

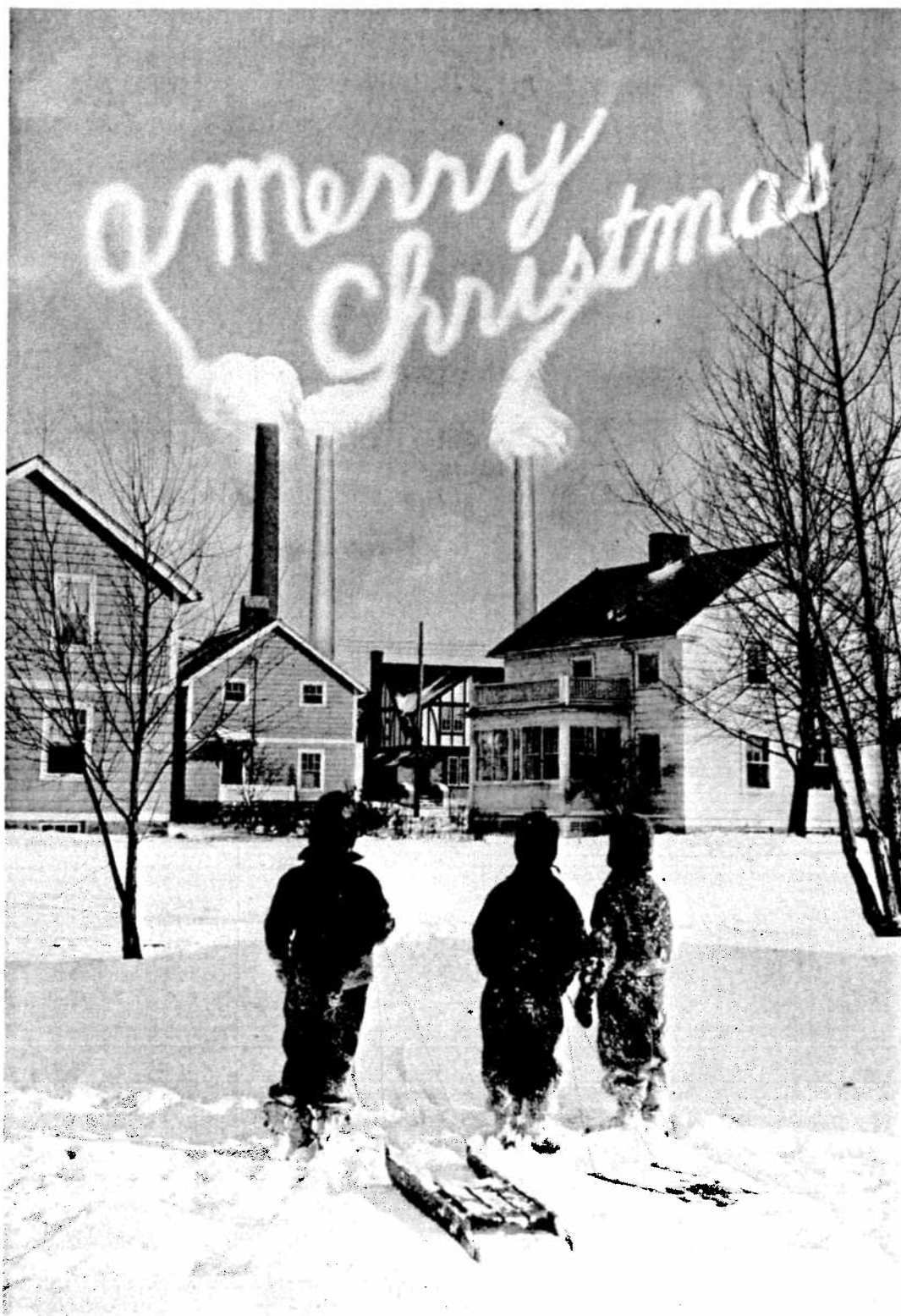
Within The

INCO TRIANGLE

VOLUME 2

DECEMBER, 1937

NUMBER 2



Yawney and His Men Set New Sinking Record

DOWN 261 FT. IN NOVEMBER

At midnight of November 30 a new INCO record had been established. Under the veteran Steve Yawney the men at the new No. 2 Shaft, Levack, had drilled, blasted, mucked, and timbered their way down through 261 feet of solid rock in one month—and a 30-day month at that.

This was 20 feet better than the previous best INCO shaft-sinking mark, hung up by J. B. Fyfe's crew at the No. 5 Shaft, Creighton, in April of 1935. It was 29 feet better than the best month's sinking at Frood's No. 3 Shaft, under Jim Hussey, in May of 1927.

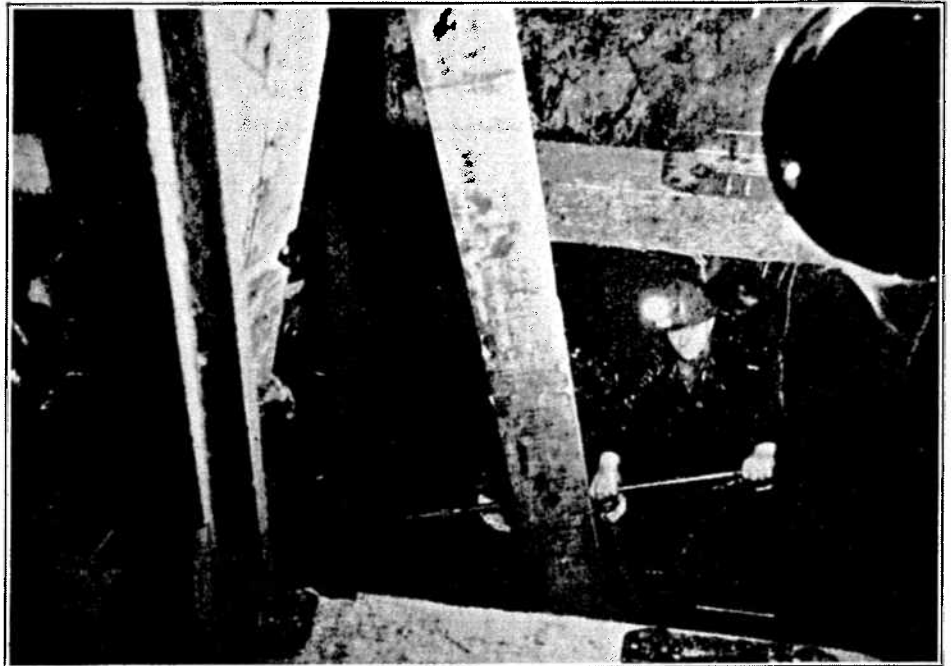
SHOOTING AT 280

The Levack crew can justly be proud of their achievement, but they've no intention of coasting on their laurels for the remainder of the 1825-foot job, of which about 500 feet is completed. Steve Yawney was in Copper Cliff a couple of nights after the record was set, to receive his service button as a member of the Company's Quarter-Century Club, and came in for a round of hearty congratulations on the 261-foot mark. He quietly deprecated the record. "Give us steady power and plenty of air," he said, "and we'll show you 280 feet in January."

When operations were commenced at the new Levack shaft, first the collar was sunk and then the temporary headframe and hoisthouse were constructed. Shaft sinking was resumed October 17, with a picked crew of about 125 men, many of whom were on the Creighton No. 5 Shaft job.

Three shifts are worked, each shift taking over at whatever point in the drilling, blasting, and mucking cycle the previous shift left off, while the timbering crew is on call and turns out to hang another set whenever sinking has progressed sufficiently to allow it.

First procedure in the sinking cycle is drilling a cut and square. From 17 to 20



Another set is being hung in the new No. 2 Shaft at Levack. The big timbers are fastened to the bottom of the skip and carefully lowered to the waiting timbermen, who, agile as steel-workers, swing them into position and make them secure with remarkably swift and efficient handling. This picture, taken at about 3.30 a.m. under very poor photographing conditions, was snapped for Triangle by A. B. Yates, Copper Cliff, an expert in miniature camera work. Fresh air is constantly blowing at the shaft bottom, and the rising mist presents a ticklish problem for the photographer.

drills are in operation in the subterranean room, which measures 30 by 18 feet. Drill holes are loaded with powder by the drillers, and when all men have been removed from the shaft the blast is fired by the shaft leader, who closes a switch at surface. Then air is turned on to blow the smoke out of the shaft, after which the men return to muck the same area they drilled. A "cut" is literally a V-shaped hole in the centre of the shaft bottom, approximately nine feet deep, 12 feet across at the top and the width of the shaft. It is blasted first, thus providing additional breaking faces when the "square," or remainder of the shaft bottom to the nine-foot depth, is fired. The cut is, of course, mucked out before the square is blasted.

SPECTACULAR SIGHT

The rhythm with which from 17 to 20 men shovel the muck steadily from the shaft bottom into the skips, in the comparatively narrow confines of 30 x 18 feet, without moving from their places or creating any confusion, makes a spectacular sight. One man bends to dig while the other just behind him straightens up to throw a shovel of muck into the skip, and the entire crew works with the same smooth alternation, as if mechanically synchronized.

Hoisting is done with three-ton skips which have extension guides so the skips may be lowered to the shaft bottom, which is always from 15 to 22 feet in advance of timbering. The hoisted rock is dumped at the top of the 90-foot headframe into rock bins, from which it is loaded into a fleet of trucks hauling it to the mine yard for fill.

SAFETY PRECAUTIONS

The timbermen, called out when mucking has gone deep enough for another set, first take the wall plates and end plates below and these are hung. By the time

this is accomplished, so accurately is the schedule clicking, it's lunch hour for the men who are mucking out the square below them. So the muckers go up to surface to take on their calories while the timbermen work away at top speed and hang the posts, dividers, and guides. This schedule is actually a safety measure to prevent the possibility of heavy timber dropping on the crew at the shaft bottom. The sinkers then descend once more and proceed with mucking the square-up, while the timbermen go ahead with blocking the set to the shaft walls. In blocking, all blocks are attached to chains, and similar other precautions are taken to avoid creating a hazard for the men working below.

Drill holes are loaded with powder by the drillers, and when all men have been removed from the shaft the blast is fired by the shaft leader, who closes a switch at surface. Then air is turned on to blow the smoke out of the shaft.

OH YES—THE BONUSES

And so it goes on, a swift and steady cycle. No wasted effort, no loss of time except when there's a break in power service or the air pressure falls off temporarily. Then the entire sinking crew champs at the bit and mine phones start ringing. Everybody, from Steve Yawney and Andy Cain at the helm, down to the men on the waste dump spreading the rock, has caught the spirit of the job. It's man versus rock, and the quicker the better. What's more, nice fat bonuses are paid for shaft-sinking records.

The "shotweld" process successfully used in the construction of stainless steel streamlined trains is now being adopted for building aeroplane bodies out of the same alloy steel, as it makes possible the elimination of rivets whose projecting heads interfere with the slippage of a plane through the air.



A busy construction scene is the new No. 2 Shaft at Levack. In the centre is the temporary headframe, below which Steve Yawney and his men are sinking the new shaft. Behind the headframe the changehouse and offices are under construction, and in the right foreground the new hoisthouse is being built.



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EDITORIAL OFFICE COPPER CLIFF, ONT.
Don M. Dunbar, Editor

VOL. 2, No. 2

DECEMBER, 1937



And she brought forth her firstborn son, and wrapped him in swaddling clothes, and laid him in a manger; because there was no room for them in the inn.

And there were in the same country shepherds abiding in the field, keeping watch over their flock by night.

And, lo, the angel of the Lord came upon them, and the glory of the Lord shone round about them: and they were sore afraid.

And the angel said unto them, Fear not: for, behold, I bring you good tidings of great joy, which shall be to all people.

For unto you is born this day in the city of David a Saviour, which is Christ the Lord.

And this shall be a sign unto you; Ye shall find the babe wrapped in swaddling clothes, lying in a manger.

And suddenly there was with the angel a multitude of the heavenly host praising God, and saying.

Glory to God in the highest, and on earth peace, good will toward men.

And it came to pass, as the angels were gone away from them into heaven, the shepherds said one to another, Let us now go even unto Bethlehem, and see this thing which is come to pass, which the Lord hath made known unto us.

And they came with haste, and found Mary, and Joseph, and the babe lying in a manger.

And when they had seen it, they made known abroad the saying which was told them concerning this child.

Luke 2: 7-17.

Merry Christmas!

At this Season of the Year I much appreciate the Opportunity of Expressing, through the columns of the Triangle, my Best Wishes to Each Employee of Our Company. I sincerely hope that You and Yours will have a Very Merry Christmas, and that Happiness will come to You in Abundance throughout 1938.

John B. Sutton

the candid camera

J. B. SUTTON

Anybody glancing at that innocent and rather Barrymore-ish profile would hardly suspect that its owner was once a fugitive in a ticket-selling gang.

