

A Joust of Skill and Wits

(STORY ON PAGE 9)



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

COPPER CLIFF, ONT. EDITORIAL OFFICE

Spotlight on Inco

In three large-distribution publications the Inco story has been featured recently. Saturday Evening Post's Darrell Berrigan, in his series of articles entitled "What's Going On In Canada", and Toronto Star Weekly's Ross Harkness in a story on "Sudbury", both devote considerable space to Inco's operations, as does Imperial Oilways Magazine in an article titled "Fabulous Inco"

Highly enthused about Canada, Darrell Berrigan uses colorful prose to record his impressions of a journalistic jaunt across the great Dominion. Here's one of his paragraphs about the nickel industry:

"They are among the oldest great mines in Canada, but there is probably no place in the country where the impact of the Canadian boom is more evident and its excitement more communicable. To stand on the edge of the vast, open-faced pits and watch a stream of enormous thirty-eight-ton trucks receive loads of rich, yellow-green ore from the slavering mouths of giant mechanical shovels and follow its roaring, snorting, impatient passage out of the 500-foot deep hole to pour its load into the maw of an insatiable mill and rush back for more-that is to feel the excitement that man can dissemble, but machines cannot. And yet, this tremendous hole is only a supplementary operation. The great work is underground, in tunnels that spread beneath your feet for miles, where men gnaw at the greatest accumulation of nickel on earth and send it up to the smelters with urgent impatience."

Ross Harkness was for several years an esteemed reporter on the Sudbury Daily full-scale experiments carried out in co-Star, so he is on familiar ground in writing operation with the steel industry. about Sudbury in the Star Weekly. He gives Inco's laboratories at Birmingham, Eng-examples of the far-reaching influence of land; Huntington, West Virginia and Baywith a rather striking point: "Even articles further development of high strength alloys that contain no nickel are possible only because of nickel in the machines that make He is intrigued by the way the new them." town of Lively has "mushroomed in two years, complete with school, churches, stores,' etc., "as casually as most parts of the country would lay a watermain or grade a road."

Opening paragraphs of the Harkness article set the pace for a well-informed story:

"The real silent service is not the Royal Navy, it is the Canadian nickel industry. While Labrador, Chibougamau, Kitimat and Alberta have been revelling in the white light of publicity, the Sudbury basin of Ontario has gone quietly about the business of building up the most gigantic mining enterprise in Canada and the biggest of its kind in the world.

"It is hard to avoid talking in superlatives when the people of Sudbury boast, quite truthfully, that no civilized man in the Western world passes a day of his life without new materials and methods as they are using in some form or other a product of their rocky environs.

The "Fabulous Inco" story in the slickpapered Imperial Oilways Magazine is well Company's huge program of conversion to picture, "Corrosion in Action". The film man, boss, who has nothing but a loaded all-underground mining.



Stars in Port Colborne Badminton

Winners and other finalists in the Niagara district badminton championships staged recently in the Inco Recreation Club at Port Colborne are shown in this group of goodlooking people, all Inco Club players: front row, Theo Tytanek, Betty Challoner, Lorette Tessier, Conny LaCapria, Rose Trepasso; back row, Archie Saville, Jack Kaiser, Don Simpson, Ron Siddal and Rod Nixon. Outstanding performer in the tourney was Rod Nixon, who won the mens' singles and paired with Ron Siddal to take the mens' doubles.

Inco Research **On Many Fronts**

(INCO ANNUAL REPORT FOR 1952)

Research activities continued on the de-

Inco's laboratories at Birmingham, Eng-land; Huntington, West Virginia and Bayfor jet engines. In their broad investigations, which cover Nimonic, Inconel "X" and other alloys, attention has been given to the conservation, wherever possible, of strategic metals, including nickel.

Metallurgical and development work for the Company's customers continued to receive major attention by its laboratories and field This work, which is a fundamental offices. part of the Company's entire program, includes not only problems in metallurgy, corrosion, fabrication and welding in the well established mechanical, chemical and electrical fields, but also problems concerning the less known applications of platinum metals, nickel and nickel alloys in the electronic and atomic fields.

Work to advance the science and art of welding nickel alloys is one of the major projects of the Bayonne Research Laboratory, which is responsible for the development of welding rods, to handle new situations with developed. The production of these rods is carried out at the Bayonne Works under careful laboratory control.

A project stemming from Inco's research who said: illustrated and deals extensively with the activities was the production of the motion

of corrosion as developed through years of work in its laboratories, in its corrosiontesting stations at Kure Beach and Harbor Island, North Carolina, and in the plants of its customers. By the year-end the film had been shown to 1,096 technical groups in Canada and the United States.

Ductile Iron, discovered and developed by the Company after many years of research, velopment of an economic process for is now manufactured by two hundred treating nickel-bearing pyrrhotite for the licensees throughout the world. This alloy recovery of nickel and iron oxide. The high- combines the ductility of steel with the good quality iron ore obtained in pilot plant casting properties of cast iron. Reflecting operations has been employed in successful its wide adoption by industry, various code making bodies, including the Armed Services, have adopted specifications covering the physical properties of Ductile Iron.

BAD NOOSE

Edwin wanted a girl friend, but his girl friend didn't specially want Edwin. Besides, her folks were not very keen about steady dating. At last Edwin told her that if she didn't go steady with him, he'd get a rope and hang himself right in front of her house. "Oh, please don't do it, Edwin," she said. "You know perfectly well Daddy doesn't want you hanging around here."

TOO LITTLE OR TOO LATE

She-What's the difference between a poor man and a millionaire? He-One worries over his next meal, the

other worries over his last.

THEY COULDN T TAKE IT

'Madam, I'm the piano tuner,"

"I didn't send for a piano-tuner."

"I know it, lady; the neighbors did." When he discovered what a drip he really was, it was too late to call a plumber.

