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SON.

Chatham,
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occasion of
S. Titus, son
m, Kings Co.,
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er of Chatham,
7 o'clock, the
the fair and
bride entered
the chapel and
steps, leaning
and attired
the marriage.
Breathed O'er
a choir. The
her younger
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ed by his bro-
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After the
Fourth per-
son. After
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a including Mrs.
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son, others, pro-
pose, where a
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of the festi-
vity in wish-
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of the high
whom he had
wed. He would
that she was
who had known
his good for-
God's blessing
rough Mrs. His
son, followed
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which the rela-
the contracting
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the beautiful
in the church.
all present, and
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Thursday morn-
sons took the ex-
on a wedding
Upham. The
of numerous
ong which was
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T SQUADRON.

Destroyers Now

Join It.

Dec. 27.—The
er, accompanied
yer Virgo, has
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ve knots. They
ports of South
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San Francisco

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EALED PREP-
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CURED with
notable Remedies,
are cured many
cases. From first
appear, and in ten
days relief is
of all symptoms
H. Green's Remedy.

FIRST PART.

MINING IN ALBERT.

The Mineral Products Com-
pany of New York

Have There the Only Plant for Treat-
ing Manganese "Bog Ore"
in the World.

Very Expensive Works—Description of the
Process—The Point de Buté Deposit
—The Scientific Theory.

In the beds of "wad" or bog man-
ganese which are known to exist in
large quantities in two places, and may
not doubt be found in others, New
Brunswick has a mineral product not
found in any other country in any
quantity. The hard manganese ore
is got by mining and found in
pockets in the rock formation, is of
course quite familiar, though in cer-
tain quantities, but to find the man-
ganese in a bed varying from five to
thirty feet thick, immediately under
the turf or first layer of soil, and so
soft that it can simply be shovelled
up without the aid of a pick, is quite
a novel occurrence in manganese min-
ing experience.

If this fine, flour-like deposit of the
mineral could be treated as simply as
the hard ore from the mines, it would
be of course of great value. But that
is not possible, and up to the present
time there appears to be only one
process of treating it with any success
at all.

To be available for commercial pur-
poses this pyrolusite or manganese
dioxide must be converted into what
is technically termed ferro-mangan-
ate. This can be done through the
agency of a blast furnace. Now hard
manganese ore can be treated simply
enough, but this bog ore or "wad,"
after the fifty per cent. or thereabouts
of water has been dried out of it, be-
comes a fine dry powder. Put it into a
blast furnace and it would simply
blow away.

The great aim of all experiments
has been, therefore, to discover some
otherwise suitable substance to mix
with the powder, to bind it together
in such form that it would

STAND THE FURNACE
The reading public will remember
that Edison, in his famous iron works
in the New Jersey mountains, first
separated the iron from the sand in
the ore and then he had a fine sand,
which is also in the form of a fine sand,
and by employing a "binder" is able
to convert the iron sand into iron
bricks, which will stand the operations
of the blast furnace.

Such a process of treating the man-
ganese has not yet been discovered
and has stood the test, and is now to
be applied by The Mineral Products
Co. of New York at the great bed of
this ore found at Dawson Settlement,
half a dozen miles from Hillsboro,
in Albert county.

An American com-
pany has endeavored to utilize the
ferro-manganese which is now to
be used, but was not successful. The
present owners are satisfied that they
can succeed, and have indeed proved
it by actual test. It may be added
that there is the only process known
which has proved effective. It in-
volves a large outlay of money and a
complicated plant, and the works in Al-
bert county are the only ones of the
kind in the world.

The Mineral Products Co. is incor-
porated under the laws of New York.
Hon. F. C. Sayles of Pawtucket, R. I.,
is president; C. Sayles, Jr., of Pro-
vidence, R. I., treasurer; Dr. L. Edwin
F. Ward of New York, secretary;
Russell P. Hoyt of New York, gen-
eral manager; N. M. Langdon of New
York, superintendent of works.

The company began operations in
Dawson Settlement six months ago,
and have spent about \$50,000 in pur-
chase of land, clearing it up and erect-
ing their plant. They have had about
forty men employed until lately,
when they were laid off to await the
beginning of operations in the works
themselves, which will start now in a
very short time. They run with a
day, employing thirty hands or more,
and treating probably a hundred tons
of ore per day.

