# The Longest Line of Levels

# Canada Possesses This Along The levelling done thirteen years Value of the Work.

Canada possesses the longest single marshes, swamps and muskegs, across fusion. lakes, rivers, and streams, across val- These levels are of great value in leys and ravines, over ridges and hills, the development of the country. They of the United States in the open lands power development and in navigation. with the waters of the Milk river, a part of that grand river system of the Mississippi that leads down to the semi-tropical sea of the gulf of Mexico. It finishes its course on the south shores of lake Athabaska, a port of an equally grand river system that takes its waters up to the rim of the world and discharges them into the Arctic ocean. Throughout its course it passes by the smiling wheat lands of the open prairies, through the semiopen park-like country devoted to and enters for a long, long run through the lonely timbered country of the Value of Levels.

Why this long straight line of levels? Of what use is it to this country of ours? This straight line of levels is a part of a great net of levels spread by the Topographical Surveys Branch over the three prairie provinces in the course of its regular surveys. They follow the lines of survey and the Fourth meridian is one of the principal meridian lines upon which all subsequent surveys are based.

Much more information about the elevations in a country is always supplied by such straight line levels than in similar lengths levelled for a special purpose, such as a preliminary railway line, or along a water route, because the straight line crosses everything in its way, while the others necessarily avoid all pronounced topography. This value of straight line levels combined, as it is, with the unique opportunity for economical levelling into an unknown country while such lines are being surveyed, is the reason why this branch always runs levels along these pioneer lines. Nor is the value of the levelling along the Fourth meridian confined to itself, for it has supplied the only connection for similar levels along no less than thirteen base lines surveyed westerly off the meridian, and spaced twentyfour miles apart. These alone total over 2,000 miles and afford practically the only present information regarding elevations in an area of over twenty million acres.

the Alberta - Saskatchewan Branch on the Fourth meridian shows Boundary - Objects and how such work must often be done much in advance of what seems present need. If the meridian had not been levelled while it was being surstraight line of levels in the world. have occurred later. There would have Along the Fourth principal meridian, been no way of connecting the base which is also the boundary between lines and instead of the present acthe provinces of Alberta and Saskat- curate and co-ordinated system of the chewan, this line extends in an un- Athabaska territory, there would have broken, undeviating course, over been no standard elevations for referprairie and through brush, across ence, but all would have been con-

for a distance of 686 miles from the give data for the highway and rail-International Boundary northward. It way engineer, and are of great serbegins its course at the northern edge vice in the important work of water

### They All Knew.

The lesson had been all about the virtue of patience, and to illustrate her point and make it more clear to her class, the teacher drew on the blackboard a picture of a boy fishing. He was sitting on the bank of a stream,

"You see this boy?" she said, beaming on her pupils. "He is fishing. He

where it follows along the main street, came the time for her to test the periences that he and his companions you eat much snow it upsets the stomcuts several villages in two, crosses scholars. She felt sure she had thor had on the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that more than the slopes of the highest moundary source that the slopes of the

> "Now, can any of you tell me what we most need when we go fishing?" Like one voice came the chorus from "Worms!"

## His Reason.

The wedding had gone off without hitch, and after the ceremony the father of the bride was taken aside by

"You do not seem to be aware that your son-in-law is head over heels in debt," the friend said. "Are you sure?" asked the bride's

"I'm certain," was the reply. "He has married your daughter so that he can get money to pay off his creditors." "But why ever didn't you tell me be fore?" asked the girl's father, with

"He owes me \$500!" was the convincing reply.



The Colored Cook. Hubby-"Why did you employ such a girl? She's positively green!" a colored cook?"

Rippling Rhymos The West Mason The

DOGS OF WAR.

boarding house awake; men tossed in bed who should have slept,

because his teeth were filled with ache. I faced him at the mid-

night hour, and said, "You've wailed enough, I guess; a dentist

dwells in yonder tower and he will end your fierce distress. If

haply you should lack the price, your fellow boarders will chip

in; but go at once, take my advice, and stop this most outrageous

din." But still he journeyed fro and to, and wept and wailed and

wrung his hands, until the boarders hove in view, in earnest and

determined bands. We rushed bim swiftly down the hall and

fired him through the large front door, and took his chromo

from the wall, and bade him to return no more. You have un-

pleasant work ahead, some task that makes your spirit quail? Approach it with a dauntless tread, and don't send up a yip or

wail. Then all the boys will know you're game, a gent to honor

and admire, and poets will embalm your name, when they tune

up the festive lyre. But if you gnash your teeth and bawl when

face to face with painful chore, some gents will rush you down

the hall, and kick you softly through the door.

I DON'T LIKE THIS ARTICLE IN THIS MORNIN'S PAPER -

The long night through James Kickshaw wept, and kept the



AIN'T IT A GRAND AND GLORIOUS FEELING! A cartoonist's impression of Uncle Sam's delight at the British debt settlement .- From the Detroit News.

