- the copper region of michigan.



## Where Copper is King.

LAKE SUPERIOR COPPER COUNTRY. By H. C. Rankin.
The date of the earliest copper mining in this district is veiled in the mists of antiquity. Would-be authorities vary much in their opinions, some placing it hundreds, others many thousand of years ago. It is certain that copper was distributed in pre-historic times, quite largely through the territory now constituting the United States and Mexico.

The Mound Builders were successful metallurgists, for they possessed an art, lost to us, that of tempering copper.


CLIFF MINE.
The Oldest Mine in the Lake Superior Country.
most keenly the depressing effect of deeper mines and decreased copper percentages, but its counter-balancing has been met in great part by the installation of most modern and more powerful boisting apparatus and by latest im. proved stamping and smelting equip. ments.

The year 1903 was highly satisfactory to the Lake Superior copper mining industry. The production of metal showed a large increase over the recordbreaking figures of 1902 . Wages have remained at the same level, the number of men employed was never larger, the outlook is exceedingly bright. The mines are in excellent condition, the management competent everywhere. The year 1904 promises material increases, on the whole both in production and in dividends.

The older properties are withstanding the ravages of large and well-sustained outputs. The Atlantic is now securing more copper to the rock stamped and a greater output than ever before. Perhaps in no part of this great mining district

The first actual Lake Superior copper mining of our times was done in 1844, near Copper Harbor, Keweenan County, by a company which later developed the Cliff Mine.

In 1866 the great Calumet and Hecla was opened and speedily took first rank among the copper mines of the world. Scores of other mines have interesting histories in this district.

The Bessemer process is used in refining. Electrolytic refining is the latest, perhaps greatest, contribution of the modern copper smelter to metallurgical science.

The Lake Superior district has felt
has the loyalty, courage and devotion of the Cornish miners been put more to the test than during this summer in the Atlantic.

The Ahmuk gives promise of becoming a large and profitable mine.

There is no reason in sight why the Allonez should not prove eventually to be a good mine.

The Wolverine has a wonderful record during the past decade. It is said to be making the cheapest copper on Lake Superior.

The Tamarack mines its rock from greatest depths.
(Continued on page r66).


COPPER MINING.

Shaft and Rock House, Tamarack Mine.
One of the Ponderous Engines used in the Mines

Interior of a Stamp Mill. Pump used for supplying water to Stamp Mills. Capacity, sixty-five million gallons every twenty-four hours.

## An Interesting Episode.

In a recent letter a : idressed to our General Manager for Eastern Asia, Mr. Barnes Moss, of Shanghai, the Company's Manager for North China, says : "My trip to Tientsin was not without incident. A Japanese cruiser pounced down upon us off the south-east promontory early one morning, and signalled 'Stop, or we will sink you.' We stopped. A couple of officers and twenty men came on board and went through our cargo. They let us go four hours later." Mr. Moss's itinerancy is evidently attended with considerable excitement and interest just now. Nevertheless it has not seriously disturbed his success in life assurance. We see in the October "Agency Bulletin" that he ranks fourth for "individual production"-that he has been on the honor list six times in the nine months of this year-and in "order of merit" for the same nine months he ranks second. That is surely an honorable record for any one of our staff. We might, therefore, well say that whoever is all right, Mr. Moss is certainly all right.

We note from the same letter that the General Manager for Easteru Asia is getting up a Chinese calendar, and that Mr. Moss is getting up the design. It is well known that, to be effective to Oriental minds, its embellishment must represent an allegory of some sort. Mr. Moss believes that his choice will be "great Joss " which means, in a matter of this kind, good luck. He explains the allegory thus: "Many years ago there lived together a family oî nine generations: they were so well informed in the teachings of Confucius that they excelled all others, and when the final examination came, they won 'hands down ;' and from that time forth they became known as the first family in the world." He adds, "This story, you will
note, is synonymus with the history of the Sun Life of Canada-first in every. thing that is good." Mr. Moss is evidently working up a distinguished and honorable record for himself in China. We wish him every success.