BREAKING IT GENTLY

He was travelling home through a back lane when he met a tough-looking character

"Could you help a poor hungry homeless



The Triangle camera got around during the past month to visit: (1) Mr. and Mrs. J. C. Bischoff (Copper Refinery) with Frank, 8, and Chris, 10. (2) Mr. and Mrs. Reg McFarlane (Garson Mine) with George, 15, Jack, 13, Raymond, 10, Bobby, 12, and Charlie, 9. (3) Mr. and Mrs. E. Zanier (Creighton Mine) with Doris, 22, Edward, 14, and Sally, 19. (4) Mr. and Mrs. F. H. Brownell (Frood-Stobie Mine) with Francis Howard, $5\frac{1}{2}$, and John Lloyd, $1\frac{1}{2}$. (5) Mr. and Mrs. Eugene Wrixon (Levack Mine) with Brian, 6, Dennis, 8 mos., and Lynne, 10. (6) Mr. and Mrs. Muir "Goonie" McGowan (Port Colborne) with Billy, 14, Pat, 16, Sharon, $1\frac{1}{2}$, Linda, 4, Mary, 18, and Bobby, 11. (7) Mr. and Mrs. Louis Renzoni (Copper Cliff Research) with Louis, 8 mos.; Peter, 3, Joanne, 11, and Carl, 14.

















60 Members in Kennel Club

With a membership of 60, many of them well-known Inco people, Sudbury Kennel Club is making steady progress with a constructive four-point program that has much to offer the dog-owner.

Obedience training, information for breeders, preparation for dog shows, and field trials are the four headings under which the Kennel Club's activities are conducted. President is Harold Bruce, vice-president is Doug MacNaughton, secretary-treasurer is Norman Jones, and directors are Harold Gathercole, Bert Robinson, Dr. Frank Flowers, and Mrs. W. Lawton of Levack.

The club, which holds its meetings in the Moose Hall on Pine St., Sudbury, is working





3

Score Perfect End at Curling

of the Royal Humane Society. Accompanying photographs were taken during one of a series of obedience training classes recently concluded. In the top picture are some of the star pupils, sitting quietly as they've been told to do: left to right, Mrs. Jack Lilley's Corgi, Patsy Gillies' Irish Setter, Mrs. Bob Urwin's Scotch Collie, Harold Gathercole's English Bulldog, Eddie Quebec's Labrador Retriever, and Mrs. Manuel Silverman's Boxer.

for the establishment of a Sudbury branch

In No. 2 Oryst Andrews is gagging a piano lesson with his Springer Spaniel, Mike, and, judging by that dog's expression, a wrong note has popped up from someplace. No. 3 shows Mrs. Bob Urwin, director of

the obedience classes and a talented trainer of dogs, with her Scotch Collie.

In No. 4 Harold Gathercole poses with his English Bulldog and in No. 5 Harold Bruce shows off Oscar Ceccutti's Golden Retriever, named Sandy.

60,000 Miles of Travel on Job

Leonard "Red" Donnelly, who recently retired on Inco pension, travelled almost 60,000 miles at his job in the nickel refinery at Port Colborne. In the little cab of his telpher crane, an overhead travelling hoist, he shuttled back and forth between various stages in the refining process, shift after shift for 26 of his 29 years' faithful service. Building under Fred Willett in 1923 and for They've figured it out that "Red" moved about half a million buckets of material ling the 50-ton crane. In 1925 he transferred containing some 650,000 tons of nickel.

But now the calciners and the sinter machines and the leaching tanks over which he presided for so long are "Red's" care no



MR. AND MRS. LEONARD DONNELLY

more. He's going to loaf around for a while, he says, and then take a day job somewhere -no more 4-to-12 or graveyard shifts for hím. His favorite pastimes will still be fishing and hunting.

Born at Tweed on Feb. 21, 1888, "Red" went west as a young fellow of 20 to work in a logging camp in British Columbia. Never out of his mind was a girl back home by the name of Rose Casabault and it wasn't long until he returned to make her his bride. They have been blessed with a family of seven: Carmil (Mrs. Roy Marr), Patt, who works for John Deere, Pauline (Mrs. D. Miller), Marylene (Mrs. D. Green), Leonard, Carol, and Patricia.



Jesse Morrison, who skipped his rink to the President's Cup and Grand Aggregate in the NOCA, went on to an even greater curling thrill when he scored an 8-end in a shift-league game at Copper Cliff Curling Club. Left to right above are the men who made this curling "grand slam", Jesse, Ritchie Sheridan, Harley Greenwood and Bob Clarke. They were playing against Allan Hall (skip), Alf Mitchell, Hughle Mulligan, and Lorne Hudson. Presentation of buttons and memberships in the select "8-Ender Club" to Jesse and his boys took place during the Macdonald's Brier playdowns at Sudbury, H. E. Wayman of Quebec City, organizer of the club, doing the honors.

"Red" started to work for Inco in No. 1 to No. 3 Building and worked on the calciners for about a year, after which he took lars. You're such a big eater." over above everybody on his monorail telpher.

On behalf of "Red's" fellow workers a television set was presented to him by Superin-tendent R. C. McQuire, who both personally and for the Company expressed appreciation of the retiring veteran's loyalty and conscientious service.

POOR PAT!

Murphy was paying ten dollars a week board and lodging.

One day his landlady said, "Pat, I'm afraid I shall have to charge you another two dol-

"For heaven's sake, don't do that," said Murphy. "I'm killing myself already trying to eat ten dollars' worth!"

Once you have fastened in your mind the truth that there can be no getting without giving, you have hold of the basis of success -Penn The Florist in any undertaking.

Third Anniversary of Garson Club



Martin A gratifying attendance of 100 couples was furnished by Chepesiuk's made a success of the third anniversary "Downbeats" Orchestra. Lunch was served dance of Garson Employees' Club. Bon bon dishes were distributed as favors, and music by the club management.