# What the Everest Climbers Learned

Mr. George Leigh Mallory, one of to digest meat or bread. Sugar also must be prepared to sit and wait. He the men who took part in the daring has a distinct stimulating effect that is to excessive speed. I know a driver "Fools! For I also had my hour;

> The climbing party last summer It leads to nervous irritability, to disreached a height of 27,300 feet, which turbances of the circulation and to a ditions and drive accordingly. was only about 1,700 feet short of the sort of starvation of the cells of the top. The remaining distance did not body. Nevertheless, there is an extra offer any special difficulties in moun- ordinary fascination about mountain taineering. The slope was not too eering at high altitudes, as there is steep, and the footing in the snow was about almost every struggle with the fairly good; but the extreme rarity hostile powers of nature. The next exof the atmosphere at such a height pedition is planned for the spring and makes every step a task of tremendous early summer of 1924, and preparadifficulty. You have to take a pro- tions for it are already under way. longed and deep breath before each step, and that step exhausts you. The winds at such an elevation are often if not usually strong, and the human body, weakened by the inadequate supply of oxygen, cannot face them long.

Effect of Intense Sunlight.

sunlight seems to have a singularly made at the Forest Products Laborasun, here tempered by no considerable partment of the Interior. blanket of air, strike fiercely, and the The rate of growth of a tree is inultra-violet rays, the force of which is dicated by the thickness of the annual considerably reduced in a dense at- rings which are seen when a log is cut mosphere, have their full effect at high across. The stem of a tree grows by to use great caution in turning out altitudes. No one knows exactly why adding every year a layer of wood for other vehicles. the sunlight is so enervating, but it is around the existing stem and if this probably because of some physiologi- layer is thick the tree is growing cal action of the chemical rays against rapidly. Thin layers denote slow which the atmosphere normally pro- growth. Three or four layers or rings tects the body. Of course the air is per inch seen on a piece of lumber always cold at 27,000 feet, often be- would therefore show that the tree low zero, and the contrast between the was growing rapidly when that part of away is also dangerous. When drivcold of those parts that are not ex- it was formed and twenty or thirty ing in traffic on slippery pavements posed to the sun and the heat of those rings per inch would show that only a care should be taken not to follow parts on which the light strikes is an small increase was effected every year. another vehicle too close and to judge other cause of discomfort and per- The effect of rapid or slow growth stops far enough in advance so that haps of debilitation.

on which they could draw in time of tarded but the strength of spruce or words, the brakes should be applied need. Others did not. Those who fir is increased. Extremely rapid or very carefully. the others. Nevertheless, Mr. Mallory thinks that the tanks are useful, and that a party can always get a little higher with them than without them.

climbers at the last lived chiefly on tion, candy and other forms of sugar. That is the best quick fuel for producing muscular energy. The climber cannot spare the bodily heat and the physic- questions to a former cowboy. logical effort that would be required



Sugar as as Stimulant. It is interesting to know that the observed in any scheme of afforesta-



## Strength of Timber and Rate of Growth.

The establishment of a definite relation between the rate at which a tree has grown and the strength of the lumber obtained is one of the many inter-Mr. Mallory adds that the intense esting results of about 45,000 tests debilitating effect. The rays of the tories of Canada, Forestry Branch, De-

but where only 1-25 inch was added stronger than the other will also the strength was reduced again.

Such facts are of importance in selecting timbers for specific purposes and have a bearing on the selection of trees and conditions of growth to be

# Premeditated.

The insurance man was putting "Ever have any accidents?"

"Nope. A rattler bit me once, "Well, don't you call that an acci-

"Hell, no! He bit me on purpose!"

"Love is the purification of the heart from self; it strengthens and ennobles the character, gives higher motives and a nobler aim to every action of life, and makes both man and woman strong, noble, and cour-

THE SKID PERIL ON SPRING ROADS.

thoughts joyfully turn to that auto- to turn and twist the car about. mobile which has been hibernating in When skidding does occur about the the garage during the cold weather only thing the driver can do is to turn days. About the easiest thing he does the steering wheel in the direction of when he gets his car out once more on the skidding, with little or no pressure the slippery pavements or muddy on the brake. This will correct the highway is to skid.

The newcomer into the ranks of the speed is not too great. automobile owners, who bought his Another help in preventing skid-

car has a slight skidding tendency the pull of the engine when the brake is driver should not be slow in putting applied prevents the locking of the "was a very, very, very naughty little them on at the first indication of slip- rear wheels, and in that way lessens boy. His mother beat him and beat does not, however, warrant driving at full speed on wet or icy roads. Wet pavements demand exceptional care, The tatered outlaw of the earth, no matter what the tire equipment

attempt to reach the summit of Mount helpful. At the highest altitudes you who ran into another car and broke where it follows along the main street.

