presentations were made to Director Raymond Coughlan and his charming wife between the acts, and also to Mrs. Mewburn and Mrs. McIntosh, the gifted two-piano team which masterfully played the long and tricky score.

The cast included the following:

The Duke of Plaza-Toro (A Grandee of Spain)—Don Horne.

Luiz (His Attendant)—Kenneth Prosser.

Don Alhambra Del Bolero (The Grand Inspector)—Sandy McNay.

Marco Palmiero—Jack Davis.

Giuseppe Palmiero—Robert Kanold.

Anontio—Clarke Tennier.

Francesco—Jack Burden.

Giorgio and Annibale—Glenn Shickluna and Bill Bremner.

The Duchess of Plaza-Toro—Donna Guinter.

Casilda (Her Daughter)—Elaine Houser.

Gianetta—Dorothy Cole.

Tessa—Barbara Saxby.

Piametta—Joy Boneberg.

Vittoria—Lenore Ross.

Giulia—Shirley Armbrust.

Inez (The King's Foster Mother)—Kathryn Fehrman.

Chorus

Barbara Augustine, Betty Ball, Monica Brodhurst, Frances Colangelo, Kathryn Fehrman, Edna Johnston, Jean King, Anna Koebel, Anne Lever, Yvonne Lewis, Anne Lillie, Beverley Minor, Patricia McGowan, Joan Patterson, Helen Rogers, Marian Rogers, Shirley Rogers, Mary Root, Audrey Saville, Shirley Saville, Audrey Scholfield, Patricia Shore, Marilyn Wallace, Wilma Wegrich, Betty Wincott.

Jack Barrick, Robert Beck, Bob Davis, Donald Davis, Colin Davison, Jimmie Doan, Harold Farrar, Wayne Farrar, Eddie Kalaliff, Don Kettle, Ernest Kettle, Donald Kanold, Keith Kanold, Charles LaPointe, Harry Little, Tom Little, Lyle Michener, Bob Peart, Charles Shickluna.

The various committees responsible for the success of the presentation included the following:

Advertising—Dorothy Cole, Donna Guinter, Elaine Houser, Don Kettle, Ken Prosser, Helen Rogers, Glenn Shickluna, Wilma Wegrich.

Stage Settings—Messrs. C. Bentley, C. Cole, D. Grant, G. Little, A. McNay, Wm. Roach, Wm. Ross.

Make-Up—Mesdames L. G. Bell, S. Vanderlip, J. Wilson, R. Kanold, B. Simpson; Misses Helen Roberts, Valeria Wilson; Messrs. D. Grant, L. Bell.

Wardrobe—Mesdames R. Coughlan, D. Farrar, C. Cole, L. Houser, Wm. Ross, A. Rogers, Wm. Wegrich; Miss R. Current.

Ushers—Gerald Guinter, Ivan Bradley, John Lee, Bruce Melick, Ken Brown, George Maltman, Pat McNulty, Jack Laing, Anthony Rossi, Ken Root, Howard Root, Bud Wincott.

A 100 PER CENT RETURN

Doctor: "I hate to bring this up, but that check you gave me came back."

Patient: "Believe me, I don't like to mention this either, but so did my stomach ache."

WRONG CONNECTION

Prof.: "Young man in the back of the room, what was the date of the signing of the Declaration of Independence?"

"Dunno."

Prof.: "Let's try another. Who was Tom Paine?"

"Dunno."

Prof.: "Well, well. I assigned these questions last Thursday. What were you doing last night?"

"Drinking beer with some of the boys."

Prof.: "You mean to stand there and tell me that? How do you expect to pass this term?"

"I dunno, bud. I just came to fix the steam pipes."

SHE'S NOT FUSSY

He: "I must apologize for my dancing, I'm a little stiff from badminton."

She: "My dear man, I don't care where you came from."



Telling the Technical Story of Nickel to the Canadian Market

Keeping the planners in Canadian industry, business, and public services posted about nickel alloys is the work of the Direct Mail Department at Inco's offices in Toronto.

To a selected list of 13,000 names, Inco periodicals and technical literature are mailed regularly, telling of the amazingly versatile role nickel alloys are playing in modern industry, and announcing the new applications of nickel which are constantly being worked out by Inco's Department of Development and Research.

To the Commissioner of the Royal Canadian Mounted Police in Ottawa may go a pamphlet setting forth the advantages of Monel shafting for his coastal patrol vessels. To a metallurgist in an automotive plant in Windsor may be mailed the latest information on Inconel furnace and heat-treating equipment. Or to a creamery operator in Saskatchewan may be sent some literature pointing out the benefits of Inconel seamless tubing in milk-cooling units.

Can Pin-Point Its Releases

There are 100 different classifications of industry, business, and public services on the Inco mailing list, ranging all the way from paper mills to hospitals, and for each classification the list also carries the names of

the men most closely associated with its special phases or problems, such as research, sales, safety, etc. Working with this highly efficient directory the Direct Mail Department can pin-point one of its literature releases to any group of industrial concerns or to any classification of individuals within those concerns.

That mailing list must be kept as up-to-date as possible, and so there is the ceaseless job of watching for new names to add to it, checking the trade papers and technical magazines for news of new appointments or transfers, even following the obituary columns for deletions. During the war, when industrial personnel was shifting all over the place on government assignments or enlisted in the active services, the Direct Mail Department just about went off its rocker trying to keep track of everybody, and it was many months after V-J Day before the mailing list was back to something approaching its usual effectiveness.

Four Inco periodicals are sent out quarterly by the Direct Mail Department.

Inco Magazine is a slick-paper job, beautifully laid out and illustrated, and carrying feature articles about new and unusual applications of nickel alloys throughout the industrial and business worlds. It goes to a selected mailing list of 1,100 Canadian executives.

Advice to Metal-Lorn

Nickel News & Topics is sent to the complete mailing list of 13,000 names, including executives, purchasing agents, production and maintenance experts, sales directors, research men and metallurgists, federal and local government officials, and so on. It is a newsletter, more topical report on the doings of nickel alloy cast iron, nickel alloy steels, nickel bronzes, etc., and it maintains a lively Question & Answer corner to which people in all walks of industry bring their metal problems for comfort and advice. The difference between Inco Magazine and Nickel News & Topics is something like that between Fortune and Time.

Nickelworth, of which 10,000 copies are distributed, reports chiefly on Inco Nickel Alloys, the Company's own mill products from the Bayonne, N.J., and Huntington, W. Va., plants. Nickelworth's coverage is much the same as that of Nickel News & Topics except that it is not mailed to the foundries and steel companies, whose interest is in primary nickel.

