You wouldn’t think a person whose job entitles him to call himself a roughneck would spend his evenings playing marbles, would you? Well, you’d be wrong. In the oil-drilling camps of the Northwest Territories to Texas a game called marbles is still played today, even though the only form it has today is the small, plastic kind.

The only place another man can’t follow you is onto your home row (A2, if you are playing out of A).

But wait! There is a space right in the center of the board. It serves this purpose: say your ally is just starting its circuit by moving up line A1, and you roll a number that will take you to the center hole. You can place your ally there, and on the next roll you can start down line A3, and thence into your home line, A2, bypassing three-quarters of the board.

But can you be knocked off the center hole by an opponent if he rolls a number to put him there?

Some roughnecks add a little spice to the game by playing in teams. Player A will team up with C to the extent of agreeing not to knock each other off the board unless they have no other choice.

One more thing: you have to roll two on your dice to get an ally off the diagonal line and onto the first hole in line A1.

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Life in the land of the big drilling rush is cold and hard and very, very nice

by JAMES KNIGHT

Most people fly to the Rainbow area in northern Alberta. You can drive in right to the lake that gives the field its name, if you don't mind backeisng over 120 miles of bush road and taking a chance on your Antonov giving out about mile 60, but most people fly. They fly in every type of airplane from sexy little two-seaters finished in decorator colors, through no-nonsense Ciners with olive-drab interiors, to 36-passenger prop-jets like Imperial's new high-wing F-27 F. Nobody lives in Rainbow but the airfield there is jet-age.

The reason nobody lives in Rainbow is it's a wilderness—a thousand or more square miles of stunted spruce and poplar, low hills and muskeg, in a loosely-defined area in the northwest corner of Alberta. The reason the airfield is jet-age is because Rainbow is the hottest little oil exploration area in Canada. Last winter there were nearly a score of oil drilling rigs, each worth up to half a million dollars, poking pipe more than a mile down to tap the oil that's there. The traffic in and out may not seem so have been much by big-city rush-hour standards, but for the northern Alberta bush, it was enormous. In February, Imperial Oil alone brought 356 people in and out of the area. And Imperial was only one of 12 companies active there.

When you get off the airplane at Rainbow, there is no waiting room, or anything else—some trucks and a few cars parked at the edge of the strip, that's all. The people get off the plane, climb into the trucks, and disappear along a surprisingly-smooth road to the drilling camps. If you remark on the condition of the road, somebody will say: 'It gets pretty bad farther on.'

'Farther on' is maybe 75 miles away in a completely uninhabited country that is as well-known to oil geologists in Edmonton...
Kirkpatrick and Riley are toolpushers, as drilling rig hours are called, and they were supervising too Imperial rigs in the same area. Kirkpatrick was visiting Riley, seeking to borrow one of Riley's drillers to replace a man who was sick, so the talk naturally turned to drilling. "They come in off the road any old time, looking for gas, a meal, a steam," Riley complained. Strum. "Sure," Riley said. "In this weather, everything freezes solid." The truckers used steam to thaw clogged pipes, and even parts of the truck when it gets cold enough.

That night it got down to 32 below, but the air was still and the cold didn't affect the drilling, which goes on around the clock. A few weeks earlier, as everyone who was in the Rainbow Lake area last winter is certain to point out, it got to 65 below (one man claimed 70 below, but since everyone agreed that the mercury in the thermometers had disappeared into the hub and stayed there for a week, nobody could check his statement). In temperatures like that, you keep a steam hose in the water tank all the time, or you get no water. Steam is essential to winter drilling: to thaw frozen pipe joints, keep water hoses open, melt ice tools. Sometimes the nookhucks work in clouds of steam thicker than any fog on the Grand Banks.

After Kirkpatrick had settled the business of the borrowed driller with Riley, he drove back to his own camp, eight miles away. On the way he talked about a nookhucks life. "It's toughest on the wives," he concluded. "They have to bring up the kids alone, and it's amazing how good a job they do it." Kirkpatrick has three children, and his wife raised them while he drilled for oil all over Canada. "I've drilled in every province except Newfoundland, Ontario and Manitoba," he said. And if the life he and his crew lived at Rainbow last February is typical, he's absolutely right about who has the tough part. Just before driving over to Riley's camp, Kirkpatrick had sat with a dozen nookhucks at his own camp and watched a 1963 movie called Diamond Heat which featured both, tropical, Hawaii, in glowing color; lobby Yvette Mimieux in a tiny white bikini, and Charlton Heston on a big white horse. He had picked up another movie along the supplies brought in on that day's airplane, and by exchanging them with another pair sent to Riley's camp, the crew could count on four movies that week. "Once," Kirkpatrick said, "we traded around and got as many as seven in one week." Later, after returning to his own camp, Kirkpatrick joined in a game of crazy marbles in the dining room. "It's from Texas, I think," he said. "It's like Chinese Checkers combined with Ludo."

That was the evening's game. The men meet in the dining room to play cards (Kirkpatrick's crew weren't much for gambling, for some reason; he said that other crews sometimes spent the whole night playing poker) or crazy marbles, or to talk in the dining room is always open for a coffee and a snack.

"They make it themselves," Kirkpatrick said, "and they clean up afterwards, or the cook complains, and you tell the driller to pass the word along to the men in his crew." Riley's don't all spend their time in the dining room when they're not working.

Time is one of the things on an isolated drilling crew have lots of and they sometimes spend it prodigally. "The first thing we do after a long change is sleep," a derick man from Devon, Alta., said on the platte into Rainbow. "But after a day or two you've caught up and you can't sleep. Then what? Oh, write letters, read a book.

Art Tydenham, a 49-year-old mechanical with three sons back in Edmonton, speaks his space time-anxiety at a Southern Alberta Institute of Technology correspondence course to qualify for a steam certificate. He's been travelling with a drilling rig for seven years and he hopes the course will enable him to settle down in charge of a heating plant some day. "I'll get my fourth class papers," Tydenham says, "then my third. Imperial pays part of the cost, you know, and I've got lots of years spent on-time studying.

A list of them also spends it working. Over-time is one of the main enticements of board drilling, and not only for the money—it fills part of the time between long changes. But the money is important. "An energetic driller can make as much as $850 a month," George Kirkpatrick said. "They can't do that well anywhere else."

That money goes back home, to pay off the mortgage on a house, to buy a pony for the children, to save up for a farm. The seasonal aspect of northern drilling seems ordered to order for farmers—drill in the winter, farm in summer—and many of the young men who come to drilling have farm backgrounds. The muscular, outer-air life may also appeal more strongly to farm boys, although its aura of romantic pioneering finds an echo in many an adventurously youth's imagination.

"They take pride in their mastery of drilling techniques—a good man can, for instance, can handle the enormous wrench so that it works almost by itself. It's only when you see a new man struggling to clasp it on the drill pipe, then reaching awkwardly around to make it fast, that you appreciate the skill of an experienced hand."