It happened this way. The Agricultural Society at Schomberg, 30 miles northwest of Toronto, decided to raffle off an automobile. Four local boys, home from the University of Toronto for the summer, took on the ticket-selling contract, and promptly headed for Sudbury. Arriving in the nickel city they sought permission to peddle their pasteboards from the mayor, the chief of police, and the magistrate. These digni-

ticket-selling jealousy probably aroused, squawked to the police about these intruders muscling in on the home-town rafflers. The cops moved in, confiscated car, tickets, and money, and notified the Schomberg quartet that they had defied a local ordinance and their case would be called Monday morning.

Early Sunday morning the Schomberg boys, led by J. B. Sutton, were knocking at Crown Attorney Wilkins' front door. Sadly they stated their plight. The Crown Attorney, veteran of many such an interview, knows misguided virtue when he sees it. With a twinkle in his eye he urged the culprits to collect their car and get going. Which the Schomberg quartet were very pleased to do, and did.

John Bernard Sutton then took the pledge, turned over a new leaf, and hasn't sold a raffle ticket since.

WON SCHOLARSHIP

He was born in Schomberg, August 26, 1903, went to high school in Newmarket, and graduated with honors in Architecture from the University of Toronto in 1929, taking along the Darling and Pearson Architectural Scholarship.

After three years with Toronto architects W. L. Somerville, John M. Lyle, and A. W. Holmes, and six months with P. T. O'Gorman in Sudbury, he went to work at ORCO in 1934, transferred to Copper Cliff Engineering Dept. in 1935, has been on the job there since. The candid camera caught him putting finishing touches to plans for the auditorium of the new INCO Employees' Club in Sudbury.

He likes fishing, swimming, bridge, landscape gardening. Plays the piano a little. Belongs to the Masonic Lodge, the Junior Conservative Club, the Anglican Church Club.

He was wed in August, 1936, to Margaret Marchant of Schomberg, and they have a daughter, Marilyn Diane, about whom J. B. can wax very enthusiastic on a second's notice.



taries, like the little girl in the song, didn't say yes and didn't say no. So the Schomberg quartet parked their prize buggy in front of the postoffice and opened for business.

THEN CAME THE COPS

It was Saturday night, and they sold tickets like hotcakes for a couple of hours. Then some Sudbury meanie, his professional

The most recent determination of the earth's weight is 6,576,000,000,000 billion tons. This figure was established by a new apparatus installed at the Bureau of Standards in Washington. This apparatus, which uses platinum for its working parts, because of the density of that metal, is so sensitive that it is affected by a person moving around in the laboratory and even by an automobile parked outside the building. Observations are made at night when vibrations caused by traffic are at a minimum.

180 DAYS OF NO ACCIDENTS

Coniston:—They'll have to start building taller thermometers for the Safety Department.

At midnight of Sunday, December 12, the red line in the Coniston thermometer reached the top, indicating a total of 180 working days in the entire plant without a lost-time accident.

But just because there's no more "mercury" in the thermometer doesn't mean the Coniston safety campaign will stop at 180 days. "We're going right on through, and I hope we never stop," said E. T. Austin, superintendent. "Our record to date, in 'breaking' the thermometer, is a great tribute to the co-operation of the men and their department heads, and I would like to see them get full credit for it."

MARK TO SHOOT AT

The previous record for the Coniston plant was 264 days without a lost-time accident, in 1931-32. Will it be broken?

Some of the individual department safety records contributing to the fine showing at Coniston were: Mechanical Dept. (Bray), no lost-time accidents since February 4, 1931, or a total of 59,004 safe shifts; Sintering Plant (Benoit, Lemieux, Vallquette), no lost-time accidents since October 22, 1930, or 64,680 safe shifts; Blast Furnace Dept. (Smith) none since July 23, 1933, or 36,060 safe shifts; Electrical Dept. (Muirhead), none since March 21, 1930, or 23,578 safe shifts.

As a result of these remarkable records, the frequency of accidents-per-1000-shifts-worked at Coniston dropped from .38 in 1930 to .046 in 1936, and this year to date is down still lower to .03.

A new potato chip machine, made partly of monel, converts raw potatoes into finished chips at the rate of 250 pounds per hour.



Halfway between Levack and Cartier (Incidentally one of the finest scenic drives in the district) two of Chief Jim Ramesbottom's sleuths halted on a hunting jaunt, barged into the bush, and spotted a fine buck. Constable Dolph Beaudry, of Frood, whose spare-time hobby is wrestling, as any mitt and mat fan can tell you, let go with a flying mare at the flying buck, and it worked. Whereupon Constable LeClaire, of Copper Cliff, not to be outdone, shot its horns off, as the picture clearly shows. They hauled the animal out to their car and posed modestly, LeClaire on the left. The buck went 250 lbs.



The morning of December 13 found broad smiles of satisfaction on the faces of Coniston employees, for the plant at midnight had completed a total of 180 days without a lost-time accident and the Safety Thermometer on the front of the "dry" had reached its indicator capacity. Triangle snapped a group of Safety boosters gathered at the base of the thermometer and obviously few tears are being shed because the instrument is "broken." Left to right: F. R. Parker, master mechanic; G. Evershed, electrician; T. Bryce, sampler; K. Montgomery, furnace helper; Sid Smith, blast furnace foreman; Wm. Sherry, machine shop helper; J. Creswell, boilermaker; G. Geoffrey, smelter general foreman; W. J. Warwick, timekeeper; E. Vallquette, sinter plant foreman; E. T. Austin, superintendent; J. Lilley, furnace man; F. Tessier, bin boss; F. G. Murphy, assistant superintendent.

HAD CHANCE AT BIG TRIP

Copper Cliff:—The three Copper Cliff Athletic Association representatives who travelled to Toronto to take part in the Canadian boxing eliminations for the British Empire Games in Australia, acquitted themselves admirably and won plenty of praise for their showing. Hughie Craig, who went along as chaperone, was enthusiastic in his reports of the trip.

ZAVELITCH FLASHY

Larry Zavelitch, now located at Levack, put on what the critics called the best fight of the night. When it was announced that he was from Sudbury, the fans unloosed a mighty cheer, and Larry kept them cheering throughout his bout, which was in the lightweight division. Although he dislocated his hand landing a wicked wallop, he kept right on punching and lost out by a narrow margin on points to Harry Hurst, of St. Catharines, one of the classiest performers to take part.

Primo "Da Preem" Condotti, man-mountain heavyweight, lost out to the accurate-punching Lennie Stein, of Toronto, who, throughout the fight, had to take the greatest care to keep from stopping Primo's murderous right. A little short on wind and experience, "Da Preem" came out of the bout satisfied that he would take Stein's measure if they ever tangle again.

BROKE BONE IN HAND

The third member of the fighting trio, Jack Lown, of Coniston, broke a bone in his left hand in his scrap with Vern Escoe, dusky Toronto slugger, and thus could do little to ward off the technical knockout which Escoe scored over him after one minute and 30 seconds fighting in the third round. As game as they come, Lown refused to give up when he was injured and stayed right in there to take his medicine.

Plenty Action In Levack Card

Levack:—With members of the thriving Levack Boxing Club taking a prominent part, a boxing and wrestling card was staged in the Community Hall December 15 before a capacity crowd. The initial venture along this line by the Athletic Association, the show was a real success, and probably several more like it will be staged during the winter months.

In the main bout Dave Moore, of Levack, 150 lbs., went in against the hard-punching Jackie Harrison, of Copper Cliff Athletic Association. These were the lads who put up such a rousing fight in the Northern Ontario championships at Stanley Stadium earlier in the year.

Buck Petryna, of Levack, who sometimes does some effective stooging for "official bouncer" Herman Thompson, was matched at 140 lbs. against Steve Dillon, the crafty Ottawa fighter.

PLENTY LEVACK FIGHTERS

Len St. Amant and Louis Marco, both of Levack, were billed for three rounds at 160 lbs., and Stan Richardson and Fred Sagle, two more Levack leather-pushers, were scheduled to go four rounds at 150 lbs. The third prelim was a 135-lb. affair between Ray Lacroix and Allan Little, still another brace of Levackians.

In the wrestling match, at 145 lbs., Johnny Yonda, of Levack, was matched with Marty Quinn, of C.C.A.A., a fast and clever young grappler.

Speed Dupuis was named referee of the show, J. W. Brown and Steve Yawney the judges, Bill Adams the timekeeper, Buck Petryna the matchmaker and Herman Thompson the announcer.

Quarter Century Club Nears 200 Members

BUTTONS TO ITS MEMBERS

"May the sunshine of happiness fall always upon you, and brighten your pathway until the end of the road."

This was the wish sincerely expressed for members of INCO's Quarter Century Club by E. A. Collins when he had completed presentation of the coveted Club buttons to 79 more service veterans at a banquet in Memorial Community Hall December 3.



This addition to the Quarter Century Club membership included those who had completed 25 or more years of service up to December 31, 1936. Buttons had previously been presented to 81 INCO old-timers, making a total of 160 in and near Copper Cliff. At Port Colborne on December 20 eight more members were admitted to the Club, and 10 had previously received their buttons there.

MORE NEXT SPRING

It is likely that another presentation ceremony will be held next spring, at which those completing during 1937 their 25 years of service, will be honored.

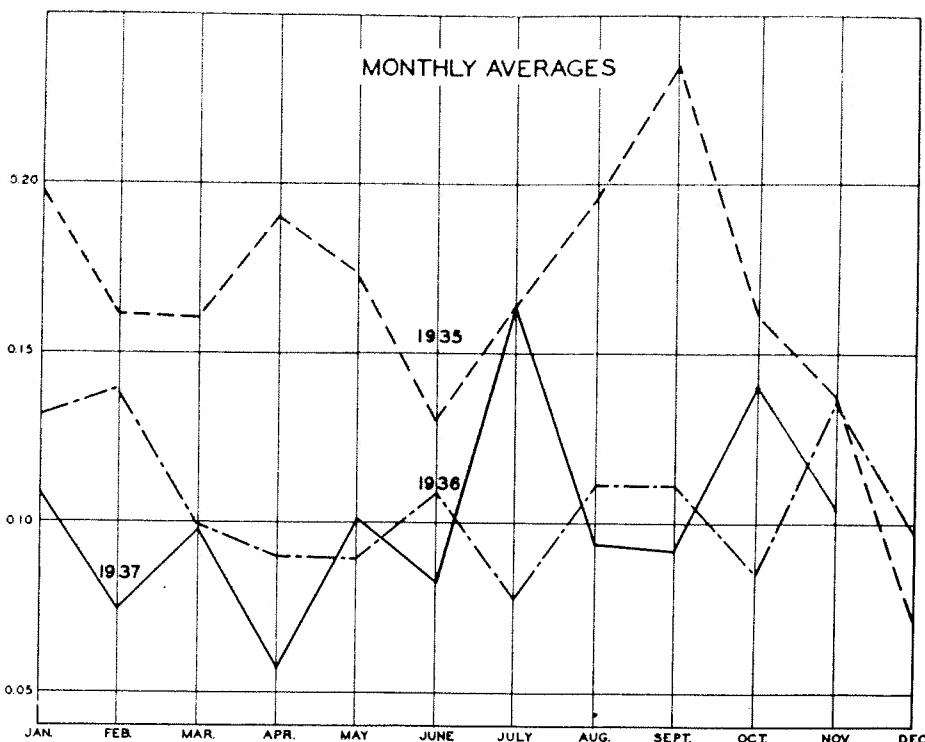
A total of 2,174 years of INCO service was represented in the gathering on December 3, and the average employment for each of the 79 new Club members was 27.5 years. Oldest to receive a button was Thomas Hall, hale and hearty at 69; youngest was William Dopson, 42, who just nosed out J. R. O'Donnell for this distinction. Mr. O'Donnell was the youngest INCO Quarter Century man at the time he completed his 25 years. Oldest employee present in point of service was Otto Toivanen, who was credited with 34 years last March.

280 Will Take First Aid Course

Approximately 280 INCO men will take the St. John's Ambulance Association First Aid course this winter under Company auspices, according to G. S. Jarrett, General Safety Engineer.

"We were highly gratified at the large number of applications received for the course from Company employees," Mr. Jarrett said, "but unfortunately our facilities will not allow more than 280 candidates. We regret very much we couldn't handle them all."

The courses have commenced, at the following places: Frood, Croatian Hall, Sudbury, Dr. Mitchell in charge; Coniston, Nickel Club, Dr. Johns in charge; Creighton, Safety lecture room, Dr. Kyle in charge; Copper Cliff and ORCO, Memorial Community Hall, Dr. Harris in charge; Garson, school basement, Dr. Pugh in charge; Levack, Dr. Thompson in charge.



In 1936 the Mining and Smelting Division's frequency of accidents-per-1000 shifts worked took a dive in October and then climbed away up in November. This year it's just the opposite, as Triangle chart shows. For October of 1937 the frequency jumped to .139, and then in November it skidded down to .104. So, these two months breaking even, on the basis of the whole year's operation it looks as if 1937 will show a big improvement over 1936, as a result of the splendid Safety co-operation of employees. The result will be watched for in the next issue of Triangle.