Fourth of the quarterly periodicals is the Corrosion Reporter, which goes to 3,000 chemical engineers to assist them in their never-ending battle with corrosion, a fight in which nickel alloys have been conspicuously successful.

In addition to these regular releases, the Direct Mail Department last year sent out some 300,000 other pieces of literature, such as reprints of advertisements appearing in the trade papers, revised technical bulletins prepared by the Development and Research Department, and new sales literature prepared by the Toronto and New York offices.

Get Hundreds of Requests

Every month the Department receives hundreds of requests for technical literature about nickel, and a library of some 200 standard releases is maintained to take care of them. Some want information about primary nickel, and a typical bulletin ready for mailing to them is "Properties and Ap-

plications of Ni-Resist", a nickel alloy cast iron having special advantages for the process industries. Others want data on Inco Nickel Alloys, and an example of the literature they may receive is "The Welding Bulletin", containing advice on how to weld Monel, Nickel, and Inconel using the newest welding techniques.

"The Romance of Nickel", that remarkable little book describing in layman language the growth of the nickel industry from its infancy, is also distributed by the Direct Mail Department. It is now in its fourth printing, and 50,000 copies have been distributed in Canada.

Recently Inco advertising offered free samples of Ni-Rod welding electrode, and it speaks volumes for the far-reaching coverage attained by the Toronto office's methods that more than 200 requests were received. Not only were the big industrial plants keenly interested, but the so-called "little fellow" was right on the beam too. James Bengough, for instance, who operates "Jim's Machine Shop" at Hensall, Ont., wrote a letter along with an order for more electrode: "I've been welding for the past 20 years and hardly thought it possible to get a rod to work on cast iron as I have found this rod will do. It is really good."

It seems pretty obvious that the men who produce the nickel can rest assured a very thorough job is being done of telling the potential customer about its merits.

Sailing distances from Halifax to European ports are from 550 to 650 miles shorter than from New York.

\$200 Radio Prize To Creighton Girl



June McDonnell, 13, popular Creighton schoolgirl, got the thrill of a lifetime when, during a recent "Find Your Fortune" program broadcast from Toronto, she heard the radio announcer say that she had won a \$200 cash prize. Her dad, Johnny McDonnell, is rigger boss at Creighton Mine. Now June spends a lot of time listening to the radio—lightning sometimes strikes twice in the same place.

The Pictures

On the opposite page are camera shots reflecting the activity in the Direct Mail Department in Inco's offices at 25 King St. W., Toronto:

1. Don McLean, left, assistant manager of Canadian Sales for Inco, studies a projected mailing program covering the Canadian food-processing industry. With him here are Jim Totton, standing, and Tom Dodgson, members of the staff.

2. Joan Asling displays a selection of literature about nickel alloy products which was mailed during 1948 to the Canadian petroleum field.

3. Four Inco periodicals are mailed quarterly to Canadian industrial personnel, the combined circulation being more than 27,000 copies. Here Lillian Kenny holds a copy of each: Inco Magazine, Nickel News & Topics, Nickelworth, and Corrosion Reporter.

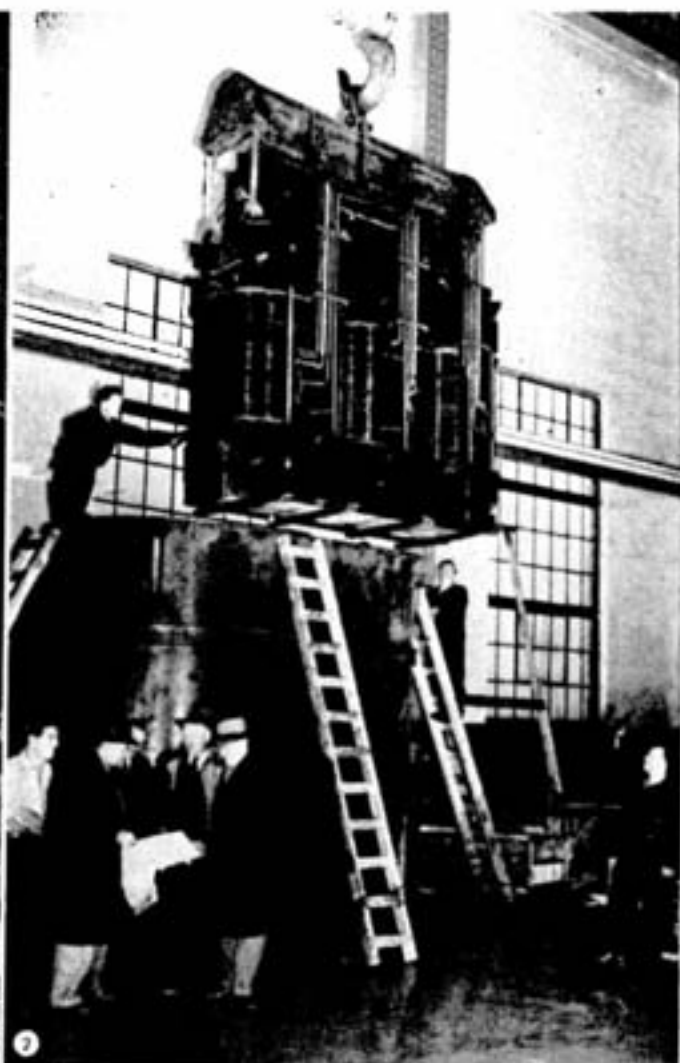
4. A selection of advertising and technical literature mailed to the pulp and paper industry in 1948 is shown by Elsie Coutts.

5. Bob Parry operates the Addressograph machine to address envelopes for mailing an issue of Nickel News & Topics, of which the circulation is approximately 13,000 copies.

6. Here Bob Parry and Gordon Lince are mailing to a selected list one of the many pieces of technical literature available on nickel and nickel alloys.

7. A typical Inco mailing is moved out of the office for pick-up by the Postal Dept. Bert Russel and Bob Parry are the strong-armed operators.

8. Keeping the mailing list up-to-date is a task which requires unceasing attention. Gordon Lince and Joan Asling are checking new names against the Inco list, looking for possible additions. The trade papers shown on the left are one source of supply for new names as well as providing corrections and deletions.



Refinery Does Unique Repair In Jig Time

An intricate repair job on a massive piece of electrical equipment was recently carried out by Copper Refinery personnel with such speed and efficiency that the unit was back in service six days ahead of expectations.

The transformer on No. 2 electric furnace at the Copper Refinery was the trouble-maker. First transformer ever built specifically for melting copper, its job is to step down the voltage of power received over the high-tension lines from the Smelter substation from 33,000 to an operating range of from 120 to 46 volts, and feed it to the furnace which handles a daily melt of 630 tons.