The company own four hundred
acres of land, on seventeen of which
the ore is found under a thin coating
of soil or vegetable matter, and ex-
tending to a depth of

FIVE TO THIRTY FEET

of the ore, which can be got out by
merely shovelling it into the cars.
A member of the Sun staff, being
in Hillsboro on Tuesday, paid a visit
to the place. He was fortunate enough
to find Mr. Hoyt, the general man-
ager, and that gentleman went out
with him. The deposit lies on a hill-
side, with a slightly higher elevation
behind it and a deep gully running
along its base. The place was cov-
ered with a thick growth of woods.
Seventeen acres of this has been
cleared and the stumps taken out and
drains dug. The ore lies in a bed of
varying thickness all over it. The
Sun man walked over the place, and
a man with a pick went along, and on
the sides of the drains and the holes
dug all over the place, sunk the pick
in through the coating of soil, and
everywhere

THE ORE WAS DISCLOSED.
A singular fact is that there are
quite a number of living springs on
the property. There are two close to-
gether on the highest point of the
deposit. The scientific theory of the
deposit appears to be that in the hills
back of the bed there is manganese
in place or in formation. If the for-
mer, as is thought, probably, there
must be a very large deposit of the
ore, and streams of water passing
over these large beds have in past
ages carried the ore in solution to the
place where it is now deposited, and
perhaps is still being deposited, as
"wad" or bog ore.

This bog ore in its natural state
contains about fifty per cent. of water,
and this of course must be got out.

When that is done the result is, as
stated, a powder, black in color and
about as fine as flour.
The company have erected their
plant at the foot of the hill that
forms the ore bed, the lower side of
the structure being on a level with
the bed of the gully, where a branch
railway comes right up to the back
door. The building is 52x72 feet, with
30 foot posts on the upper side, and
extending 18 feet lower on the side
next the railway, being thus erected
on the shoulder of the hill. The build-
ing is equipped with heavy machin-
ery, specially made for the work.
There is an 80 horse power engine and
a brick chamber 10x14 feet and 30 feet
high, in which there is a revolving
cylinder of half inch iron, five feet in
diameter and 28 feet long.

THE PROCESS
Through which the ore must pass is a
very interesting one. It goes in, as
rough ore, looking to the unpracticed
eye not very unlike any other black-
ish colored fine earth, and it comes out
in the form of a hard, black, cylindrical
brick, three inches in diameter and
two and a half inches long.

The process is not easy to under-
stand without being seen, and even
then of course the secret of the pro-
cess by which the dried powder is
cemented together remains a mys-
tery, known only to the company who
control it. The ore is brought in little
trains from the bed, a distance
of only 600 to 1,000 feet, and run-
ning into the building, is dumped on
a platform on a level with the feed-
hopper of the revolving drier already
spoken of. It is shovelled into this
hopper, and the revolving drier, which
is kept heated by wood or coal fires,
carries it to the back end of the brick
chamber, where it drops into a spiral
conveyor, which carries it out of the
chamber to the foot of a bucket ele-
vator, by which it is elevated to the
top of the building, some thirty-odd
feet, where it passes through a re-
volving screen. The fine ore sifts
through the screen into what is called the

AT POINT DE BUTE.
This has been secured by the Mineral
Products Co. There is a bed, said to
cover a hundred acres, to a depth of
five to fifteen feet.

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through the screen into what is called the

DRY ORE BIN.

The coarser part, which will not sift
through, goes on and out of the far-
ther end of the revolving screen, and
is carried from thence down into a
grinder, which grinds it up fine, and
it is then carried back to the foot of
the boot of the elevator and up again to
the revolving screen, through which
this time it sifts without difficulty
into the dry ore bin.

But this is not all. Above the
brick drier is a dust chamber with a
V shaped bottom, provided with a
spiral conveyor, "dry" the ore pass-
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steam or gases, settles in the bot-
tom of the dust chamber, and is car-
ried out by the spiral conveyor and
passes to the foot of the elevator and
up to the revolving screen and into
the dry ore bin. Thus every bit of
the ore is saved. The steam and
gases pass out and away through two
spoke stacks rising from the dust
chamber above the drier.

The ore from the dry ore bin is
drawn into a mixer, where it is mixed
with a suitable "binder," the pur-
pose of which is to cement the powder
together. The mixed material is then
carried up to a sufficient height to
pass in at the top of the

BRICKQUETTING MACHINE.

A very complicated piece of mechan-
ism, from the bottom of which the ore
comes out in the hard cylindrical bricks
or briquettes already described. These
briquettes are carried to a pocket on
the level of the railway, with capacity
for about 250 tons, and from here the
ore is shipped on cars to be taken to
the company's blast furnace at Bridge-
ville, N. S.