A man unaware constantly about the job in the way that soldiers grumble about the army—it's that they're dissatisfied, it's just that grumbling is expected. Nobody would think of making a real complaint, or of staving about conditions. When the temperature got to 65 below in Rainbow last January the work went very slowly because you can hardly move in that cold, but nobody complained. The men are too proud of themselves for that.

They're all too proud of themselves for their own good, sometimes. While the men were waiting around for the hut to fill up for the showing of Diamond Heat that night last February, most of the talk was about the young nookhuck who had to be driven out over that tortuous bush road the day before suffering an attack of appendicitis. At Grouville, the driller on the young nookhuck's crew, drove him out to Manining on the Mackenzie Highway, and somebody asked how long it took.

"Oh, three and a half to four hours," says Grouville.

"That's pretty good," somebody says. "But you should have said five or six." Everybody laughs. The joke lay in the fact that it was George Kirkpatrick's car, and doing 120 miles on that road won't help the car. But even Kirkpatrick laughs.

"He looked pretty weak," Grouille says. "I asked him once how he felt, and he said: Oh, it's a bit weaker. They all shake their heads admiringly. Our men have been on the drill floor, trying to work, until he was too weak to push the chain that wraps around the drill pipe to unscrew it. They shake their heads again.

"He was stupid not to tell anybody," Kirkpatrick says, but there's a touch of admiration in his voice, too.

During the two hours it takes to run the movie, the heat and smoke inside the hut build up and build up. Outside in the crystal night it's something like 20 below and the snow squacks under your boots and the air is cold and sweet and sharp as water. A hundred yards or so away the derrick booms, etched in hard electric light and wrapped in thick tendrils of steam. Up on the drill floor the rotary table is revolving, turning the drill stem to grind the bit against the rock mile a dozen.
again. The short change occurs once a week, simultaneously with the long change, when one crew heads for a week at home, and a fresh crew arrives to replace it.

This time, the short change crew seems to get all the work. They made a trip that morning, which is roughneck jargon for the process of pulling the drill pipe out of the hole, unscrewing it by hand and stacking the 90-foot stands in the derrick, then replacing the worn drill bit with a new one and running the pipe into the hole again. Now it looks as if they will have to make another trip before their shift ends at eight the next morning. One of the young roughnecks mutters an epithet, and Al Grosvenor, the driller and top man on the crew, notes it only to the extent of making a slightly contemptuous remark about green roughnecks. He’s a little annoyed that it had taken them two hours to make the trip. "Should be an hour and a half, maybe three-quarters," he grumbles, in the accepted manner. Later, the young roughneck tries to recover with an offhand remark about how he’d feel they’d be making the trip because “it’s better to have something to do during the graveyard.”

As it turned out, they didn’t make the trip after all. The bit encountered a soft zone and they got through the night without having to change it. In fact, it wasn’t until ten next morning that they pulled the pipe. There was 50 feet left to drill below they expected to hit the pay zone, and everybody figured the bit must be worn flat after 11 hours at the bottom. But when they pulled the pipe, it was fine.

"Hell," says Jack Hamilton, a young geologist making his home in Dawson Creek while the drilling continues at Rainbow. "It could have done another 50 feet, easy."

Actually, nobody is certain it could. The drillers think of Rainbow as a tricky area. One of the problems on the toolpush’s mind is the hole’s deviation. "There’s no such thing as a straight hole, anyway," George Kirkpatrick says, examining some photoplates in a circle of paper the size of a quarter. The paper is inserted into a pipe-shaped device which is dropped down the drill pipe. When the device hits the bit at the bottom, a dart penetrates the paper disc and the position of the hole indicates the deviation. Al Grosvenor, the driller, says it’s his opinion that the rock strata is a slant, forcing the drill off at an angle.

"All the holes are like that around here."

Actually, the hole has been a good one to drill; they hadn’t lost control of their drilling mud (it cools and lubricates the bit, among other uses) in a zone where porous rock would let it seep away; the drill pipe hadn’t got stuck; the bit hadn’t broken in the hole. The only delay had been caused by the scarily cold weather, but the crew had huddled up and kept going.

"I wear medium weight thermals," Art Tyndale, the diesel mechanic, explained. "When it got to -65 below I had three suits of thermals on, two pairs of pants and a couple of sweaters under my parka."

Under such frigid it’s no wonder the men move ponderously and the work slows down.

The coldest job on Kirkpatrick’s rig last winter was the driller’s. When the crew is pulling pipe or running it back in again, the driller stands by his console of controls, manipulating levers, throwing clutches, pulling on a big brake; the driller is active, but his activity isn’t strenuous. And on a diesel-electric rig like Kirkpatrick’s, there’s no big engine roaring away and belching out a steamy breath to warm up the drilling floor; the motor is down on the ground, in a hot 50 feet away. The roughnecks who handle the tongs and wrestle the pipe keep warm through their own efforts—even the derrick man, 90 feet up the rig, stays warm by manhandling the stands of pipe into a rack as the floor crew unscrews them. So for two hours, while the crew hands up a mile of pipe, replaces the bit on the end, and sends it all back down the hole, stand by stand, the driller stands there, stomping his feet occasionally. He wears thick felt underboots in a pair of rubber overboots like everybody else, but still his feet get cold. Once the drill is back on bottom, he can set the machinery to run automatically while he goes into the doghouse for a coffee, or under the floor to examine the pipes, or to attend to the hundred other details that are his job, and get warm again in the process.

To keep going under such conditions, the men eat enormous meals. No bowl of bran flakes and cup of coffee for those guys. Breakfast is gallons of canned fruit juice, bacon and eggs, French toast, pancakes, fried potato—anything they want. There are 21 people in the camp, but their short ordering doesn’t seem to fatten Mrs. Dorothy Gaye, who does all the cooking. She’s the only woman in the camp, an unusual circumstance, but far from rare. She and her husband run the kitchen. Once a week (twice sometimes) she gives the men steak; every Sunday it’s turkey; every Friday, fish. An everyday lunch may be cold ham, sliced thick; boiled potatoes (you put on your own butter from a slab on the table); canned beans; chocolate pudding, cookies and small cakes; strong, hot tea from an enamel pot that tastes better than any other tea in the world. For their evening meal (they call it supper) there may be plasters piled on overflowing with fried chicken; turrones of mashed potatoes; fresh boiling carrots; bowls of peaches, plates of tarts, bliss full of cookies; and tea, coffee and, if it’s the day the grocery truck makes its weekly trip from Peace River, fresh milk in a cardboard carton so big the only way to get the milk out is to put a weight in the bottom; it’s too awkward to lift. The men all look like testimonials for vitamins pills—clear-eyed, clear-skinned, healthy in color and jaunty in their bearing.

In the winter some of them put on a little weight, and one night Kirkpatrick tried to kid Joe Rezowski, a solidly muscular roughneck with seven years’ experience, about a slight bulge appearing above his belt.