Due to the nature of the electric arc, a furnace transformer is under a constant pulsating stress as compared with the steady load imposed on a transformer in regular power service. Thus mechanical strain resulted in the failure of an insulating member in No. 2 transformer, with consequent grounding of the core.

Fortunately the failure did not occur instantly. It was heralded by a gradually rising temperature which alert operating personnel detected on indicating thermo-

meters, permitting a shut down before more serious consequences developed.

Major Transportation Problem

An elephant with a ruptured appendix would have been an easier patient to handle than the crippled transformer. It stands over 14 feet high and is 12 feet wide; filled with its 2,700-gal. special oil bath it weighs 100,000 lbs. But by some legerdemain they got it over to the great hoist house at No. 5 Shaft, Creighton Mine, where there was ample headroom and crane capacity to proceed with the operation.

When they opened the big baby up they saw that the core would have to be completely restacked and many of the bolts would have to be replaced. And so they hopped to it, working day and night. And because of the unusually fine facilities provided for them by the Creighton people, and the fact that they were a highly skilled combination crew of electrical and maintenance mechanics, they astonished even themselves with the speed they made.

In the first of the accompanying photographs, as the job nears completion, one of the transformer's three coil assemblies is being placed over the central leg of the core. Each of these three legs, newly stacked, contains 3,000 sheets of special high-silica electrical steel, 14 1000 of an inch thick, which has had carefully controlled heat treatment followed by the application of a uniform coat of insulating varnish 1/2000 of an inch thick on each side. The trick in stacking these 3,000 sheets is to have the finished coil assembly fit perfectly into a prescribed space.

In the second picture the complete core assembly is being lowered into its housing, after which the final operation was to pump in the oil bath.

The Men on the Job

Third photo shows one of the two shifts of the repair crew which did such a fine job in such a short time: front, Roy Miller, Wilf Gattoni, Mac MacNeil; back, Conrad Gensereaux, Remi Picard, Art Picard, Pete Martin, Paul Coulombe, and Johnny Sorgini. Members of the other shift were Arvi Ristimäki, Harold Kotivula, P. Blais, W. Deschenes, L. Paquette, R. Thompson, and S. Moore.

The big job was under the general direction of W. E. Gillespie, Inco electrical superintendent. Actively in charge was A. Weiblund, Copper Refinery mechanical superintendent, and his assistant surgeons were Harry Clemens, electrical foreman, R. Rodger, assistant mechanical superintendent, L. Kitchener, steam engineer, M. McDonnell, assistant electrical foreman, and Art Picard, maintenance mechanic foreman. One shift was in charge of Picard and the other of A. Ristimäki.

High Distinction for Dick Dow's Daughter

For outstanding efficiency in all phases of Girl Guide work, Joan Dow, 14, has been awarded her "all-round cord".

One of only 10 Sudbury District girls to win this high distinction, Joan is the daughter of Mr. and Mrs. Dick Dow of 21 Brodie Ave. Her proud dad is a member of the Open Pit staff.

Prior to capturing the coveted "all-round cord", Joan earned many laurels during her four years as a Guide. Outstanding was her "Little House" emblem, for which she had to earn proficiency badges in cooking, needlework, laundering, homeworking, child nursing, and as a hostess. Four additional badges required to qualify her for her "all-round cord" were athlete, swimmer, woodsman, and First Aid.

Joan is a member of the Seventh Sudbury Company of Girl Guides.



Blessed Event at Cliff

There really should have been the skirl of the pipes and a couple of sword dancers performing in the background when a shipment of 50 pairs of new curling stones, straight from Scotland, were carefully removed from their sawdust packing one day last month at Copper Cliff Curling Club. After each 40-lb. perfectly matched stone had its handle tapped tight, Rinkmaster Bill Jessup lovingly polished it until the granite glowed like his own venerable pate. Soon fully initiated into play, the new stones received a special blessing on January 21 from the touring Scottish curlers, first to visit Canada from the auld land in 10 years.

Skilled Scottish Craftsmen Only Producers of Stones for Curling

So great is the demand upon the world's only producer of curling stones that Copper Cliff Curling Club had to wait four years for a shipment of 50 gleaming new rocks which were unpacked at the rink last month.

The home of the world's curling stones is the inland village of Mauchline, about 11 miles from Ayr, Scotland, and it is from there that stones go to all parts of the world where the ancient game is played.

What the Royal and Ancient Golf Club of St. Andrews is to golf, the Caledonian Club, founded in 1838, is to curling and curlers the world over. The Scottish association with the "roaring game" is not only supreme, but unique, for it is an Ayrshire factory which produces the world's only stock of curling stones today.

The material from which the stones are manufactured comes from the rock of the Island of Ailsa Craig, in the Firth of Clyde, some 10 miles from the Ayrshire coast. The stones in their rough state are transported by water to Girvan Harbor, and from there they go by rail to the factory at Mauchline.

Matching Requires Skill

First stage after the stones have arrived at the factory is to match them in pairs of the same color and texture, a task demanding skill and experience. Having been matched, and some inevitably discarded in the process, each stone is chipped and hewn down to a size 12 pounds heavier than its finished weight.

Next comes the process of boring a hole exactly through the centre of the stone in

which to fix the handle. Now the stone is turned in a lathe and reduced by means of a circular cutter to within two pounds of the final weight. Then comes the grinding process and the formation of the cup and rim.

The rim is an important feature, for it is upon this that the stone travels on the ice and by which its play is controlled. At this stage the stone is placed on a vertical shaft, operating at 700 revolutions a minute, for chucking and polishing. Running water, carborundum stones and a hone known as "Water of Ayr stone" make up the polishing process from which the stone emerges smooth, glistening and beautiful. The job of marking the "belt" and affixing the handles is the last stage.

Canada is a good customer of the Mauchline factory. Stones are also sold to the Klondike and Alaska. One order to hand at the moment is from Yellowknife. Another, for 348 pairs, is from the Alberta Curling Association, where there are more curlers, and where curling is keener, than perhaps anywhere else in the world.

A REAL TREAT

A cowboy was riding a mountain highway; he noticed quite a gathering of horses and autos outside a new cottage, so he stopped and asked: "What's going on in there?"

"They're giving the bride a shower," replied someone.

Quickly dismounting, the cowboy exclaimed, "Let me get in there—I've got some soap."



Another Bright Star in the Crowns of Santa's Lieutenants

Santa's lieutenants, those unsung heroes of many a mad Yuletide scramble, were on deck again this year with well-organized Christmas parties to gladden the hearts of all Inco kiddies. Generously backed financially by their fellow-workers, these willing helpers of old St. Nick once more made it a memorable Christmas for thousands of youngsters.