The company would have erected a
blast furnace at Hillsboro, but there
was some difficulty in getting a site,
and they purchased the furnaces at
Bridgeville, N. S., which along with a
fine belt of hardwood happened to be
on the market. The briquettes will be
taken by rail to Bridgeville, and from
there can be shipped to steel works in
any part of the world.

The company have had the prop-
erty examined and reported on
by seven of the best experts
in the United States and Canada,
and the ore is analyzed by ten of the
principal steel makers and prominent
chemists of the United States; and the
result shows that the ore deposit is a
valuable one. The analysis is as fol-
lows:

	Per cent.
Metallic manganese	48.24
Metallic iron	5.70
Sulphur	0.098
Phosphorus	traces
Silica	1.38

This analysis was made on the dried
manganese at 25 degrees Fahr. The
ore is shown by the very slight
proportion of phosphorus and sul-
phur. No process has yet been dis-
covered that will eliminate phos-
phorus. When an ore contains more
than 0.10 per cent. of phosphorus or
more than 12 per cent. of silica, the
price is scaled down in proportion to
every unit above these figures.

The Albert county ore is thus a very val-
uable one if it can be successfully pre-
pared for the blast furnace.

The ore is covered by a few inches
of vegetable matter. A cubic yard of
the ore in its natural state weighs 1-
500 lbs.

Besides erecting their plant the com-
pany have

BUILT A BRANCH LINE

of railway from the works one and a
half miles to Stony Creek on the S.
and H. railway. The latter connects
with the I. C. R. at Salisbury, eleven
miles away, where the ore is taken
to Bridgeville, and which connects the
works with the Grand Trunk system
and practically with the railway sys-
tems of the continent. It is only five
and a half miles from the works to
Hillsboro, where at a wharf which the
company propose to construct, ves-
sels of a thousand tons can lie, and
thus they will have direct water com-
munication with Boston, New York,
Philadelphia and other American
ports, and also with Europe by ves-
sels which come there to load lumber.
The vessel rate of freight of U. S. ports
is \$1.50, and to British ports about the
same.

When the works are in full opera-
tion, running night and day, they will

employ about thirty men, and expect
to ship about 50 tons of briquettes per
day to the blast furnace. Mr. Lonsdale,
the superintendent of works, has had
long experience in manganese work-
ing in New York state, and his inven-
tive skill has been utilized in adapting
the briquetting machine to its present
purpose. There has been some diffi-
culty in finding a suitable material for
the properly adjusted and the "binder" ef-
fectively mixed with the ore, but they
were making hard briquettes when
the Sun man was there, and were con-
fident that in a very short time the
plant would be in full operation day
and night. Machinery practically does
it all, from the time the ore goes into
the hopper of the revolving drier until
the briquettes come out. The build-
ing is equipped with an elevator con-
necting the floor where the briquet-
ting machine stands with the storage
room below the railway.

The market value of ferro-mangan-
ese today is \$48.50 per ton. Two
tons of the bog ore will make one ton
of ferro-manganese, which is the only
material that will successfully purify
steel. It is imported by steel works
from South Africa, Spain, Cuba, Mex-
ico and Japan. This is not a material
found in quantity in any country. The
bog ore so far as known only in New
Brunswick. In Canada the returns
show that only twelve tons were pro-
duced in this country in 1896.

This reference has already been made to
a deposit of "wad."

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The vessel rate of freight of U. S. ports
is \$1.50, and to British ports about the
same.

When the works are in full opera-
tion, running night and day, they will

CUBA AND LIBERTY.

Gustavo Gisbert and Mario Garcia,
Two Sackville Students,

Talk Hopefully of the Day When the Span-
iards Will be Driven from the Island.

A Sun reporter had a very pleasant
half hour's talk the other afternoon
at 285 Princess street, with two young
Cuban gentlemen, Gustavo Gisbert
and Mario Garcia, the former the son
of a large sugar planter, the latter the
son of General Garcia, minister of war
of the Cuban republic, and a soldier of
no mean reputation. Gisbert and Gar-
cia, who are students at Mount Alli-
son University, are spending the
Christmas holidays in St. John as the
guests of two of their classmates.

It was the first named gentleman
who answered most of the reporter's
questions, Garcia nodding his head
occasionally in hearty approval of his
comrade's utterances.

