

INCO TRIANGLE

VOLUME 7

COPPER CLIFF, ONTARIO, NOVEMBER, 1947

NUMBER 8



WHO'S AFRAID OF THE BIG BAD HUNTER?



Published for all employees of The International Nickel Company of Canada, Limited.
Don M. Dunbar, Editor

EDITORIAL OFFICE: COPPER CLIFF, ONT.

VOLUME 7 NOVEMBER, 1947 NUMBER 8

HOW IS YOUR BRAIN-POWER?

So all right! So that last one was easy. Well!

With metronome regularity, just when we thought we had a good one, the answers started rolling in as soon as the paper was off the press.

"Too easy, old boy," penned Clarence Harrison of Personnel. "Three broken links, plus a strand of four, one of eight, and one of sixteen, gives all the currency required."

Okay, Harrison, if that's the way you want it. Get going on this one, submitted in all good faith by the Research Department:

Make four fours (4, 4, 4, and 4) total every number from 1 to 21 inclusive by applying addition, subtraction, multiplication, or division. Decimal points may be used, but only to one place (e.g. .4). You cannot use the square root or the square of any four.

There! We may as well tell you, Clarence old sock, that the Research Department (we're leering as we write this) not only sent in the problem but they also sent a complete set of answers. And if you're not on deck with the full story within two hours after you get your copy of this great family journal, we hereby decree that you shall, according to the traditions of this department, climb on your hands and knees up the post office steps at high noon, barking like a fox. (Extra pencils may be obtained from Bert Flynn in the Stationery Department).

Just by the way, in case there is any question, it should be mentioned here that the Research Department will examine all answers to this problem, and their decisions as to the correctness of same shall be regarded as final. (This is known as Passing the Spinach).

The most frequent answer to last month's forehead-wrinkler was to cut the chain at 1, 6, and 15 links. Personally, we wouldn't have cut it at all. We'd have worn it around our right ankle as a souvenir until some compassionate friend pointed out that it was causing a swelling.

For prompt and well-considered answers we want to thank, among many, Jeff Aulie of the Copper Refinery, our old puzzle pal E. H. Capstick of the Concentrator, Ken Robb of the Research Dept. library, Bill Zyma of Creighton, A. H. Olfert of Frood, A. E. Edwards of Creighton (his summary of the solution was tops), Vic Stone of Garson, and Don Fraser of the Metallurgical Dept. at the Cliff. In addition we would like to acknowledge replies from A. E. Wennerstrom of Sudbury, who writes that he was an Inco employee some years ago and still reaches for a Triangle instead of a confession magazine, and somebody whose signature, like our own, is perfectly legible but still almost impossible to read: it could be Dorsey.

It should be clearly understood that the Research Department problem set forth above is by no means confined to Clarence Harrison. Anybody can have a crack at it, and that means you.

Sunset on the North Shore



On one of his holiday trips by motor boat along the North Shore of Lake Superior, K. S. Clarke of Copper Cliff took this striking sunset picture. A great outdoorsman and conservationist, he also has a keen appreciation of scenic beauty.

FULL RANGE OF ACTIVITIES AT EMPLOYEE CLUB

A 32-person turnout to a badminton organization meeting reflected the tempo of interest at Inco Employees' Club in Sudbury the other night as activities switch into high gear for the winter season. Getting people to attend meetings, even when you bribe 'em with doughnuts and coffee, is always a problem, and the enthusiastic attendance at the badminton huddle augurs much action.

With Johnny Juryczak and his 14-piece orchestra really in the groove, the Saturday night cabaret dances at the club are proving a very popular innovation. From 9:30 to 10:00 each Saturday the band broadcasts over Radio Station CHNO.

Bowling is in full swing and the alleys are bulging with maple-spillers. Frood, Copper Cliff, Refinery, and Ladies' leagues are operating as usual, with Garson and Murray members taking part in the Frood loop.

Bridge Under The Big Top
Jack Deacon is presiding over the bridge and 500 sessions which are held each Monday evening. The card-sharks have moved up to the main auditorium, where acoustics are better.

There's the possibility of a billiard league with Creighton, Copper Cliff, and Levack. A Russian billiards tourney is now in the draw stage. New equipment is on order for the gymnasium, and as soon as it arrives there'll be a capacity turnout of leather-pushers to train for the winter's program of boxing bouts.

Bingo continues to draw the faithful every second Wednesday, table tennis still has its

following, and Steward Vern Tupling reports a steady increase in the number of wedding receptions, for which the club is an ideal choice with its attractive arrangements and excellent cuisine.

All in all, it looks like a big winter for the Sudbury hub.

Executive of the badminton club is headed by R. Gallagher as president with Hattie McCrea as secretary-treasurer and the following executive: Edna Johnston, Eileen Van Allen, D. Purvis, J. Piggott, J. Myers, J. Harroway. A house league will be organized. The club is open for badminton on Tuesdays, Thursdays, and Saturdays, and on Sunday afternoons.



HIGH FALLS YOUNGSTERS

Good-looking youngsters playing in the leaves at High Falls were snapped by Mrs. Elizabeth Hayward. Holding young John Hayward, aged 14 mos., is Jean Desjardin, 11. The fair-haired lad is Harley Moulton, 6, and his dark-haired chum is Rennie Desjardin, 7. The two little girls are Valda Edwards, 6, and Jackeline McQuillan, 3 1/2.



Kiddie Pictures Sweep Board In Cracking Good Contest

Robert Boudignon, of the Paymaster's Office at Copper Cliff, won the \$10.00 first prize in last month's picture contest. First honorable mention went to Donald Elliott of the Concentrator, and second mention to Mrs. Ruskin Chambers, whose husband is assistant to the reverend, supt. in Copper Cliff Smelter.

"It would be mighty nice to hit that jackpot just before Christmas," Robert Boudignon opined in the letter which accompanied his entry. Which is exactly what he did, and we hope his young son Robin will get at least a 50-50 cut of the swag for proving to be such a good subject. The picture was made with an ordinary bellows camera, in bright sunlight, using Verichrome film with an F-7 opening at 1/25 of a second. Detail is exceptionally good. Young Robin was certainly getting a big kick out of his first attempts at swimming.

Donald Elliott's unusually appealing snap of his 3-month-old son was taken late this summer at Simon Lake Park on the highway near Naughton. The miniature house in which his picture-wise daddy posed him is the receptacle for the tourist register at the park. Holding back the door in the background is Donald's sister-in-law, who doesn't do any harm to the scenery either. This entry is a good example of improvising on the spot to get an out-of-the-ordinary snap.

Mrs. Ruskin Chambers was right on the job with her kodak when trouble suddenly

flared up between son Gordon, aged 2½, and son Brent, aged 15 months. The expressions on their faces indicate that Brotherly Love has been adjourned for the time being, and it's every man for himself. A delightful and very human action shot.