Garson Mine

At Garson Mine the big party was held in the school basement, and gifts were presented to 720 children. Special entertainment included music by a local orchestra, movies, an acrobatic display, and songs by Mrs. A. Taus and her father, Louis Cassio. Members of the committee in charge were Foster Todd, A. Bowen, V. Stone, A. Massey, A. King, G. Quilty, G. Secker, O. Cull, P. Desjardins, and M. Fluvian.

Open Pit

Open Pit Athletic Association entertained almost 1,000 kiddies, who received toys and feasted to the bursting point on candy, apples and oranges, 1,380 hot dogs, and 1,344 bottles of pop. The grown-ups were treated to coffee and cake in the Inco Employees Club lounge. Those assisting in staging the event were M. Mulloy, W. McIntosh, R. Dow, R. Shields, R. Brunne, A. Toffoli, J. Martelli, J. Gartley, E. Boyd, W. Young, D. Reynolds, C.

Mason, D. McGregor, J. Rheasme, J. Turton, D. Dreger, Joan and Dick Dow, and Colin Young.

Copper Cliff

Copper Cliff Athletic Association booked three Sudbury Theatres, the Regent, Grand, and Century, to entertain all the plant employees' children of 4 to 11 years. Transportation was provided by the Association to and from Copper Cliff, Gatchell, Coniston, Minnow Lake and Lockerby by bus or street car, and 2,600 kiddies attended the monster theatre party. Besides seeing a swell show the children received oranges and candy, and had the thrill of a visit from Santa Claus. Helping handle this large assignment without a hitch were Earl Stoneman, Gordon McLean, R. Grigor, R. L. Maltby, A. Nickle, P. Hanna, J. Turnbull, A. Carroll, J. Latresle, Clem White, W. Nolan, A. McNeill, R. Boudignon, T. Smythe, W. DeSoto, A. Talamelli, R. Sheridan, A. Davigi, A. Carding, J. A. Fournier, J. Walker, G. Rustin, P. Fitzgerald, E. Olivier, I. Wright, T. Montgomery, L. Trahan, A. Ouellette, E. Fowler.

Frood-Stobie

More than 3,000 children from Frood-Stobie and Murray Mines families had a whale of a time at a Christmas celebration in the Inco Employees Club. Each child was

(Continued on Page 10)





The Three Musketeers

Recently out from England and now on the survey staff at Frood-Stobie Mine, Martin Watts eagerly awaits the arrival of his wife with the Three Musketeers, pictured above. Athos, Porthos, and Almas are French bulldogs, a breed not often seen in this country, and Martin can look forward to a lot of attention from the young fry when he steps out on the street to give his trio of pets an airing. He took this very good picture himself.

Members of the committee who did a bang-up job included George Rymer, J. Gonnella, Norm Silverson, John Krystia, Bob McLeod,

Christmas

(Continued from Page 9)

presented with a toy and a bag containing popcorn, an apple, and a chocolate bar. Movies were shown by the Club Steward, Vern Tupling, and coffee and cake were served to harassed and distraught mothers in the lounge room. Eldred Dickie was again chairman of a very active group of workers which included Mrs. Dickie and son Bobby, Mr. and Mrs. Jesse Baseden, John Cuthbertson, Andy Rayne, Frank Southern, Wes Johnson, Vic Leroux, Adam Cook, Don Dixon, Brian Peel, Harry Towns, Bert Meredith, and Ed. Chateaufort.

Levack Mine

Levack Employees Club was the scene of another splendid Yuletide party at which an all-time record of 519 children were guests. Much interest was shown in the miniature church on display at the entrance to the Club; fully furnished, it was the handiwork of Lloyd Davis, who was chairman of the entertainment committee. Others giving valuable assistance were the Athletic Association officers, Archie Cucksey, Fred Spencer, Champ Plaskoski, and Andy Weslake, as well, of course as Bill Bushnell and Supt. C. E. Lively; Mrs. Crome, the Club Stewardess, Joan Hykin and Eva Sul, Hector Otto, and members of the school teaching staff, Miss Lively, Miss Shane, Miss Tierney, Mr. Hamilton, Mr. Sandwell. Christmas carols were sung by a choir of boys and girls under the direction of Miss Vivian Gauvreau. Every child received a gift and a chance in a draw for two door prizes, a Sleeping Beauty Doll and a large Panda Bear. The lucky young winners were Marie Jackman, 5 years, and Richard Holmes, 4 years.

Creighton Mine

Candy and gifts were distributed to 700 children at the Christmas party in Creighton Employees Club after Santa had made his spectacular arrival through the fireplace on the stage. Stan Dobson, chairman of the Creighton Mine Athletic Association, extended Season's Greetings to all on behalf of the Association and Supt. Earl Mumford.

Raymond Davies, P. Truskoski, and Billie Wellington.

Copper Refinery

At the Copper Refinery party in Inco Employees Club, Santa Claus revealed hidden talents when he led the children in a rousing sing-song. Part of the program was broadcast over CHNO. More than 600 gifts, each tagged with the name of its recipient, were distributed to the kiddies with the usual slick Refinery efficiency. The buying committee for the toys and candies consisted of Jimmy Bryson, Jerry Mahon, and Frank Scott, while Al Wellbund directed the 25-turkey raffle. Others assisting were Mel Luck, Jack Latreille, Murray Mulligan, George Smith, Mike Shamley, Bill McElin, Sandy MacGillivray, George Furchner, Bob Roger, and Harold Koivula.

Gems of Thought

It is only the people with push who have a pull.
—T. R. Dewar

There is nothing so powerful as an idea that arrives in its day. It is futile to resist it.
—Montesquieu

Better do a little well, than a great deal badly.
—Socrates

Life is for everybody, just as sunshine is for everybody. To assert that you live your own life is like asserting that the sun sends out special rays for your own private benefit.
—Franc-Nohair

The best work is done by men whose consciences won't let them do inferior work.
—Public Service



Do It Yourself

Many an Incolite who is a bit of a handyman around the house will be interested in a new Monel kitchen sink called Eas-E-Install which can be easily mounted in cabinet units using linoleum, plastic, or other types of decking materials. No special mouldings are needed, and the sink bowl, for which no dishpan is required, can be placed anywhere to fit kitchen design. The beautifully finished nickel alloy scoops at stains and will last a lifetime. There is no coating to chip, crack, or peel, and its natural resiliency is protection against damage to china or glass. The Eas-E-Install Monel sink measures 18 x 20 inches and comes complete with an illustrated booklet telling how to mount it. It is selling in Toronto for \$29.75.

Nickel's "Ore Pals" Invaluable Workers in Modern Industry

"Two-thirds of all the platinum metals sold to United States consuming industries in 1948 were for electrical, chemical, dental and miscellaneous purposes of an industrial nature," Dr. Charles Engelhard, president of Baker Platinum of Canada, and Baker & Co., New York, world's leading refiner of platinum metals, announced.