Sudbury Wolves Howling for that Old Allan Cup



After rubbing out Rouyn Flashes in four straight games to win the Northern Ontario Hockey Association Senior "A" championship, Sudbury Wolves have plunged into an unforgettable series with Kitchener-Waterloo Dutchmen for the all-Ontario crown. Guesstimates are that the winner of this set will take the Allen Cup. On the short end of a 2-1 match tally as the Triangle goes to press, the Wolves are figured to hit full stride from here in and come up with the verdict. Here they are, looking their best: front row: Gordie Heale, Roly Giacomin, Yacker Flynn, Max Silverman (coach), George DeFelice, Andy Anderson, Nick Tomiuk; centre row, Allan Duncan (manager), Red McCarthy, Durno Rondina, Aandy Milne, Orval avell, Marty Burton, Jack Stack (trainer); back row, Roly McLenahan, Mauno Kauppi, Red Barrett, Tatter McClellan, Johnny Mestan, Lennie Speck.

'52 Production Of Ore Highest Ever for Inco

For the third successive year, Inco's annual report for 1952 states, the Company was under sustained pressure for the maximum possible output of its metals and maintained its production at capacity.

three years has resulted in the delivery of States, the United Kingdom and elsewhere nearly 100,000,000 pounds more nickel than called for \$1,190,786. It is estimated that the total delivered to the world over any prior three-year period exclusive of World \$18,000,000. War II.

Inco's production has furnished the free world with over 75% of its supply of nickel nickel. The cost of this program was \$4,967, and has made major contributions to its 450, compared with \$2,593,908 in 1951 and

in 1952 Inco produced over 13.000,000 tons of compared with 289,677 in 1951 and 260,127 ore, highest production in its history. This in 1950. was made possible through the rapid progress. The exploration program involved con-made in the program for expansion of un- tinuous geological work on Inco's known dederground mining; underground production posits and geological studies of other parts untold wealth.

last year was 10,200,000 tons, an increase of of the Sudbury Basin, including further exmore than 30% over 1951 and 75% over 1950. ploration in the Company's Crean Hill Mine. Commenced early in World War II, the expansion program in the mining and treating of underground ores has involved capital expenditures of over \$150,000,000. Of the \$19,315,391 in capital expenditures in 1952, \$9,733,747 went for expansion of underground mining, \$2,793,736 for process improvements in smelting and refining, \$2,297,373 for employees' homes in the Sudbury District, \$1,-292,634 for the new lumber mill of George Gordon & Co., Cache Bay, Inco subsidiary, and \$2,007,115 for expansion and improvements at the rolling mills; various other Its high level of production over these capital requirements in Canada, the United capital expenditures in 1953 will approximate

In 1952 the Company again expanded its exploration in search for new sources of included; requirements of copper and platinum metals. \$1,682,436 in 1950. The number of feet of From underground and surface combined exploration drilling in Canada was 499,906.

Important features of the exploration program were the operation of exploration camps in Manitoba and in the Northwest Territories, and property examinations and prospecting elsewhere in Canada and in other parts of the world.

All phases of the exploration program will be continued intensively during 1953.

HOW TIMES HAVE CHANGED!

"Canadian Photography" recalls the organization meeting of the Toronto Camera Club on March 17, 1888. There were 25 camera fans present, in the Gentlemen's Parlour of the Old Queen's Hotel on Front Street. W. B. McMurrich, then mayor of the city, made the motion to form the Toronto Amateur Photographic Association.

"Refreshments" consumed on the occasion

5	gall	ons o	f beer	r at	18c	gal		.90
3	lbs.	chee	se at	13c	lb.			.39
10	lbs.	of or	nions	at 1	120			.15
5	lbs.	biscu	its a	t 8c	lb.			.40
								1.84

April is the month you can be ruined by

S. A. Crandall Gave Years of **Fine Service**

A man who joined Inco late in 1927 when the Company's great construction program was just going to the drafting boards, combined vision with a sound respect for orthodox ways in playing a role of steadily increasing responsibility in Inco's development, and closed his career as chief engineer, S. A. Crandall has retired on service pension. To him goes a substantial share of the credit for the way the Company has always been able to put through major plant expansions without interrupting capacity production schedules.

"Sac" Crandall this nickname coming easily from his initials) was born at Rochester, N.Y., on Feb. 15, 1888. Adventure came soon to him; in 1905 his father, a lawyer, moved to Alaska as commissioner of a judicial district. For the next eight years Sac was to spend his summers in the land of the sourdough, putting into practice the mining things he learned at university during the winter. He located a promising copper property and carried on its development alone after his father's death, driving several hundred feet of tunneling to cross-cut the vein at depth. Financial woes finally caught up with him and he abandoned the project, got a job on the Alaska coast, saved his money and finished his schooling. He graduated from the University of Washington in 1914 with an engineer of mines degree, having previously earned his bachelor of science degree at college in Tacoma.

In the spring of 1916 Sac heard of a lead smelter to be built at Kellogg, Idaho and landed a job there as draftsman. With the extensive practical training of his Alaska With the summers he got along fast, remained in operation after the construction program was completed. He stayed there six years, during which time he married Flora Bergner and became the proud father of two sons, Arnold and John.

The urge to move along took him to New York in 1922 to assist with the designing of a copper refinery for Belgian interests. In 1923 he hooked up with the Nichols Copper Co. at Laurel Hill, L.I., a custom smelter handling blister copper from South Africa. He became chief engineer of the operation after supervising a broad modernization program.

Sac's big break came late in 1927 when he got a tip on the proposed expansion by International Nickel. He shared none of his associates' qualms about going "up to Canada" and on Dec. 16, two weeks after L. M. Sheridan hired him for the job, he was on location in Copper Cliff as chief draftsman. He soon learned the scope of the operations in which he was to play such a big part. Work on the new surface plant at Frood Mine was started in the summer of 1928, and the new smelter, crushing and screening plant, concentrator, coal plant and shops buildings at Copper Cliff were commenced the next year. It was a program to thrill and inspire any young engineer. In 1931 came transfer of the Orford process from Port Colborne to Copper Cliff, and after that, almost continuously over the years. Sac and his associates in the mechanical engineering department were challenged by major construction assignments, often sorely complicated by the necessity of continuing full scale production while the job after attending dinner at the home of expansion was being carried on.

A great summer camp enthusiast, Sac with some corn, he passed his glass.