She spent some time on enlarging on the beauties of being patient. Then that is interesting to tell about the excannot stop often to melt snow, and if This was probably true, but unquestable true. The cannot stop often to melt snow, and if This was probably true, but unquestable true. She spent some time on enlarging Everest last summer, has a great deal cannot get much water to drink. You both headlights, and he asserted he There was a shout about my ears, Saskatchewan river with its semi-bad and as she gathered her books to- that efforts to scale the summit will ence at altitudes above 20,000 feet, that the driver should know how his even without hard exertion, is difficult. that the driver should know how his through a section of the Kentucky child's face. car is going to behave under all con- mountains where hillside farming is

Crown of Road Increases Dangers.

will cause a slip of the front or rear an old farmer just scrambling to his him a question. Up went a little hand, prevented by a reduction in speed. "Gosh ding!" said the farmer as why did they want a ladder to go up But the careful driver will at least they approached. "That's the fourth and down, sir?" drive slow enough under such road time to-day I've fell out of that corn- The Bishop, rather nonplussed, said: might occur from this cause as light as possible. Wherever a road has a crown there is always increased danger of skidding. Often, however, these roads that have a hard slippery section in the middle, also have a narrow strip of gravel or dirt on each side. Under such conditions it would be better to drive with one pair of wheels in the dirt rather than to keep on the middle where slipping is almost

In other cases, where there is no dirt strip, it is perhaps better to keep right in the middle of the road and

Other Signs of Danger.

Rounding a corner at high speed is, of course, a direct invitation for a flapper is doomed." very serious skid. Making sharp turns | She-"Yes-they all marry." of the steering wheel on a straighton the strength of timber varies with the car may be brought to a standstill, Some of the climbers last summer the kind of tree. The strength of oak if necessary, several feet before the Wife-"Diln't you advise me to get carried tanks of oxygen on their backs or ash is reduced if the growth is re-

> were artificially supported by oxygen very slow growth are, however, weak- In extreme cases it may be found got only 250 feet higher than those ening to all kinds of timber. Douglas impossible to apply the brakes at all who breathed the natural air; they had fir from the Pacific Coast showed an without skidding, and it will be necthe bother of carrying the extra weight increase in strength of 45 per cent. essary to practically let the car drift of the tanks, and exhaustion affected where the rate of growth was reduced to a standstill. Brakes which are adfrom 1/4 inch to 1-16 inch per annum justed so that one takes hold a little | then.



In the spring the motorist's cause a skid by permitting one wheel skid before damage is done, provided

machine at some automobile show and ding is to leave the clutch engaged who is new at the art of driving, will and the engine pulling slightly when not be new long to the experience of the brake is applied. Of course, before the car is actually brought to a Non-skid chains are the best answer standstill the clutch must be released, to most skidding problems, and if the or the engine will stall. The slight these students of Scripture.

The Donkey.

Of ancient crooked will; Starve, scourge, deride me; I am dumb,

## A Bit Steep.

A couple of travelers, walking done at an angle of about 45 degrees, about that there snike!" she confessed. were surprised by a terrific crash in the underbrush at the side of the road. the vision of Jacob at Bethel. Finally Occasionally the crown of the road Pushing their way in, they discovered he asked if anyone would like to ask



He-"I was just reading that the

When we believe in our one ness with our Creator, and that this oneness is as indissoluble as the laws which bring together the atoms which form the crystal, then we shall begin to make progress towards God, then we shall begin to take on Godlike qualities, to develop divine attributes. They are already ours. All we have to do is to claim and use them. When we realize our oneness with the Divine One we shall begin to live, and not until

# When Children Score in Sunday School

A young teacher had undertaken a class of boys supposed to be the naughtiest in the school. His first lesson was devoted to impressing upon the scholars the fact that God could see and hear all they did and said. After he had enlarged upon this truth for some time, a small boy held up his

"Please, teacher, can God see me in my grandmother's back kitchen,"

"Certainly. Why do you ask?" "Because I know He can't!" "What do you mean?"

"Because she ain't got one!" Collapse of the teacher; delight of the class.

The Patriarchs have suffered griev. ously at the hands of Sunday scholars, Not even the meekness of Moses has protected him from the criticism of

him and beat him until she could beat him no longer. Then she put him into the ark of bulrushes!" "My dear child," exclaimed the hor-

rified teacher, "what makes you say "Please, teacher, it says in the Bible

'When she could no longer hide him she took for him an ark of bulrushes." A very ignorant girl attended Sunday school for the first time. The les--G. K. Chesterton. son was on Adam and Eve in Eden.