ANNOUNCES INCO'S PLANS

President Robert C. Stanley recently made an inspection visit to the Company's mines and plants in and adjacent to Copper Cliff. Every department was found to be functioning most satisfactorily, he announced.

INCO's 1938 program will call for several million dollars in capital expenditure, and will take most of the year to complete, he said.

The construction schedule covers erection of a new low-grade mill unit adjoining the present concentrator at Copper Cliff, and the inauguration of a new program of surface mining at the Frood mine. Foundations for the mill have already been constructed, but further work on the building will be deferred until the peak of the winter weather has passed. Plans for the structure and new equipment are well in hand, but it is expected it will be next fall before the complete program of mining and milling is functioning.

BALANCE PRODUCTION

The proposal was announced a short time ago, and the technical staff of INCO has been busily engaged in working out the details. It is expected that when fed to capacity the new mill unit will handle between 4,000 and 5,000 tons daily from the Frood open pit. The project contemplates the shovelling of the upper layer of Frood ore and concentrating in the new plant, apart entirely from present operations. The live ore reserves of the company would

thus be greatly increased. The mass mining planned, also, can be cheaply done. The whole program, however, is designed to balance ore treatment and production of metals, and will not mean any substantial increase in output.

Anniversary of Victory Banquet

Twelve years ago this month—on the 18th, to be exact—Copper Cliff baseball club sat down to a banquet in celebration of a conquest which was very nearly duplicated this year by Creighton.

The Cliffites had annexed the Ontario Amateur Championship, eliminating Niagara Falls in the finals. This autumn Creighton, making a great bid for the same laurels, lost two games of three in the showdown with Strathroy.

Copper Cliff Club was the scene of the 1925 Victory Banquet, and Colonel Brodie, now a magistrate in Windsor, made the presentation of the Championship Trophy to Frank Taylor and Bert Flynn, respectively president and manager-captain of the team. The Monel Cup was presented by J. L. Agnew, medals by Arthur Elliott, club bags by W. T. Waterbury, and sweaters by Frank Taylor.

Members of the team, of whom no less than seven are still located at or near Copper Cliff, were: F. Walmsley, catcher; A. Cloutier, pitcher; C. O'Reilly, first base; L. McLaughlin, second base; B. Flynn, short-stop; A. Herrick, third base; M. J. Kelly, centre field; D. O'Reilly, right field; H. Grannary, infield; J. Ryan outfield; E. Bell, outfield; J. Travers, catcher; F. Hambley, mascot.



A typical bit of action in Nickel Belt hockey with Creighton, No. 2 in league standing, pressing hard to score and Conreco Aces putting up stubborn resistance. Squee Allen, on the right, is hustling to get his stick on the puck for a shot at goal and another boost to his league-leading scoring record. In front of him pesky little Walter Zuke of the Aces has dropped to his knees in the scramble, and Goalie Clarke Burlingham, characteristically nonchalant about what may happen to his "physog," hopes to grab the shot right off Squee's stick. Dotten and Vancielief have come up with Allen on the play, and Hart of Aces is giving the old business to Vancielief while Lemieux of Aces comes in from behind.

Tight Contest is Certain For Nickel Belt Puck Title

By this time last year the hockey die was pretty well cast. Frood Tigers, mighty machine, had forged to the front of the Nickel Belt League, and to many who were watching the puck picture without prejudice, it was already just a question of how far the Bengals could travel on the Allan Cup trail. As everybody knows, they went the route.

In the meantime other Nickel Belt clubs gave their best in the face of the inevitable, but it was a one-team league.

DIFFERENT PICTURE

This year, so far, the picture has changed entirely. Not until just before Triangle was going to press did Frood kick through with a win in Nickel Belt play, after three straight losses. Creighton, packing a much stronger scoring punch than last season, was perched in second place in the league standing. Top spot was gleefully occupied by Conreco's, the three-in-one amalgamation of Coniston, Refinery, and Copper Cliff, each of which had its own club last year and had little else but a handsome deficit to show for it at the end of the schedule.

Whereas last year it was often a double-dyed cinch which team would win a scheduled fixture, this year about the only thing certain to date is that Joe Phan is going to get his two shillings' worth whenever he sits in at Stanley Stadium, no matter what two clubs happen to be putting on the show that particular night. The closely fought games have whipped up public interest to a new high, and capacity crowds have been turning out to almost every engagement.

Charity Cup honors went to Creighton, after a thrilling final-round victory over Frood. The fur usually flies when these

two traditional rivals get to grips, and the MacAskill Trophy final was no exception. All hopped up over its triumph, Creighton then proceeded in the first league game to come from behind in the last period, tie up a 3-0 score sheet, and go on to win 5-3 in overtime. Rozzini, Sargent in goal, McGlashen, and the dynamic young Squee Allen have been outstanding performers to date, although Coach Bill Regan seems to have every man on the club playing his head off, and probably intends to keep them travelling at that clip all season.

CONRECO'S FIGHTING

Conreco's, sitting on top of the heap, have strengthened their hand with the addition of Heximer and McReavy from Maxie Silverman's Prague postponement, and will take plenty of beating for Swenson Cup laurels. Price, the great Coniston rear-guard, is going better than ever. Besides usually doing a powerful 60-minute trick on defence, the former Brockville star seems to inject a world of fighting spirit into the club with his spectacular offensive dashes, his clean brand of play, and his natural generalship. The Redmen line of last year, Zuke, Webster, and Lemieux, have surprised their most sanguine supporters with fast and smooth scoring thrusts. Burlingham, in goal, is a daring and spectacular netminder, heedless of personal risk and full of pepper. Conreco's greatest asset, however, is the dogged back-checking policy which is shared by every member of the team. "Never beaten" seems to be the club motto, and it was strikingly exemplified in a recent tussle when, down 4-1 with only 18 minutes left to play, the three-in-one outfit knotted the score before the final gong sounded.

Herb McMunn of Winnipeg, newly

appointed coach, hasn't a team of individual stars to work with, but he has a club which doesn't know when it is licked. And that's sumpin, in hockey.

A WELDING JOB

In the 1937-38 Frood Tiger edition, on the other hand, Red Stuart has the unenviable task of welding a flock of individualists into a compact machine. Red will do it, if it's possible, and it is. Frood's slow start—it took three defeats to get them underway—was an indication of Red's problem, but against Creighton in their fourth game they registered a decisive win. So far their best forward line seems to be the Dewey-Burke-Chalette combination, and the old team of Lavigne and Graham on defence is spilling oncoming forwards with characteristic vigor. Dopesters who have been crying blue ruin for Tigers on account of those early-season defeats should pull in their horns a bit. The Frood team will be a powerful contender before the season is much older.

INJURIES FREQUENT

Injuries have taken their usual toll to date. Stack, Conreco winger who improves with every game, had an artery severed in his right leg. Seymour of Conreco's, who packs a wicked shot, had his jaw dislocated. Smith of Creighton, still the same tricky opportunist, drew a broken bone in his right hand. Webster of Conreco's suffered a dislocated shoulder. Allen of Creighton took a puck in the eye with most uncomfortable results. Conick of Frood had the bridge of his nose pushed down onto his palate when he stopped a shot on goal. But it's all in the game, and the boys take their beatings philosophically.

Life stops, but modern industry goes on at 328 deg. Fahrenheit below zero. Here quicksilver freezes so hard that it can be used to hammer nails, and iron vessels become as brittle as milk bottles; but nickel and high nickel alloys, which become harder, stronger and more durable, the colder it gets, are used for working parts of compressors operating at this low temperature.

TITO TAKES HIS PENSION

Copper Cliff:—January 1 will mean a lot more to Tito Armanteo than just the start of another year. It will mean the start of a long holiday—for the rest of his life, as a matter of fact—with pay.

On December 31 Tito retires from INCO service and joins the ever-growing ranks of faithful employees whose service the Company rewards with a comfortable pension for the remainder of their days.

Tito went to work for INCO on March 1, 1899, and has the splendid total of 35 years of credited service.

STARTED WORK AT 15

He was born in Cosenze, Italy, on December 10, 1872, and by the time he was 15 he was swinging a pick and shovel to carry his



share of the family's responsibilities. At 25 he crossed to the United States and for a year worked as a trackman in Boston. There he heard about Copper Cliff and an Italian who was reported to be the only one of his nationality in the far-northern camp at that time, Bruno Manderino, who is now living in Kansas City. So Tito and his chum, Phillip Cerenzia, decided to hike North and keep Bruno company.

The two Italo-Bostonians quickly landed jobs at the old Evans mine, and set up housekeeping in a little shack of their own. Tito worked in the rockhouse, and soon was transferred to the rockhouse at No. 2 Mine, where his boss was Owen O'Reilly, whose son, Denis, is now in charge of the slag dump at Copper Cliff.

Tito picked up experience at many different jobs as the plant grew, being employed by mining, smelting and transportation departments. Finally he located permanently with the yard crew, and is No. 1 section foreman as he retires.

LIVES WITH HIS SON

He was married in Italy 42 years ago, but his wife passed away in 1935. Five daughters, one since deceased, and three sons were born to them. One of the boys, Nino, is employed with the Copper Cliff transportation department, and he and his father "batch" it together.

Tito hasn't made many definite plans for his retirement. One thing he is anticipating eagerly is a trip out to Utah to visit with his daughter, Ninetta, and her family there. And another thing he is going to do is cook

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METROPOLITAN LIFE INSURANCE COMPANY

ACCIDENT AND HEALTH

SERIAL NUMBER 3004	POLICY NUMBER 306012	DATE OF BIRTH NOV 12 1937	DATE AT ONCE NOV 12 1937	21496
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PAY THE SUM OF

**10 DOLLARS AND 71 CENTS ** \$10.71

TO THE ORDER OF
NEGOTIABLE WITHOUT CHARGE AT
ANY BRANCH IN CANADA OF THE
ROYAL BANK OF CANADA, THE BANK
OF MONTREAL, (TRUSTS DEPARTMENT
EXCEPTED), THE CANADIAN BANK
OF COMMERCE, THE BANK OF NOVA
SCOTIA OR THE BANK OF
CANADIAN NATIONAL.

JOHN MARSH ** NO 4138

THE INTERNATIONAL NICKEL CO OF CAN LTD KINDLY CASH
COPPER CLIFF ONT AT ONCE

TO THE ROYAL BANK OF CANADA
OTTAWA, ONT.

One of the first claims to be paid an INCO worker under the Accident and Health Group Insurance plan, which went into effect November 1, was that of John Marsh of Frood. An attack of grip took him temporarily off the job, and promptly on receipt of his claim the insurance company mailed him a cheque for \$10.71, more than his share of his year's premium, the balance of which is paid by INCO.

lots of macaroni himself. By the time a working man gets home in the evening it's too late for him to make his own macaroni, and Tito confesses he's been eating a lot of the canned stuff. But now it will be different, and Tito admits modestly that there aren't any better macaroni-makers than he is this side of Rome.

PALS WILL MISS HIM

His pals on the section will miss Tito, who thrived on their comradeship and joking. Harry Severin and Jim Rossi will not find a more good-natured victim for their joshing than this little veteran with the twinkling eyes has been. As for Tito:

"Are you glad you're through, Tito?"

"Glad with no more work to do. Lots of rest. Sorry too. I miss everybody. It hurt me here," and he puts his hand to his chest. Then he turns and walks quickly away, because his eyes have filled suddenly with tears, and it is not good for anyone to see the happy Tito that way.

Institute Has New Executive

H. W. "Bill" Reed, manager of the Sudbury office of Canadian Industries, Limited, will guide the destinies of the Canadian Institute of Mining and Metallurgy, Sudbury branch, in 1938. His election as chairman took place at the annual meeting of the Institute, held in the Nickel Range Hotel, November 20.

J. B. Fyfe, of Garson, was the choice for vice-chairman, and D. M. Dunbar, of Copper Cliff, was named secretary-treasurer.

COUNCIL MEMBERS

Elected as members of the council to retire in 1938 were: Frood, F. J. Eager; Garson, Geo. Sullivan; Levack, C. H. Stewart; elected as Council members retiring in 1939 were: Sudbury, W. A. McMitchell; Falconbridge, M. J. Templin; Copper Cliff, J. R. Gordon; Ontario Refinery, R. H. Waddington; Creighton, B. F. Crandall.

Several interesting programs are already being arranged for the coming year, assuring Institute members profitable as well as entertaining returns for their interest. More than 200 members are expected to sign up, of whom more than half have already enrolled.

Many methods have been tried to hasten the aging of whiskey. One of the most successful, it is said, is to agitate the raw whiskey with charred oak chips, specially prepared in monel roasting cylinders in order to produce the proper charred surface.

POLICIES IN NICK OF TIME

Off on a hunting trip in the Espanola district, a Copper Cliff smelter worker was stricken with an attack of acute appendicitis. His condition was too critical to allow his being brought home for surgical aid, so he was rushed to the Espanola hospital, where an operation was successfully performed.