This mass of pure Copper, weighing about 6000 lts was found upon the property of the Minong Mining Company, Isle Royal, Lake Er perior. It was taken fron an ancient mine pit, $161 / 2$ feet deep, and is shown just as discovered, bearing ancient stone hammer marks.

## Two Sun Life of Canada Men Runsing.

No matter what may be the result of the coming parliamentary elections in Sherbrooke county, the Sun Life of Canada will be in evidence. Mr. C.C. Knight, the manager of this Company for the Eastern Townships, is the Libe ral candidate, and Dr. Worthington the Company's medical examiner, is the Conservative candidate.

The logic of events forbids us wishing success to both of them. They are tmo worthy men and no mistake will be made in electing either.

The Ston Life of Canáda is
"Prosperous and Progressive."


An Electric Pump now in tsb nearly a mile melow the suriace,
in the Calumet and Heckla Mine,


Birdseye Virw of the Calumet and Heckla location,

## Where Copper is King.

(Continued from page 162).
The Quincy is carrying on an elaborate system of improvements. It has recently installed an electric underground tram service.

The Osceola consolidated has splendid properties and fine prospects.

A score of others might be referred to.
The interest of the world at large centers round the Calumet and Hecla, largely because of its well-known high quotations for years in the stock market. It has paid $\$ 83,500,000$ in dividends. It employs now more than 5,000 men. Last year it produced $80,000,000$ pounds of refined copper. It has a library of 16,000 volumes. The bistory of this great mining company reads like a romance. It would fill a large quarto volume.

The Calumet and Hecla has produced about fifty-five per cent. of all the copper made on Lake Superior. It is now making twelve per cent. of the copper produced in the United States. Eight per cent. of the entire world's output.

The most important results of the last few years' developments are the South Range trio-the Champion, Trimountain and Baltic-and the mines to the north of Calumet. The South Range properties have an exceedingly bright future in store for them.

The Champion is said to be stamping the richest amygdaloid rock mined in the Lake Superior country.

The Baltic is operating four stamps.
The Trimountain will make a larger output this year.

The entire output of the Lake Superior mining district will perhaps exceed $200,000,000$ pounds of refined copper during 1904.

Houghton county contains nearly all of the valuable copper mines of Lake Superior. It is the second county in

Michigan in point of assessed valuation. It has, naturally a very cosmopolitan people. More than thirty different languages are largely spoken. The principal towns are Houghton, the county seat, Ha icock, just across Portage Lake, Calumet, Red Jacket, Laurium, a series of towns twelve miles distant, and Lake Linden. There are a dozen or more enterprising towns and mining locations of considerable importance besides. There are many very fine public buildings and privace residences built of material to stand the test of time. The school sys. tem is excellent. The churches are well supported. The people are above the average in intelligence. They are thoroughly up-to-date in every particular. They are generous to a fault ; their hospitality is of a nature similar to that of the South, they do not pinch a dollar until the eagle squeals, but they havea weakness for investment, and at least once in a while wish they had confined their speculations to more standarif securities than copper stocks.

The Anglo-Saxon portion especially of this rich copper country are staunch believers in life assurance. They regard the life assurance solicitor as a business man and treat him accordingly. They view life assurance as the greatest, safest, best, surest method of providing a competence for later years. They understand it, too, and woe betide the man who comes to them with any trumped-up story of glowing estimates as substitutes for actual dollars when settling day comes.
"No backward footsteps" seems to be the motto of the Copper Country Around copper as a nucleus every commercial interest of Houghton County centers and revolves. The whole popt lace is sensitive on this crucial point of intense interest.

Houghton County is proud of its (Continued on page 174),


COPPER MINING.
Tram Car filled with Copper Rock awaiting the Cage.
Cage Loaded ready for Hoisting.
Entrance to the Deepest Shaft in the World-4935 feet-Tamarack Mine.
How the Mines are Timbered-Calumet and Heckla.