Once again Inco camera fans came through with a really interesting group of entries to keep their pic contest percolating on all eight.

Eric Ashick, slope boss at Creighton Mine, sent in a couple of cracking good snaps of deer in Algonquin Park, taken during his holidays. A young doe walked right up and ate an apple out of his hand, so with such a willing subject right on the spot he unlimbered his lens-box and got busy.

M. C. Beauchamp, of the Concentrator, snapped his entry just a jiffy before a big spray of Lake Ramsay water descended upon him. His subject was his fiancée, Miss Connie Rose, who had recently arrived from England. When he trained his camera on her while she was in swimming, she let him have the old splash with both hands, but he got the snap before he was dunked.

L. W. Shore of the roaster dept. in the Cliff Smelter sent in a group of four very interesting pictures: one taken during a fire in Sudbury, one from a bridge over a stream near Greenwood, N.S., one of the snout of a bomber near Yorks, Eng., and one of a group of Arabs in Tunisia. This contestant need take a back seat to no one for uniformly

good photographs.

From Vic Nissila, a welder at Frood Open Pit, came a sparkling snap of his infant son, giving out with a great big grin in what looks like a post-bathing scene. The little guy fairly exudes personality.

Mrs. Jack Peskett, whose husband is an operator on the pachuca floor of the Port Colborne Refinery, recently returned from a trip to England and her snaps of the North Atlantic and of a Horse Guard in London are good indeed.

Cecile Carriere of Blezard Valley, whose dad Joe works in the Cliff Smelter, writes that she is very enthusiastic about her camera, and her entry showing a motor boat approaching the shore of Trout Lake indicates that she's getting along right smartly with her hobby. She addresses us "Dear Friend", which is certainly okay by us, Cecile.

One of the most amusing snaps yet to arrive was the entry of Willard G. Petersen of Levack. His young son Randy had come in from playing in the sand pile but was just too tired to get washed up for dinner. Instead, dropping a pillow on the kitchen floor, he got down on his haunches, put his head forward on the cushion, and was soon fast asleep. Willard hauled out the floodlights and got a dab of a picture.

And then there's a fine sunset scene on Fairbanks Lake, by Marjorie Pawson of the Mines Dept.; a snap of a cocker spaniel sitting up on top of a car with his eyes peeled for partridge, sent by Joseph Brosseau, 10½, of Garson Mine; "and", as the society editor says when she's near the bottom of the column, "many others".

That's the way we like to see this contest clicking. How about another avalanche of entries for next issue?





Recreation Club's Annual Stag Acclaimed One of The Best Yet

Recreation Club members at Port Colborne are still talking about the high-class variety show presented at the annual stag by the entertainment committee under the chairmanship of Bill Roach. The program was voted one of the best in years.

On account of fogging of the lens, or something, the Triangle camera muffed pictures of the show itself, but it did come up with some shots of the men who were there.

In the layout on the opposite page are:

1. J. R. O'Donnell, retiring president of the Recreation Club, greets the capacity audience and thanks the Club committees for their work during the year.

2. In the usual cash draw for the club members on shift in the plant who naturally couldn't attend, first money of \$10.00 was won by Mike Iszak of No. 5 Building. Picture shows Mike happily displaying the ten-spot which was presented to him in the plant after the party by Stewart Augustine, secretary of the club. Other winners in the draw were Fernand Lacasse, Laurier Lahale, and Powell Torok.

Charlie Neff Takes Over

3. While Alec McNay, director of club activities, looks on, Bill Roach (right) seems to be suffering no pain at all as he surrenders

the onerous duties of chairman of the entertainment committee to Charlie Neff. The fact that Charlie is smiling is purely coincidental: he'll know better after a while. Bill did a great job in his two years of office, and Charlie will have to step to match it.

4. R. C. McQuire, plant superintendent, speaks to the gathering. In his usual straightforward style he thanked the men for their help in the fire at the plant on Sept. 8, saying that with co-operation a very serious disaster was averted. He urged support of the drive to sell Dominion of Canada bonds, reminding his audience of the great strides in private savings which were made during the war years through the Victory Loans. "Turn out one bulb in 10 in your own home," he urged, backing the Ontario Hydro's plea for conservation of power. Power was being conserved to the limit of safety in the plant, he said. Discussing the safety program in the plant, he congratulated the men on an improvement over 1946 in the percentage of man days lost based on man days worked, due to lost time accidents. But, he said in challenge, the record still wasn't good enough; it could be better, and he was confident that the men would see that it was better.

5. A group of the Recreation Club executive

talk things over. New president Vic Lynden (seated) seems to be taking with a grain of salt Director Jack Wilson's admonition to watch the pennies. Also amused are Allan Harvey (house committee) and Stewart Augustine. Other club officials for the coming year are: vice-president, J. H. Walter; directors, W. J. Freeman, Ray Brown, Vince Upper, and Durbin Nixon.

6. Here's one of three groups of regular fellers attending the annual stag and picked at random from the crowd; seated are Steve Pidsadnick and Steve Sera; standing are Mike Lopeke, Joe Luke, Geno Vasileff, Art Boyer, and John Marshall.

7. Another group of stags; seated, Dave Cooper and Tony Concessi; standing, Alex Lungul, Jim Foulis, Fred Buccel, Dave McNeil, and Ivan Royal.

8. And the third gathering: seated, Bill Sinclair and Louie Cognigni; standing, J. R. O'Donnell, Doug Hanham, Bill Mew, Bill MacSweyn, and Manny Wolfe. Attendance at the entertainment was 700.

A DATE AT LAST!