"This indicates that these precious metals served the public extensively as hard-working metals as well as for adornments. Canada is a major source of the world's supply of these metals which include platinum, palladium, rhodium, ruthenium and iridium and osmium. All are produced from the ores which supply the Dominion's vast nickel output," he added.

Sales of all metals to United States and Canada during the first nine months of 1948 amounted to 259,000 ozs., including approximately 14,000 ozs. of platinum and 13,000 ozs. of palladium per month. The commercial importance of palladium is approaching that of platinum and far outranks the four other metals.

Platinum continues to be the heart of the producing equipment in the rayon industry, where viscose solution is extruded through thousands of tiny holes into a corrosive acid bath to produce continuous strands of rayon. Clothing, draperies, tire "cord" and many other products make use of these rayon fibres. A platinum alloy device is used in the production of glass fibre, where it must withstand the high temperature of molten glass forced through small holes.

Platinum's role as a hard-working metal is further illustrated in mass production of bases for electric light bulbs, where a platinum feeder die puts glass into 40,000,000 bases before the accuracy of the orifice is affected.

Song of Sudbury

TUNE—"Where The Silvery Colorado Winds Its Way"

I have sailed across the ocean, I have wandered far from Home;
I have lived in lands of want, and fear and dread,
But I'm going back to Sudbury, to the land where I was born,
Where the Slog Pots paint the skies a rosy red.

You may sing about your cities or your wide and rolling plains,
You may tell of mountain ranges wild and high,
But my heart is growing lonely and I long once more to see,
The old Smokestacks etched against the evening sky.

Men from every tribe and nation in Sudbury find a Home,
And there's welcome peace and plenty there for all.

From the slopes of old Vancouver, to Cape Breton by the sea,
They have come in answer to the Nickel call.

Some bright morning in the spring time I will see my friends once more.

I will settle down and never say good bye,
I will spend my life's long evening gazing at the rosy West.

Where the Smokestacks spread their banners in the sky.

—The Bard of the Nickel Range.

Palladium is reaching new heights in popularity as a precious metal for jewelry. It is similar to platinum in appearance and durability and more articles per ounce are obtained from the lighter palladium, which has been used for industrial purposes for many years. Fashion designers and retailers now have a better appreciation of the importance of palladium to the jewelry industry. The whiteness and reflectivity of palladium enhances the color and brilliance of diamonds and other jewels.

The communications industries are using large quantities of palladium for innumerable electrical contacts, such as in the telephone system where several hundred tiny contacts are utilized in dialing a single call. In the synthesis of vitamins, and other products of modern chemistry, palladium catalysts are simplifying processes and reducing costs to consumers.

Rhodium, which possesses greater whiteness and reflectivity than the platinum and palladium, is the ideal metal for surface finishing as it does not discolor and it resists wear. Inexpensive costume jewelry and cigarette lighters utilize rhodium finish.

Ruthenium is used to harden palladium, especially in jewelry alloys. Fountain pen points utilize its high resistance to wear and corrosion for smooth writing and long life.

Iridium continues to be used in alloy form in ignition systems, especially for airplanes. Osmium is used chiefly in the production of pointing materials that must have great resistance to wear. An example is record-player needles.

"The future of the six platinum metals seems well established for many years to come. Constant research will continue to discover many new uses in all industries. All the platinum metals are steadily gaining recognition as hard-working metals, having high salvage value," Dr. Engelhard declared.

Christmas Gift Was Appreciated By the Pensioners

"My years of service are happy ones to recall—the Company, the foreman I worked under, and the men I worked with. I could not have wished for better, and I close in saying A Happy New Year to all, and long may Inco continue to prosper."

This was the reply of David Hutchison, Copper Cliff, to a Christmas letter sent to all pensioners of the Company by I. J. Simcox, general assistant to the vice-president. A \$25.00 Christmas bonus was enclosed with each letter.

W. A. MacDonnell wrote from Toronto: "Please convey to Mr. Stanley and Mr. Beattie my sincere thanks for their thoughtfulness. It is this kind of thing, among others, that makes the International Nickel Company one in a million."

"I appreciate this very much and extend to the management my best wishes for a happy and prosperous New Year," wrote K. P. MacRae from Muskoka Hospital at Gravenhurst.

John E. O'Donnell wrote from Stirling, Ont., "I wish to thank you for your very kind letter. . . . I am always glad to hear of the grand progress the Nickel Company continues to make, and hope they will do so for many years to come. Thank you also for sending me the souvenir program of the Quarter Century Club meeting, and I found it very interesting and will often refer to it. I notice that most of my old friends have been pensioned and some have passed away."

"Thank you for your kind letter of the 20th, with bonus cheque enclosed, and with good wishes for Christmas and the New Year which are returned herewith with compound interest (all except the cheque)," replied E. A. Collins of Sudbury.

NOW HE'S CONVINCED

"Is Jim a confirmed bachelor?"
"He is now. He sent his picture to a Lonely Hearts Club and they sent it back with a note saying: 'We're not that lonely'."



Most Injured Player

By the time they got around to presenting Lawrence Kavanaugh with his trophy for being the most valuable player in the Canadian Legion's minor baseball league at Copper Cliff last summer, he had broken his leg playing hockey. Crutches and all he was on deck, however, to receive the handsome Sinclair trophy and miniature from the donor, W. C. Sinclair, manager of Cochrane-Dunlop, Copper Cliff. On the left in the above picture is Specs Telford, Legion sports director, and on the right is Dunc Finlayson, Legion president. Arnold Boyd, assistant sports director, is in the centre.

New Contest Gives Substantial Boost To Figure Skating

A long stride toward establishing a fast-growing sport on a thoroughly organized basis was the staging of the first annual Northern Ontario figure-skating championships at Stanley Stadium, Copper Cliff.

Three world-renowned authorities on figure-skating were the adjudicators at this important inaugural, Norman C. Gregory of Montreal, president of the Canadian Figure Skating Association, and Melville Rogers and Paul Belcourt of Ottawa, all former Olympic titleholders and now Olympic judges.

Although all were not represented, nine Northern Ontario centres were qualified for entry in the new championships: Cochrane, Kapuskasing, Kirkland Lake, New Liskeard, North Bay, Porcupine, Sault Ste. Marie, Thunder Bay, and Copper Cliff.

W. C. Jarrett, president of Copper Cliff Skating Club, and J. L. McCarthy of North Bay, councillor-at-large of the Canadian Figure Skating Association, headed the enterprising committee in charge of the competitions.