Rezowski patted the bulge and shrugged. "When the weather warms up, I’ll vote it off," he said matter-of-factly, and headed for his bunk.

Naturally, the place was spotless when Rezowski got there. Camp attendants do all the housework—scrub the floors, sweep the walks, keep the stoves fuelled with oil. Last winter the men had to make their own beds because the cold weather kept the attendent busy just putting the stoves, but usually even this is done for them.

And if an anniversary comes up, as Joe Rezowski’s sixth wedding anniversary did while he was in camp, a man can usually get permission to use the radio-telephone in the toolpush’s shack to call home. Reception is sometimes spotty, and the channels are often in use, so that Rezowski had to wait two hours for the chance to talk to his wife that night in February, but he got the message out without any real trouble.

Just another proof of toolpush George Kirkpatrick’s famous dictum: Drilling is taught on the wires.\]
THE INDOMITABLE DORY

It looks like it was fished out of newspaper, but it can take you across the Atlantic.

By Murray Baird

"I'm a-sailing you," said Captain Angus Wallace, weathered 84-year-old skipper of Nova Scotia's famed fishing schooner Bluenose, the last big boat ever put in the ocean. And there's not a fisherman on the Atlantic coast to say I'm wrong."

For its particular purpose the dory is probably the best boat ever developed. Even now, though its heyday is long past, the dory is still as much a badge of the Atlantic province as the great schooner Bluenose herself, and chances are that dories will still be built in Lunenburg when Bluenose II, the present replica of the old fishing fishman, passes into memory like her namesake before her.

A dory is really nothing more than a little rowboat, beautiful only in its cleanliness, like Humphrey Bogart, but light (a 16-footer weighs about 400 pounds), strong (it can carry a ton of cod), seaworthy (a man sailed one alone across the Atlantic), and durable (it will take about six years of hard, daily use). Our fishermen don't work the Banks with dories anymore, but you'll find the sharp-nosed little boats almost everywhere else.

You can find fished dories today nesting on the decks of ocean-going trawlers; decorative dories adding atmosphere to a Philadelphia restaurant; sporting dories competing in California surfboat competitions; hunting dories on Great Slave Lake; value-driven dories owned by film stars like Sterling Hayden. But most of the dories you will find are working dories, bearing fishermen seeking lobsters, herring and cod out around the coasts of the Atlantic provinces and New England.

There was a time, within the memory of men still living, when more than 400 white-winged fishing schooners out of places like Gloucester, Lunenburg and the Newfound-

land ports of Grand Bank and Buoys, cast some 16,000 fishermen adrift in dories 100 miles or more from shore to seek codfish and brave the brutal sea until the schooners could pick them up again.

None of them were never picked up. Getting lost on the Newfoundland Banks is a danger that has haunted fishermen ever since the French and Portuguese began the fishery in 1594. The Arctic current which feeds the vast sea life that makes the Banks the best fishing grounds in the world also generates chronic bad weather. Countless dories have died in the maw of vicious waves or the sudden shroud of impenetrable fogs on the Banks. In the 1868's Gloucester alone said services for 100 dead Banks fishermen a year.

But those who managed to come home praised the seaworthiness of their dories, and their exploits entered the folklore. The prowess of the dory as a safe boat in seas that might swamp a craft of different design was demonstrated to the world in the spectacular ocean-crossing of Alfred Johnson of Gloucester in his dory Gastrod in 1875, and the half-dozen adventurers who followed him. Johnson voyaged alone under a sail the size of a bedsheets, from his home port to Bar-

ringston, N.S. and on to Liverpool, England, in 67 days. Since then the lure of the dory-

men has been kept alive by such writers as Rudyard Kipling. His novel Captain Gra-
pye, first published in 1897 and later filmed, has remained a classic in high ad-

venture ever into the space age.

"Of course it was adventurous," said Captain Clarence Williams, a breton-faced Newfoundlander of 65, who began dory fishing at 16 and is one of the few Canadians still living who skippered a Banks schooner. "In those days a man had to take chances to make a living. So we fished rough and we fished hard."

Like all Banks fishermen Williams' men were paid a share of the market value of their catch, so that the more cod they brought home to the ship's owners, G. & A. Bigelow Company in Grand Bank, the more money for all. It was part of the captain's job to lead his men to the best fishing grounds and if the crew brought home a poor catch they blamed the skipper.

If we didn't make much fish on a voyage," said Williams, "I couldn't raise a crew the next spring.'

The longest voyages were in summer and fall but the hardest was the spring voyage beginning in March, when mountainous icebergs moved down from the Arctic and the ice-covered dories thawed their oil-

skins by the cook's stove in the galley. "It was a good life if a man could stand up to
it," said Williams, who now teaches seamanship at the College of Fisheries in St. John’s. For those who couldn’t face the long Atlantic from a dory, there were shore jobs such as drying and packing code for overseas markets, or there was emigration.

Aboard the schooners the dorymen were out of their banks by two a.m. preparing gear to start fishing at first light around four o’clock. They worked about 20 hours a day through snow, wind, rain and fog. When fishing was done for the day, they took turns splitting and cleaning the fish on deck and sailing them down in the hold. And when the schooner moved from one fishing spot to another, all hands did duty on deck and aloft. "There was no time to space," said Williams, "but late at night in the 1950s, somebody might strike up a tune on the accordion, and there’d be a bit of singin’ and yamin’.

At work, the dorymen set their travel lines close to the bottom, 30 to 60 fathoms down, anchored in place and supported along their length by the buoys which also served as markers. The four lines fastened together covered a mile and a quarter with more than 2,000 baited hooks. When the dorymen pulled the travel in, one man took off the fish while the other rebaited the hooks and reset the travel from the other side of the boat. A well-loaded dory could carry nearly a ton of cod and every time a bust returned with gulls howling in the water from the weight of fish, the men tramped and sometimes snapped at one another until the fish were heaved on the deck of the schooner and counted. The ‘high man’ with more fish than his shipmates was a leader in the capelin society of the f’er’C’lhe, and was paid a bonus.

If a doryman had a good year he might make as much as $1,400. Sam Scott, a 61-year-old St. John’s man, small and wiry, with a long jaw and quick eyes, was 20 years a doryman and he remembers the routine like an old soldier recalling a battle.

"If the skipper was anchored, we’d draw lots for the different compass points, and pull away from the vessel a mile and a half or maybe two or start setting," he said. "If we were ‘fishy’ artists, he’d drop us off and sail on a couple of miles, drop another dory, and so on." There was no radio to give weather forecasts then and the skipper was always edgy about the notoriously bad weather on the Banks. He had only his barometer to rely on, and when the weather began to look threatening, he flew the ship’s flag upside down, sounded aizzling hand horn or fired his deck gun to warn or recall the dories. Once when the wind jumped up and the fog came down dark, Sam Scott and his dory mate were lost for three hours in a screaming gale.