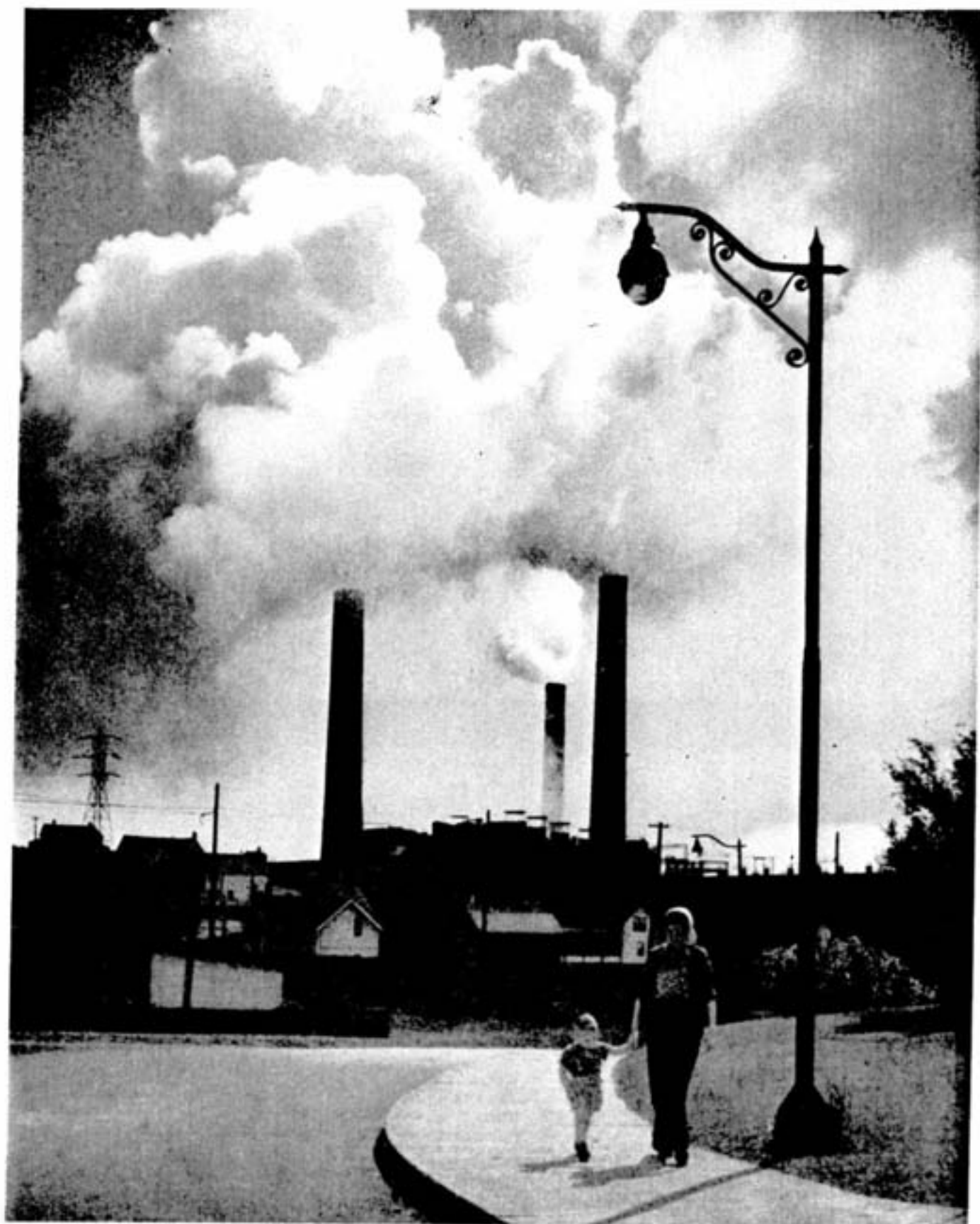
City Rook: "Our gas stove exploded and blew mother and father out of the house together."

Country Rook: "That's terrible."

City Rook: "Yeah, but it made mother very happy."

Country Rook: "Made her happy?"

City Rook: "Yep — that was the first time they'd gone out together in 20 years."



Morning Sky at Copper Cliff



New Breathing Apparatus For Mine Safety

Recently provided at Inco mines for the use of mine rescue teams and fire brigades is the new Chemox self-generating oxygen breathing apparatus. Developed during the war, this apparatus served well in naval fire fighting, and has been approved by the U.S. Bureau of Mines for commercial use.

The Chemox apparatus is a self-contained breathing circuit operating independently of the outside air. It employs a replaceable canister containing a chemical which, upon contact with the moisture in the exhaled breath of the wearer, evolves a plentiful supply of oxygen for breathing requirements and absorbs the exhaled carbon dioxide and moisture. Complete respiratory protection is provided for 45 minutes or more in highly toxic gaseous atmospheres; at the end of a pre-set time interval an automatic timing device rings a bell to indicate that the wearer should return to fresh air. The total weight of the outfit is 13½ lbs.

Photographed above as they try out the apparatus for the first time are four Creighton men, Fred Gotro, Supt. Earl Mumford, Paul Bug, and General Foreman Bruce King. "Just like breathing mountain air," they said after the demonstration.

COULDN'T BLAME HIM

An old man dropped something in the theatre and began making a great fuss hunting about on the floor. "What did you drop?" asked the usher. "A caramel," replied the grouchy old man. "What?" cried the usher. "You are making all this fuss over a caramel?" "Yes," snapped the grouchy old man. "My teeth are in it!"

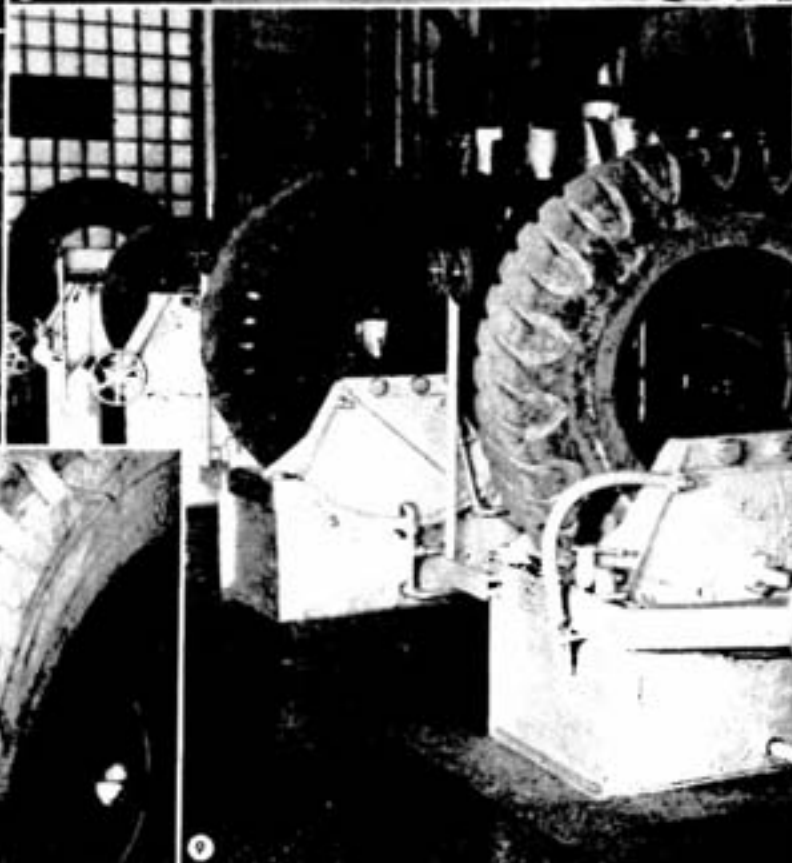
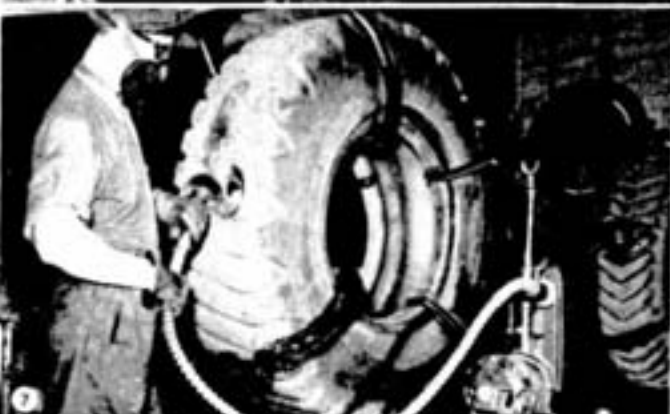
* Few things are impractical in themselves; and it is for want of applications, rather than of means, that men fail of success.—Roche-

* Circumstances are the rulers of the weak; they are but the instruments of the wise.—Samuel Lover.