Sudbury 16-Year-Old Starred

Magnetic young Joyce Salo, representing Copper Cliff, was the stand-out performer as she won the senior women's singles championship and the Norman C. Gregory Trophy. She is the only amateur figure skater to whom Mr. Gregory has awarded nine out of a possible 10 marks, with the exception of Barbara Ann Scott herself.

Other Northern Ontario champions:

Senior men's singles, Murrel Bentley, North Bay (Melville Rogers Trophy). Juvenile men's singles, Gary Edwards, North Bay (North Bay Nugget Trophy). Juvenile girls' singles, Sandra Duncan, Copper Cliff Skating Club (Duncan Finlayson Trophy). Junior girls' singles, Patsy Poupore, Copper Cliff Skating Club (E. A. Collins Trophy). Junior men's singles, Paul Tatton, North Bay (John S. MacLean Trophy). Junior girls' pair,

Margaret and Sandra Duncan, Copper Cliff Skating Club (Bannon Bros. Trophy). Senior women's pair, Pauline and Caroline Percovich, Porcupine Skating Club (Col. C. E. Reynolds Trophy). Senior mixed pair, Gladys Lennie and Elphio Grotto, Copper Cliff Skating Club (Norah McCarthy-Michael Kirby Trophy). Waltz, Kathleen Hill and Bernard Youton, Porcupine Skating Club (R. J. Ennis Trophy), also winners of Dance (D. E. Keeley Trophy).

Canada has more than 125 species of trees, of which 33 are "softwoods". Only about a dozen of the "hardwoods" are of much commercial importance and about 80 per cent of our merchantable timber is of softwoods.

REFINERY SPORTS LEADERS

R. B. "Bob" Rodger heads the newly elected executive of the Copper Refinery Athletic Association, which is as follows:

President, R. B. Rodger; vice-president, G. H. Purchner; secretary-treasurer, G. R. Mahon; departmental representatives: F. Scott, power; A. B. McGillvray, casting; A. Marshall, yard, transportation, drill room; W. McBain, tankhouse depts.; R. Steadman, tankhouse; C. Trigg, shops; O. T. Hubbard, office, stores, watchmen; L. O'Brien, lab., research, cost office; E. Rabenu, G. A. Dick, staff; committee chairmen: social, F. Scott; softball, C. Trigg; bowling, R. Steadman; horseshoes, A. Marshall; ice sports and ticket sales, G. T. Hubbard; property, M. McBain.

Honor Ice Queen in New York



Barbara Ann Scott displays the palladium skates presented to her at the Canadian Club after her professional debut in New York. With her are Henry S. Wingate (left), secretary of the International Nickel Company of Canada, Limited, and Dr. John F. Thompson, executive vice-president of the Company.

Snazzy Skates For Barbara Ann

Special ice skates created in precious palladium, one of the metals of the platinum group, were presented to Barbara Ann Scott, World and Olympic Figure Skating Champion, at a reception held in her honor at the Canadian Club in the Waldorf-Astoria Hotel, New York, December 21. The Honorable Hugh D. Scully, Canadian Consul General, made the presentation following her professional debut at the Roxy Theatre. Attending the reception were a group of Canadian and United States notables.

In presenting the palladium skates to Miss Scott, Mr. Scully emphasized the hard work and many long hours of training required to bring her the titles of World and Olympic Figure Skating Champion. He pointed out that as a rising skating star she had appeared in ice carnivals in Northern Ontario which is generally recognized as the world's leading source of platinum metals, includ-



ing palladium which is used in jewelry. He said it is fitting that the palladium of which the skates are made should originate in an area of Canada that was the scene of her early training and many of her early successes.



JUVENILE CHAMPION

Seen here performing a camel spin is talented Sandra Duncan, newly crowned juvenile girls' figure skating champion of Northern Ontario.

All This And Fatherhood Too

A one-armed paper-hanger with the hives would be an idle loafer compared to Alex Godfrey of Copper Cliff in January.

During that hectic month the ubiquitous Scotty: (1) Directed preparations for the big Bonspiel of the Northern Ontario Curling Association, of which he is president; (2) Presided over the welcome to the visiting Scottish curlers; (3) Skipped his rink to six straight victories in the round-robin for the right to represent Copper Cliff in the British Consols eliminations for Northern Ontario; (4) Kept close tab on the multitudinous details of his job as Assistant Works Auditor, and was in full charge for 10 days while his boss, E. C. Lambert, was called to New York on business; (5) Became the father of a fine baby girl, his fifth child.

How busy can a guy get?

Record-Breaking Entry

A record-breaking 87 rinks entered the big N.O.C.A. Bonspiel, with play slated at the Sudbury and Copper Cliff Curling Clubs and also at the new Sudbury Granite Club, a splendid addition to the Nickel Belt's sports facilities with six sheets of artificial ice and handsome accommodations for social activities. A rich bag of prize booty, special entertainment features, and unusual interest among the curling fraternity promised to make the 'Spiel the best in the Association's history for President Scotty and his hard-working committees.

In the British Consols round-robin at Copper Cliff, Scotty's rink repeatedly came from behind in hair-raising finishes to maintain an unbroken string of six victories over such hot skips as Jim Hudson, Canapini, and Clarence Harrison. Other members of the unbeaten brigade are Clarence Beach, third; Holly Hyland, second; Jim Holtby, lead.

And if by now you don't think this Scotty is a pretty thorough fellow, listen to this: we asked him to go through the motions of throwing a rock, just for a picture, and the stone came to rest neatly in the 8-foot ring at the other end of the rink; we asked him to throw another, just for a second picture, so it wound up as a perfect guard to the first rock!

That, brother, is concentration.



Scotty Godfrey, the man with the jammed January, gets one away.

Metalcraft Is Tyers' Hobby



An interesting hobby which will repay him for all the time he feels like devoting to it is the metalcraft with which Waverley Tyers of Copper Cliff whittles away some of his leisure hours.

People are apparently eager to buy the attractive creations in copper which he produces at his basement work-table (a converted sewing machine cabinet) and he has sold some 50 pieces privately.

Metalcraft is chasing designs into metal, such as copper, and it's slow and painstaking work. Waverley started it two years ago and found himself fairly proficient after a few months. Rather than follow established patterns he prefers to work out his own designs. The Chinese plaque in the right foreground of the above picture is an example of his art; including the cutting, trimming, and polishing, it took him about six hours to complete. The article on which he is seen working with hammer and chisel is an old-fashioned candle snuffer.

Born in Saskatoon, Waverley moved with his family to Ottawa at an early age. He joined Inco, in the storehouse at Levack, in 1937, and transferred to the purchasing department at the Cliff in 1940. He served for four years with the Canadian Army, and was an instructor in infantry tactics at various training camps across Canada.

He was married in 1943 to Miss Theda

King of North Bay and they have a daughter, Marideth, who will be two in May.