MR. AND MRS. S. A. CRANDALL

the help of his family has developed a vigorous pace for which he has always been beautiful property on Lake Penage. Boat noted. But whatever he does, and whether building and other woodwork have occupied his domicile be California or Copper Cliff, much of his leisure hours. It'll be a great he and his good wife will always have a surprise to all who know him if he succumbs circle of warm friends to brighten their to the lure of retirement and slackens the days.

A WISE DECISION

Mrs. Jones-The shift bosses' dance is next What color dress are you going to week. wear?

Mrs. Smith-Well, we are supposed to wear something to match our husband's hair, so I'm going to wear black. What will you wear?

Mrs. Jones-Gracious me!. I don't think I'll go.

THOUGHTFUL FELLOW

They were unpacking their goods for a weekend's camping. "George!" thundered the massive wife, as

she came upon an unopened bottle of whisky, what's the meaning of this?"

"That's all right, my dear. I brought it along to stick a candle in when it's empty."

HE'S GOT SOMETHING THERE

Trying to rest after an exceedingly hard day, father was beset with an endless stream of unanswerable questions from little Junior. Junior-What do you do down at the office?

Father-Nothing!

Junior (after a thoughtful pause)-Dad, how do you know when you're through?

The new minister from Kentucky lost his one of the church elders. Asked if he'd like



A \$147.00 IDEA

Figuring out a more economical way of maintaining water pressure between the water tube of a longhole carbide drill and the chuck rod, John Kulyk of Levack received an award of \$147.00 from the Suggestion Plan Committee. He's seen here receiving his cheque from Levack Superintendent Frank McAteer.

It costs more to amuse a child now than it used to cost to educate his father.

APRIL, 1953





Frood-Stobie Vs. Copper Cliff In Final First Aid Contest

That great annual joust of skill and wits, the First Aid competitions, has worked up show:

to the final test in which Frood-Stobie Mine will represent the underground installations winning the semi-final match for the Dunagainst Copper Cliff Smelter, winner of the can Finlayson shield, which was presented down comes April 9 at Inco Employees Club Morrow (left), superintendent of smelters; in Sudbury, with the Inco inter-plant champ- P. Duffy (captain), Len Shore, J. Babin, Joe ionship and the Ralph D. Parker Shield as Clarke, Eli Bosnick (spare), and Manley the coveted prize.

Countless hours of study and practice, doz-Beyond calculation is the value of the St. John's Ambulance training acquired in the process.

To reach a berth in the finals the Copper Cliff team had to outwit three other smart surface plant lineups from Copper Refinery, Open Pit and Coniston, in the semi-final match with the Duncan Finlayson Shield at stake. The problem, a tricky one, had to do with a man who had been trampled by a horse, and the patient was Gordon Beckett. Dr. Jack Stanyon was the judge.

Frood-Stobie had an equally tough assignment in surviving the challenge of four strong of Frood-Stobie, other underground plant brigades in the semi-final go for the Herman J. Mutz Shield. were handled by "Cy" Arrayed against them were Garson, Levack, Creighton and Murray. Their difficult test involved a man who had fallen from a scaffold in a construction accident. The patient was Leo Frappier and the judge was Dr. sheet as the Creighton Mine team goes Brent Hazlewood.

For both contests realistic settings were erected under the supervision of Tom Crowther, Inco safety engineer in charge of the teams which chased Copper Cliff to the wire First Aid competitions.

Photographs this story accompanying

1. The victorious Copper Cliff team after Bennett (coach).

2. At the conclusion of the other semiens of elimination contests, and the enthusi- final T. M. Gaetz (left), asst. superintendent astic participation of hundreds of men form of mines, presented the H. J. Mutz Shield the background for the Parker Shield event. to the Frood-Stobie entry: "Bud" Fisher (captain), Pat Hamilton, Russ Armstrong, George Sleeman, Weir Stringer (spare) and Bill Gaylor (coach).

3. Here's the big moment that comes to every team-that "this is it" time. The Garson lineup has just come on the floor and has been handed copies of the test problem; you can almost hear those skulls cracking as the boys soak up the details against the ticking of the timekeeper's watch.

4. Dr. K. Bromley conducted the oral examinations in First Aid for the underground teams. He's seen here quizzing Russ Arm-

5. The oral tests for the surface teams were handled by "Cy" Varney of Creighton No. 5 Shaft First Aid staff, who is pictured here (left) popping the puzzlers at M. Taback of Copper Refinery.

6. Dr. Brent Hazlewood marks his score through its paces in the Mutz Shield semifinal.

In the next three photographs are the (Continued on Page 12)



Big Variety of Timber Processing Handled for Mine









Frood-Stobie Carpenter and Framing Shops a Busy Spot

a year is processed into various shapes and rington. sizes for underground square sets at Frood-Stoble Mine alone. In addition to this material, the carpenter and framing shops at Frood-Stobie regularly produce a tremendous quantity of other items for use in the mine, such as ventilation doors, concrete forms, ladder sides, skip and cage guides, saddle blocks for drifts, grizzley blocks for stopes, chute sides, pillar and jaw blocks, and thousands of blasting spacers, to name just a few.

The big producer is the massive doubleend framing machine seen in the first of the The whirring knives, just a blur in the accompanying photographs. With two picture, cut a horn on the end of the piece accompanying photographs. vertical and two horizontal saws on each side of timber like the framing machine does, it cuts horns on both ends of a piece of although not as swfitly. timber in one backward and forward pass of its carriage. When the square-set method floor planks for a mine cage in this picture of mining was first introduced at Frood, are Stan Newman and Noah Desrochers. timber for the sets was cut by hand saw. 6. Walter Leach is operating the swing Lady of the House: "I'm afraid A gainer was soon put to work on the job, saw to cut lengths of 10 x 10 B.C. fir which know what good, honest work is. and then a single-end framer was installed, will be framed into gangway timber on the to be followed by the big double-end machine. gaining machine.

Three quarters of a million feet of timber At the controls in the picture is Alf Sher-

1011 100

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Other phases of the framing and carpenter operations at Frood-Stobie are shown:

checks the horn measurements on a load on posts just off the framing machine. Measurements must be exact to ensure a firm fit in the square set.