Provided Upset in Garson Softball



After showing the way to the other three teams in the Garson softball league all season, Ralph Armstrong's underground lineup was trounced in the playoffs by Ed Mills' brigade, also from underground. Here are members of the victorious team, which finished second in the regular schedule: front row, Vic Kreko, Mel Hyrstak, John Chokan, and Joe Barnoski; back row, Nino Vedova, Harry Prokopchuk, Dave Mann, Joe Cull (the league manager) and Metro Mudrie. Absent were Fenton Mills, F. Fraser, and Ed Mills, coach and manager. The league was hotly contested and produced some lively entertainment for the townspeople. It was sponsored by the Garson Mine Athletic Association.



Fully Modern Vulcanizing Plant Services Open Pit Truck Tires

It's always "time to retire" at the Open Pit, but the boys don't get much rest and relaxation out of it.

The 33 big trucks which roar up and down the pit ramps in an endless procession with their 35-ton loads of ore and rock, use a heap of rubber on their diesel-driven wheels. Tire repair and maintenance is a major feature of Open Pit operations, handled in a fully modern vulcanizing department operated in conjunction with the garage where the trucks are serviced. Let's take a look around out there:

1—TIRES FOR ONE TRUCK

Campbell Girdwood, garage superintendent, is seen in this first picture with the tires required by one of the 33 haulage trucks, eight 14 x 24's for the rear wheels and two 12 x 24's for the front. There's just about two tons of rubber in that pile.

2—BRANDING THE NEW TIRE

All new tires are branded with a serial number when they are delivered at the garage, so that a complete history of the service life of each tire may be kept. Pete Walker, who has 33 years of Inco service to his credit, is operating the electric branding iron here.

3—DISMANTLING THE TIRE

Wrestling one of those big babies off its rim for regular inspection requires the close team-work of two skilled men. The tire stands 53 inches high, and weighs 400 lbs. with tube; the rim weighs 50 lbs. That's Andy Sheehan at the back, and Hal Hartry removing the rim.

4—REMOVING THE TUBE

Even with the tire elevated by air hoist to a special rack, and spreaders applied, Bill Ritter has to yank hard to pull out the tube so the tire can be inspected for breaks.

5—INSPECTING THE TUBE

Partially inflated, the tube is here being inspected for leaks by Dick Carmichael, one of the "originals" in the vulcanizing department. The wheel by which the tube is turned and at the same time kept submerged in the water was the result of an idea submitted under the Employees' Suggestion Plan, and the equipment was built in the Frood Mine shops.

6—SKIVING THE TIRE

A break has been located in one of the tires. Here it is mounted on an air-operated spreader and Eddie Whalen is skiving it, or removing the rubber at an angle of 45 degrees from around the injury. This operation is performed both outside and inside the tire, so that when a rubber plug is vulcanized into the opening, it cannot work loose from either side. The tire is 20-ply, and at the present time is manufactured in Canada by only two companies.

7—BUFFING THE TIRE

After the tire is skived the next step is to provide a good contact surface for the repairing material, and this is done by buffing the opening with a wire brush electrically operated on a flexible shaft. The operator performing this job in the picture is Tom Martin.

8—APPLYING THE STOCK

Skived and buffed, the opening is ready for application of the stock which will seal the break. First the bevelled injury is filled with cushion gum which is "stitched" or rolled into position by hand with a small, many-pointed wheel. The gum makes good contact in the grooves left by the buffing brush.

Then the plies of tire repair fabric are applied one by one, the cords criss-crossed in each case, and each ply carefully "stitched" into place. Louie Chevrette is seen building up the break in the tire.

9—CURING OR VULCANIZING

Curing, or vulcanization, of the injury is a complicated process in which close attention must be given to proper placing of the tire in the mould, careful fitting of the steam sectional bag which is inserted inside the tire to keep it firmly pressed to the mould and also to provide heat, and close manipulation of the controls. Taffy Reynolds, leader in the Open Pit vulcanizing department, is photographed here as he checks one of the six moulds. In the mould the tire "cooks" for about two hours, and is then allowed to cool and set. The curing process usually takes between four and five hours altogether. Then, expertly repaired, the tire is ready to go back into service.

One nice thing about being a truck driver at the Open Pit—you don't have to worry about "flats".

Has Clicked Eight Times in 14 Tries



When Raymond Groulx, tankhouse crane-man at the Copper Refinery, recently pulled down an award of \$30.00 for suggesting that the braking surface on certain types of overhead cranes be increased, thus reducing maintenance costs, it was the 14th idea he had submitted and the eighth award he had collected under the Inco Employees Suggestion Plan.

In sums ranging from \$5.00 to \$50.00, Raymond has tapped the suggestion kitty for a total of \$165.00. Persistence, plus a keen eye for mechanical improvements, have paid him real dividends. He has been on the Refinery force since 1930.

Raymond was born at Chelmsford, one of a family of seven sons, all of whom enlisted in the First Great War. He was the only one to return, the others being killed in action.

He was married in 1920, has five sons and a daughter. One of his boys, Roger, is employed at Copper Cliff Smelter. He has been interested in music since boyhood when his father was the leader of the Chelmsford Band, in which he and his brothers all played.





Schoolteachers Tour Cliff Smelter

A large party of separate school teachers from Sudbury and District, among those attending a convention in Sudbury, were guests of Inco one afternoon last month in a tour of the smelter at Copper Cliff. Here is a photograph of the group, one of the larger parties to tour the plant this year.

Present Trends in Nickel Alloys

A heavy demand persisted this year for alloys of all types containing nickel to satisfy the needs of the metal industry in which high production has been the keynote. A number of trends were observable which reflected the increasingly exacting demands of industry for better performance from all kinds of equipment tools and appliances.

Alloy Steels

Widespread use of alloy steels containing nickel has continued throughout the year. The railroad industry has been particularly prominent in using low alloy high strength structural steels to save weight on new rolling stock, by taking advantage of the improved strength, abrasion resistance and resistance to corrosion offered by these steels in the rolled condition. Most of the high strength steels employ nickel in amounts ranging from about 1% to 2%, are readily cold formed and welded, and find extensive use in transportation equipment and other applications in which weight saving is an important consideration.