"And have you never heard that story before?" asked the teacher

A gleam of intelligence lit up the

"I believe as I've heard summat A Bishop was questioning a class on

"Perhaps some other little child can answer that question?" Another little girl was asked: "What

do you know about Esau?" She answered: "Esau was a mighty hunter who wrote fables, and sold them for a bottle of potash!"

A little boy, when asked what struck him most in the character of King Solomon, replied that he was exceedingly fond of animals.

"Fond of animals?" echoed the surprised teacher.

"Yes; it says he kept three hundred porcupines, and my mother won't let me keep one hedgehog!" Though the following answer was

given in a day-school, the boy who gave it had evidently made good use of his opportunities on Sunday. The inspector asked the meaning of the word "pilgrim." "A man who makes long journeys,"

replied a scholar.

"But I make long journeys. Am I a "Oh, no," replied the boy; "a pil-

grim is a good man!" "The definition of "bearing false witness," given by a child of tender years, bears the stamp of observation: "False witness is when nobody ain't done nothing and someone goes and tells on

"Tell me," said a teacher, hopefully "what was the difference between the Sadducees and Pharisees?"

"The Sadducees," replied a bored but polite boy, "didn't believe in spirits, but the Pharisees were publicans and sold them!"

An energetic young curate, conducting a children's service, told the scholars that he wanted them to sing, "Hold the Fort" while marching round the church in procession. He said that in order to avoid confusion he would go first; and after lining them in ranks, he did so, singing vigorously. All went well until the second verse was reached: "See the mighty host advancing

Satan leading on." . . The congregation, including the

children, burst into an irrepressible shout of laughter.

### Huge Covered Reservoir. The city of Cleveland has now al-

most completed the construction of one of the largest reinforced concrete reservoirs of the covered type in the world-only a unit, however, in a \$30,-000,000 project for a fully developed water system. Groined arches, almost cathedrallike in character, carry the the New Brunswick coast. The picture shows a ton of boiled lobsters in the roof of this 130,000,000-gallon struccourse of preparation for canning at a factory on the Mirimichie River. known as the Baldwin Reservoir; these in turn are supported by 1,200 columns, each 40 feet high and 30 facees in diameter. In time the 14-acre roof of this 130,000ff,000-gallen structure will become the central "floor" of a large municipal park. Water for the system will be pumped from a crib intake 41/2 miles out in Lake Erie, and fed to the Kirtland Street pumping station by a connecting tunnel driven through the lake floor. The present development cost \$13,000,000.

> Horse radish is a native of England. You are not dressed for work until you put on a smile.-Coleman Cox. Notice the adaptable people. They are invariably the interesting, the at-

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tractive, the lovable people.-Kathleen Aunty: "Where have you been all the afternoon?" Willie: "Over on the hill teaching a goat drawing lessons."

Aunty: "Drawing lessons?" Willier
"Yes, teaching him to draw my excan make themselves acquaint many phases of life with whi necessary for them to be family Queen Mary, for example, h ed from time to time the poore ters of London and many oth lish cities in the guise of a visitor, her guide on several o being the Bishop of London. Pages might be filled with periences in the poor quarters don. A clergyman who has wo many years in the East-end recently that there were few visitors who knew the poor

King George in Disgui

Royalties delight to travel ind

whenever they can do so, to

for a time from the artificial

phere in which they live, and fra rigid etiquette which always sur

But apart from the pleasurable

of freedom royal personages

Joy when emancipated from the

mels of their high position, it

by concealing their identity the

of London better than Que mided in their distress will known outside the few throus Her Majesty carries on thes able works.

At the Old Bailey,

adventures in disguise. O casion he spent a whole di London Hospital as a medical a fact that only became know hospital authorities several ye He has spent the best part of

and has often listened to tria Old Bailey in the public gall On one occasion, as the I coming out of court, a boy near him shouted out to his co the Prince of Wales!" "Run and tell the gent t

yer 'ari a crown." But the Prince, as he was Ariven off before the boy of

Mrs. Chester.

had no rooms available; but planation soon put the pro his ease, and the names in h were quickly altered.

# World's Fiercest F

Which is the fiercest fis lamb compared with a small haunts the rivers of South The pirhana, as it is ca

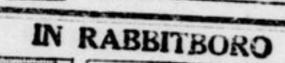
not beat a hasty retreat I dragged under in a few m scores of finny demons and

The pirhana is dreade sooner is the victim atta single pirhapa than the wal with frenzied fish biting a as though possessed with a killing. The natives dread



"Not he to settle up." A Bifurcated Honey

who to give up dat workin for de white folks "But sin't we gwine t oneymoon an' take a trip "One of as might go,









LOBSTER FISHING ON THE CANADIAN COAST

A delicacy is provided for Canadian tables by the lobster fisheries along



Inset is a picture of fishermen dropping a trap from a boat.

