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American Anthracite and Blacksmiths' Coal
Constantly on hand

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Have your Watch
Repaired here in
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Geo. C. McCallum

Satisfaction guaranteed.
Have also on hand a stock of brooches,
stick pins, lockets, rings, bracelets,
watches, chains, charms, etc., which I
will sell at a great discount.

We would be pleased to have
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Drug Store
when in Eastport
We carry everything usually
found at a first class
pharmacy

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**Local Salesman Wanted
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CANADA'S GREATEST NURSERIES
Special list of Hardy Tested varieties,
thoroughly adapted for New Brunswick
planting. Large and small fruits; orna-
mentals. Shrubs, vines, Roses, bulbs
and seed potatoes.

A permanent situation for the right
man; liberal inducements, pay weekly.
Reserved territory, free equipment.
Write for particulars.
STONE & WELLINGTON
Fonthill Nurseries
(Over 800 acres)
TORONTO, CANADA

**No Theories
No Guesses**

Go into the process that produces

**Nectar
Tea**

It is grown and treated with science
and skill.

It is a packet tea, packed direct
from the Ceylon gardens.

It costs something because it is
worth something.

W. C. PURVES,
St. Stephen, N. B.
Agents.

To Enjoy Good Health, DRINK
**Old Homestead Ginger
Beer and Club Brand Soda**
Use Valentine's Flavoring Extracts

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THE INTERNATIONAL DRUG CO., Sr. Stephen, N. B.

**The Leader Pneumatic Water Work
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The Latest Improvement in water systems for Private Res-
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Part of the house.

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Sample Outfit Installed in Boyd's Hotel. Intending pur-
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System Installed in any part of the County.

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Manufacturer and Dealer in Monumental and General Cemetery
Work of the Best Selected Canadian and American Granites.



First class work guar-
anteed and prices as low
as can be quoted for honest
work. Our work is a stand-
ing advertisement, and our
business is in creasing ac-
cordingly.

We will deliver and
erect monuments in any
part of St. John and Char-
lotte Counties. Write for
prices and designs.

IMPORTER AND
DEALER IN

**Domestic and all
Foreign Granites**

BLACK GRANITES A SPECIALTY
Works Opposite Cedar Hill Cemetery. Street Cars pass the door.
Phone, Works, 177-21, Residence, 165-11. West St. John, N. B.

Professional Cards
Henry Taylor,
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Physician and Surgeon,
Office and Residence, PARKS BUILDING
ST. GEORGE, N. B.

C. C. Alexander,
M. D., C. M., M. GILL.
Physician and Surgeon,
Residence, Goss House,

DR. E. M. WILSON
DENTIST
Will be in St. George the third week of
every month

Long Distance Telephone.
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Contractors and Builders
ESTIMATES FURNISHED
Address: St. Stephen, N. B.

J. D. P. Lewin,
LAW OFFICE,
Canada Permanent Building,
St. John, N. B.

Wing Hem, Laundry,
Fred Hem, First-Class Laundryman.
Work Done Quickly. Laundry finished
on Wednesday, Friday and Saturday.

Seemed to Vary

A country schoolmaster was coaching
his pupils for the yearly examination by
the clergymen of the district. He had
before him the junior geography class.

"Can any little boy or girl tell me
what is the shape of the earth?"

To this there was no answer.

"I will give you something to remind
you. What is the shape of this snuff-
box in my hand 3-8?"

"Square sir," replied all.

"Yes, but on Sunday, when I change
my clothes, I change my snuffbox and
carry a round one. Will you remember
that?"

"Oh, yes," was the reply.

Examination day came and the junior
geography class was called.

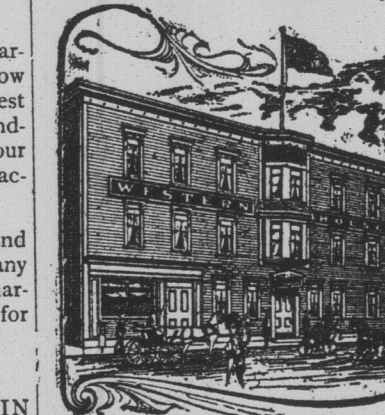
"Fine class," said one of the clergy-
men. "Can any one of the little boys
or girls tell me the shape of the earth?"

"Round on Sunday and square all the
rest of the week," was the reply by one
of the boys.—Exchange.