Engineering grades of triple alloy steels containing nickel, chromium and molybdenum are also being widely employed. Aircraft manufacturers have shown preference towards the use of nickel-chromium-molybdenum steel tubing for engine frames in which high strength plus ready formability and weldability are important considerations.

Triple alloy steels of both carburizing and direct hardening grades have been almost exclusively adopted by the tractor industry for all highly stressed applications; the automotive and machine tool industries are also prominent users. A considerable market has developed for hot coiled and leaf springs be-

cause of the higher quality surface conditions and superior toughness obtainable with triple alloy steels containing from 50 to 65% carbon. The American Iron and Steel Institute during the year established as one of its standard alloy steels, a free-machining variety of low alloy, triple alloy steel, known as 8541. It is especially well suited for automatic screw products and combines a high degree of

machinability with the good properties of alloy steels.

One of the largest consumers of nickel-containing steels has been the automotive truck and bus industry where the demands are high strength and toughness require the use of various heavily alloyed steels containing combinations of nickel and molybdenum and nickel, chromium and molybdenum.

Recently developed low carbon high nickel steel, containing 8½% nickel, shows considerable promise for use in the petroleum industry for sucker rods and drill pipe. The excellent mechanical properties developed by this steel in the normalized and drawn condition also are of advantage in this applica-



USE TARTAN AS FLOOR BORDER

Nothing is too good for Copper Cliff Highland Cadet Corps, if you ask the commanding officer, Major R. C. Barnes. Over the long years during which he has guided the destiny of this outstanding unit, its welfare has become a personal as well as a public service

to him. The Corps' clubrooms in the basement of the Copper Cliff postoffice bear witness to that, because by finagling or finagling he has furnished them with every possible comfort. This summer he applied the master touch. Aided and abetted by Harry Costello, the genius of the plant paint shop, he had the Douglas tartan, officially designated to the corps, reproduced in color as a border around the floor. It's covered over with invisible cement, or something, so it won't chip off, and it looks very smart.



Costume Contest Features Dance At Levack Club Hallowe'en Night

Although the number of entries wasn't up to previous years, there was lots of head-scratching for the judges of the costume contest at Levack Employees' Club dance the night of Hallowe'en. Pictured here are some of the outstanding entries. In No. 1, left to right, are Mrs. Mary Madsen, gypsy, Mrs. Alf Armstrong, bride and groom, Miss Alice Shields, gypsy, and Eddie Kaupinen, spinster. In No. 2 are Milton Hanson, you-name it, Miss Maizie Purvis, tramp, Miss Jackie White, Indian girl, and Miss Frances Downey, Mexican. In No. 3 are Mrs. E. Kaupinen, Topsy, Mrs. A. Crawford, Old Man Winter, and Mrs. T. Kaupinen, tramp. Prizes were awarded to Mrs. A. Armstrong, E. Kaupinen, Miss Maizie Purvis, and Mrs. A. Crawford.

tion. Another important trend in the petroleum industry has been the use of relatively highly alloyed steels for drill pipe operating in deep wells. The long strings of rod which must be handled in such wells require the use of nickel-containing steels which develop high tensile strength when heat treated by normalizing and drawing.

Piston rods of drop forging steam hammers sometimes have given short life because of the exceptionally severe impact and vibrational stresses imposed in service. In one case low carbon 3½% nickel molybdenum steel, oil quenched and tempered to a hardness of 200 Brinell, improved the average life from one week to over 200 days.

Cast alloy steels containing nickel are extensively used in railroad equipment, steel mill equipment, excavating machinery and similar fields in which strength in heavy sections and toughness are requisite. They also are in substantial use in applications subject to both low and high temperature service. Low alloy nickel-chromium-molybdenum cast steels are finding considerable use for parts operating at 950 to 1000° F., not only because of their strength but because of their resistance to deterioration by graphitization over long periods of time at these temperatures. For applications involving exposure at sub-zero temperatures, castings containing about 3½ to 4% nickel with less than .15% carbon, are generally employed to avoid the brittle behavior which often characterizes other steels at low temperatures.

Stainless Steels

The high volume of production of stainless steels achieved during the war years has continued in the post-war period. Ingot production of over 500,000 tons was reached in each of the years 1945 and 1946. Based on the present outlook equally high volume, or more is predicted for the year 1947.

Industry looks forward to further expansion in volume and scope of uses in the future and is continuing its research and development activities to provide a better knowledge of fabricating procedures and a broader consumer appreciation of the economies offered by stainless steels in terms of lowered costs of maintenance, repairs and replacements.

Large amounts of stainless steels continue to be employed for consumer products such as kitchen and pantry equipment, including range tops, stoves, sinks, refrigerators, deep freezers, cooking utensils and other uses in the home, restaurants, hotels and other public institutions. Among the specific industries in which the use of these steels is said to show substantial growth are the air-conditioning, architectural and structural, automotive and truck, heating, plumbing, chemical, paper and pulp, textile, marine, petroleum, and the food and beverage fields. The aircraft industry, where stainless and heat resisting steels are essential in connection with the development of jet and gas turbine engines, expects to utilize stainless steels in substantial quantities.

(To Be Continued Next Issue)

RETURN OF THE PRODIGAL

"Who's the stranger, Mother dear?
Look, he knows us, gee, that's queer!"
"Bob, my own, don't talk so wild.
He's your father, dearest child."
"He my father? No such thing.
Father died away last spring."
"Father didn't die, you dub,
Father joined a golfing club.
But they've closed the club, so he
Had no place to go, you see.
No place left for him to roam,
That is why he's coming home.
Kiss him—he won't bite you, child;
All who play golf look that wild."



WILL ENCORE CLUB CONCERTS

Music-lovers who packed the auditorium at Copper Cliff Club last winter for the series of Little Symphony Concerts arranged by Roy C. Barnes will be glad to learn that another series of concerts is being lined up for this season.

With John Gribble, Inco pensioner and veteran musician, as guest conductor, the Little Symphony Orchestra will present its first program at the Club on Sunday, Nov. 23, commencing at 8:45 p.m. Guest artists will be Mrs. Antoinette Taus, well-known soprano, and Karl Niemi, talented accordionist. An outstanding attraction will be the choir of the Church of the Epiphany, Sudbury, under the baton of its conductor, Frank Menagh.

The concerts will be given monthly through April. A special Christmas concert, featuring choral music, will be heard on Dec. 21.

Baby Clinic Enrolment Averages 125 Weekly



During August there were 4,600 office visits at the Inco Medical Centre in Sudbury, in addition to the 900 house calls made by the doctors. Not the most numerous in this vast tide of patients, but by no means the least important, and certainly the most vocal, are the infant Incoites enrolled at the regular Tuesday Baby Clinic at the Centre.