## SUNSHINE <br> PUBLISHED By THE

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A. M. Mackay, Editor.


HEAD-OFFICE BUILDINGS

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Arthur B. Wood, F.I.A.
Suprrintendent of agencies.
Frederick G. Cope.


Two_Questions.
"How are you going to vote?"
"An impertinent question," you say. So it is.
Yet at this writing the United States and Canada contain many thousands of people who are impertinent enough to ask their fellows this question.

In the face of common usage, the question is pretty generally admitted to be quite proper.

To some who make bold to ask us this question we answer candidly, but to others, our reply is couched in language that means "It's none of your business."

We stand upon our freedom.
And we proudly assert it.
After all it is not so much, perhaps, our wish to make known that we are "free and independent" citizens to act as we think fit, but a reproof to the impertinent manner in which the ques. tion is asked.

Quite likely were another man to meet us a few moments afterwards with the same query, but asked in a different manner, we would gladly make known our political leanings and perhaps enter into discussion if opposed to the questioner.

Here is another question.
"Is your life assured?"
Some may say it is impertinent.
Others may allow it.
Many thousands of life assurance representatives all over the world daily ask it.

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## SUN SHINE

Some reply curtly. Others are open for argument and many are glad of the opportunity to answer in the affirmative. A great deal depends upon the way the question is asked.
The significance of both questions is apparent.
The former is significant more particularly from the view point of the questimer.
Which party governs is after all a relative matter.
The party in opposition is anxious to get into power and the party in power is as anxious to hold the reins of government.
To the great mass of people it matters not which government is in power as long as the country is governed well.
The question "Is your life assured ?" bears an entirely different aspect.
It is severely personal.
It strikes at the happiness of the questioned and those whom it is his bounden duty to protect.
A man may brush aside a life assurance representative with disdainful coldness and say that his reply to the query is his own personal affair and not the business of others ; while this nonchalant attitude may perhaps cause the representative to cease ringing his door bell, the facts of the case will not cease to force themselves to the front and demand a more acceptable answer.
The "little tots"' who are so dependent and to whom care and worry are unknown terms are unconsciously looking to the father for their protection ; that patient and self-sacrificing woman whose life is taken up with the care of the children and the comforts of home looks to the same source for her protection.
In the face of this stern duty how can man, who claims the right to be called man, ignore the responsibility of protecting his loved ones during his lifetime
and after.

It may be that the indiscretion of some life assurance solicitors has done much harm.
By their want of tact they have made it more difficult for the level-headed solicitor to do his work.

The failure of some solicitors is aside from the question, and does not alter an iota the importance of carrying every cent of life assurance that possibly can be carried for the security and the protection of those who need protection.

The question "Is your life assured?", is not an impertinent question.
It is very pertinent.
The life assurance man, although his primary object is the advancement of his own personal affairs, is still doing a work which should command the respect and assistance of all men who have an interest in promotiag the best economic conditions and the welfare of the individual and the State.
He is doing a service to the people by his thankless work the value of which cannot be easily computed.

We trust our readers who may not have taken the announcement of a life assurance representative very kindly, may, in the future, cease to consign the fraternity to a city down by the sea or perhaps to a region of more torrid climatic conditions, but just allow themselves to be "bothered" a little by them, and especially if it happens to be a representative of the Sun Life of Canada, for he who links himself with this " Prosperous and Progressive "' Company acts wisely.

In the above we have been incidentally hitting indiscreet life representatives over the heads of the public. Take the hint kindly from one who is seated in an arm chair in an office and not up against the difficulties you have to meet.

Notwithstanding this perhaps our word may cause some representative to set a watch on himself and give his very best efforts to the great work.


MICHIGAN COPPER COUNTRY.

Quincy Stamp Mill on Torch Lake.
Quincy Mine Office.
Court House, Houghton, Michigan.

Building and site of the Lake Superior Smelting Co., at Dollar Bay.

Hubbell Hall, one of the six Buildings of the Michigan College of Mines, at Houghton.