**One in Seven Called by Consump-
tion**

A dreadful plague indeed when you
consider that in incipient stages it can be
cured. Take care of the little cold before
it becomes a big one. When the throat
is sore and it hurts to expand your chest,
rub in Nerviline and immediately apply
one of Polson's Nerviline Porous Plasters.
Pain and tightness are at once relieved.
Inflammation and soreness gradually
disappear and fatal illness is thus avoid-
ed. Nerviline Plasters act as a counter
irritant over the seat of pain, and as an
exterior application in curing colds in
the muscles, in pleurisy and headaches
they have no equal. Keep these remedies
right in your home.

Western House,



A. & M. J. WILSON, Proprietors.
Favorite Hotel for winter port employees
Private Boarders on Reasonable Terms
Modern Improvements.
Hotel for Summer Tourists, near the
Favorite Bathing Beaches. Heated
throughout with Hot Water, and Light
ed by Electricity.
**RODNEY STREET
WEST ST. JOHN.**

HOTELS

Victoria Hotel,
KING STREET,
St. John, N. B.
AMERICAN PLAN.
Victoria Hotel Co., Ltd., Proprietors.

Boyd's Hotel,
ST. GEORGE, N. B.
First-Class Livery and Sample
Rooms in Connection.

Cough Caution

Never, positively never poison your lungs. If you
cough—even from a simple cold only—you should
also protect your throat, and ease the irritated bron-
chial tubes. Don't blindly suppress it with a
stupifying poison. It's strange how some things
finally come about. For twenty years Dr. Shoop
has constantly warned people not to take cough
mixtures or prescriptions containing Opium,
Chloroform, or similar poisons. And now—little
late though—Congress says "Put it on the label."
If poisons are in your Cough Mixture, Good!
Very good! Hereafter for this very reason, mothers,
and others, should insist on having Dr. Shoop's
Cough Cure. No poison marks on Dr. Shoop's
label—and none in the medicine, else it must be
law be on the label. And it's not only safe, but it
is said to be by those that know it best, a truly re-
markable cough remedy. Take no chance then,
particularly with your children. Insist on having
Dr. Shoop's Cough Cure. Compare carefully the
Dr. Shoop package with others and note the
difference. No poison marks there! You can
always be on the safe side by demanding

**Dr. Shoop's
Cough Cure**

"ALL DEALERS"

**Come to Us
With Your
Orders
for Job
Printing**

We are prepared to give a
class of work that is artistic
and at a reasonable price

And we will give it to
you on time—The
wise man will
consider this

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The Scientific Aspect of Earthquakes and Volcanoes

BY W. J. MURRAY

The dreadful fatal tragedy en-
acted at the extreme south of Italy
and the eastern coast of Sicily cannot
fail to awaken the heartfelt sympathy
of the whole world for the ill-fated
victims of probably one of, if not the
most appallingly destructive earth-
quakes in the annals of seismic dis-
turbances throughout the world. The
latest accounts estimate the loss of
life at 170,000 to 200,000 people,
and it is much to be feared that the
total number when fully ascertained
may turn out in excess of these figures.

We surely have here the evidence
that in the play of cosmic forces
nature recks little of consequences.
The terrible catastrophe on the shores
of the straits of Messina has as little
interest for the universe at large as
the destruction of a microscopic in-
fusorium or of the smallest bacillus.
Both events happen through the op-
eration of a mechanical necessity
which throughout nature takes no
cognizance of sentient beings, their
feelings and their interests.

That from the human point of view
earthquakes are an evil, goes without
saying; and the worst of it is that it
is quite impossible to prevent them,
and almost equally impossible to
avoid them.

Earthquakes and volcanoes, while
different in their localities and modes
of manifestation, are undoubtedly due
more or less to a common natural
cause, viz., the gradual cooling, and
consequent shrinking or contracting,
of the earth's crust, taken together
with the fact of the great body of
intense heat in the interior of the
earth. A very high temperature must
exist at a depth of even a small frac-
tion of the earth's radius. At the
depth of say twenty miles, the heat is
so great that the most refractory solids
whether minerals or metals, would at
once yield if they could be subjected
to such temperatures in our labora-
tories. But none of our experiments
can tell us whether, under pressure of
thousands of tons on the square inch,
the application of any heat whatever
would be adequate to convert solids
into liquids. It is, therefore, doubt-
ful whether the terms solids and
liquids are at all applicable, as we
understand them, to materials form-
ing the interior of the earth. As to
the immediate cause of earthquakes,
there is considerable difference of
opinion, as is always the case where
a natural problem presents itself for
solution outside the domain of what
are termed the exact sciences. In all
probability, an earthquake is one of
the necessary consequences of the
gradual cooling of the earth. As the
terrestrial heat is gradually declining
through its radiation out into space,
it follows that the bulk of the earth
must be gradually shrinking.