Inoculation against all those things which babies shouldn't get but do, check-up on general health, and advice for their mothers on post-natal care, are features of the Baby Clinic. An average of 125 babies per Tuesday is the enrolment record this fall—bigger and better than ever as more and more parents come to appreciate this valuable service. And you should hear the racket!

The above pictures were snapped by the Triangle camera during a recent regular Clinic session. (1) Three "customers" and their mothers await with mixed emotions the call to action: Mrs. Joe Bedard with Gertie, Mrs. Harry Pryor with Jimmie, and Mrs. Albert St. Armand with Marlene. (2) Mrs. Harvey Desmoreaux registers Maurice (not too interested) with Miss Kay Gilmour. (3) Mrs. Woodrow Hackett arrives with Bertha May. (4) "Stop your ticklin', Doc!" gurgles

Claudette, daughter of Mrs. Emil LeBlanc, as Dr. J. H. Stanyon, chief of the Medical Centre, applies his stethoscope. (5) "Shoot the vaccine to me, Jackson!" says Raymond, son of Mrs. Leo Gastonguay, apparently somewhat unimpressed by the privilege of sitting on Nurse Mae Moroney's knee while Dr. Fraser Parrott makes up the needle.

NEW PEP IN FIRST AIDING

With a total enrolment of more than 600, and average attendance at the highest peak it has reached in years, the annual First Aid classes are in full swing for Inco employees. Tom Crowther of the Safety Department, who handles arrangements for this valuable special training, estimates that a much higher percentage than usual will receive their St. John Ambulance certificates when the classes conclude in December, on account of the better attendance and generally keener interest.

Weekly classes are being held at Inco Em-

ployees' Club in Sudbury for employees from Frood, Open Pit, Stobie, Murray, and those from Copper Cliff who reside in Sudbury; also at Coniston, and at the Community Hall in Copper Cliff. Two classes weekly are held at Levack, Creighton, and Garson.

Lectures are given by members of the Inco medical staff, and practical demonstrations by First Aid men from the various plants. The new Eve Method of artificial respiration, in which a rocking stretcher is used, will be introduced during the lectures. Stretchers have been supplied to all Inco plants.

With the St. John Ambulance training under their belts by Christmas, Inco First-Aiders will take a breather and then commence practice for the annual inter-department and inter-plant team contests.

THE MALE CALL

Riding in a dogcart, one wire-haired terrier said to the other, "Heard from your beau lately?" "Yes, indeed," was the reply. "I had a letter from him Tuesday."

* Genius is initiative set on fire.—The Sphinx.

HONOR TWO INCO VETERANS



Two familiar figures are missing from the accounting department at Copper Cliff with the retirement on disability pension of Howard Rowe and Lawrence Lawson. As far as the mechanics of operations are concerned their places have been filled, but their fellow-workers will miss the friendly daily contact with these Inco veterans.

Although forced by ill health to retire before the full span of service, both T. H. Rowe and L. A. Lawson had rolled up long records with the Company. The former joined the Company in 1910, and became chief timekeeper in 1920; he is succeeded by R. J. Henderson. The latter, son of John Lawson who was general superintendent of the Company from 1908 to 1913, started to work for Inco in 1922 in the smelter and later transferred to the accounting department; he is succeeded by his son Bill.

At a banquet attended by 50 time office and accounting department representatives in the Copper Cliff Club, tribute was paid to the loyal and efficient service of the two retiring employees. Pictured above is E. C. Lambert, works auditor, addressing the gathering; on his right is Mr. Rowe, and on his left Mr. Lawson and son Bill. Among the speakers expressing regret at the severing of old ties were W. T. Waterbury, John Gribble, J. W. Gallagher, and T. J. Mulligan.

Presentations to the two guests of honor were made by Alex Godfrey, assistant works auditor.

An indefatigable "behind the scenes" worker in the Copper Cliff Skating Club, particularly in costuming the annual carnival, Mrs. Howard Rowe was honored at a largely attended reception at the home of the club president, W. Jarrett, and received a gift in token of the high esteem in which she is held.

BAND CONCERT AT LEVACK

With W. J. McCoy as master of ceremonies, an enjoyable band concert was staged at the Employees' Club in Levack. The Sudbury Band, under the skilled baton of Gordon McAllister, pleased the large gathering of townspeople with a variety program. Guest artist was Miss Mary Foy, the gifted young violinist, who played "Humoresque" and "Berceuse," receiving great applause.

Three Straight For Refinery Peg Artists

Copper Refinery's cribbage players pegged out their third straight victory over the Copper Cliff team in a session at the Copper Cliff Club on Oct. 30.

Representing the Refinery, and blushing admitting to being the cream of the cribbage crop at that plant, were Jack Duncan (president), Joe Hughes (1st vice-president), Romeo Leclair (2nd vice-president), Charlie Marshall (there's that man again), Wes Hart (and him too!), Joe Harrison, Leo Deslets, and Herb Shoveller (novice).

The star-studded Copper Cliff team was composed of Al Scammell, Gord MacLean, Grant Benjafield, Angus Harrison, Bob Rodger, Morris McDonnell, Frank Zurbrigg, and Mel Luck.

In justice to the Cliff team it should be mentioned that Zurbrigg forgot to bring the dip-needle.

OFF TO FLYING START

A mark for bowlers in the dozens of leagues scattered through the Nickel Belt was set in the Frood loop at Inco Employees' Club when Fred Paul rolled a mighty handsome string of 317, 309, and 326 for a total of 952.

* It is only imperfection that complains of what is imperfect. The more perfect we are, the more gentle and quiet we become toward the defects of others.—Fenelon.

EMPLOYEES SAVE THOUSANDS THROUGH WAREHOUSE SERVICE



New employees such as those seen here, getting outfitted in the warehouse at Frood Mine, welcome the advantage enjoyed by all Inco workers of being able to purchase their boots, safety hats, belts and gloves at wholesale price. A saving of thousands of dollars for the employees is reflected in their purchase through Inco warehouses of 110,089 pairs of work boots during the past seven years alone. Corresponding savings have been rung up on other equipment, all made available by the Company at the quantity rate quoted by the manufacturer, with no charge for handling.

Although there is no choice between French or Cuban heels, or no nifty numbers made of alligator skin trimmed with the tail feathers of the gilligalulu bird, no less than nine different styles of work boots are carried by the Inco warehouses. Each is of the highest quality of leather or rubber obtainable, and has been chosen after exhaustive tests as the most serviceable for the various conditions encountered. With boots slated for a substantial drop in price, according to the papers, the advantage of getting them at cost becomes more attractive than ever.