"When we got back the vessel was pitchin’ so hard, she was sinkin’ in her bowspirit and throwin’ the main boom under water. We figured we’d lose it," said Scott, "but every dory couldn’t have lived through that night.

But not every dory lost from its schooner became a coffin. Sometimes last dorymen rode out blinding rainstorms with gale nuts for a sea anchor and mast and sail lashed over the open boat to form a protective cover against the shipping spray. Some were picked up by other Banks schooners or passing steamships, after drifting for days on the open Atlantic. In 1957 two lost Newfoundland dorymen, Charles Williams and George May, sailed and drifted 374 miles in 11 days before being rescued by a passing ship.

Harrowing escapes by dory from sinking vessels still occur nearly every year on the Atlantic seaboard. When Captain Walter Longmuir’s 65-foot scallop dragger Euphie III burned in a storm on the Bay of Fundy in October 1964, the three-man crew from Digby, N.S., rowed their dory through gale-rippled seas to safety ashore. And when the 93-foot schooner Golden Glen, heading for the Caribbean, ran on a reef in a storm on November 13th, 1965, owners Dudley Fletcher and George Moar of Chatham, N.B., used the schooner’s dory to abandon ship and rescue their wives, a guest, and their three children, aged ten, eight and two.

But the dory’s reputation rests mainly on its efficiency as a fish catcher, and for some ship owners it helped to make fortunes. When the industry was flourishing in 1888, Newfoundland manned 350 Banks schooners with 8,000 men, and in the same year New England sent 335 ships with 11,000 men. By 1908 Lunenburg owned 150 Banks schooners and was building more ships every year than any other port in Canada. But tells whittled away traditional salt fish markets in the Mediterranean and West Indies, refrigerators put fresh fish on everybody’s table at home, and modern trawlers began to replace the elegant old schooners like Bluenose. By 1937 Lunenburg sent out only 27 ships. The courageous days of dory fishing on the Banks ended for Canadian and American fishermen with the Second World War. Dory building dried up proportionately but never disappeared; the seaworthy little craft had long since been adopted by the inshore fishermen who work within sight of land, and their need has kept the craft alive.

The standardized design of the dory grew from the demands of the Gloucester schooner captains on the Grand Banks of New

When it’s spawning time, Newfoundlan-
ders are out in their dozens by the early dawn

22-footers which are 26 feet overall, take in- board engines, and are used in the inshore cod fishery on Newfoundland’s south coast. He supplies shipbuilding firms with doilies for lifeboats on fishing vessels, and builds the dories for the international races. He’s shipped to places as remote as northern Labrador and the Northwest Territories, but his principal market remains the thou-
sands of inshore fishermen in the Atlantic provinces and New England who still rely on his 16-foot bottoms.

The Charles Wyman firm in Stellarton is a larger operation than Allen’s but its markets are pretty much the same, except that Wyman’s 20-footers go mainly to the New England trap and seine fishermen. The Stellarton boats are somewhat wider than Lunenburg’s and are made with four-piece frames fastened with metal clips, where the Lunenburg dory uses ‘green’ timbers sawn from the roots of native trees to preserve the natural curvature of the grain, like the blade of a hockey stick. But the main difference in two dories is not appearance, performance or price, but pedigree. When dory building spread in the 1880’s from New England to Lunenburg and Stellarton in Nova Scotia, and Grand Bank and Fortune in Newfoundland, the local builders adapted the New England designs. The original Stellarton dory is descended from one de- veloped in Swampsport, Massachusetts, while the Lunenburg dory derives from the original Gloucester dory which became the standard of the Banks fleets.

‘As I see it,’ said Lawerence Allen, ‘build-
ning dories is more than just a job. We’re carry-
ing on a tradition.’

When it’s spawning time, Newfoundlan-
ders are out in their dozens by the early dawn
THE OIL INDUSTRY has been around for 6,000 years. In that time it has been embalmer, road builder, boat caulkier, supplier of heat, light and medicine. But it wasn't until the 20th century that it found its real calling as a source of energy. The coming of the internal combustion engine kicked off a heyday of expansion, which shows no signs of slowing down yet. And the versatile crude that comes from the ground finds its way into an ever-increasing number of products, processes and places.

How much do you know about this vital industry? Here's a list of 20 questions; the answers are the last item on page 29.

1. Where did the North American oil industry begin?
   a) Texas
   b) Pennsylvania
   c) Florida
   d) Ontario

2. Oil companies use strippers to:
   a) Cut down the legal verbal baggage in company contracts
   b) Complete the distillation of crude oil fractions
   c) Cut the grass lawns around a refinery
   d) Enter many existing executive suites

3. One of these four early uses of oil dates back to 4,000 B.C. Which came first?
   a) Asphalt mortar for buildings in ancient Iraq
   b) Asphalt to embalm ancient Persian Indians
   c) Caulking for the bull-rush basket of infant Moses
   d) A base for the war paint of North American Indians

4. Oil and natural gas together supply about 70 percent of all energy used in Canada, including hydroelectric power. Oil alone supplies:
   a) 10 percent
   b) 30 percent
   c) 55 percent
   d) 69 percent

5. In oil industry slang, geologists who look for clues to where oil may be found are called rock hounds. Junior geologists (university students working in the summer) are called:
   a) Cliff hangers
   b) Pebble pickers
   c) Stone heads
   d) Sandy

6. Which of the following is derived in no way from crude oil?
   a) Cellulose
   b) Chemical fertilizers
   c) Uranium oil
   d) Aspirin

7. Canada ranks eighth among the crude oil producing countries of the world. First comes:
   a) Russia
   b) The U.S.A.
   c) Venezuela
   d) Kuwait

8. The oil producing areas in Canada are:
   a) British Columbia, Alberta, Saskatchewan, Manitoba, Ontario, New Brunswick, and the Northwest Territories
   b) Alberta, Saskatchewan, and Manitoba
   c) British Columbia, Quebec, and Prince Edward Island
   d) Newfoundland, Nova Scotia, Alberta, Saskatchewan and Ontario

9. One of the earliest pipelines was built of bamboo 2,000 years ago by the Chinese to carry petroleum gas for heat and light. The longest oil pipeline in the world today (2,023 miles) is in Canada—the:
   a) Trans Mountain pipeline
   b) Trans Canada pipeline
   c) Interprovincial pipeline
   d) Western Pacific pipeline

10. The cheapest method of transporting crude oil over long distance is by:
    a) Pipeline
    b) Ocean tanker
    c) Rail tanker
    d) Tank truck

11. Since 1920, the average wholesale price of regular gasoline has decreased by:
    a) 3.8 cents a gallon
    b) 8.7 cents
    c) 27.5 cents
    d) Increased 2.3 cents

12. The average provincial tax on gasoline is:
    a) 1.1 cents a gallon
    b) 61.5 cents
    c) 163 cents
    d) There is no provincial tax on gasoline