3. Art Rouleau is drilling handle holes in a string of heads for wooden mallets to be used for opening powder boxes underground.

4. Framing gangway timber on the gaining machine are Jack Goode and Roly Brunet.

5. Feeding birch to the planer to make

7. On the rip saw Jack Maki is cutting floor boards to the proper width for a mine cage

8. Making basswood brake blocks for mine hoists, Arvo Rassu takes a cut with the big band saw.

9. Leo Midgley (left) is busy at the bench making models of square set timber for experimental use and Tommy Ryan is fashioning trays for the machine shop tool crib.

10. Alf Maggs watches the performance of the automatic filing machine on which 2. Eli Simon carpenter shop foreman, the carpenter shop's dozens of saw blades are reconditioned. Blades range in size from 36 inches down to 10 inches.

And that's a quick look at Frood-Stobie's carpenter and framing shops, where some 40 men maintain an extremely valuable service to the mine.

"DOWN" ON THE FARM

Two disgruntled farmers liked to grouse to each other

"Never did see hay grow so short as mine this summer," sighed one.

"You think yours is short," answered the other. "I had to lather mine to mow it!"

WELL?

Lady of the House: "I'm afraid you don't

Knight of the Road: No. ma'am what good is it?







Supervision and men on the George Fleming shift at Frood-Stobie No. 7 Shaft earned bows from all Inco on February 9 when they passed the 100,000 mark in consecutive safe shifts worked. They started their run on July 13, 1950, and up to March 31 had completed 991 days without a compensable lost-time accident, a total of 106,229 safe shifts. Photographed above are the men who have rolled up this fine record.

Great Progress Reported from The Inco Mines

(INCO ANNUAL REPORT FOR 1952) The underground development in the producing mines advanced 132,435 feet, approximately 25 miles, compared with 89,269 feet in 1951 and 87,963 feet in 1950. The total underground development in the operating mines now stands at 1,717,981 feet, or more than 325 miles.

As a consequence of the heavy war-time drain upon the open pits and of their large post-war output, it had been anticipated that before the end of 1953 it would be no longer practicable to remove ore from the Frood-Stobie ore body through open pit surface operations. During 1952 the Company was able, however, to block out more ore which could be mined from the surface. As the open pits give ore of relatively low cost and provide valuable flexibility in the mining operations, production from this source is being continued.

The increase of approximately 2,400,000 tons in underground ore production was due principally to the large tonnages produced from the Creighton caving project. This low-cost bulk mining method is an adaptation of a mining technique by which great marses of ore are induced to cave and in 1953, including work necessary for ex-disintegrate by their own weight. This ploration at depth. disintegrate by their own weight. This project, together with new metallurgical processes, has made it practicable for the existing main shaft and the sinking of the Company to recover and treat ore lower in new internal shaft were both completed to grade than it had ever worked before in underground mining. From the caving area alone Inco is currently mining more ore than from the Frood open pit. Additional blocks were developed sufficient to supply the Creighton Concentrator at its increased capacity, which, by July 1953, will be 12,000 tons per day. A second underground crusher installation to handle ore from the new caving blocks was practically completed and is scheduled for operation in April 1953.

Development of the Creighton lower areas continued throughout the year. This is Inco's deepest operation, the lowest working level being 5,425 feet below the surface, with the Frood-Stobie Mine for stabilizing older areas shaft to serve the area reaching 5,562 feet and for filling current working stopes. At below the surface.

production are planned for 1953. Work was mine filling, resulting in more economical continued on the 1,400-foot level crusher and mining, higher production from working ore-pass installation. The development of places and improved working conditions. new areas in the mine is progressing rapidly to meet requirements of the conversion schedule.

The new No. 8 shaft at Stobie was completed to the depth required for the present operations. By excavating this shaft from for the Finlayson Shield: (7) Copper Re-underground, working up from several dif-finery, R. Duncan (captain), H. Seguin, M. ferent levels simultaneously, the project was finished some 20 months earlier than other-there is a several dif-finery, R. Duncan (captain), H. Seguin, M. Barran, J. Austin, M. Taback spare) and Ed. Sutherland (coach). (8) Coniston, W. wise would have been possible and with a saving of many man hours of labor. The head frame, hoist installation, crushing plant and change-house addition required for the No. 8 shaft project were advanced sufficiently to assure this shaft being available for regular hoisting operations by about mid-year in 1953.

At the Frood section of the Frood-Stobie Mine, another low-cost bulk mining techni-que called the "blasthole" method has now become the principal method of mining. This differs from "induced caving" only insofar as explosives are used to break the ore. Development of a new mining block in the south end of the mine above the 1,000-foot level continued during the year.

The daily production rate at Murray Mine was again lifted and development is being carried on in anticipation of a further increase to meet the requirements of the complete conversion program. In the lower section of the Murray Mine, shaft stations and rock pockets were excavated. Development in this lower area will be carried on

At Levack Mine, the deepening of the new internal shaft were both completed to the depths necessary to service the new area from the 1,600-foot to the 2,650-foot levels. Shaft stations have been cut and develop-ment has been started in the area. Plans have been made and preliminary work is under way to extend both shafts to the 4,000foot level.

The deepening of the main shaft at Garson Mine continued during the year. This will permit development of the lower area of the mine as well as further exploration at depth.

Water-borne sand fill from the Copper Cliff Concentrator continued to be used in the lower levels of the Frood section of the Creighton Mine, water-borne sand fill from Production from the Stoble section of the the Creighton Concentrator is now used for Production from the Stobie section of the the Creighton Concentrator is now used for "You knew he was a burglar when you Frood-Stobie Mine was stepped up to 4.500 filling all current working stopes. At both married him?" asked the magistrate. at the end of 1951. Further increases in practically eliminated the use of rock for the house."

First Aid

(Continued from Page 9) Bradford (captain), R. Keffer, M. Boulet, A. Nooyen, and J. Bureau (spare); not shown is R. Bouchard (coach). (9) Open Pit, W. Scott (captain), G. Wilcox, G. Ruston, S. Desorneaux, J. Chellak (spare) and J. Stalker (coach).