Passi Shift and Levack Town Retain Laurels

Both Levack Town and Passi's Shift at the Open Pit successfully defended their Inco fire-fighting championships last month, but only by about a gnat's whisker.

Among the non-pumper brigades, the Passi shift squeaked through with a three-second margin over another Open Pit team, skippered by Negus, and a Copper Refinery brigade was only 18 seconds being Negus. Among the pumper brigades, Levack Town had just 13 seconds of a lead over the Smelter team captained by Parker.

Value Is Demonstrated

Summarizing the results of the contest, which took a month to complete, Fire Inspector W. H. Humphries found ample evidence of the value of this inter-plant competition, inaugurated last year. For instance, in one test which was the same in both years for non-pumper brigades, the average time for 1947 was 18 seconds better than in 1946, clearly showing the fruits of competitive practice.

Sixteen fire brigades from eight Inco plants took part in the tests for brigades whose equipment does not include a pumper, and six brigades competed in the class for those having motorized pumpers.

Top picture of the accompanying layout shows the Levack Town brigade, champs in the pumper class: standing, left to right, Mine Supt. C. E. Lively, Bert Conley, Ed. Southcott, T. Wilson, Bob Greive, A. Mott, Tommy Kiley, Chief Jack Drohan, and Mayor Earl Gilchrist; at the wheel is Jerry Mulvihill, and seated on the pumper are A. Shal-lan, A. Crawford, E. Armstrong, D. Shields, and E. Piaskoski.

The second picture shows the Open Pit squad which retained the shield for non-pumper brigades: standing, Chief C. Gir-wood, George Gerling, Bill Robinson, Alcide Campeau, Deputy Chief George Passi, and Jim Miles, master mechanic. On the ladder, from the top down, are Frank Beauchamp,



Charlie Gatti, and Jim Turton. Absent were Dave Taylor and Fred Boscarol.

In the third picture Walter Eastman, assistant to the fire inspector, poses with the equipment used to present a problem which each brigade in the contest had to work out. The model house, complete in all details, had a basement fire which required ventilation and extinguishing. A miniature hydrant was connected up to the water line, hose was on hand, and smoke filled the building. The brigades were judged on the speed with which they handled the fire.

Tests For The Non-Pumpers

Each brigade, in addition to this problem, took part in a series of evolutions, judging being on a time basis. Evolutions for non-pumper brigades were as follows:

1. Stretch a line of hose six lengths (300 ft.) from hydrant to target using hose cart for four lengths to a doorway and stretching the last two lengths by hand through the doorway.

2. Stretch four 50-ft. lengths of hose from hydrant toward the target using doughnut rolls.

3. Take a hose line up a ladder and handle a stream of water from the top of the ladder.

4. Stretch a line of hose four lengths (200 ft.) using one man to do the entire work of pulling out the hose. This evolution was designed to show how one man, by pulling out the hose in stages, can stretch a long line of hose without getting winded.

Pumper Brigade Tests

For pumper brigades at Copper Cliff, which are equipped with a 45-ft. ladder, the evolutions were:

1. Stretch a line of hose six lengths from hydrant toward target, three lengths being stretched using the pumper and three lengths by hand through a doorway. The stream of water had to be sent through the pumper.

2. This evolution was similar to the No. 3 evolution for non-pumper brigades.

3. Raise a 45-ft. ladder to the roof of the crushing plant, with one fireman having to climb the ladder to the roof. As the outside pumper brigades have no 45-ft. ladder, another evolution similar to No. 4 for non-pumper brigades was used for them.

Fire Inspector Humphries acknowledges the excellent co-operation of fire chiefs and others in staging the annual competition, and has a special word of thanks for the safety engineers who clocked the various events. Besides stimulating better fire-fighting technique, the annual inter-plant contest serves to focus the spotlight on a special service which is maintained within the Company, ready for any emergency but too easily forgotten in the average employee's daily routine. Here's to the hook-and-ladder boys!

Complete Competition Results

Following are complete results of the competition, the time being given for each evolution:

NON-PUMPER BRIGADES

1. Frood Open Pit (Passi): 46 sec.; 32 sec.; 20 sec.; 1 min. 15 sec.; problem, 20 sec.; total 3 min. 13 sec.

2. Frood Open Pit (Negus): 49 sec.; 31 sec.; 13 sec.; 1 min. 13 sec.; problem, 30 sec.; total 3 min. 16 sec.

3. Copper Refinery (Afternoon shift): 52 sec.; 36 sec.; 16 sec.; 1 min. 19 sec.; problem, 31 sec.; total 3 min. 34 sec.

4. Coniston (Binke): 58 sec.; 34 sec.; 20 sec.; 1 min. 23 sec.; problem, 30 sec.; total 3 min. 45 sec.

5. Copper Refinery (Night shift): 1 min.; 43 sec.; 14 sec.; 1 min. 22 sec.; problem, 31 sec.; total 3 min. 53 sec.

6. Coniston (Geoffrey): 1 min. 1 sec.; 45 sec.; 20 sec.; 1 min. 28 sec.; problem, 30 sec.; total 4 min. 4 sec.

7. Coniston (Mick): 52 sec.; 33 sec.; 16 sec.; 1 min. 4 sec.; problem, 1 min. 40 sec.; total, 4 min. 25 sec.

8. Garson: 1 min. 33 sec.; 31 sec.; 21 sec.;

1 min. 35 sec.; problem, 40 sec.; total 4 min. 40 sec.

9. Coniston Town: 1 min. 20 sec.; 58 sec.; 28 sec.; 1 min. 31 sec.; problem, 30 sec.; total 4 min. 47 sec.

10. Copper Refinery (Day Shift): 59 sec.; 1 min. 8 sec.; 27 sec.; 1 min. 39 sec.; problem, 40 sec.; total 4 min. 53 sec.

11. Creighton No. 3: 1 min. 10 sec.; 42 sec.; 26 sec.; 1 min. 20 sec.; problem, 1 min. 50 sec.; total 5 min. 28 sec.

12. High Falls: 1 min. 11 sec.; 52 sec.; 21 sec.; 1 min. 39 sec.; problem, 2 min.; total 6 min. 3 sec.

13. Murray Mine: 1 min. 15 sec.; 45 sec.; 47 sec.; 1 min. 33 sec.; problem, 2 min.; total 6 min. 20 sec.

13. Creighton No. 5: 1 min. 6 sec.; 1 min. 44 sec.; 32 sec.; 1 min. 18 sec.; problem, 1 min. 40 sec.; total 6 min. 20 sec.