13. The United States has 288 refineries, more than any other nation in the world. With 40, Canada comes:
    a) Second
    b) Third
    c) Fourth
    d) Seventh

14. A cut cracker is:
    a) A multi-million dollar refinery unit for breaking heavier parts of crude oil down into more valuable products
    b) An inexpensive drilling rig
    c) A vehicle for travelling in the northland
    d) A medieval instrument of torture

15. A rate is:
    a) A dispute between company and union
    b) A flaming oil drum used to mark landing area for exploration helicopters in the far north
    c) A night time at the top of a refinery stack to burn off any volatile gases escaping up the chimney
    d) An urgent message from head office to a regional branch

16. The research octane number of a gasoline represents the degree to which it prevents engine knock in your automobile. The present average research octane rating of premium gasoline in Canada is:
    a) 89.7
    b) 96.3
    c) 98.4
    d) 100

17. The men who drift for oil have a colorful language all their own. Which of these terms refers to the office on a drill rig?
    a) The monkey board
    b) The crown block
    c) The iron tower
    d) The doghouse

18. In its nine refineries Imperial Oil uses crude oil as the base from which to manufacture how many different products?
    a) 13
    b) 275
    c) 1,029
    d) 720

19. Oil has long been used in medicine where as late as 1903 crude from southwestern Ontario was recommended in a text book as:
    a) A laxative
    b) A cure for baldness
    c) A cure for diphtheria
    d) A mouthwash

20. In recent years, the revolutionary effect of petrochemicals has been felt in many fields, especially in the building industry. Of the following, which are not yet made from petrochemicals?
    a) Floor tiles
    b) Enamels
    c) Chimney liners
    d) Drains
The real history of any country isn’t contained in books. It’s written in the works men leave behind them. And yet, of all the works that men perform, of all the buildings they construct, few require time and progress to become the history of the future. So it is with the mills of Old Quebec. Only a century ago, there were still hundreds of mills in the province. Now only a few dozen remain to remind of Quebec’s distant past.

The first mills in New France were built for a dual purpose: in peacetime they ground the habitants’ grain, and in time of war they served as fortresses. In the villages along the St. Lawrence, the mills were usually the only stone structures. The four-foot-thick walls of the 25- to 30-foot-high mill towers were often pierced with loopholes through which defenders could fire at attacking Indians.

But mills were expensive to build and there was a perennial shortage of them. When Frontenac became governor of New France in 1672, the whole country had only 35 mills. To remedy this situation, Frontenac introduced Europe’s feudal system into New France, requiring the habitants to grind all their grain at seigniorial mills, paying a portion of it as their rent or mill toll.

This rule pleased no one. The settlers grumbled because they had to send their grain to some faraway mill, and the seigniors complained that the cost of keeping a mill, a miller, and a mill road was ruining them. In 16 years only 10 new mills were built.

Fed up with the general foot-dragging, the Sovereign Council of New France issued a decree in 1683, ordering all seigneurs of the country to build mills on their properties within one year.

This finally produced results. Millwrights were busy all over New France and by 1734, 118 new mills had been built in addition to scores of mills for carding wool, cutting shingles and sawing lumber. The millers were kept honest by draconic laws. If one short-measured his clients, he ran the risk of being hanged from a gallows built especially for the occasion right beside his mill.

When the Swedish scientist Peter Kalm visited New France in 1745, mills were a prominent feature of the country. Travelling down the St. Lawrence from Montreal to Quebec, he noted: "We sometimes saw windmills near the farms. They were generally built of stone, with a roof of boards which together with its wings could be turned to the wind. The wings of the windmills were made either of thin board or of linen, which could be removed when the mill was not in operation."

Montreal, then the fief of the Gentlemen...
A 300-year-old mill at Les Épaillements (above) still grinds grain. A son-in-law of 17th century explorer Louis Jolliet built the old waterwheel (at left) and the mill at St. Joseph de Beauce.

Both Wind Mills & Water Mills were in use during the French régime. Wind Mills were used generally for grinding grain; Water Mills for winnowing meal. This is a combined Saw & Sift Mill, run by water power.
Only the mill's tower remains at St. Famille.

Quebec's old mills number in the dozens and a few of the most impressive ones are marked on the map at right. In the opinion of the author, all are worth seeing and some are kept open for the public (see text). One can and page 15 show the one remaining windmill on Île aux Coudres. Nearby is a windmill, also in good condition and open to sightseers. Some of the mills are now used for other purposes. The windmill on the Island of Orleans is a center for chamber music concerts and the windmill at Repentigny, on Highway 2 east of Montreal, has been converted into an art gallery. And at the École Technique in Quebec City, the tower of an old windmill serves as a bathroom. Some old mills are private homes now. The impressive large stone building on the river St. Lawrence, near Lachine, halfway between Montreal and Quebec, has been preserved by the family which gave the village its name. Diplomat Edmond Joly de Lattre is its owner. In excellent condition, too, is the beautifully preserved windmill at Vercors which can be seen from the road.

of Saint-Sulpice, had only one mill. Kalm visited it and wrote: "The fields of Montreal have a mill here where they take the fourth part of all that is grown. However, the miller receives a third part for his share. In other places he gets half of it... Besides them, nobody is allowed to erect a mill on the Ile of Montreal, they having reserved that right to themselves."

Now only a few of the old windmills remain at Repentigny, Vercors, Laouchère, Lachine and Cap St.-Ignace. Near the St. Lawrence, on the north shore of the Island of Orleans, stands the massive ruin of a windmill, and on Îles aux-Coudres, farther downstream, the windmill has been bought and restored by Quebec's Historical Monuments Commission, thereby escaping the fate of its recently demolished sister mill. The carding mills and shingle mills, once part of every village, have had even less luck. Only a few remain, some of them converted into homes.

But there have been enough mill fanciers in Quebec to save a few of these ancient buildings, some dating back to Frontenac's time. The windmill at Les Échafauds, one of the most beautiful mills in the province, is owned by the Canadian Heritage of Quebec, and is open to the public. A Dutch musician, Johan van Veen, who shares his countrymen's weakness for mills, acquired the old windmill at St.-Laurent on the Island of Orleans, and has made it a center for chamber music concerts.

Another mill preserved is the diploma of Edmond Joly de Lattre. He is a descendant of the seigneurs of Lachine who maintain two mills: one, an imposing large stone building surrounded by forests, along the river St. Lawrence, near Lachine; and another on the St. Lawrence, both of which have been designated Historic Buildings by the Quebec Historical Monuments Commission, but only the latter is open to the public.

In addition to the three already mentioned, visitors are also welcome at eight more: Repentigny, Châteauguay, the Forêt and Laouchère mills at Ruis St.-Paul, a windmill and a windmill on Îles aux-Coudres, and those at St.-Joseph-de-la-Rive and Rimouski. The remainder are privately-owned.