His misfortune took place on November 5, just four days after the non-occupational Accident and Health Group Insurance plan for INCO employees had gone into effect, and for which he had signed an application. The heavy expense of an emergency operation, performed away from home, would have been a much more severe financial blow to him without the insurance benefits he collected throughout his convalescence.

STRUCK BY CAR

Another outstanding instance of the value of this new insurance plan was the case of a Frood employee who was hit by a car on his way home from work. Doctors discovered he had a fractured pelvis, and a long hospital siege faced him. Without his insurance cheques to offset his heavy loss of working days, he would have a much more serious financial worry on his mind.

In the first month during which the Accident and Health Insurance was effective, no less than 110 claims were paid in the Northern division, striking evidence of the additional security INCO has provided for its employees by making available to them at low cost this protection. Benefits are payable on the fourth day of disability in case of sickness, and on the first day in case of non-occupational accidents, and continue for a maximum of 13 weeks for any period of disability. The benefit is \$15.00 per week, and the employee's contribution is 75 cents per month. The balance of the entire cost is paid by the Company.

BIG MAJORITY SIGNED

INCOites were quick to take advantage of their opportunity when application forms were available to them. It took only three days for 98.4 per cent. of those eligible for the insurance in the Northern division on November 1st to sign on the dotted line. Officials of the Metropolitan Insurance Company who assisted at the various plants in the sign-up, expressed admiration at the speed and efficiency with which it was handled by the Company's Retirement System and Insurance Department.

Modern New Laboratory In Operation at the Cliff

Recognized as one of the country's outstanding private industrial laboratories is the new Research and Plant Lab now in operation next to the General Office at Copper Cliff.

Knotty problems relating to both chemical and physical metallurgy will be referred to the Research department from the Copper Cliff and Coniston smelters and from the ORCO and Port Colborne refineries. Under chemical metallurgy fall problems connected with the production of metals, including recovery, improvement of present processes, or the institution of new processes. The department's work in physical metallurgy will deal chiefly with problems relating to the use of copper and its alloys. Also, it will generally supplement the research work now being carried on in the various plants.

1000 ASSAYS DAILY

The Plant Lab will continue to handle the work which was assigned to it in the old building it occupied in the smelter yard for 30 years. Approximately 1,000 mine, mill, and smelter assays are handled daily, as well as determinations of the metal content in diamond drill samples brought in by the Geological department.

Both departments now have ideal working conditions, with fully modern equipment and ample room for their operations. All services, such as electricity, gas, water, air, etc., are combined in a hollow service wall, two and one half feet in width, which cleaves the centre of the building from basement to attic and will make it possible to alter the layout of rooms in any section, if this is found advisable at a future time, without the usual general disorganizing of facilities. Still further flexibility has been allowed by erecting all partitions independent of the main structure.

COVERS 12,485 SQ. FT.

The new Lab is comprised of one main building with basement, two floors, and attic, and two wings with basement and one floor. It is 155 ft. over all in width and covers 12,485 sq. ft. of ground area. It is of brick and tile construction, the tile being exposed on the inside and painted ivory with a green base. Floors are of reinforced concrete covered with industrial

tile, and the roof is of Haydite, a cement and clay composition, supported on steel rafters.

The building is divided into two sections, the Research Lab and the General or Plant Lab, the latter occupying the left wing.

At the rear of the Research Lab a ramp leads into the basement, and there is sufficient room for trucks to drive into the receiving room with all incoming supplies. Off the receiving room is a grinding room equipped with a jaw crusher, rolls, a disc grinder, screening apparatus, a steam plate and hood, and a small electric furnace. There is a spare room off the grinding room, and beyond this is the transformer room from which all incoming electric power is distributed. The front part of the basement is given over to stores for chemical equipment, a shower and locker room, and a machine room in which are installed compressor and vacuum pumps and a hot water heating plant.

MODERN MACHINE SHOP

A ramp leads up to the workshop, which is eight feet lower than the main floor and is served by a large brick stack, four feet square inside and 54 ft. high. Another concrete ramp leads to the main floor level in the right wing, and opens first on a machine shop equipped with lathes, drill press, grinder, and cut-off saw. Beyond this is the equipment-testing room, in which to date is installed a testing machine for determining the tensile strength of materials.

The rear portion of the first floor in the main building commences with a furnace room with a Globar and an Ajax high-frequency electric furnaces. Next door is a preparation room with a diamond saw and a hydraulic press, and beyond that is a polishing and grinding room having six polishing machines. The photography room has a Bausch and Lomb spectrophotograph and Zeiss Neophot for microphotography, and connects with a dark-room for developing and printing, a labyrinth passage excluding all light without the need of doors.

On the front half of the main building's first floor are the research engineer's office, the general office, main entrance hall, and a balance room and furnace room assigned to the Plant Lab.

At the end of the hall is an elevator



Winners of the first tournament of the season in the Port Colborne Town League were the Lucky Spare 5-Pin Team from INCO's Refinery, composed of, left to right: Lambert, Freeman, Morton, Wilson, Prittie, Augustine.

serving the basement and the first and second floors.

On the second floor are a fully equipped chemical lab, a balance room, a library, a room to be used as a museum, a stenographer's office, a file room, and a spare lab yet to be equipped.

AIR-CONDITIONING PLANT

In the attic are the air-conditioning plant which heats and washes all incoming air, seven fans for exhausting hot plate hoods in various parts of the building, a transformer room for the air-conditioning equipment, a storage room, and water-distilling equipment supplying five gallons per hour through bloc-tin pipe to all sections of the building where it is required.

Occupying the left wing of the new building, the Plant Lab is 87 ft. long. At one end are the chief chemist's office and a balance room for incoming samples. The Lab itself is 60 ft. long by 35 ft. wide, and is equipped with four large chemical tables, 14 hoods and electric hot plates, three electroplating machines, work benches along both sides of the room serviced with gas, water, electricity, air, and vacuum. Also part of the Plant Lab layout are the furnace room and balance room in the front part of the main floor, to which reference has already been made. Downstairs is a full-length basement in which are installed 1,000 steel drawers for samples, two exhaust fans, and distribution benches for acids, chemicals, etc.

All chemical drainage pipes in the building are stoneware, and furniture is steel with specially prepared acid-resisting wooden tops. Cupboards are separate units in many instances, so that they may be moved to different parts of the building.

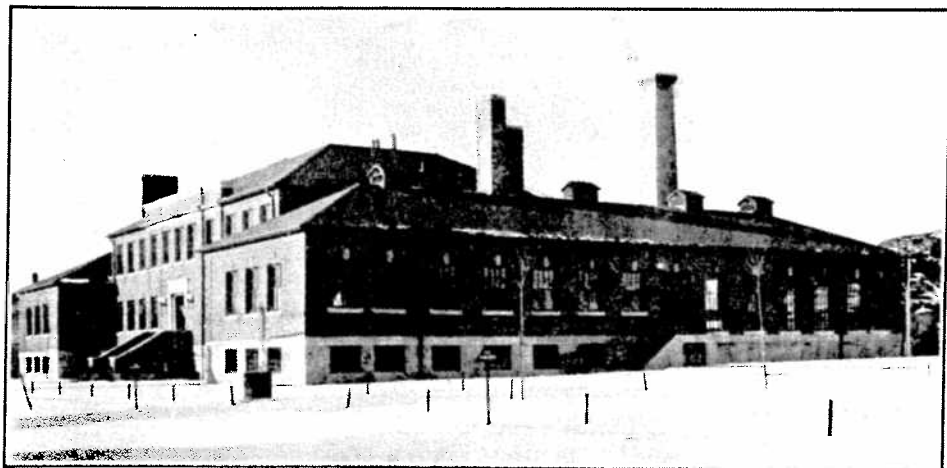
STEAM FROM SMELTER

Heat is supplied by steam piped from the smelter and entering the service wall in the basement. All leads to the various heaters throughout the building rise vertically in this wall, as do electrical and all other services. Behind each hot air register there is a booster heater which maintains a final constant temperature in each room of from 65 to 80 degrees, depending on requirements.

Running down the centre of all rooms is a covered trough built in the floor, which carries drainage and all services required, and is fed from the main service wall.

On the roof of each of the wings are ventilators for exhausting foul air and gases from the building. Freshly conditioned air is supplied to each floor through ducts installed in the main service wall.

In 1936 the automobile industry in the United States used 19,000,000 pounds of nickel.



INCO'S fine new Research and Plant Laboratory, now in operation at Copper Cliff. It covers 12,485 square feet of ground area, and is built and equipped to the most modern specifications.

SHIFT TEAMS MAKE FUR FLY

A new impetus to shift, inter-department, and inter-level league hockey at INCO mines and plants is the announcement that each league will pick a winner to play a round-robin series next February, and the championship club will go out in N.O.H.A. competition under the auspices of the Nickel Belt Hockey Association. The winning club will likely have to be decided by February 20.

The sparks are already flying in one shift league, and the other loops will be under way by the time this issue of Triangle is off the press. In each case the plant Athletic Associations are sponsoring play, and it is estimated that more than 300 puck-chasers will take part.

FIVE AT CONISTON

Five teams will probably enter the Coniston loop.—Stevenson's shift, Geoffrey's shift, McMullen's shift, and two clubs from Shops. Ice is expected to be in shape about December 20.

At ORCO four clubs have so far signified their intention of contesting the plant championship: Yard and Casting, under Herb Shoveller; Office, under Clarke Burlingham; Shops, under Harold Kurtz; Tank-house, under Tom Moore. The ORCO Athletic Association committee in charge of the league is composed of Fred Sheridan, Herb Shoveller, and Paul Coulombe.

Creighton does not expect to operate an inter-level league, but Vic Tremblay and Ernie Mosher will recruit a lineup to enter the intermediate playdowns next February. In the meantime the team will work out with the senior Creighton squad to compensate for lack of league play.

CLIFF HAS SEVEN

Copper Cliff's shift league is already in full swing, and games to date have been closely and hotly contested. The Johnston, Montgomery, and Crawford shifts have joined forces under the club name of J.M.C., with Manley Bennett as manager and G. Telford as coach. Claus of the Crushing Plant is again in the thick of the scrap, managing and coaching his own club. Jordan's Concentrator lineup is managed by Jack French and coached by Fred Stephens. Orford Aces are in there once more with Frank Wolfe as manager and Wilkie as coach. The Somers shift team is being managed by Bill Jigg and coached by Harry Gilbert. Sid Smith's lineup, another nickel reverber representative, is managed by Sid himself and coached by Bill Trotter. Frank Matte of the Copper Converters is also managing his own club, as well as handling the coaching assignment. On Bill Nelan's shoulders has fallen the responsibility of keeping the league running to schedule.

First game in this seven-team setup was played December 7 when J.M.C. lost to Jordan, 2-1. December 8's fixture saw Somers take Claus into camp 4-2 in overtime, and on December 10 Claus and J.M.C. battled 10 minutes overtime but failed to break a 4-4 deadlock. Herb McMunn, coach of Conreco Aces, is handling the referee's whistle in a most capable manner, and, on the side, thinks the boys are dishing up a mighty classy brand of hockey.

FROOD EXPECTS FIVE

Inter-level play at Frood was to be organized at a meeting December 15, but Gordon Soucie expected to see one team from Surface and four from underground, all above 2400 on each shift uniting for two clubs and all below 2400 on each shift joining forces for another pair of lineups. The F. J. Eager Cup will be at stake in the schedule.

At Copper Cliff 39 Years Ago



About 1898 is the date set on this photograph resurrected from "Cap" Hambley's collection of early Copper Cliff lore. The scene is in front of the "dry" at the old No. 2 Mine, and patient investigation has established the identity of most of the figures, although the original picture is yellow with age and the reproduction is consequently a little furry. As far as can be learned, this is how they lined up for the cameraman and his birdie:

1—Irvine Keene, a machine runner, later went to Cobalt and operated a dairy, and is deceased; 2—Jack Doney, machine runner, later killed in an accident in a Michigan mine; 3—Ned Price, sludger, later moved to Sudbury and now deceased; 4—McGee, formerly an old river driver, was fast with his fists and could lick his weight in wildcats; 5—Sandy Cameron, machine runner, went to British Columbia and still lives there; 6—Jack Butler, sludger, Irish and proud of it; 8—Madill, and (28), his brother, who came from near Stayner and eventually went back there to take up farming; 9—Tom Hambley, was running a hoist pulling ore from No. 2 Extension for No. 2 rockhouse, now Superintendent Algoma Division, C.P.R., with headquarters at North Bay; 10—Charlie Boyle, now locomotive engineer on the slag trains, Copper Cliff; 12—Joe Keene, machine man, always had a graphic description of the day's events for the gang around the boarding house table at night, later moved to Rossland, B.C.;

McGEE NOW CONTRACTOR

13—Tom McGee, nipper, now in Toronto employed as a general foreman on big contract work; 14—Hugh McKenzie, machine runner's helper; 15—Billy Wingham, trammer, lived in a log house located where the E. H. Rose residence now stands on Park Street, later moved to Gatchell, has son working in Copper Cliff smelter; 16—Jack MacDonell, machine runner, brother of W. A. MacDonell who recently retired as general manager at Coniston, worked several years in smelter, now Company pensioner living in Sudbury; 17—John Saunders, watchman, died about 10 years ago; 18—a young French lad, trammer, loved his practical jokes and was quite an acrobat; 19—Dunc McGregor, who worked with the Canadian Copper Company

from early boyhood, died in 1904; 20—"Cap" Hambley, steel sharpening shop, eventually became a mine captain at Creighton, now Copper Cliff Town Clerk; 21—Fred Rodda, came from Eastern Townships, mine captain of the shift photographed here, later went to Creighton and then to Antitokan Mine about 30 miles above Port Arthur, now living in Province of Quebec;

23—Herman Boutz, machine runner, later went farming with his brother Paul (25) near Pembroke; 24—Bob Kennedy, subforeman, was also at Creighton, now a Company pensioner residing at Elphin, Ont.; 29—Nick Gauthier, machine runner's helper.