Organize Boys as Conservationists

A highly constructive step toward the conservation of Northern Ontario's great natural resources was taken by Sudbury Fish and Game Protective Association when it organized a fish and game protective society among teen-aged boys. More than 100 lads attended the first meeting to enrol and receive a booklet outlining the aims and objects of the club.

Motion pictures on the conservation of duck and salmon were shown, and words of friendly advice to the young fellows were given by two game overseers, Bill Chellew and Dino A'Agostini, and also by Ken Clarke of Copper Cliff and Joe McNab, prominent conservationists.

SAME OLD STORY

Love making hasn't changed much in 2,500 years. Greek maidens used to sit and listen to a lyre all evening, too.

In dollar value, coal is Canada's second principal import; machinery is first.

INCO FAMILY ALBUM

Well, we're back at the old stand after that big fling in the Christmas issue, and while it was fun having an artist doll up the old Album with a big Christmas tree, etc., there's a lot to be said for the simple life at that. We have with us this month: (1) Mr. and Mrs. R. E. Hiscock (Copper Refinery) with their three fine sons, Jim, 14, Joel, 8, and Jackie, 12. (2) Then, moving over to Creighton, we find Mr. and Mrs. Andy Marcinishyn with Helen, 17, Stanley, 11, Karenanne, 6 months, Angeline, 12, Paul, 18. (3) At Lavaek we call on Mr. and Mrs. Doug Wright and Peggy, 8, Tommy, 20 months. (4) The Froid-Stobie entry for February is Mr. and Mrs. Robert Cook with Emily, 8, Frances, 20, James, 14, Robert, 19, who is now in the Air Force at Trenton who used to be on the office staff at Copper Cliff, John, 22, who is with Fraser-Brace, and Ronald, 12. (5) Next are Mr. and Mrs. Roy Spry and daughter Vera (6) of Lawson Quarry. (6) And then we have Mr. and Mrs. Warren Koth (Copper Refinery) with Alan, 12, and Paul, 5. (7) And finally, to complete this month's group, Mr. and Mrs. Wally McIntosh (Open Pit) with Joanne, 17 months, and Ronnie, 4½.





Levack Bowlers Going Strong

The pressure on the bowling alleys at Levack Employees' Club is about 1,000 lbs. to the square inch these days as 36 six-player teams battle for honors in the two smoothly operating leagues. The silence that spreads through the popular recreation hub when Mrs. Stella Crome finally buttons it up for the night is a strange thing after the steady rumble of balls and the shouts of joy and despair emanating from the trundling department.

There are 12 teams in the ladies' section and 24 in the men's section, making a total of 216 players. Personnel of the teams follows:

Men's Bowling Teams

Alerts: J. Yanda (Captain), Elmer Kruger, Andy Kaczmariski, Wallie Crossman, Wes Bragg, Gordon Sandwell.

Bachelors: Armand Lavergne (Captain), Jimmie Brandie, Henry Roy, Sam Legault, Johnny Markesins, Edwin McKenna.

Bobby: Billie Bobby (Captain), Bill Brown, Bun Londeau, Jack Campbell, Jerry Glavonetti, Herb Cilli.

Cecchetto: Armand Cecchetto (Captain), Walter Tosato, Primo Tracanelli, Stan Piaszkoski, Eddie Piaszkoski, Harold Kulmala.

Convincers: Harold Snowdy (Captain), Alex Lefebvre, Mattie Hawryluk, Johnny McNamara, Johnny McAuley, Gordon Smith.

Graveyard: Oliver Ignace (Captain), Ted Atkinson, Nick Preyma, Leo Lavoie, Alex Kirk, Stan Todd.

Green: Gar Green (Captain), Bill Lawton, Alex Didur, George Ruller, Martin Callaghan, Bill Shess.

Hot-Shots: George Lockhart (Captain), Sid Kemp, Sid Holmes, Johnny Mihajic, Roger Lafleur, Eddie Kauppinen.

Johnsen: Johnny Johnsen (Captain), Gordon McAuley, Bill Mills, Harry Warren, Herbie Lamore, Aussie Johnsen.

Lehto: Dave Lehto (Captain), Joe Shillington, Mattie Tuomi, Dave White, Edwin Lumoa.

Mallette: Ernie Mallette (Captain), Bert Mallette, Edgar Mallette, Pete Mallette, Alfie Mallette, Raymond Mallette.

Mitchell: Norm Mitchell (Captain), Larry

Nice Scenery at Levack

Club the other night when it found this bevy of beauty in the bowling alleys. Back row, left to right, Joyce Hykin, Sophie Lemkiew, Eileen O'Burnsawin, Velma Armstrong, Jackie Watier, Aileen Tierney; middle row, Mrs. Ida Ryter, Mrs. Norma Kemp, Mrs. Coreen Thrall, Mrs. Mary Clarke, Mrs. Ad Storey, Vivian Gauvreau, Mrs. Gabrielle Corke, Dorothy Snider; front row, Mrs. Jean Stephenson, Mrs. Estelle Hilton, Mrs. Nora MacCoy, Mrs. Alice Lejambe, Mrs. Jeannette Wrixon, Mrs. Jean Koski.

Who could blame our trusty camera for going right into action at the Levack Employees

Villeneuve, Doug Laidlaw, Mike Levonchuk, Larry Forget, Mike Fullumchuk.

MacNeill: Bill MacNeill (Captain), Bob Anderson, Frank Corkal, Bill Neal, Melvin Corkal, Stan Mason.

McDonald: Jimmie McDonald (Captain), Hegg Swift, Nalsh Farrow, R. J. Heywood, George Flanagan, Bob Grieves.

Night-Keepers: George McDonald (Captain), Eddie Schneider, Len Roberts, Rex Casselman, Phil Raymond, Jerry Ladoecaur.

Outlaws: Johnny Mazur (Captain), Bill Bilows, Ken Belter, Ken Taylor, Eddie McNamara, Jim Lawrence.

Rible: Nick Rible (Captain), J. Kennedy, N. Lohay, Oscar Laberge, Gordon French, Toivo Kauppinen.

Shaller: Cecil Shaller (Captain), Len Leroux, O. Riutta, Leo Ethier, Lorne Parker, Ben Landsburg.

Sharp: Harry Sharp (Captain), Jim MacCoy, Rudy Gross, Bill Fritz, Waldo Clarke, Ray Bouclin.

The Shmoos: Gordon Armstrong (Captain), Bob Ludgate, Gene Wrixon, Jim Kozma, Harvey Decaire, Ken Gilbert.

The Sleepers: Jerry Lappan (Captain), Leo Lebel, Blair Parsons, Lionel Caldwell, Roger Crepean, Pat Kelly.