"Cuba will get independence very soon,"
said Gisbert, and Garcia's eyes
glowed with patriotic fire as he re-
sponded to the sentiment. "The island will
accept nothing less. It is true that
Spain has recently granted the Cubans
a much more liberal form of govern-
ment than they have hitherto enjoyed,
but this offer will not delude any-
body. Experience has shown the
Cubans that Spain never keeps her
promises, so they don't take any stock
in her word just now. "We want in-
dependence; not annexation to the
United States."

How is the struggle progressing at
the present time? asked the Sun man.
The patriots are fighting very hard
just now, and an engagement
takes place every day or two. They
realize that Spain will have to give
up the war ere long, and every bat-
tle is a severe engagement in which
they repulse the enemy's assaults. The
Cubans possess all the rest of the is-
land, including several large towns.
The Spanish troops are concentrated
in the hope that they will always be re-
luctant to discuss matters of interest
to the Cubans. Among other things it
was said that the Cubans, having
accepted the offer of the chaplaincy of
the island, a recommendation to that effect
had been made to the Spanish govern-
ment.

Capt. White, the adjutant of the corps,
is receiving congratulations on having at-
tained the high rank of 87 in his re-
cent examination at Quebec. The
majority of the corps, to which he
will soon be promoted.

WHAT OUR EXCHANGES SAY.

What Halifax Says.

Halifax is now enjoying the pleasure
of seeing the government sub-
sidized steamers running between the
old country and St. John, pay a flying
visit to the harbor each way. They
see by the experience of St. John and
Portland what a goodly thing it is to
be the terminus of a company railway,
and by their own how indifferent a
matter it is to be only a terminus
of a railway owned by the people.

While the Grand Trunk railway are
carrying all their freight to Portland
for shipment, and the C. P. R. carry-
ing all their western freight to St.
John for shipment, the intercolonial
are not carrying a pound of freight
to Halifax, and the steamers might
as well not touch there at all
and let the country serve the addi-
tional expense in the way of sub-
sidy.

Punch in Trouble.

(Montreal Witness).

Punch will get punched if he does
not look out, as Jack Ketch used to
do at him before he was "Mr. X."
Punch. Does he not know, and has
Mr. K. Kipling not told him, that it is
an insult to Canada, to represent her
shop in London as containing nothing
but such Arctic dainties as "Fresh
Snow Shoes," "Prime Polar Bears,"
"Judy Sea Lion Steaks"? Then to re-
present such a cheap show as is not
true, as Uncle Sam, who is short on
seals, could have told him. Can Punch
face such an avalanche of Canadian
poetry as fell on Rudyard's devoted
head when he ventured to associate
himself with snow? Canada will have
to forbid Punch the country, as the
Grand Turk and other insulted poten-
tates have done.

BEGGED WITHOUT WORDS.

(From Vogue).

A dear old clergyman once ex-
changed pulpits with a younger brother
minister well known for his aggres-
siveness. Speaking to him before ser-
vice, the resident pastor told his sub-
stitute that the window behind the
pulpit was broken, and requested the
latter to say nothing about it, as he
had spoken several times without ef-
fect. He added that the hymn books
were badly torn, and finished by say-
ing, in an apologetic tone, that "he
didn't suppose the people could afford
new ones."

THE LATEST CITY LOAN.

J. C. Mackintosh of Halifax the Highest
Tender.

(From Daily Sun, December 26th.)

The treasury board of the Common Council
had a long session in the City hall yester-
day afternoon. All parties were in the
chair and there was almost a full attendance.
The first business taken up was
the opening of the tenders received for the
last issue of bonds ordered in connection
with the San Point improvements. The
lowest amount was \$125,000 of 4 per cent.
bonds, payable in 40 years, interest pay-
able half yearly.

The tenders for the purchase of the whole
lot were as follows:

H. O'Hara & Co. of Toronto, \$123,197.12

for the whole lot, along with accrued interest.

A. E. Ames & Co. of Toronto, \$120,968 for
the lot, with the accrued interest.

The Confederation Life Association of Tor-
onto, \$123,550 for the lot, with accrued interest.

Hudson Bros. of Montreal, \$105,531 for each
half of the lot, with accrued interest.

Bank of Montreal, \$105,531 for each
half of the lot, with accrued interest.

Bank of Nova Scotia, \$105,531 for each
half of the lot, with accrued interest.

Bank of New Brunswick, \$105,531 for each
half of the lot, with accrued interest.

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