C. C. E. B. A. Elects 1938 Directorate

Copper Cliff:—Full of pepper and planning big things for 1938, the newly-elected directors of the Copper Cliff Employees' Benefit Association are girding themselves for action.

The elections were held at the end of October, by secret ballot among members of the Association. In only five departments were representatives elected by acclamation. The directors then met to name their executive officers, and the complete slate is as follows:

President, G. Telford (nickel converters, Montgomery's shift); vice-president, Jim Duncan (mechanical dept., blacksmith shop); secretary, Jack Lamacraft (copper converters, Steadman's shift); treasurer, D. E. Wilson (nickel reverbs, Somers' shift).

Directors: Mechanical Dept., Gordon Adams, Joe Gilpin, Harold Anderson, Jim Duncan; Electrical Dept., Pat Bradshaw, F. Lumley, W. Fex; Nickel Converters, G. Telford, W. Snowden, K. Madill; Copper Converters, M. MacEwan, J. Lamacraft, J. F. Day; Nickel Reverbs., Ben Taylor, D. E. Wilson, Geoffrey Fisk; Copper Reverbs., C. Minard, G. Clare, J. O'Neil; Orford Building, H. Higgs, V. Vaillancourt, K. Harkins; Transportation and Misc., W. Boyle, Dave Coleman, Pat McGovern; Crushing and Screening Plant, A. E. Whissell, Keith Walsh; Concentrator, C. Kirwan, J. Griss, B. Allen.

NICKEL . . . AND ITS USES

NICKEL IN THE FOOD-PROCESSING INDUSTRIES

Faithful Guardian of Freshness, Purity, and Cleanliness
is the Product of Sudbury Ores

Nickel and nickel alloys form an almost unbroken "white way" along which much of our food and drink come to our dinner tables. And there tableware of nickel silver, or of that alloy plated with either pure nickel or silver, helps the food along on its final journey!

NICKEL GOES FISHING

Where nickel begins this service depends upon the type of food or drink in question. Take fish, for instance. Trawlers off the Atlantic seaboard now dump their catches into holds which are lined with nickel-clad steel to permit the holds being thoroughly cleaned at the end of a voyage and thus eliminating the bacteria which might spoil the next cargo of fresh fish. For similar reasons of cleanliness oysters are shucked and crab meat is picked on tables surfaced with "Monel". And many of the oyster boats and of the smaller units in the offshore fishing fleets are equipped with "Monel" propeller shafts and "wheels", because this nickel-copper alloy is not only resistant to corrosion but is also tough and resilient to sudden impacts and strains caused when the propellers strike driftwood.

INCONEL IN DAIRIES

Nearer at home are the dairies where milk is pasteurized and where cream is separated. In the pasteurization process the milk passes through several temperatures, and at certain of these points the lactic acid which it contains becomes highly corrosive to most metals. The result is

harmful both to the equipment and to the milk which picks up a metallic taste. Here "Inconel", a nickel-chromium alloy, is used because of its high resistance to corrosion and its freedom from effect on the taste. Originally developed in cooperation with leading technicians in the processing of dairy products, this alloy possesses properties which are making it a valuable material in industries outside the food processing field.

PROTECTS TOMATO JUICES

The wide popularity of tomato juice as a beverage has led to an important industry in preparing and packaging this product for the market. At the basis of the processing is the extraction of the juice from raw tomatoes in "Monel" pulpers and finishers. In the subsequent pasteurization of the juice the two essential properties in the metal equipment are good heat conductivity and high resistance to corrosion, and here again nickel and its alloys are depended on. Among the various items of equipment are bowls, kettles, dippers and trays of nickel, and peelers, pulpers, strainers, pans and table tops of "Monel". Pure nickel and nickel alloy tanks in capacities up to 500 gallons are common in the industry. Thus nickel in one form or another is called upon to protect the vitamin content, colour, flavour and aroma of the juice through every step from the handling of the raw tomatoes to the filling of the bottles or cans in which tomato juice is sold.

An interesting development in modern

food processing technique is the use of super-centrifuges for the clarification of fruit juices, jelly stock, bouillon, consommé, Madrilene and other liquids. Whirling as fast as 40,000 revolutions per minute, these machines separate out the last vestiges of solid matter and leave a clear product. They must be built of a metal which can withstand the tremendous centrifugal force thus generated and which at the same time must be resistant to the corrosive attack of the food acids involved. "Monel" meets both these tests.

Take salt and sugar as two other standard articles of diet. In both instances there are corrosion problems which must be successfully solved not only to assure long life of the processing equipment used but also to safeguard the whiteness and purity of both these products. Here "Monel" and "Ni-Resist", a special alloyed cast iron with high nickel content, are called upon for the rotary driers, washers, conveyors, troughs, screens, filters and other machinery parts. This is particularly true in the production of maple syrup, where "Monel" is counted on to safeguard the delicate flavour of the product.

IN CANNING INDUSTRY

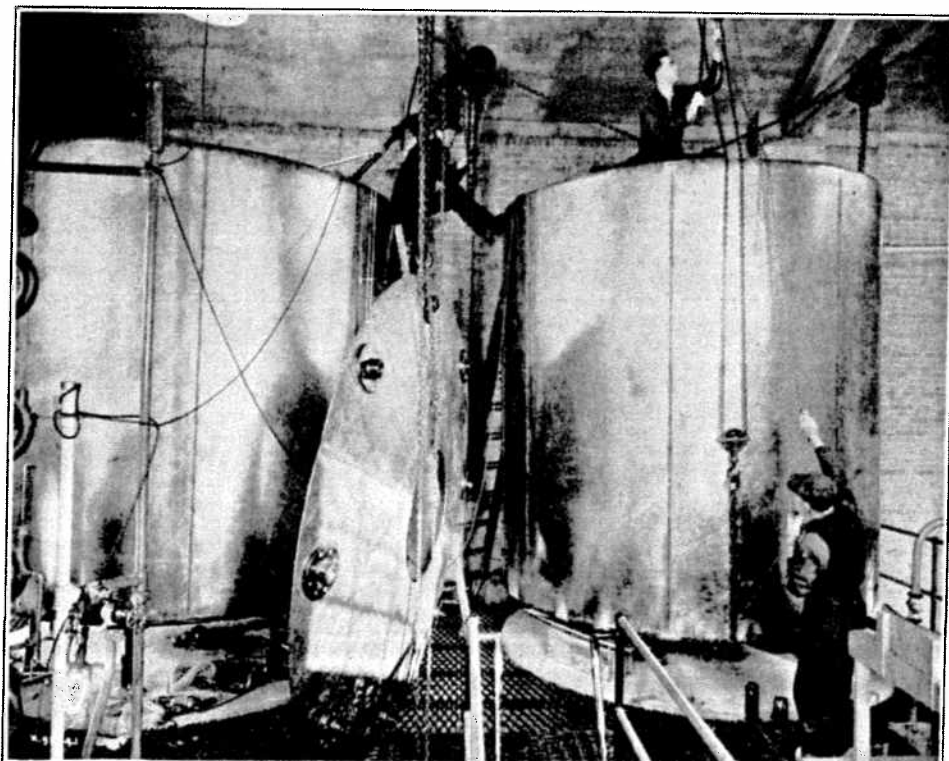
Speaking of salt, a brine solution of a specified density is used by canners to separate peas of different qualities, the tender peas floating and the poorer grade sinking in the solution. Brine means corrosion, and corrosion means nickel alloy cast iron of the "Ni-Resist" type for the heavy machinery parts and pure nickel for the brine tanks in which the peas come in contact with the heavily salted water. And, speaking of canned peas, we open up the whole fascinating subject of the variety of food products that now come to us in cans and bottles and jars—the soups and the meats, the vegetables and the fruits. All of them must be cooked and all of them must be absolutely sterile before they are finally packaged in one type of container or another; otherwise they will spoil before they ever can be used. At the same time the cooking of the foods and the sterilization of the equipment with which they are handled and of the containers in which they are finally packed, must be done in equipment which not only must be clean and easily kept clean but also must not contaminate the taste, the smell or the colour of the product. So it is that the great steam kettles are of pure nickel, and much of the subsidiary processing and handling equipment is also of nickel, "Monel" or some other nickel alloy.

GUARDS GOOD COFFEE

Take coffee as still another example. Grinding burrs of "Ni-Hard" nickel cast iron stand up best because this alloy's resistance to abrasion is definitely superior to that of common grey iron. The great coffee urns in restaurants and institutions are lined with "Monel" to preserve the aroma and taste of this almost universal beverage. It may well be that in your own home the coffee is prepared in an electric percolator which depends on a special nickel alloy to provide the heating element. Or visit a modern bakery and notice how much of the machinery and handling equipment is dependent on the bright, clean alloys of nickel.

KEEPS WHISKEY PURE

This same dependence carries over into the field of alcoholic beverages. Here clarity of colour, purity of taste and subtlety of aroma are all important considerations. Test after test has been made to determine which metal is best adapted for use in the equipment of distilleries, breweries and wineries. Whether it be gin or beer, whiskey or champagne, modern standards require that the necessary metal equipment in processing and dispensing will not contaminate the product; and modern research has demonstrated that pure nickel,



Clarity of color, purity of taste, and subtlety of aroma are of prime importance in producing good whiskey, beer, or wines. After exhaustive tests it was found that pure nickel is the ideal metal for processing and dispensing equipment. Here are workmen installing two 5000-gallon Inconel tanks in the plant of W. & A. Gilbey, Ltd., at Toronto, for use in the production of gin.



Taking in a haul of fish on the trawler "Storm" off the New England coast. The holds of the ship are lined with nickel-clad steel so that they may be thoroughly cleaned at the end of the voyage, thus eliminating the bacteria which might spoil the next cargo of fish.

"Monel" and "Inconel" are the outstanding metals in meeting this exacting requirement. An example of the extent to which this selection of the proper metal goes, is that of the "Monel" roasting cylinders in which oak chips are specially charred for use in the artificial ageing of whiskey. More common are the "Monel" tubes through which beer is pumped from keg to stein, and between these two extremes are filter cloth, processing tanks and cooling coils.

Although "Monel" and other alloys have come into our modern homes and have definitely established themselves in the kitchen and even in the dining room, their great usefulness in the food and beverage fields is in providing butcher, baker, canner and dairyman with materials which have the strength and other physical properties necessary for equipment used in mass production, and which at the same time possess a corrosion resistance which will safeguard the purity of the products. The "white way" of the nickel alloys has become Quality Street for the food and beverage industries!

EXIT RUSTY "DEAD PANS"

Ever hear of a rusty "dead pan?" The glass industry has, to its sorrow. So now the "dead pan" is made of Monel. It's actually a pan to catch bottles as they come from a conveyor on the way to the annealing oven. Rusty, corroded pans cause discoloration of the bottle. Beside corrosion resistance Monel offers the necessary wear resistance, strength and rigidity.

Croal and Taylor See the World Through a Porthole

From Copper Cliff smelter to the tangled jungles of Dutch Guiana was the long hop taken in search of adventure this year by Jim Croal, 21, silica bins, and Jack Taylor, 20, carpenter shop.

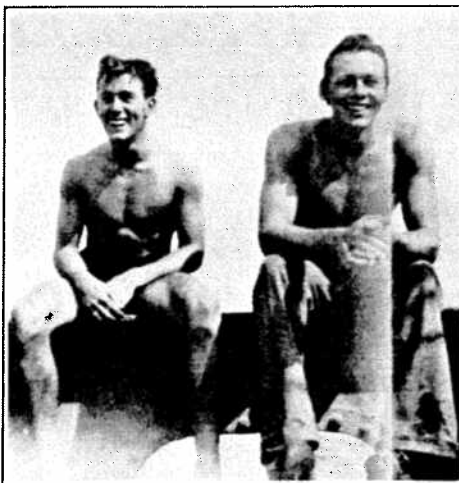
They shipped from Montreal June 3 on the S. S. Fairfield, a tramp steamer bound for Dutch Guiana to take on a cargo of bauxite, or aluminum ore, for delivery at Port Alfred on the Saguenay River, Quebec. En route she carried supplies to islands in the West Indies.