Un regar funct Press. preser pende been his fa tions assura its ap heart

Of 1 surance Its use the hot great in It is a various partners lives of against the sud form of populari lieve tha members better cre Neither existence saved ma haps failt
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## The Practicability of Life Assurance.

Until recently life assurance has been regarded as possessing chiefly a domestic function, writes the Oracle in Insurance Press. Its accepted object has been the preservation of, family unity and independence. The affections of man have been appealed to ; the sense of duty to his family has been aroused; his emotions have been stirred. Heretofore life assurance has made progress largely by its appeal to sentiment. The human heart has been touched.

Of late, however, the scope of life assurance has been considerably broadened. Its usefulness is no longer confined to the home. It is now recognized as of great importance in the business world. It is adaptable to business affairs in various ways. It may take the form of partnership assurance, or policies on the lives of individuals, securing the firm against a possible loss consequent upon the sudden death of a member. This form of assurance is rapidly growing in popularity. It is but reasonable to believe that business houses in which the members are jointly assured enjoy a better credit and a higher rating thereby. Neither could it be disputed that the existence of partnership assurance has saved many a firm from peril and perhaps failure.
A partnership policy is evidence of good faith. It is equivalent to a declaration that the firm is in business to stay, and is desirous to protect its creditors to the fullest extent.

In an indirect manner life assurance for the benefit of families affects business affairs. For where a business man, who is a husband and father, has provided for his family by life assurance, not only is his mind better fiitted to cope with busi-
ness problems, but he is enabled to put into his enterprises practically his entire resources. Unquestionably life assurance has been the means of producing better business men, and releasing a considerable amount of money that would otherwise be tied up for the security of families.

However, there is another phase in connection with the relation of life assurance to business affairs that is attracting considerable attention of late ; that is, the value of a life assurance policy as a borrowing medium. It is not always an easy matter to secure credit. Many a man has been sorely embarrassed by his inability to negotiate a loan. Inasmuch as a large part of the business of the world is conducted on credit, the man who is unable to procure any is seriously handicapped.

Frequently a life assurance policy has been the only relief a business man has had. It has been his one resource, and undeniably has saved many a business enterprise from disaster.

It may not be generally known to what extent loans are negotiated under life assurance policies. For the year 1903 the total amount of money invested by the life assurance companies in premium notes and loans was $\$ 158,567,609$. This amount, of course, does not include the loans which have been placed through individuals who accept policies as security. No way could be devised to estimate the grand total, but nevertheless it is a most impressive testimonial to the usefulness of assurance that policyholders were able to borrow over \$1 50,ooo,ooo upon their policies as sole security.

This loan privilege is yearly becoming more appreciated. Five years ago the total amount of premium notes and loans was $\$ 70,000,000$. Each year it has steadily increased, the amount gaining at the rate of about $\$ 20,000,000$ a year.


THE CALUMET AND HECKLA BRASS BAND.
This Band has now an International reputation.

Between the years 1902 and 1903 the increase was over $\$ 30,000,000$.
There are peculiar reasons why loans under life assurance policies are increasing in popularity. In the first place the loan is quickly made. There are no titles to be searched; no securities to be examined; no tedious and expensive processes to be gone through. A policyholder is able to present his contract, sign the necessary papers, and receive the full loan value within a surprisingly short period.
In the second place, a loan under a life assurance policy is desirable because of its absence of publicity. No embarrassing questions are asked ; no examination of financial standing is made; no filing of documents, open to the public eye, is required. The whole transaction is confdential.
We do not think that the statement
will be challenged that the $\$ 158,567,607$ borrowed under life assurance policies in 1903 directly saved many business house from ruin. This is particularly true in the case of the small manufacturer of tradesman. It is often impossible fur men of limited capital to secure a loas upon their business except from a mones shark at exorbitant rates. However, thes small men of business are able to borror at legitimate interest a small sum a money from $\$$ io up, which may be at that is necessary to save their interess from utter failure. This class of peopid is fast appreciating the great benefit of life assurance to their business. The function of life assurance is growing with the times. It is no longer limited to the maintenance of homes. It is factor of mighty importance in busines affairs, and its adaptability in this respec is almost without end.