The École Technique in Quebec City had a unique mill problem some years ago. The ancient mill of Quebec's General Hospital, built in 1710, stands on the property it acquired to enlarge the school. School authorities wanted to remove the mill, but popular opinion forced them to abandon this plan. Finally they came up with a compromise solution: they incorporated the old mill tower into their new building. Its top pokes out of the school's roof, its bottom section, with its four-foot-thick walls, is inside the school and serves as a tool room.
Maurice Tims is so hooked on Rolls-Royce cars that he doesn't bother with bonds.

"A Rolls is better than a bond, anyway," Tims claims, and to prove it he points to a 17-year-old Rolls with 165,000 miles on it that he keeps in the garage behind his place in Calgary. He bought the car in March of 1965 for $3,500 and turned down an offer of $4,500 for it last November. If it keeps appreciating at that rate, it will be worth twice what he paid for it by July. If you point this out to Maurice Tims he will nod his head in agreement. If you press him and ask how such a thing can be possible, he will explain that his 1949 Rolls-Royce isn't just any old Rolls-Royce, or even just any old 1949 Rolls-Royce.

"It is," Maurice Tims says, "the first all-Rolls-Royce Rolls-Royce."

To grasp the significance of that statement, you have to know that Rolls-Royce didn't always make every bit of a Rolls-Royce. They used to make the motor and chassis, and other people made the bodies. In 1949 they started doing it all themselves, and Maurice Tims has the first one they ever made. To look at it, it isn't all that much; the sort of Rolls-Royce you average country millionaire, press baron or head-of-emerging-state will drive. The fact that it's a 17-year-old doesn't get it out of the running (noting puts a Rolls-Royce out of the running, apparently, except deliberate abuse). Tims knows of one that a farmer drove for 350,000 miles without any engine repairs at all.

Still, if the first all-Rolls-Royce Rolls-Royce isn't grand enough for you, Tims has a 27-year-old Phantom III Rolls-Royce limousine (Phantom is Rolls-Royce's top line) with 30,000 miles on the clock and a retractable roof over the chauffeur's section. He also has a 1954 Silver Dawn Rolls-Royce (60,000 miles) that he drives to work every day (he's an engineer working on special projects for Imperial Oil in Calgary) and a 1949 Alvis, another English car that says quality in every rather dusty line. Mrs. Tims drives the Alvis around Calgary with their two children (boys, 5 and 3) and since Maurice rescued it from a field near Woodstock, Ont., in 1957 and spent $1,400 putting it back in running order, it has gone 50,000 miles without any repairs whatever.

He hasn't spent that on the Rolls-Royces. Not in actual cash mooney, anyway. If you add in his time, the amount would be vast, because Maurice Tims works on his Rolls-Royces the way some men work on their gardens. In fact, since he got his first Rolls-Royce in January, 1962, he has become one of the 120-old Canadians in the 2,000-member Rolls-Royce Owners Club Inc. of North America—there's another one in Europe—and he's a member of the club's technical committee. Tims is now so profi-

Life is almost absolutely perfect for Maurice Tims. He has a pleasant wife, two little boys, an attractive bungalow in Calgary, and out in the garage behind his house are

by RUDOLPH HENRY
photos by HORST EHRLICH

THREE

ROLLS-ROYCES
cient at Rolls-Royce maintenance that the
Rolls-Royce man (the chap who makes
periodic visits to owners of Rolls-Royces
to see how the cars are being kept) considers
him up to Rolls-Royce standard. He is so
good at Rolls-Roycerry that a Texas oil mil-
lionaire almost fired the 1939 Phantom III
on him because he knew Tim would give
it a good home. "I hadn't intended to buy
it," Tim says. "In fact, I couldn't really
afford it; but he made the terms so easy
I couldn't turn it down." Tim drove it from
Houston to Calgary in 1965, and is now in the
process of taking it all apart, cleaning
each bit, painting it the appropriate color
(black, ivory) and putting it back to-
gether again. The thing has 12 cylinders and
weighs more than three tons. It'll sell for
100.
Yes, yes, yes, but what about Tim? Well,
in his view, it isn't inappropriate for a man
in his position to own that many Rolls-
Royces. It's good sense, that's all. He had
this '56 Corvette which the family outgrew,
so he sold it in 1962. 'To cost me $650 a year
to own that car," he argues. That year he
bought the 1954 Rolls for $4,500 and 'I
turned down an offer of $7,200 last year. Old
Rolls-Royces don't depreciate; they go up in
value.'
Okay. He spent $300 on parts, over-
headed the car completely and spent a year
getting over the feeling of driving around
in a Rolls-Royce, as if you were somebody.
The fact is, Tim has found that driving a Rolls-
Royce isn't like driving other cars. 'For
instance," he said, 'if I'm waiting to turn out
of the parking lot into a line of traffic, cars
will often stop to let the Rolls proceed. I get
last service in stores, but if I don't want to
get soaked at antique sales, I park around
the corner.'
So a year ago last March he bought a
third Rolls. 'We were considering the $7,200
offer on the '54 at the time," Tim explained.
'If we took it we wouldn't have a car to
drive.' It does no good to point out to Tim
that he still had his sturdly Alvis. When Tim
says 'car' he seems to mean only a
Rolls-Royce car. Anyway, Tim knew the
'49 was one of the last all-R-R-R Rolls (only
760 of them were made) and such knowledge
is elementary among Rolls-Royce fanciers.
So he knew it was a good buy. His bank
manager agreed and Tim got it for $3,000.
Then Tim checked the serial number, and
was stunned to discover what a historic
vehicle he had. 'I knew then it really was a
bargain, and its price could only go up.' He
passed, thus added: 'It's a way of saving up.'
All this talk about money and value and
appreciation is only to point out that Rolls-
Royce owning is not necessarily impracti-
cal; it is not meant to imply that Maurice
Tim's to traman about. He isn't. To Tim, a
Rolls is what a Rembrandt is to a dedi-
cated art lover; one is aware of the price the
market puts on it, but one values it for
reasons other than price.
Tim owns his Rolls-Royces; or at least,
he loves restoring them. He is so obsessive
about his everyday 1954 job that he stops
it 50 feet behind the last car in a line-up at
a red light and then inches up slowly. 'It's
just in case somebody comes speeding up
from behind and can't stop in time," he ex-
plained. 'I like to leave a margin for error.'
Damage and decay are always on his
mind. 'I clean the car regularly once a
week, and hose underneath the fenders in
winter to clean off the salt.' Twice a year
he paints under the fenders with a fresh coat
of white -- it's more flexible than painted.
He worries so much about the car getting
scratched in parking lots, and about the
toughed damage caused by youngsters,
that he keeps it in a locked garage
downtown instead of the parking lot.
And he jotters around those cars all the
time. Tim is a bargain-hunter and make-
shifter of championship caliber. He has in
his garage (which he built himself to accom-
modate his cars) two separate electronic
motor performance analyzers, each origi-
ally worth a thousand dollars. He picked
them up at auctions for $25 apiece.
'I started to make a list of my tools for
insurance purposes," he said, 'and found I
had $84,50 worth of pipes alone. I'm afraid
to finish the list for what it will tell me." If
he can't find the proper tool to do a particu-
lar job, he makes it, as matter-of-factly as
you or I would make an excuse.
His background prepared him for it. At
16 he won an engineering apprenticeship
at the Royal Ordnance Factories in Eng-
land for a total of eight years' study, and
emerged with a degree in electrical and
mechanical engineering and all the skills
he would need to keep Rolls-Royces rolling.
He was hardly thinking of Rolls-Royces
then although cars were on his mind. His
first car was a 19 b.h.p. four-cylinder RRA with
a Daimler transmission, which he took apart
and overhauled. Then he bought an Austin
overhauled it, and sold both to buy a 1952
Wolseley 14, which his family kept for
years. 'A friend of mine has a Wolseley 14
with a quarter of a million miles on it," Tim
said admiringly, 'and it still cruises at 75:
Since he came to Canada in 1952 he has
owned a used 1950 Austin A-40, which he
traded in on a Vanguard, then up to his
brand-new Corvette, the Alvis, and thence
in his Rolls-Royces.