It was a case of any old job at first, as long as they landed berths, and they were galley man and mess boy when they started out. They wound up as seamen, and comparatively tough old salts, too.

It was their first time at sea, but both deny falling prey to the well-known malady, although Jack admits that for the first three or four days there was an uncertainty about life that troubled him a little.

SAW PIRATE LAIR

The grub was plentiful but not always in the best Waldorf Astoria style. Both in splendid physical condition, they found the work not too tough,—four hours on and eight hours off. In their spare time they loafed and read, and went swimming whenever the ship dropped anchor. Photo shows them perched on the ship's rail

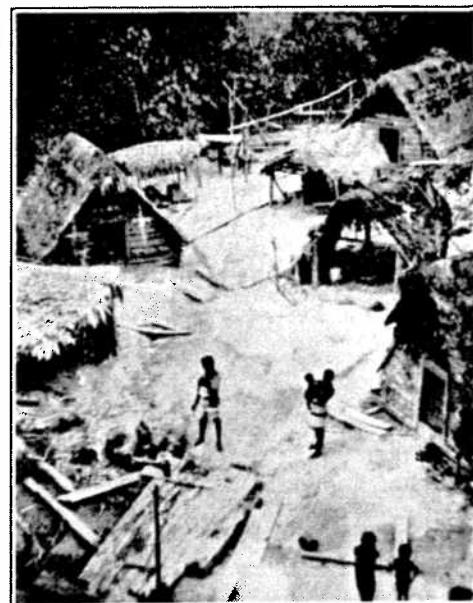


after a dip at Bermuda. Other islands they saw were St. Kitt's, Barbados, Dominica, St. Vincent, Guadeloupe, Martinique, and Grenada. They liked picturesque Grenada best, partly because of its romantic history as the storm centre of the old mutiny days when Captain Blood was on the loose. High on a cliff overlooking the harbor at Grenada still stands a Spanish cannon.

It was a two-day run to Trinidad from the West Indies, and then four days to Dutch Guiana. From the coast they entered the Mongo River, tributary of the Surinam. A narrow, tortuously twisting stream, the Mongo presents many difficulties to navigation. For the last 10 miles of their trip the boat had to be towed stern first, since it would be impossible for them to turn around for the outward journey. Often the sides of the ship were within jumping distance of the banks.

NATIVE VILLAGES

Now and then the heavy jungle growth was broken by a small clearing where a native village was built. Almost entirely uncivilized, the natives nevertheless made



one concession to the youthful modesty of their passing guests and donned bits of clothing while the ship went by.

Deep in the heart of the jungle is the aluminum ore plant where the ship took on its cargo. The bauxite, like clay, is dug by negro labor, crushed, dried, and then run into the hold of the ship by electric belt conveyors. During the three days it took to load up, the crew made trips into the jungle, ate wild pineapples, watched the huge crocodiles in the evening. They saw no roaring lions or sabre-toothed tigers, and didn't look very hard for any, either.

On their return trip they ran before a tropical hurricane, during which huge seas battered the ship until the two Cliffites were certain it couldn't hang together any longer. Up near Maine they were whipped by the tail of another tropical disturbance.

NOSE PLAYED OUT

The chief excitement on board was supplied by the captain, a burly Dane who often vented his spleen by punching the noses of the mate or the third engineer. While they were coming back down the Mongo the mate, whose nose was beginning to give out under this treatment, got the Dutch militia aboard and had them fine "the old man" \$300.00. This he cheerfully paid, and then proceeded to get his money's worth once they were out to sea again.

It was seven weeks before they docked at Port Alfred to unload their bauxite for the aluminum plant. During the six months they were away from home they made the Dutch Guiana jaunt and also two trips to British Guiana, also for cargoes of bauxite.

Then the two prodigals headed for home, Jim to his parents at Kitchener and Jack to Copper Cliff. The wanderlust has them thoroughly in its grasp, though, and probably they'll soon be off on another quest. This time they'll likely take a squint at Europe, and perhaps straighten out that international tangle over there.

A new night highway sign uses rhodium plating for its letters which shine when automobile headlights strike them. Rhodium is a sister metal of platinum, being valuable especially for its qualities of high reflectivity and non-corrosion.

ORCO TAKES BRIDGE TITLE

Only two tables of play were left. The General Office team, captained by Bert Flynn, was 10,000 points in the lead and seemed a cinch to win the second semi-annual Inter-Plant Bridge Tourney for the E. A. Collins Rose Bowl Trophy.

Then Warren Koth's ORCO cross-rufflers suddenly turned on a power play. Led by Mrs. Cooper and Mrs. Harkins, and with every one of the six couples turning in stout scores, they rolled up a total of 7790 points at the fifth table while General Office, hitting a disastrous slump, could collect only 1030.

Came the sixth and final table. General Office found themselves still holding spotty hands and had to count three "goose eggs" which held their total to 1750. Meanwhile ORCO, victory within their grasp, laid down another heavy barrage of honor tricks and reaped an aggregate of 5970. The trophy was theirs!

NINE TEAMS ENTERED

This exciting last-minute denouement topped off a most interesting series at Memorial Community Hall in which nine teams of 12 players each took part. Final standing after the three evenings of play was as follows: ORCO, 79,540; General Office, 78,440; Copper Cliff Ladies, who also staged a driving finish to come within striking distance of championship honors, 77,230; Creighton No. 2, 75,580; Frood No. 2, 72,270; Smelter, last spring's champions, 65,040; Frood No. 1, 64,710; Outlaws, 64,430; Creighton No. 1, 63,780.

Substantial cash prizes were awarded each evening, and were won as follows: October 4, 1, Messrs. McTavish and McLean, General Office, 7150; 2, Mr. and Mrs. Nelan, Smelter, 6940; 3, Mrs. Coleman and Mrs. Fitzjohn, Copper Cliff Ladies, 6240; 4, Miss Gommoll and Dr. Kyle, Creighton No. 2, 6230; 5, Mr. and Mrs. Brock, Frood No. 2, 6030.

Oct. 18: 1, Messrs. Henderson and Armstrong, General Office, 7950; 2, Messrs. Tupling and Desilets, ORCO, 7070; 3, Mrs. Cawthorpe and Mrs. Ness, ORCO, 6890; 4, Messrs. Flynn and Kearns, General Office, 6130.

Nov. 1: 1, Messrs. Burlingham and Desilets, ORCO, 6800; 2, Messrs. Holmes and Lindell, Outlaws, 6470; 3, Mrs. Cawthorpe and Mrs. Waddington, ORCO, 6440; 4, Mrs. Cooper and Mrs. Harkins, ORCO, 6280.

BEATTIE PRESENTS TROPHY

In the unavoidable absence of Mr. Collins, the Rose Bowl Trophy was presented to Captain Koth of the ORCOites by R. L. Beattie, who offered his hearty congratulations to the winners. Serving of lunch concluded the evening.

Emblematic of bridge laurels among INCO plants, the Collins Trophy will be held by ORCO until next spring, when another series will be held.

Karl's "Holiday"

This issue of Triangle is a "holiday" for Karl Lindell, who takes a well-earned rest from his series of articles on "Mining, Past and Present."

He will be back in the next edition with a comparison of actual mining methods in INCO mines and those of the days of Agricola, back in the 16th century. Special illustrations are being prepared to help present the story clearly to Triangle readers.



R. L. Beattie (left) presents the E. A. Collins Rose Bowl Trophy to Captain Warren Koth, of ORCO's bridge team, which won the Inter-Plant championship in the second semi-annual series at Memorial Community Hall. Members of the team were: seated, left to right, Mrs. C. Harkins, Mrs. J. Cawthorpe, Mrs. R. H. Waddington, Mrs. W. Koth, Mrs. D. Cooper; standing, left to right, L. Desilets, C. Burlingham, V. Tupling, G. Stesco, M. Shamley, A. Tupling. Members of the team not present were Mrs. F. Ness, Mrs. C. K. Aldrich, F. Richardson, K. Clarke.

Press is Behind the Sailors; —They Own Their Own Paper

Port Colborne:—Hats off to the Sailor Hockey Club for its snappy little newspaper, number one of volume one of which appeared on December 2. To be the official publication of the Club, "The Sailor" will keep fans and supporters posted on hockey dope throughout the season, and should prove a big factor in keeping enthusiasm at Allan Cup pitch.

Eight pages of well written and neatly presented hockey chatter, "The Sailor" is splendidly patronized by local advertisers.

CORBEAU CONFIDENT

Coach Bert Corbeau of the Sailors contributes an article to the first issue under the headline, "Coach Looks for a Winning Club." He writes: "Back again in the big-time amateur circuit, I'm looking for great things from this rugged bunch of athletes that will be wearing Sailor uniforms this year.

"It's out of order for a coach to prognosticate or declare a champion before the first game is played, so I'm going to confine my pre-season remarks to my observations of the club as I have made during a strenuous training season featured with two good exhibition games.

"First of all, the boys are in first-class condition physically. They have attended strictly to their knitting since ice was first available at the arena and most of them are ready to go the route against the toughest opposition they are likely to meet.

"We've had some uncertainty with respect to our grouping and schedule, but in any event, it certainly won't be anything like last year.

STRONG ADDITIONS

"I feel the additions we've made since last winter are going to very definitely

strengthen our position. With Connell on defence, we have a quartette of hard-hitting bumpsters who can make it tough for any attacking team. Brownlee can be depended on to capably take care of the nets. Upper, Horne and Morrison need no introduction to Port fans and their ability to hand it out as well as carry the play is well enough known.

"Jasmin and Fitzgerald should put added power behind our attacking division. These boys have plenty of speed and know what to do with a puck when they get it—they've shown some very marked ability in the exhibition games that we have had to date.

"Right here at the start of the season, I want to assure the fans that we have a great bunch of fighting hockey players, boys that will be out to give their best in every game, who won't stop trying. Let's everyone turn out and give them a big hand for the season's opener."

ALSO BOOST INCOS

"The Sailor" also devotes some space to the INCO Athletic Association entry in the district intermediate league, the Big Five Loop. It says:

"Coach Clyde Near, with the able assistance of Walter Horne, has been busy building up a strong team of Incos and they should go places in Ontario competition.

"The team has not yet been selected but it is a safe bet that Johnny Chapdelaine will take over the goaltending duties with Zuch acting as understudy. Lining up for the defence jobs are Brown, Gallagher, Wells and McCubbin.

"The forwards will be selected from the following promising material: Huffman, Gordon, Morrison, Roy, Boyer, Minor, Stubbins, Marlees and O'Neill."

Recreation Club Opens at Port Colborne

WIDE RANGE OF FACILITIES

Port Colborne:—The gala spirit that fills an enterprising community when a long-desired objective has been attained, predominated here the week-end of December 18-20 when the handsome new Recreation Club was officially opened.

After a brief address by Vice-President Donald MacAskill, Superintendent H. W. Walter formally presented the finely-equipped building to INCO's Port Colborne employees during a concert held the evening of December 20.

Other items on the concert program were selections by the Old Time Village Quartette, assisted by Jan and Eleanor, a talented team of acrobatic and adagio dancers, and James Dunn, mimic and comedian.

VISITING STARS

The evening of December 18 was Athletic Night, and a constellation of outstanding stars attended from distant points to launch activities in the various departments of the Club. Volley ball at its best was demonstrated by the Kitchener team, Canadian champions, in a match against Buffalo Y.M.C.A. A particularly fast game of basketball was played between St. Catharines, former Canadian champs, and Buffalo Y.M.C.A. Badminton, speedy pastime which promises to rank as a major community sport, was displayed with all its finesse by Jack Purcell, of Montreal, world champion, and a party of three. Earlier in the month the bowling alleys were formally put in play with matches between the Reds and the Greys, the former winning by a margin of 60 pins. W. J. Cook led the individual scoring with 233 and 154 for 387 in two games.

President E. C. Lambert reports an avalanche of membership applications, and expects that between 1,800 and 2,000 members' cards, ladies' privilege cards and children's permit cards will be issued for the new Club.