Smith: Jimmie Smith (Captain), Ted Lawrence, Stan Snider, Doug Wright, Clare McGowan, Frank Crome.

Storey: Dar Storey (Captain), Glen Thrall, Al Ryter, Ernie Hilton, Ed McIvor, Cliff Brown.

Weslake: Andy Weslake (Captain), Henning Bergstrom, Ronnie McFarlane, Joe Rible, Elmer Bethune, Bill Wauchaluk.

Ladies' Bowling Teams

Mrs. A. Lyambe (Captain), Mrs. N. MacCoy, Mrs. J. Koski, Mrs. E. Hilton, Mrs. J. Wrixon, Mrs. B. Green.

Mrs. R. MacDonald (Captain), Mrs. C. Shaller, Mrs. H. Corkal, Mrs. L. Purvis, Miss E. Gudbranson, Miss O. Wawryszyn.

Mrs. J. Stephenson (Captain), Mrs. M. Clarke, Mrs. I. Ryter, Mrs. C. Thrall, Mrs. N. Kemp, Mrs. A. Storey.

Mrs. J. Swezey (Captain), Mrs. J. Parker, Mrs. M. Shillington, Mrs. H. Sul, Mrs. B. Kauppinen, Mrs. P. Cameron.

Mrs. A. Snider (Captain), Mrs. E. Davis, Mrs. L. Lawrence, Mrs. O. Wright, Mrs. M. Petersen, Mrs. R. Cowan.

Mrs. I. Puro (Captain), Mrs. R. McNamara, Mrs. P. McDonald, Mrs. E. McAuley, Mrs. J. Beckett, Mrs. I. Macklem.

Mrs. J. Leberge (Captain), Mrs. V. Mallette, Mrs. B. Mallette, Mrs. P. Leino, Mrs. H. Brown, Mrs. L. Farrow.

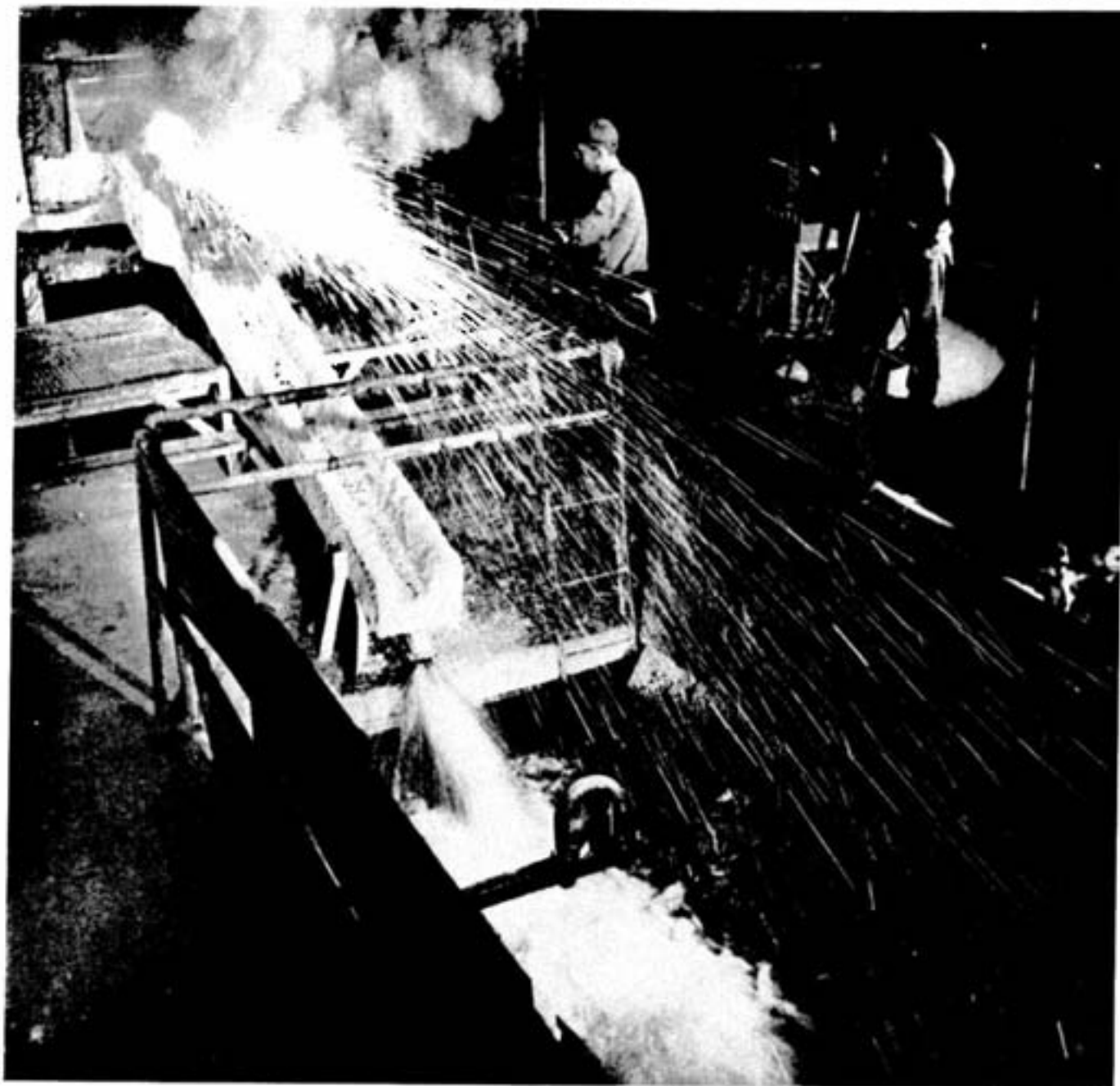
Mrs. P. Mitchell (Captain), Mrs. T. Hanson, Mrs. E. Bragg, Mrs. I. Heacock, Mrs. J. Lefebvre, Mrs. T. Hawryluk.

Miss D. Snider (Captain), Miss E. O'Burnsawin, Miss V. Armstrong, Miss S. Lemkiew, Miss I. McNamara, Miss J. Watier.

Mrs. R. Swiddle (Captain), Mrs. G. Croteau, Mrs. A. Didur, Mrs. A. Thomson, Mrs. O. Villeneuve, Mrs. C. Jobin.

Miss A. Tierney (Captain), Miss D. Shane, Miss P. Shillington, Miss J. Hykin, Miss V. Gauvreau, Mrs. O. Corke.

Mrs. B. Holmes (Captain), Mrs. J. Cullis, Mrs. B. Adams, Mrs. Y. Bouclin, Mrs. N. Callaghan, Mrs. H. Mason.



Opening Electric Furnace Taphole With Oxygen Lance, Port Colborne