The cars are almost part of the family. Tim's file, which include 18 binders of Rolls-
Royce lore, already threaten to boggle him
outside of a little basement office, which you
reach by threading your way through a maze
of Rolls-Royce fenders, wheels, radi-
ator shells, exhaust systems, seats -- you
wouldn't believe how much stuff could come
out of a single limousine, and still leave a
recognizable car on the blocks.
But it did, and the car is out there, every
bit of paint scraped from its body, small
parts chattering up on a bench, more bits in
tins and jars, all labelled, most of them
enamelled shiny black. That limousine, the
Phantom III of 1939 (only one of its kind in
the world) is Tim's Centennial project, and
he's taken no chances with it. It will
be restored to exactly the condition it was in
when Rolls-Royce delivered it to its first
owner, a New York toy manufacturer.
'I made a mistake with the '54 Silver
Dawn," Tim admits, and opens the hood
to reveal a gypsyish motor with many of
the parts plated in gleaming chrome.
'That's wrong. Should be black.'
Wally West's Marvellous Idea

It's just this: Make the scooter team so desirable the kids will do anything—even drive safely—to get on it.

The first time Wally West presented the Klondike Kids motor scooter team to the reporters in Edmonton, the team's captain almost blew the whole thing. The Kids were coming out of the Death Corkscrew, a tight reverse spiral with only inches between their bikes, when the leader fainted.

Minutes before, the 30 boys had tumbled onto the suncrack on the 50- to 90-c.c. machines, looking incredibly young in their purple and white satin uniforms and crash helmets on that day last June. Their faces might have outgrown dimples, but at 14 to 18 most were still too young for beards.

In the Death Corkscrew the boys were following the team captain single file into an ever-diminishing circle. It was a reverse order version of the childhood game of Crack-The-Whip, here played out on small motorcycles that could roar up to a murderously 50 miles per hour, or stall suddenly at Death Corkscrew speed. Each rider had to work his way out from the center, weaving through nine rows of bikes, all bearing down in dizzying circles.

It sounds treacherous and it is—at least potentially. But when Dave Palahnik, the team captain, fainted in the middle of the Corkscrew and failed to make the right turn, 30 bikes did not pile up; no one was injured; the fledgling team was not laughed out of existence.

What happened instead was that 15-year-old Bill Thompson, second-in-command, saw Dave's bike ride another boy's. Nobody went over, but Bill knew something was wrong.
“This was our first real show,” Bill said later. “We were in front of the press. I thought: It’ll look pretty stupid if we all go down. So I just took over.” Bill kept the line in formation while two other boys grabbed the leader’s handlebars and towed him back in line.

“The next thing I knew I was riding 12 placers back in the line,” Dave said. “I wondered how everybody had passed me. I couldn’t figure it out.”

The recovery was so smooth that none of the watching reporters realized the leader had blacked out—mesmerized by sunlight flashing off chrome. Dave Palahnuik had provided proof of a favorite maxim of the team’s founder and coach, Wally West. West says: “You’re not the master of your bike. That bike is your master.”

In the year since, the Klondike Kids have put on shows of precision riding in front of a million spectators. They have ridden in Toronto’s Grey Cup parade, at Calgary’s Stampede, Vancouver’s Pacific National Exhibition, and such Alberta events as water safety shows, antique car derbies, drag races and, of course, Klondike Days, the Edmonton summer fair which gave the team its nickname. Its real name is the Loyal Order of Moose Precision Scooter Team.

The boys have also provided free guide service for 4,000 tourists in Edmonton. Uniformed and labelled “Tourist Pilot,” they greet out-of-province motorists approaching Edmonton. All a visitor has to do is give his destination and a boy will lead him there without change.

“It has been the most popular thing done in the 15 years I’ve been in the tourist business,” said Jim MacDonald, the city’s public relations officer.

The man who made safety and service a status thing among Edmonton teenage scooter riders is a one-time gold cord Scout who looks like a kid himself in T-shirt, white ducks and sneakers, even though he has three children of his own. Crew-cut and muscular, Wally West earns his living as assistant to the general manager of the Alberta Safety Council, with moonlight jobs in the army reserve and as a lifeguard. He also instructs a swim club and coaches Little League baseball.

Yet he was working as a volunteer—not on his Safety Council job—when he helped organize the safety program which included the formation of the Klondike Kids.

“Before I got involved I didn’t have much interest in motorcycles,” West said. “In fact I had a particular distaste for these noisy kids riding around on crazy contraptions. But after seeing accidents rising and rising and rising, you begin to feel that something has to be done.”

West felt that safety training for young riders was particularly necessary in Alberta.
Statistics showed Alberta’s motorcycle accidents rising at a rate faster than the rest of Canada’s from 1946 in 1963, the nation’s accidents for the same period rose only from 1,086 to 1,284. And the numbers of riders is growing fast. In 1961, national sales were 2,500. In 1963, they had jumped to 12,900. Expected sales for 1965 were a whopping 48,000.

The Alberta government has tried to minimize the risks of cycles by requiring youngsters below the age of 16 to have their bikes adjusted to suit their size. But any bright kid with a screwdriver can re-adjust a throttle to make some of them capable of doing 80 miles per hour. ‘What’s more, Alberta’s the only place on the continent where a 14-year-old—a child—can operate a motor vehicle,’ West says. West decided to set up safety schools, and to entice youngsters to attend they challenged them to test their skill, to compete with other riders, to pit themselves against a difficult course.

One of the tests measures control by requiring a boy to nose his bike down a six-inch-wide avenue lined for 100 feet with empty shotgun shells. They make up to the boy who takes the next time. He has to crawl his bike without either steadying it, dropping a reading hash or toppling in a slalom. The Local Order of Motorcycle and radio station CJOA sponsored the program, and Canada Safeway Ltd. agreed to let the schools he held on its parking lots.