10. The Copper Refinery team is seen in action here, ministering to patient Gordon Beckett. Although they did the rest of their work extremely well, none of the four teams in the Finlayson Shield event found that Gordon had a fractured jaw along with his other injuries.

11. Dr. Jack Stanyon watches closely as the Copper Cliff team captained by P. Duffy carefully moves its patient to a stretcher.

The four teams defeated by Frood-Stoble for the Mutz Shield are seen in the remainder of the layout's photographs: (12) Creighton Mine, J. Lalonde (captain), H. Cormier, V. Holla, M. Dubien, B. Livingstone (spare) and H. Moyle (coach). (13) Levack Mine, H. Gillis (captain), T. Hamilton, A. Frollick, J. Bryant, W. Rodd (spare) and W. Ceasar (coach). (14) Garson Mine, R. Cayen (captain), L. Lisk, W. Crump, J. Woods, F. Sarazin (spare) and S. Grassam (coach). (15) Murray Mine: K. Martin (captain), D. Rodgers, W. Cichomski, K. Amos, C. Leduc (spare) and A. Bazzo (coach).

TAKE CARE

We ought to think of safety rules Not in terms of regulations,

Or of posters, charts or signals,

Posted up at various stations But in terms of broken legs and arms

- And how much such things cost, Just how many hearts are broken
- And how many hours are lost. For your life is an investment
- In which others have a share
- And everyone would benefit
- If YOU would just take care.
- -R. D. Bulloch-The Aluminum Sheet.

GUMSHOE HUSBAND

••••••



An all-time all-Inco safety record of 232,769 consecutive shifts without a lost-time accident was established by Coniston Smelter during the period from August 9, 1951, to March 4, 1953. The previous record of 227,965 safe shifts was held by Coniston. In setting the spectacular new mark they collected their eighth 100,000-Safe-Shifts-Award since 1944. Seen above with Superintendent Fred Murphy, who expressed his congratulations and thanks for this splendid safety performance, are representatives of the various departments in the plant: front row, left to right, W. Shelegey, mechanical dept.; F. Cresswell, electrical dept.; G. De-Marchi, misc. dept.; G. Landriault, converter dept.; P. Leclair, converter foreman; N. Dematteo, sinter plant dept.; G. Pugliese, sinter plant dept.; M. Holunga, mechanical dept.; D. J. Kidd, time clerk; back row, A. Gobbo, mechanical dept.; S. Floriana, converter dept.; A. Gagne, converter dept.; S. Johnson, blast furnace dept.; A. Zlatkus, pilot plant; R. Bredin, pilot plant; G. Halverson, mechanical dept.



At a regular meeting of supervision Superintendent Fred Murphy spoke his appreciation of the striking safety record established by the Coniston Plant. Sharing his congratulations in this picture are: front row, R. L. Snitch, asst. superintendent; E. H. Bracken, pilot plant foreman; R. H. Keffer, relieving foreman; E. Strom, sinter plant foreman; H. Bassett, plate shop foreman; R. Hood, surface labor boss; A. Martinello, carpenter foreman; W. Johnson, machine shop foreman. Second row, R. Muirhead, chief electrician; W. Bachorski, feeder boss. Back row, C. Phillips, safety engineer; R. Bouchard, first aid man; P. Leclair, converter foreman; J. Forestell, bin boss; G. Geoffrey, general foreman; T. Tancredi, miscellaneous fitter foreman; J. Metcalle, asst. master mechanic.

BADMINTON CHAMPIONS

The 1953 Nickel Belt badminton championships were decided in a thrilling series hardfought final matches at Inco Employees Club. Harvey Nadeau retained his singles title but was forced to the limit to turn back the records at the New York office, was a visitor challenge of Johnny Hartman. The latter teamed with Geno Gonnella to win the men's doubles crown and paired with Colette Potvin goods store in Helsinki, he won both the to cop the mixed doubles. Miss Potvin shared 5,000 and 10,000-meter races at the 1912 acter from a friend. He is a mirror, on a triumph in the ladies' doubles with Sheila Olympics and crowned an illustrious career which the warmth of our breath impedes Keegan, who won the ladies' singles. Ron by winning the Olympic marathon at Ant- the clearness of the reflection.

consolation men's doubles championship.

in charge of the Inco Retirement System in Sudbury at the end of March. A famous Finnish athlete who operates a sporting

Bryan and Tommy Stefanko captured the werp in 1920. He broke eight world records consolation men's doubles championship. between 1911 and 1920. He and Antti Rantamaa, minister of sport in the Finnish Hans Kolehmainen, whose son "Chet" is cabinet, are on a tour of Canada and the United States to express appreciation of aid to their country during its heavy post-war ordeal.

> Wa cannot easily discover our real char---- Richter



Elizabeth I, seated in the Coronation chair, receives from the Lord of the Manor of Worksop a scarlet glove which it is his ancient right to present to the Sovereign. The glove is donned just before the Scepter is placed in the royal hand. Queen Bess was crowned on Sunday, January 15, 1559, at the age of 25. Elizabeth II will be 27 when she is consecrated with the same age-old ceremony at Westminster Abbey on June 2.



Historic Crown of St. Edward, with which all British monarchs are crowned, is shown left. Formed of "massy gold," it is encrusted with diamonds, sapphires, emeralds and pearls. The two central arches symbolize Heredity and Independence. The ceremonial Crown is worn but once in the lifetime of a sovereign and then only for a few moments. On the right is the Imperial State Crown with the arches slanting upward, an ensigne of empire. This is the most valuable royal crown in existence. In the centre of the band is the 317-carat Cullinan II diamond, the second largest diamond in the world. Above it, the great ruby of the Blace Prince. In the cross at the toy of the monde, Edward the Confessor's sapphire. The arches are clusters of diamond oak leaves with pearl acorns; almost 3.100 gems in all.



The story is told that the first time baby Prince Charlie saw his mother, the young Queen Elizabeth, posing for a photographer in her diamond tiara, he chuckled and pointed and asked. "What's that funny hat, Mummy?"