A stro
surance $C$ on Octob McKenzi rector of t ever faith ties devoly judgment He was in in Scotlan in 1844 , a business et later, when supplies in in business prior to h preumonia leaves man manner and bound him btasiness or the directio pany will meetings of


THE LATE REV, R, TAYLOR.
We were pained to learn a few days ago of the unexpected death of Rev. Mr. Taylor, on September 27th, at his home at Picton, the cause being jaundice. He was connected with the Sun Life of Canada for nearly a year, and was doing excellent work. Last year, on account of illness, he was given a year's leave of absence by his church, and he joined the staff of this Company. At the recent Outing he seemed to be quite cheerful, and heartily entered into the enjoyment of the occasion along with the other members of the staff.

Mr . Taylor was in the active ministry of the Methodist Church for twenty years, and was held in the highest esteem by his co-workers in the ministry.
We extend to the sorrowing friends our sincere sympathy, and we shall always carry with us the memory of the many pleasant chats we had with him at the Outing.


Lake Linden, Michigan, site of the great Stamp Mills of the Calumbt and Heckla Copper Mines.

## Where Copper is King.

## (Continued from page 176).

Mining College, whose graduates are in demand all over the mining world.

The people rejoice in their water-way to the Great Lakes in both directions, whence their outlet to the sea. Largest lake and many ocean steamers pass and repass here.

The facilities for railroad transportation are excellent. The office of the Chicago \& North Western is elegant in all its appointments. The D.S.S. \& A. officials are courteous and obliging. The C.M. \& St. Paul R.R. find outlet from here. The Copper Range R.R. does an enormous business.
The possibilities of this great country seems limitless.

## Flimsy Promises.

" Flimsy promises are the basis of some investments ; it is not so with life as surance, which is founded upon scientific calculations and years of business experience. The outcome of an assurance policy is never uncertain ; of few othe securities is this true. Doubt was long ago eliminated from life assurance."
-New Zealand Government Insurance Recorder

Right and wrong are in the nature of things. They are not words and phrase They are in the nature of things, and ii you transgress the laws laid down, imposed by the nature of things, depeni upon it you will pay the penalty.
-John Morles.

On this raph of M eling Age Ceylon, as Ball, held eport as g lent is as fo Mr. Fred. gent of th any of Can nique adve ay. He a nit, on whic
were displayed, printed in bright red:
"Sun Life Assurance Company of Canada;"'
"Why live and be miserable when the 'Sun Life of Canada ' will look after the wife and kids? Assure your life and be happy;'"
"Is life worth living?-Yes, if it is the 'Sun Life of Canada ;'"
"Is marriage a failure?-Not if you have assured with the 'Sun Life of Canada ; ','
" Do you want to make your wife a happy widow? - Assure with the 'Sun Life of Canada;'"
"Once you have assured, don't count the chicks. The 'Sun Life of Canada' looks after those little details;'
" Many a man has married a rich widow, thanks to the 'Sun Life of Canada ;'" "Ladies make your husbands to assure ; "
"Assure with the 'Sun Life of Canada' and though your sun may set your widow's sun will rise ;"
" To wed or not to wed, that is the question ; but before you pop go to F. P. Staples, C. T. A. of the 'Sun Life of Canada ';'"
"The best wedding present you can give your bride is your Life Assurance Policy;"
The costume was one of the prettiest, as it was also one of the most striking and amusing in the room, and evoked laughter at every turn throughout the night.

## Have a Purpose.

The man without a purpose is like a ship without a rudder; a waif, a nothing. Have a purpose in life, if it is only to kill and divide and sell oxen well, but have a purpose ; and having it, throw such strength of mind and muscle into it as has been given thee.
-Carlyle.