West trained 35 Moose Lodge members as instructors and prepared them safety manuals to hand out. In September of 1964 he was ready. He asked CJOA to invite Edmonton’s motocyclists to a series of safety schools—three nights of riding on supermarket parking lots in five sections of the city.

For that first school, 275 boys turned up, but they didn’t all take the tests. A preliminary examination showed that one bike in five had mechanical defects. Edmonton scooter dealers repaired them free. The response convinced the Moose that the schools were a good idea, and they decided to hold them every six months.

‘While we were getting involved in the schools, we wondered how we were going to keep this thing together and keep interest up,’ West said. ‘We got the idea that some type of riding team would be the answer.’

So he called in the boys who had done well in the safety school competitions and set them to work learning a routing round on police motorcycle team maneuver, with echoes of square dancing, gymkhana and the ROMP Musical Ride.

The boys first learned the routine of their bikes, in stocking feet in the Moose Lodge hall. “They walked through the maneuver until they knew them,” West said. “Then they started to ride.”

Each boy was also trained to watch out for another boy, to tow him if his bike overheat, and to stand at a parade’s small pace, and to take over in case of emergency. It was this training that saved the day when Palahnuik fainted during the green show.

The Moose Lodge underwrote costs at first. “In fact,” West says, “the team would not be possible without the help of a lot of Moose Lodge members, housewives, parents of the boys, and interested city leaders.” As the boys became identified with Edmonton’s youth.(3)

The city and various civic organizations began to help pay the cost of sending them to out-of-town events. The mayor called them the pride of our city.

Because of Moose Lodge sponsorship, it cost the city only $2,300 to send the Kids to the Grey Cup parade in Toronto. The team finds sleeping space for the team, usually in a Moose Temple where they can get their sleeping bags. Food is somewhat cheaper, though, the team’s notion of a light snack can run to 48 milkshakes and 72 hamburgers. West recalls a railway dining car staff’s astonishment as their supplies melted away during the 21 hours between Edmonton and Vancouver. Among other things, the boys polished off 30 dozen hamburgers.

Last summer wasn’t all hot hamburgers, cool crankcases and thousands cheering. It was strictly work shuffling through a rain-soaked show in Vancouver. At an antique car rally in Hinton, Alta., the boys discovered how slippery grain can be in 97-degree heat. It was even worse on the pavement of Calgary. There, Stampede parade officials positioned the team among the hottest-buffalo entries, without benefit of streetweeper.

On the other hand, teenage girls sometimes rode in a caravan of autographs. That kind of status, along with the travel, makes the boys determined to ride carefully to stay on the team. And they hardly ever miss practice. Last Thanksgiving Sunday, for instance, with a World Series game on television, 26 of the 30 boys turned out.

They always wear crash helmets whenever they ride their bikes. West made this a rule, and he hopes the teams’ example will influence other youngsters. Helmets have generally been shunned as kid stuff by older teenagers in Alberta, where there are lists of those who have demanded them only for riders under the age of 16. Last spring there was talk of amending the law to include all riders and passengers on bikes, regardless of age.

West is now receiving applications for a second squad he is organizing, to take over the tourist pilot service when the first squad is performing out of town. Every rider on the evening squad must pay $2 per shift the City of Edmonton. Imperial Oil provides free oil and gasoline. And the boys will all have a new look in blaze orange coversalls—a was-surplus bargain West discovered.

There are already signs that the standards set by the Klonidie Kids are attracting imitation, and that safety is paying off. Take the boy who won around prizes for weeks in the hope of being asked to fill in. ‘I’m a pretty good rider so I figure I’ve got a chance,’ he said. ‘But it sure makes you ride carefully!’

He shook his head and sighed wearily. ‘It really stunts ya down.’

THE LEARNING PAGE

POLY BROLLY

Will Englishmen abandon their traditional umbrella with its 34-piece metal frame for a brush one-piece newcower? The new frame is made of polypropylene and comes in assorted colors, never rusts, or sags and is warm to the touch. It has molded-in hinges which were opened and clased in a test three million times without showing any wear.

NO NEW WRECKLINES

The shirt industry is touting a new permanent-press shirt made of cotton treated with various petrochemicals (poly-alkylene glycol ethers or tetrarimehyl succine). The initial high-pressure, high-temperature pressing the manufacturer gives the shirt the only one it will ever need, they say. The material won’t wrinkle. It won’t unwrinkle either.

SULPHUR MAKER GOOD

There was a time when you couldn’t give sulphur away. Now it is long on demand and short on supply, and the cosmetics industry has come up with yet another use for it. Mixed with glass fibers and sprayed on both sides of a wall of bricks, sulphur appears to promise a bond with higher tensile and compressive strength than cement mortar. Sulphur is also a constituent of a paint so durable they use it for the lines on the highway; it’s so quick-drying that the painters don’t even have to protect it from incoming traffic.

SIMPROOF TELEPHONES

A problem that has been plaguing telephone companies for some time has been solved with the development of the new simproof telephone. Customers with those cheerful pastel-colored receivers were complaining about lipstick stains that wouldn’t rub off. It seems that the petrochemicals in lipsticks used to combine with the cellulose plastic of the regular phones to leave a not-so-cheerful pink glow. But with the new ABS (acrylonitrile-butadine-styrene) plastic, stains just wipe off.

PETROCHEMICAL VINTAGE

The constant demand of the fastidious wine steward is a sour bottle. Traditional wine bottling methods leave tiny microorganisms in the bottle which can turn a palettes to vinagre. In a recently developed process, a touch of diethylure pyrocatechol is added to the wine just before bottling. It chemically sterilizes the wine, then changes into carbon dioxide and ethyl alcohol within 24 hours.

GETHCA

Golfers out for a little exercise and a friendly game need no longer fear the aches and pains of bending over to pick up their ball. A recently designed package of golf balls doubles as a golf ball picker-upper. It is made of clear butylate plastic in the shape of a long narrow tube, and is called a Gethca. The wavy golfer simply rolls the tight plastic tube end over the ball and carries it away.

GOT A PIGEON PROBLEM?

These paper-nitché great horned owls that farmers have used for years to scare crows have found a new use and taken on a new form. Businessmen, long plagued by noisy pigeons and starlings, are using plastic dummies of the predator owl as scare-pigeons (they don’t scare crows—crows will harass a great horned owl). Some department stores are using them to keep pigeons off ledges and one aircraft company claims savings of $6,000 a month since they put the dummies in the crotches of their hangars. Inside? Yes, and now they don’t have to cover their aircraft with polyethylene sheeting any more, or touch the paint that didn’t get protected in time.

ANSWERS TO QUIZ

1. a 5. b 9. c 13. a 17. d
2. b 6. c 10. b 14. a
3. a 7. b 11. c 15. e 19. c
4. c 8. c 12. e 16. c 20. e