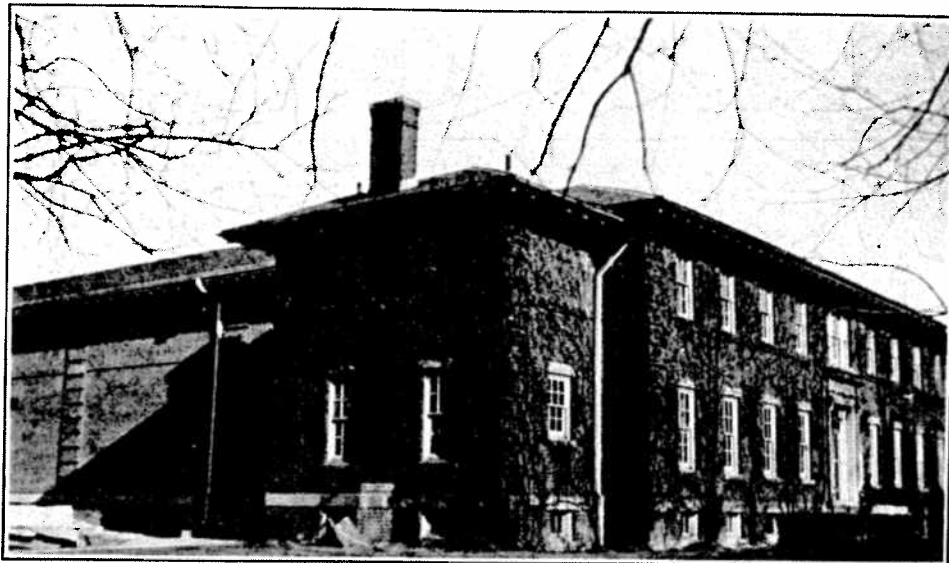
HAS BIG AUD-GYM

The new INCO recreation building, built by the company for the use of employees of the Port Colborne refinery, is one of the finest recreation buildings in the Niagara Peninsula. With an auditorium-gymnasium 96 feet in length and 60 feet in width, provision is made for badminton, basketball, volley ball, table tennis and indoor baseball, while an annex provides four bowling alleys for those who like to topple the pins. Built of steel, haydite blocks and brick exterior, the new building is an attractive one as well as one which will provide recreational and entertainment facilities for the hundreds of employees and their families.

Galleries are arranged above the observation room and down both sides of the long auditorium. There are billiard and reading rooms, reception rooms and lockers and showers for both men and women. The old lodging house, remodelled as part of the new building, houses on the main floor the kitchen, reading and reception rooms and the ladies' locker and shower rooms. On the second floor of this section are located the lobby and men's locker and shower rooms, and the billiard room with one billiard and one pool table.

COMPLETE FACILITIES

The very complete facilities provide for four badminton courts, four volleyball courts and two basketball courts, and may also



The splendidly-equipped new Recreation Club formally presented to INCO's Port Colborne employees on December 20 by Vice-President Donald MacAskill during a concert which marked the official opening. It is expected that from 1,800 to 2,000 members' cards, ladies' privilege cards, and children's permit cards will be issued by the Club directorate.

be laid out for indoor tennis and indoor softball if required. Two or more tennis tables will be installed in the gallery and a golf driving net on the large stage.

The new building will be managed by the Recreation Club board of nine directors appointed by the company and these directors will include the president and secretary of the athletic association and of the welfare association. The officers and directors of the Recreation Club include E. C. Lambert, president; W. J. Freeman,

vice-president; V. A. Lynden, secretary; Alex McNay, assistant secretary, and C. R. Howard, A. C. Harvie, George Parker, J. H. Walter, Durbin Nixon and Ed. Barrett as directors.

New pure nickel coins of one and two pesetas, dated 1937, have been struck for the Basque Government. These coins were minted in Brussels from metal obtained by melting down the nickel five-franc pieces which Belgium recently withdrew.



Directors of the new Recreation Club at Port Colborne posed for a Triangle photograph. Top row, left to right, Ed. Barrett, D. A. Nixon, George Parker, A. C. Harvie; bottom row, left to right, Alex McNay, C. R. Howard, E. C. Lambert, V. A. Lynden, J. H. Walter. The other director, W. J. Freeman, could not be present when the group was posed.

PUNCHING OUT

with

JOE the DRY MAN



¶ Almost 5,000 miles were covered by Mr. and Mrs. Alfred MacDonald, of Port Colborne, on their holiday trip this year. They travelled by car and spent a good deal of their time in Florida. "Mac" is a shift foreman in the Electrolytic Dept.

* * *

¶ A late-season fishing trip to Windy Lake proved fruitless for Tony Miziuk, of Frood, and his companion, former INCOite Bill Jason, who was located at both Frood and Copper Cliff in his service with the Company. But while they had no luck with their rods they had a full day's excitement by knocking over a 450-lb. black bear. Tony saw the bear coming out of his den near the lake shore and, with his trusty .22, let old Bruin have it right between the eyes. It took three shots to finish the job. Then the two men had to lug the huge animal half a mile to the road. The skin has been made into a rug.

* * *

¶ Creighton Mine Welfare Association's canny administration of its affairs will probably be even cannier next year. One of its directors, Tom Starkey, has gone to Scotland for two months to take a post-graduate course in High and Low Finance. His family went along, and they left at the end of November.

* * *

¶ ORCO Security Association is planning to make December 22 a big day with a Christmas Tree party for members and their families at the Oddfellows' Hall in Sudbury. In addition to a lot of fun, and presents for the kiddies, 15 turkeys will be given away to lucky ticket holders. Looks like a Merry Christmas for ORCOites.

* * *

¶ With sufficient snow at last covering the country, interest in the ski club at Levack is getting very keen. A ski run has been cut and about 40 enthusiasts are preparing for a gliding good season. Lauri Tulkku, the eminent performer who holds several Eastern Canada championships and was prevented only by unfortunate circumstances from being right up there with the winners at the Canadian championships at Banff last winter, has had a hand in laying out trails and is acting as instructor.

* * *

¶ When Frood Welfare Association decided to hold a Christmas party on December 19 and have a present for every kiddie in its members' families, it took on perhaps more than it realized. Committees in charge started their checkup, to be sure nobody was overlooked, and made some startling discoveries. One member had no less than 14 youngsters, and from seven to 10 kiddies in one family turned out to be quite a normal figure. The show must go on, however, even if Santa has to bring along his entire headquarters staff to handle the assignment. A draw was staged, with turkeys as prizes, to raise funds for the party, and the Welfare executive were hoping that no miner's child between the ages of two and 10 years would be missed. There will probably be about 2,000 of them.

* * *

¶ Garson observers applauded when a prominent member of their police force displayed a great burst of initiative and built himself a garage behind his home. They were puzzled, though, when the new garage was suddenly put to use as a woodshed. One

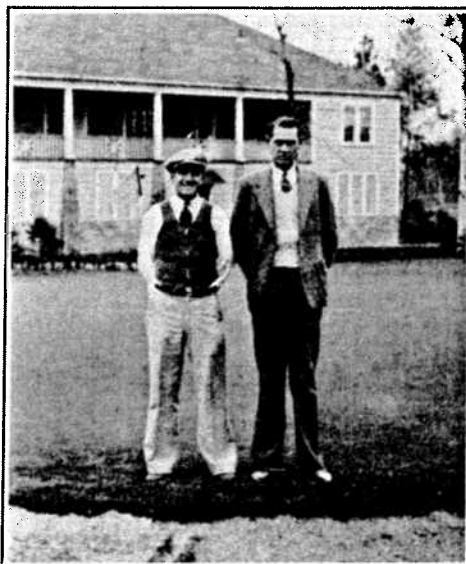
of my secret operatives tells me that the limb of the law made a little mistake in his measurements, and when he brought home a shining new car, he found it wouldn't go into the new garage. This explanation of the mystery will undoubtedly be strenuously denied by the gent in question.

* * *

¶ Thank you, "INCO WORKER," for your letter of November 17 and your kind thoughts about the Triangle. If you have anything more to say along that line, by all means write me. Don't be bashful. I enclose stamped and addressed envelope for your convenience.

* * *

¶ Despite unfavorable weather conditions on account of the advanced season, ORCO's annual golf tournament wound up with a brilliantly-played match in which Cecil "Flash" Matthews (left) carried Jim Charl-



ton (right) to the nineteenth hole before conceding championship honors and possession of the highly-coveted MacDougall Trophy. ORCO golfers now have nothing for it but to wait until next spring for further enjoyment of their favorite pastime, the usual classes of the Clarke Winter Golf School being cancelled this year on account of the recent transfer of the noted lecturer and instructor, Ken Clarke, to INCO's Toronto office.

* * *

¶ Anybody interested in a picture of complete desolation and despair should have seen the expression on "Doc" Ferguson's face at the Stadium the other night when one of his pals, for a joke, reported to him in great excitement that Price had signed a pro contract that day. The Conreco's physician-in-waiting and ardent supporter almost broke down into an ambulance case on the spot.

* * *

¶ After many exciting games, some so closely contested that the thickness of a gnat's whisker would decide the point, ORCO's horseshoe-pitching season is over and the champions are declared. The Keegan brothers, Bill and Irving, won the R. H. Waddington trophy for the plant doubles, and Irving also took the J. C. Bis-

choff trophy for the plant singles championship. Departmental winners were: W. Otley, the Welblund shield; A. Reeve, the trophies donated by N. Arbour and G. Shute; G. Ferri and J. McLaughlin, the Hewgill trophy. And speaking of champions, the ORCO Security Association are presenting crests to the Mechanical Department team, 1937 winners of the Gemmell Cup for the inter-plant softball championship.

* * *

¶ With construction work going on apace, Levack is taking on all the airs of a hustling little town. The new Bank of Toronto branch is open for business and finishing touches are now being put to the new Rio Theatre, and to the drugstore and dental offices. The two new boarding hotels, one of which is already in operation at this writing, will both be filled to capacity. Alterations have been made to the Community Hall by members of the Welfare and Athletic Associations, and this popular rendezvous is greatly in demand. There's a shindig of some sort almost every night. One big night to which everybody is looking forward is December 20, when a concert and Christmas Tree will be staged under the auspices of the energetic Ladies' Welfare Association, with the assistance of the Employees' Welfare Association.

* * *

¶ The First Aid men at Copper Cliff "dry" run into a big variety of work in the course of a day, but they found themselves handling a brand new type of assignment last month. A young lad from the West, who had only recently started work at the smelter and hadn't had a chance to get acquainted with many people, commenced dropping in to see them before and after his shifts. Always he steered the conversation around to his favorite topic — his sweetheart out on the prairies. Lonesome and innocent, he sought advice about her. How soon did the First Aiders think he would be able to get married? Did they feel there was any danger of her forgetting him for somebody else, if he waited very long before getting the knot tied? Was it really true that two could live as cheaply as one? And so on. Now and then he'd fish her picture out of his pocket and proudly pass it around for inspection. (And a right snappy looking gal she was, too.) Bill Yorke-Hardy was on the job the first day the lonesome cowboy put in an appearance, but, a confirmed old bachelor himself, Bill felt his advice might be too cruelly cynical for the situation, so he called in Ivan Fraser, a noted benedict, to administer treatments. After about 10 days of periodical consultations, the westerner ceased his visits. The boys are satisfied that Fraser's discourses on the facts of married life must have been adequate, and are considering hanging out a new shingle, "First Aid to the Lovelorn. Report All Injuries to Us Before It Is Too Late." Looks like Dorothy Dix has some opposition.

* * *

¶ Gordon Soucie, one of the Welfare master-minds behind Frood's big Field Day in September, came in for congrats after parties he organized recently for all those who assisted in making the Field Day a success. Two tickets each to one of the hockey games in which Frood was playing at Stanley Stadium, followed by a very enjoyable turkey supper, made the committee-men realize that their help had been appreciated.

* * *

¶ With Durbin Nixon a suave master of ceremonies, the Port Colborne Welfare Association staged a successful Amateur Night on November 13 to raise funds for the association's benevolent fund. A feature of the evening was the appearance of a plant orchestra, styling themselves the "Nickel Itchers," who entertained with instrumental selections. First prize among the amateurs went to Tom Marsh, second to Bill Hanni-

gan, and third to Gordon Bell. The audience picked the winners.

* * *

¶ A prize draw, proceeds of which will help defray the expense of a big Christmas concert for families of its members, is being held by Creighton Welfare Association. Another Welfare activity recently undertaken was the entering of a team in the proposed district intermediate hockey loop, with Vic Tremblay as manager and Ernie Mosher as coach.

* * *

¶ The Electro Dept. at Port Colborne lost a popular employee, well-known for his prowess at swimming, boxing and wrestling, when Fred Davies, son of Chief Constable Fred Davies, decided to follow in his pappy's footsteps and left for Toronto to take a position on the police force there.

* * *

¶ From a usually reliable source I learn that a collection is being taken up at Frood for sending Grant Baker to Hollywood to try out for the role of Rhett Butler in "Gone with the Wind." The idea comes on the heels of someone's suggestion that Grant's throat isn't sore, it's worn out.

* * *

¶ A Frood philosopher was thinking recently how much Harry Towns would have had to spend on stove polish if he had lived in the old armour-suit days.

* * *

¶ Donald Benny, Frood's man-about-the typewriter, is alleged to have been caught turning in his own name for a present at the Welfare Association Christmas Tree. "Heck," said Donald, when submitting to the third degree, "how was I to know there's no Santa Claus?"