No doubt the diminution of the
earth's diameter from this cause must
be small, even in a long period of
time. But the shrinking is neverthe-
less continually in operation, and ac-
cordingly the crust of the earth has
from time to time to accommodate
itself to the fact that the whole globe
is slowly but surely getting smaller.
It follows from these considerations
that the rocks forming the earth's
crust over the surface of continents,
islands, and under the beds of the
ocean, must have a declining acreage
year after year. So that of necessity
the rocks must compress either con-
tinuously or occasionally; and their
yielding will usually take place in
regions where the earth's crust hap-
pens to have least power of resistance.

The acts of compression may be
and usually are irregular, with small
successive shifts; and though the dis-
placement of the rocks in these shifts
may be actually small, yet the pres-
sures which the rocks are subjected
to are so great that a very small shift
may correspond with a very great ter-
restrial disturbance.

Suppose that there is a slight shift
in the rocks in each side of a crack
or fissure at, say, a depth of ten miles,
where the pressure would be about
thirty-five tons to the square inch.
Even a slight displacement of one ex-
tensive surface over another, the sides
being pressed together with a force of

thirty-five tons to the square inch,
would be an operation accompanied
by violence greatly exceeding that
which we might expect from so small
a displacement, if the forces con-
cided had been only of more ordin-
ary magnitude. It can be readily under-
stood that these violent movements
under the surface of the earth must
cause great changes and commotion
over-ground, resulting in the whole-
sale destruction of houses, villages,
and even large cities, and infrequent-
ly great sacrifice of human life.

When an earthquake occurs under
the floor of the sea, at a great distance
from land, it does little harm; but
when it happens near the shore, as it
did a few days ago, on the coast of
Southern Italy, it causes great dam-
age and loss of life. When the dis-
turbance occurs under the bed of the
sea, the waters above it become up-
lifted, and the shock spreads out-
wardly. As the waves approach the
shore, the friction or drag on the sea
bottom decreases their speed, but
greatly increases their height. On a
low-lying coast such waves (usually
miscalled "tidal waves") are generally
very destructive which is unfortun-
ately verified in the Italian disasters.

Both earthquakes and volcanoes are
more frequently found near the sea
coast than inland. In the United
States, earthquakes are most common
in California. There appears to be a
seismic zone encircling the world in
which earthquakes are more numerous
than elsewhere. It includes Central
America, West Indies, Azores, Italy,
Persia, Afghanistan, Tibet, Japan,
and Hawaii. Earthquakes are com-
mon in volcanic regions.

Volcanoes are caused in the main
by the same conditions and influences
that give rise to earthquakes. But
they are different in their manifesta-
tion. Volcano eruptions are caused
by leakage or percolation of water
through cracks or crevices of the
earth or rocks in varying quantities—
sometimes in large quantities. As it
comes in contact with the great heat
in the lower part of the earth's crust,
the water is converted into steam.
The steam finds violent vent in an
explosion that removes the pressure
from the lava, which in turn is forced
up through the vent.

This internal heat causes evolu-
tion of a great body of elastic vap-
or, which expanding and seeking an out-
let where there is less resistance,
shows itself in upheavals and explosive
eruptions. The body of vapor sup-
posed to be derived from superficial
masses of earth becomes hydrated, or
combined with water. Such action,
as well as the presence of molten rock
known as lava, is accounted for by
vast internal displacements, bringing
the inner crust with its high temper-
ature nearer the surface. A great
portion of the material thus upheaved
is lava.

Lava is largely composed of silica
and silicates; those containing a rela-
tively small percentage of silica
being called basic, and those contain-
ing considerable silica, acid. The
acid variety of lava is lighter. Some-
times it does not move from the lava
vent, and when it does it generally
proceeds a short distance only,
solidifying into a thick mass. The
basic is much more liquid, and covers
the slopes of the mountains or forms
a lake on the adjacent plains. At
the surface the lava is torn apart by
the steam, the fragments being hurled
high in the air. The fragments
are known as cinders, and when finer
as ashes. There are also numerous
accessory phenomena, such as earth-
quakes, electric and magnetic dis-
turbances, and acoustic manifesta-
tions, accompanying a volcanic erup-
tion.

Both earthquakes and volcanoes
have been inseparably bound up with
the evolution of our planet for count-
less ages past, but their duration must
have its limit, although that limit
may be tens and even hundreds of
thousands of years hence.

The present inherit and dead con-
dition of our satellite—the moon—
once the center of great volcan-
ic activity, points unmistakably to
a fate that sooner or later awaits
earth of ours.