14. Frood: 1 min. 33 sec.; 1 min. 12 sec.; 58 sec.; 2 min. 8 sec.; problem, 40 sec.; total 6 min. 31 sec.

15. Frood Open Pit (Kilby): uncompleted; 52 sec.; 25 sec.; 1 min. 26 sec.; problem, 30 sec.; no total.

PUMPER BRIGADES

(A) Copper Cliff Brigades

1. Smelter (Parker): 2 min. 13 sec.; 1 min. 31 sec.; 3 min. 21 sec.; problem, 20 sec.; total 7 min. 25 sec.

2. Town of Copper Cliff: 2 min. 21 sec.; 2 min. 1 sec.; 2 min. 38 sec.; problem, 36 sec.; total 7 min. 36 sec.

3. Smelter (Vallancourt): 2 min. 11 sec.; 1 min. 28 sec.; 3 min. 57 sec.; problem, 20 sec.; total 7 min. 56 sec.

4. Smelter (Fletcher): 2 min. 58 sec.; 1 min. 44 sec.; 2 min. 52 sec.; problem 1 min. 20 sec.; total 8 min. 54 sec.

(B) Outside Brigades

1. Levack Town: 2 min. 18 sec.; 43 sec.; 1 min. 46 sec.; problem, 50 sec.; total 5 min. 37 sec.

2. Levack Mine: 2 min. 47 sec.; 2 min. 1 sec.; 1 min. 39 sec.; problem, 40 sec.; total 7 min. 7 sec.

FINAL COMPUTATION

1. Levack Town: 3 min. 51 sec.; 2. Smelter (Parker): 4 min. 4 sec.

NOT PARTICULAR

First Old Maid (excitedly): "Oh, Agatha, I'm going out with a used car salesman."
Second Old Maid: "What's the difference, as long as he's healthy?"



CAN THAT BE OUR HENRY?

This bag of plump partridge, shot in the Massey District, will bring tears of envy to the eyes of some of the boys who found their pickings very slim this year. Henry Latinville and Jack Beaudry of Copper Cliff shops are the two nimrods modestly posing for the camera. Jack's son, Harold, was a third member of the party — the two oldsters haven't mentioned how many of the birds he shot.

Barry Price Builds Miniature Plant, Welder Only Help



A really smart piece of work, and a great credit to young Barry Price of Copper Cliff High School, is the miniature power plant he completed last summer. Except for the assistance of a welder he was responsible for its entire construction.

The plant has been on test at the summer camp of his parents, Mr. and Mrs. T. D. Price, and is now ready for installation in a boat, in which it will be connected to paddle wheels. It can also be operated with a regular marine propeller.

Grate Area 1 Sq. Ft.

The boiler is of the horizontal return tubular type and is approximately two horsepower. Its overall length is 48 inches, height 22 inches, and diameter 12 inches, with 16-inch copper tubes, and 6 1/2-inch copper tubes in the lower part of the drum. The grate area is one square foot and the heating surface 18 square feet. Pressure is 100 lbs. to the square inch. Fuel is either wood or coal.

The engine is of the vertical marine single cylinder type, 3 1/2-inch bore, 4-inch stroke, 250 r.p.m. It is 18 inches high and the base is 15 by 10 inches. It has Stephenson link motion reversing gear and direct-connected boiler feed pump.

When you're young and full of beans, it's lots of fun to start a job like building a plant such as this, but actually completing the project is so often quite a different story. Not so with Barry; he has something to be proud of.

WASTING HER TIME

"That man over there is annoying your wife."

"Why, he isn't even looking at her."

"That's what's annoying her."



"The Home That Sunkist Built"

When Bill Kirkland came back to Sudbury a year ago after three and a half years in the Air Force, his first concern was a home for his attractive English bride. His old job as chute blaster was waiting for him at Frood, where he first started work in 1935. Then he landed an apartment and started looking around for furniture. The prices of things chilled his good Scottish bones to the marrow, so he bought a hammer and saw instead.

The result, you might say, is "The Home that Sunkist Built," because a large portion of the furniture in the Kirkland apartment is made of orange crates. That's all—just orange crates with a lick of paint, and it's mighty good-looking and substantial furniture too, easily durable enough to last through the high-price era.

After one or two experimental efforts, like a shoe cabinet and a sewing cabinet, Bill tackled a small kitchen cabinet. His wife produced the design she wanted, and even gave him a hand with the hammer and saw as he worked evenings in the basement of the apartment house. The small kitchen cabinet was a definite success, so they worked out plans for a big one, got another bunch of orange boxes from the chain store, and soon had it made too.

In the first picture Bill poses with his infant son James Edward, aged 4½ months. Soon after James Edward came upon the scene, Bill got busy and built that nifty little two-place rocker, using nothing but orange boxes and shingle nails. Hard to believe, but it's a fact. Now all that's lacking is another little husky for the other seat.

In the second picture Bill's wife, formerly Barbara Mary Cumber of Devon, shows off the kitchen cabinet, as well as her nice smile. The stool on which she is sitting is another little product of the Kirkland orange-crate reconversion program.

Bill has dealt a body blow to the High Cost of Living. His Scottish ancestors must be smiling in their sleep.

YOU NEVER KNOW

The automobile motor pounded and suddenly wheezed to a stop on a lonely road.

"I wonder," mused the minor, "what the knock is?"

"Maybe," suggested his blonde companion "it's opportunity."

UNDER COVER

"Pat, you'll run your stomach drinking that vile stuff!"

Pat: "Niver mind, niver mind. It won't show with me pants on."



\$182.00 Richer From Hunch re Liners



DON BRAY

The swirl of the fine ore pulp against the sides of the flotation cells in Copper Cliff Concentrator causes abrasion against which even cast iron liners did not stand up for very long. Don Bray thought it might be a good idea to replace the cast iron liners with liners of B.C. fir, covered at the wear

points with rubber. He wrote out his idea, dropped it in the suggestion Box.

Tests of Don's suggestion were carried out by the Efficiency Department and the scheme found satisfactory. Savings in labor and material result in an award under the Suggestion Plan of \$182.00.

With the Company for 15 years, Don is married and lives in Copper Cliff. Light of his life is his young daughter Melinda, 8, who shows much promise as a figure skater.

THE FRONT COVER

With many an Incoite taking to the woods either at week-ends or for a full week of holidays he cannily cached away, this hunting scene is particularly appropriate, even though it's not quite clear who's hunting who.

"We'd give our right leg to be able to say that the sleeping hunter was C. O. Maddock, or C. H. Buck, or Foster Todd, or Bob McInnes, or some other well-known gunman, but the resemblance just isn't there so we may as well tell the truth about the picture. It won first prize in a recent picture contest in "GM Folks," the unusually fine magazine published for employees of General Motors Ltd. The shutter was snapped by H. P. Moody, and his victim was his fellow Pontiac dealer, Kenneth J. Healy, both of Massachusetts. The Triangle is indebted to them and to the editors of "GM Folks" for a highly seasonal and amusing frontispiece.

* He that wrestles with us strengthens our nerves and sharpens our skill. Our antagonist is our helper.—Burke.