* * *

¶ Frood's engineering office has formed a Saturday afternoon Curling League for inside and outside competition. Following are the besom an' stane experts on the lineup: George Thorpe, Max Monteith, Chas. Thompson, Harold Steers, Bob Smith, Don Wilson, Bert King, "Butch" Ross and "Jay" Smith. The Survey Office bowling league,



Is this to be Creighton's Grand Slam Year in sport, as last year was for Frood? If the infectious grins on the cheerful dials of Barney Barnett and Mickey McGlashen are any indication, the answer to that riddle is yes. Barney holds the Monel Trophy, emblematic of Nickel Belt baseball supremacy and won this year by Creighton. Mickey cradles the Donald MacAskill Charity Trophy, won by Creighton from Frood in the finals of the annual Charity Series which opens the hockey season at Stanley Stadium and proceeds of which go to Copper Cliff Canadian Legion for welfare work.



Saying farewell to Copper Cliff had its compensations for David Butchart, retired Master Mechanic of Mines, who is seen here with the bevy of beauties that clustered around him at the General Office on the afternoon of his departure for his old home in Scotland. In the group, from left to right, are: front row, L. Schofield, M. Hickey, Olive Lee, E. Browne, L. Tresize, D. Butchart, M. Owens, R. Price; back row, N. Perras, E. Kennedy, E. Jenkins, N. Regan, M. Whalen, Jean Bell, S. Watson, A. Small, R. Gribble.

now in operation for two months, has brought to light beautiful figures, both mathematically and physically. This may or may not have had something to do with the crushing defeats suffered by Duke Jarrett's Copper Cliff team.

* * *

¶ Oscar has observed that people don't throw their programs on the ice at the Stadium until the third period. He suggests that the program lucky numbers be attached as a separate ticket, so fans can toss out their programs any old time and still win a package of cigarets. He says sometimes it's awful hard to hold his temper until after the prize draw is made.

* * *

¶ A Frood inventor, who wishes to remain anonymous for the present, is working on a revolutionary gadget—windshield wipers for foggy spectacles. Motive power is furnished by a rubber diaphragm placed over the wearer's heart, pressure being transmitted by a small rubber tube to the wiping mechanism. Each pulsation of the heart thus causes a stroke of the wipers. The problem now is a suitable reduction gear so the wipers can be worn at hockey matches, where the heartbeats are too fast and furious and would probably cause a wiper-runaway, or wear out the spectacles, or make the owner dizzy, or distract the attention of the players,—or something.

* * *

¶ Recent activity at Garson, under the auspices of the Welfare Association, includes putting the skating rink in shape for use and lining up a juvenile hockey team to enter in the district league. The Ladies' Auxiliary of the Welfare has taken the lead in effecting the organization of Girl Guide and Brownie troops, in which about 25 girls are already enrolled.

* * *

¶ Bowling is at fever heat now in the ORCO league, with Tank House No. 3 leading the pack, closely followed by the Yard and Shops No. 2 teams. Tony Gennetti, who in some mysterious way manages to bowl for a lot of teams, is having quite a race with Cliff Atkinson for high-scoring honors.

* * *

¶ Hunting tales are usually just as tall—if not taller than fish stories, but we have the solemn word of one of our really unimpeachable sleuths for the following details. It seems that Bill Ripley, of Copper Cliff Shops, was down near North Bay on a duck-hunting expedition. Along in the morning, the

birds being none too plentiful, Bill decided to hop into his canoe and scout around the marsh on the edge of which his blind was located. When he had paddled out to about the middle, and had brought down a couple of stray mallards, he noticed another canoe coming toward him from the edge of the marsh, the occupant waving his arms now and then and shouting something unintelligible from the distance. "Game warden!" thought Bill, and went into full flight. The chase lasted a good half hour, Bill paddling furiously in and around the reeds with the stranger in hot pursuit. At length the Copper Cliff nimrod wearied of being a fugitive, resigned himself to the thought of paying a fine and having it over with, and rested his paddle while his pursuer pulled up beside him. "Say, you're a hard man to catch," said the stranger, puffing mightily, "I know where there's lots of ducks in a place right near here. Want to come along with me?"

* * *

¶ We have received from F. Sandelli of Port Colborne a most realistic description of a football game he attended at Pittsburgh November 13 between University of Pittsburgh and University of Nebraska. Unfortunately space requirements do not allow its reproduction in full, much as we would like to pass it on to our readers. The big Pittsburgh Stadium was jammed with 71,000 spectators, and Sandelli was Johnny-on-the-spot two hours before the game started to get all the fun of watching the crowd. It was an afternoon of bright clear sunshine. Pittsburgh Panther Band, of 120 pieces, and Pitt Cadet Rifles formed an impressive parade in their blue uniforms with gold stripe and braid, and the band music seemed to key the huge crowd right up to the height of pre-game pitch. A large mass of students, wearing reversible jackets, made various letter formations as the game progressed, an innovation to Eastern Colleges and first introduced on the West Coast. Dodd of



F. Sandelli

(Continued on Page 16)

JOE THE DRY MAN

(Continued from page 15)

Nebraska ran a kick back 60 yards for a touchdown which was converted, putting his team ahead 7-0. In the fourth quarter Patrick, Pitt fullback, went over for a touch but there was no convert, making the score 7-6. Then, with but four minutes left to play, Stapulis scored on a plunge through the centre for Pitt, they converted, and the game was in the bag, 13-7.

* * * *

¶ A frozen ear isn't any great novelty, but it can lead to deep complications sometimes. Take the case of Bob Dixon, of Levack. On a recent Saturday morning the thermometer had dipped to about 10 below, and John Frost took hold of Bob's left ear during the walk to work at the mine. A neat refrigeration job John did, too, and by noon the outraged auditory organ was all blown up like a cream puff. That evening Bob had a date at a Sudbury photographer's, and since the pictures were a Christmas remembrance he had solemnly promised to send home to his family, there was no postponing the sitting. It took some remarkable co-operation between Bob and the photographer to keep that bulging ear out of the camera's reach. Needless to say, the photo was a very definite profile.

* * * *

¶ Congratulations to Harry Towns of Frood and A. E. Whissell of Copper Cliff, two INCOites who were successful in bids for places at the Sudbury City Council table in 1938. Harry drew an acclamation in Ryan Ward, and Arthur was second high in Fournier Ward.

* * * *

¶ The Coniston Safety Thermometer hangs on the outside wall on the front of the "dry." On the inside wall, directly behind it, is a steam radiator. No wonder the "mercury" in the thermometer had shot right up to the top on December 12. Or was that the reason, Coniston?

* * * *

¶ Recent additions to the INCO family: at ORCO, daughters to Mr. and Mrs. Ross Lowe, Mr. and Mrs. Lorne Burkholder, Mr. and Mrs. S. Kew, and Mr. and Mrs. A. Walford, and sons to Mr. and Mrs. Joe McLean, Mr. and Mrs. A. Paquette, Mr. and Mrs. N. Bobalyick, and Mr. and Mrs. Cliff Atkinson; at Port Colborne, a daughter to Mr. and Mrs. Dillon Guenther and a son to Mr. and Mrs. Howard Martindale; at Copper Cliff, a son to Mr. and Mrs. R. A. Corless; at Frood, a daughter to Mr. and Mrs. Andrew Spy, and a daughter to Mr. and Mrs. C. C. Lemon; at Creighton, sons to Mr. and Mrs. Demetro Kishchuk, Mr. and Mrs. Stu Smith, Mr. and Mrs. Steve Ostroski.

* * * *

¶ ORCO weddings within the past couple of months: Steve Kopochinski to Katie Samalo; Thomas Kupshank to Stella Perchewski; Johnny Gylden to Aino Tani; A. Kelosta to Elizabeth Matik; Clarke Burlingham, Conreco Aces' goalie, to Emig Thomas of Yorkton, Sask. At Coniston, Oswald Benoit wed A. Gamelin, and Francis Brady wed Evelyn Spencer. At Copper Cliff, Leo Myher was married to G. Norlock.

* * * *

¶ Football runs in families at Garson, and even Dan Cupid seems to co-operate. The wedding took place November 13 of Olavi Matson, well-known Garson pigskin-chaser, and Miss O. Sathrang, sister of Chris Sathrang, another widely-known soccerite.

* * * *

¶ The November issue of The Canadian Mining Journal, published at Gardenvale, P.Q., was devoted almost entirely to a detailed description of all INCO operations.

Beautifully printed and profusely illustrated, the volume will undoubtedly prove to be a handbook of lasting value. Special features are most effective pencil sketches of various INCO properties or operations, done by the Journal staff artist, George Cuthbertson.

* * * *

¶ At Levack Neil McKillop and Frank Calder have apparently given up hope of bagging that moose they were talking so hard about, and have now taken to hunting down the field mice that wander into the warehouse.

* * * *

¶ When a daughter was born to Mr. and Mrs. Amadio Bordignon, of Port Colborne, on November 6, it was a red-letter day for Dame Coincidence. The Bordignon's first born, a son, also made his appearance on November 6, in 1935. It's a frugal pappy who can make one birthday party do for the whole family.

* * * *

¶ A League of Nations hunting party hit the south shore of Lake Penage last month, and great were the reverberations thereof. Five of the six members of the party were Froodians: Al Brady, Irish; Romeo Frappier, French; Jack Stafina, German; Jim Ing, Chinese; Gene Reed, self-styled Methodist. Stafina and Ing each brought down a fine



buck, as the photo proves beyond the shadow of a doubt, and later on Frappier got a doe. Jim Ing cornered his buck in a small ravine and put on the exhibition of the hunt. First he stalked from one side of the ravine and let fire; then he crept cautiously around to the other side and released another broadside at his quarry. Finally the buck dropped. Other members of the party rushed out from their hiding places to inspect it, found no marks whatever on it, and came to the conclusion that Jim had just worried it to death.

* * * *

¶ Several INCO families were represented in the group of enterprising young people who put on an excellent concert in the Croatian Hall, Sudbury, under the direction of Joseph Cisper. The performers were: Mary Perkovich, Mike Obradovich, Tony Despot, Mary Sostarich, Rose Repar, John Menican, John Bermarija, Nick Menican, Slava Zaic, Mary Hack, Rose Menican, Margaret Pavlesinac, Joseph Cisper, Ana Juratovac, Bozenka Matijevich, Pepa Sostarich, Ana Perkovitch and Terezija Hack. Many favorable comments were heard about the musical talent displayed.

* * * *

¶ "Heap big medicine man" is what Dr. C. A. "Army" Armstrong will be by the time this issue of Triangle comes off the press. One of the company doctors at Creighton for the past year, "Army" has resigned that post to take charge of the United Church missionary hospital at Port Simpson, in the far north of British Colum-

Employees' Club Near Completion

Construction of the new INCO Employees' Club in Sudbury is steadily approaching completion, and it is expected that the institution will be ready for use about the first of March.

An administrative setup is now being arranged, and operating details will be taken care of well in advance of the opening date, so that no time will be lost in placing the Club at the disposal of its members.

bia, where most of his patients will be Indians. Just before his departure he made a strategic move in the pursuit of happiness by marrying Ina Newman, daughter of Mr. and Mrs. R. G. Newman, of Creighton. Mr. Newman has been in INCO service for about 25 years, and is an electrician.

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¶ Clarence "Shilly" Shillington, of the Frood team, is claiming an even greater honor than that of being the highest scorer in amateur hockey last year. Now he is maintaining he is the best dancer on the Frood lineup. Coach "Red" Stuart says "Shilly" can be the best dancer in the world if he wants to, as long as Creighton isn't setting the tune.

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¶ With the projected open pit operation at Frood comes a new claim to fame for Sam Costa, who maintains he's a real open-pit miner and with one drill can keep ahead of two steam shovels. The open pit department is now reported as trying to figure out whether it would be cheaper in the long run to buy one steam shovel and put on a dozen drillers, or buy two shovels and put Sam on by himself. Why not put Sam in the driver's seat of one of those 4½-cu.-yd. side-hill gougers and never mind the drillers?

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¶ Doug Garrett was the 1937 winner of the bronze medal awarded each year to the member of Copper Cliff Highland Cadet Corps displaying the best marksmanship. Doug hit the bulls-eye just 10 times in 10 shots on the final shoot. The medal is presented by the Strathcona Trust.

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¶ High hopes for a "possible" in bowling were almost realized by Dalton Ovens, of Copper Cliff, in a regular scheduled tournament game of ten pins on the Copper Cliff alleys. Playing against Jack Hogan, Dalton opened with a string of six straight strikes. Chances of a perfect game went aglimmering when a spare popped up in the seventh frame, but he spilled the maples for two more strikes, then picked a spare in the final frame. His score was 253. Ten-pin bowling has been much more popular this season at the Club than for several years, according to Steward Tom Dunn.

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¶ FROOD MINER FOILS THUG! George Leach, diminutive member of the F.W.A. executive, observed a suspicious-looking brute hanging around the cash-register of a Sudbury cafe. The fellow noticed George's interest and suddenly turned on him, pressing a hard object into his side. This fully aroused our George, who let go with rights and lefts and soon had the situation thoroughly in hand. Not a bad performance for an old-timer who could easily have spotted the thug at least 20 years! It has not yet been determined whether the "hard object" was a gun or a dagger. Since the event took place in a cafe, maybe it was an elbow.