When he sees his pretty "mummy" in her regal red velvet robes, wearing the Imperial Crown of State that flashes with nearly three thousand diamonds and carrying the scepter in her slender hand, his small head will probably be too full of wonderment for asking questions. But the picture of his mother cn her Coronation Day is sure to stay with him so long as he lives.

The last reigning queen of Great Britain had no little boy to gaze on his mother with love and astonishment when she was crowned. Victoria was only eighteen and unmarried at her Coronation and her nearest living relative was her mother. The first Elizabeth was twenty-five when she was crowned four centuries ago. Never married, the "Virgin Queen" had not even her mother to watch her take the throne.

World Will See Crowning

Elizabeth II will be crowned at Westminster Abbey on June 2, next. Inside the great grey Abbey Church, few Canadians will witness the proceedings, although many will go as tourists and watch the Coronation procession from wooden grandstands. The rest of us will see the crowning on television, in newsreels and through pages of pictures in papers and magazines.

This will probably be the greatest Coronation pageant given any queen in British history. The ceremony will be well rehearsed with replicas of the royal regalia. The British Crown Jewels are the most valuable in any collection in any royal treasury. Including at least seven magnificent crowns besides scepters, orbs, swords, spurs, rings and bracelets, there are about sixty pieces all told. The total value has been estimated as high as \$80,000,000.

Some of the individual gems, however, are virtually priceless. The historic Koh-i-noor is the most famous diamond in the world. The Black Prince's ruby, now in the front of the State Crown, has historic value quite apart from pounds and pence. In the Royal Scepter sparkles the Great Star of Africa, the biggest cut diamond in the world, weighing 530 carats-as big as a Seckel pear. Also, there's its sister stone, most often called the Cullinan II, which weighs 317 carats and was cut from the same huge diamond crystal that produced the Great Star of Africa and more than a hundred other finished gems. The Cullinan II is in the band of the State Crown, and the third and fourth pieces are in Queen Mary's Crown.

Two Crowns Are Needed

Since the Coronation of Charles II in 1661, the British monarch has been crowned with two crowns. One is the historic Crown of St. Edward, used only at the Coronation; the other is the "Sunday" Crown, used for the opening of Parliament and other state occasions.

Elizabeth II will have the Crown of St. Edward on her dark curls for only a few minutes. As a hardressing sidelight, it is interesting that Elizabeth I wore her red hair flowing to her shoulders, although not all artists have depicted her that way, and Queen Anne wore an elaborate wig of long corkscrew curls.

The whole balance and safety of the Crown depend upon the fit of the velvet cap. It is adjusted by a hatter for each sovereign Inside is a chamois lining to keep it from slipping, and velvet pads are anchored at four places around the head to that when the heavy Crown presses down it won't hurt!

Adventure In Jewels

The Crown Jewels have had some thrilling adventures, in and out of the Tower of London, where they live. It was Charles II who first put them on public display as they are today. Shortly after this innovation, an attempt was made to rob the Tower and only the quick wit of a few attendants prevented the loss of everything for which King Charles had just gotten the bill paid! The Earl of Pembroke, in his will, left fifty pounds for the foctman "who cudgell'd the thief ... that knave of dyamonds!

During the Second World War, the regalia were taken to Windsor Castle for safekeep-And just in time! A "doodle-bug" ing. bomb hit a nearby building and smashed to fragments the great glass case in which the objects were exhibited. At Windsor, the most precious of the gems, including the Koh-i-noor diamond, were pried out of their settings with a pair of scissors, stuck into a jam jar and buried in a potato field. The Crowns, wrapped in newspaper and packed in old-fathioned leather hatboxes, were stored in a passage under the castle. The far end of the passage opens into Sherwood Forest-something that would have surprised Robin Hood!

Queen May Remember

Windsor, she and her sister were taken down who, on preventive or research jobs, go on by their governess to see where the Crowns for weeks and weeks without discovering were being kept-the battered boxes in the anything and find themselves asking, "Heck, cold gray vault. Perhaps the young Queen is this really worthwhile?" will remember that adventure when the In the picture is a shaft from one of the great State Crown is placed on her head in cranes in the converter building at Copper Westminster Abbey. Perhaps the picture of Cliff, where the big ladles of molten metal the old leather hatboxes in the underground are handled. The chalk marks on the right gloom in a time of terror will hover before her eyes as she looks on the brilliant pomp have resulted in an equipment failure if of her Coronation Day. And perhaps the two scenes will blend together to symbolize for her the story of her people.

Note Developments In Milling, Smelting

(INCO ANNUAL REPORT FOR 1952)

The concentrating and smelting operations benefited from the first full year of the by new plant utilizing a more efficient hydro-Creighton Concentrator and handled record metallurgical process developed by the re-tonnages, permitting continued high output cearch staff. A new research laboratory is from the refineries. Process improvements practically completed at the Port Colborne were made without interrupting production.

Oxygen flash smelting of copper concentrates, a major result of the Company's research, was carried out on a commercial basis England, has continued its work of improving during the past year. This new process, in by reacting the concentrates with oxygen, rep- in connection with the refining of rhodium, result of death or disability. resents an important advance in non-ferrous extraction metallurgy. Several operating problems encountered in this new method of smelting are under continuing study.

Large-scale production of liquid sulphur dioxide, obtained as a by-product from Inco's oxygen flash smelting of copper concentrates, At Year-End was initiated during the year by Canadian Industries Limited in a new plant built at Copper Cliff for the purpose. The resulting to supply a substantial portion of the sulphur requirements of the sulphite pulp industry in Ontario and Western Quebec. The pro-duction of sulphuric acid by Canadian Industries Limited from Copper Cliff smelter gases was increased during the year.



This little story is of interest to every-shaft had failed in operation is anybody's When Elizabeth was a child Princess at body but it's beamed particularly at fellows

> end of the shaft indicate cracks which would they hadn't been discovered. And they were discovered only by a regular, painstaking inspection routine which many, many times had uncovered no defects in other shafts. What might have happened if this particular how discouraging it may seem at times.

At the Refineries

Colborne and Clydach leading to improvethe Orford Process at Clydach was replaced refinery providing larger and improved facilities for process research.

The Platinum Metals Refinery at Acton. the refining of platinum metals and has

26,742 in Inco

(INCO ANNUAL REPORT FOR 1952)

The total number of employees of the was 26.742, the highest in the Company's history. The total number of employees in searching her last suitcase and she was try-1951 was 25,757 and in 1950 was 22,503.

The year marked the first quarter century year-old daughter said excitedly: of the Company's formal Retirement System. During these twenty-five years, 1.955 em- i.n't he.'

guess.

The regular inspection procedure is carried out in the Mechanical Dept. shops at Copper Cliff with a Magnaflux unit. Powdered iron filings are sprinkled on a shaft around which a coil has been placed. In the magnetic field set up by the coil the filings follow the flow cf magnetism. A crack or other defect interrupts the flow and the filings build up at that point.

The machinist looking at the cracked shaft in the picture is Norman Temple. There's no doubt in his mind about the value of per everance on an inspection job, no matter

ployees have been retired on service or Important progress was made at both Port disability pensions and 2,197 beneficiaries of former employees received death-benefit ments in the electrolytic and carbonyl payments. At the year-end there were 1,241 processes. Treatment of refinery residues by service and disability pensioners on the rolls. The funds available for future benefits under the system aggregated \$61.851,678 at the yearend, consisting of the Retirement System Trust Funds and also the Retirement System assets on the Company's own books.

A contributory group life insurance plan, which is distinct from the Retirement System, is also maintained for employees of the Company and some of its subsidiaries. Cash benefits under this plan have been paid which all smelting heat requirements are met introduced the use of ion-exchange methods during the last 25 years in 1,506 cases as a

Acknowledgement was made by the Company's Board of Directors of the skill, energy and loyalty of the employees throughout the organization, which made possible the accomplishments of the year.

LITTLE HELPER

A woman had taken great pains to conceal the bottle of perfume she was trying to smuggle into the country from her vacation output of this valuable chemical is expected Company and its subsidiaries at the year-end trip abroad, and all seemed to be going well. The customs official had nearly finished ing to look unconcerned when her little five-

"Oh-h-h, Mummy, He's getting warm,

Ladies Are Enthusiastic Curlers at Levack



At their closing bonspiel of the season the members of the Levack Ladies' Curling Club posed for this picture: front row, M. At their closing bonspier of the season the members of the Levack Ladies' Curling Club posed for this picture: front row, M. Mason, E. Bushnell, B. Adams, O. Wright, B. Kauppinen, P. Goodspeed, H. Drohan, C. Piprell, Y. Villeneuve, M. Malette, M. Moran; second row, E. Hutchinson, M. Ribic and R. White, draw committee; P. Andersen, secretary; I. Ryter; M. Gomoll, president; G. Butterworth; J. Endleman, vice-president; M. MacNeil, A. Storey, B. Palumbo; third row, J. Rodd, A. Lejambe, C. Richer, M. Rowley, F. Snowdy, E. Davis, A. Bell, P. MacFarlane, M. McGowan, H. Lampi, Y. Bouclin, N. McCoy, M. Gilchrist, C. Kennedy; back row, L. Kulmala, C. Taylor, F. Austen, B. Holmes, J. Koski, L. Lawrence, A. Snider, M. O'Shaughnessy, M. Kennedy, J. Fraser, M. Clarke, T. Rhodda.

Hectic Time at **Final Bonspiel**

The Easter Bonnets finally defeated the Indian Chiefs, and the Clowns and Convictstaged a hilarious exhibition match, at the official closing bonspiel of the season held by Levack Ladies' Curling Club on March 7. Lunch and supper were served in the base-

ment of the rink and the gals went all out for fun in the gay one-day 'spiel. Results were as follows:

"A" EVENT

Winners: E. Davis, lead; P. MacFarlane, second; F. Austin, third; A. Bell, skip. Runners-up and winners of the High Ag-gregate: A. Snider, lead; P. Goodspeed, second; O. Wright, third; L. Lawrence, skip.

"B" EVENT

Winners: J. Rodd, lead; B. Holmes, second; B. Kauppinen, third; P. Andersen, skip.

Runners-up: C. Kennedy, lead; N. McCoy, second; Y. Bouclin, third; M. O'Shaughnessy, skip.

CONSOLATION

H. Lampi, lead; R. White, second; M. Gomoll, third; M. Ribic, skip.

Organized early in January, the club quickly enrolled 56 enthusiastic members who struggled through primary lessons in the game with help and encouragement from the Sudbury Curling Club and the Copper Cliff Ladies' Club. It wasn't long until some very creditable curling was in evidence, and the calibre of play in the closing bonspiel was, on the whole, unusually good for a first-season club.

In regular scheduled play the Matilda Trophy, donated by Piccolo Bros., was won schedule arranged by Levack Athletic As-by Mrs. Hal Snowdy's team with Mrs. Ray sociation last winter. The Legion entryled Fraser as lead, Mrs. Cec Richer as second, the league and then went on to win the and Mrs. Ralph Gomoll as third. The Endleman Trophy, donated by Harry Endleman, Stadium in Copper Cliff.



OFFICIAL CLOSING OF THE SEASON This was the scene at the Levack curling rink as the ladies' club took to the ice for the bonpsiel which officially brought a very successful first season to a close.

went to Mrs. Waldo Clarke's foursome with Mrs. Wm. Bell as lead, Mrs. Wm. Bushnell as second, and Mrs. Stan Parkhouse as third.

LEGION JUVENILES WIN

Legion, Mine-Mill and Elks battled their way through the eight-game juvenile hockey McAteer Trophy in the playoffs at Stanley

WISHFUL THINKING Judge: "Tell the court how you came to

take the car." Defendant: 'Well, the car was standing in

LEGION JUVENILES WIN Three teams sponsored by the Canadian the owner was dead."

THE SUNNY SIDE

'It looks like rain.'

'Not here in California."

"Look at those clouds up there."

"They don't mean a thing. They're just empties coming back from Florida."