

AMERICAN INDIANS KNEW CHEMISTRY WELL YEARS AGO

Was Better Acquainted With
Chemistry Than Half Of
College Graduates

Given in Philadelphia Inquirer—
Nothing was said by the world
chemists who met in Philadelphia
recently about the chemistry of
the first Americans.

But the American Indian knew
more chemistry than half the col-
lege graduates ever learned.

On this topic of Indian chem-
istry none is better informed than
James A. Branegan, head of the
Kali Company of this city. "I read,"
he writes, "your column regard-
ing the prehistoric chemists in
Egypt and the Holy Land. You
failed to mention the prehistoric
chemists of America."

Mr. Branegan admits the Indian
chemistry is his hobby. It is the
truth that he has delved exten-
sively in that field and found many
amazing results.

It is astonishing how many
chemical secrets the red man knew
centuries ago and before he ever
saw a pale face.

By the simple use, says Mr.
Branegan, of barks and the
brains of animals, the Indian made
a leather from hides, "which in
softness and durability can hardly
be equaled today."

With glue made from fish scales
he fastened feather to his arrow
and then glue equaled the common
fish glue of commerce.

Modern science has found no
easier way to keep water out of a
boat than the Indian employed
when he used the pitch from pine
trees to cement the seams of his
frail birch-bark canoe.

To make his pottery more dur-
able the Indian mixed with clay
powdered clam or mussel shells,
and did that chemical trick so well
some of his bottles buried in the
Mississippi valley for centuries
are as strong today as when they
came from the hand of their maker.

And to make his pottery the red
man again drew upon his chem-
ical instincts. He applied to the
clay oxides of iron before he baked
it.

As a geologist, the American
Indian knew a bookful.

In his way he was as smart and
clever in cleavage of rocks and
flint as are the most skillful dia-
mond cutters.

Mr. Branegan says the Indian

used flint only for arrow heads,
knives and spear points. "I have,"
he adds, "examined hundreds of
Indian axes and never found one
made of flint."

A flint tomahawk would too
easily split or become dull. It
would flake off at every stroke. So
the pioneer American chemist
searched fields and streams for
water-worn stones of basalt or
diorite which have the closest
grain.

Of this material he made his axe
which retained a fairly good edge
after years of use.

But the Indian displayed his
supreme chemical knowledge in
making the tool which he carved
his flint arrowhead and ax.

What was that tool? A
bone from the leg of a buffalo,
deer or bear.

But the main trick was his pre-
paration of that bone chisel. A
bone with any grease on it would
slip and break. It wouldn't chip
the flint and stone, hard as arm-
or plate.

The bone was scoured, then bur-
ied in hot ashes moistened with
water which, as our chemists
know, is the process of making
soap. Chemistry! When the bone
was truly dried it formed a chisel
for chipping flint and sharpening
stone axes. And Mr. Branegan
says scarcely any other material
known today would be better for
that purpose.

In the West were found axes
made of hematite, which, having
for hundreds of years, retained
their polish. As hematite will
soon wear out the hardest steel
file it can be seen that the Indian's
method of making his ax had called
for a high order of chemical re-
search.

Widest interest of the white race
is shown for Indian arrowheads,
since these have been found by
thousands.

Many legends told about the se-
cret quarries of flint! How did the
Indian find his flint, and how did
he dig it out?

Sometimes he removed the earth,
then built a big fire upon the rock,
poured cold water upon it and
then cracked it.

Not all Indians could make a
spear point or arrowhead, and the
red artisan who did the work usu-
ally made them at his wigwam
and put at the place where the
flint was found.

Quartz and obsidian as well as
flint, were used for arrows.

An Indian mint was not so
crude as it seems.

His money, or wampum, was
made of clam shells. But these re-
quired a delicate cutting and then
had to be bored so that the wam-
pum could be put upon a string.

And, in boring a clam shell, the

red man displayed such mecha-
nical skill. Using a strong, dry reed
for a drill he employed his bow-
string as a sort of engine.

Twirling the string revolved the
drill and so the Indian could make
holes through a rock. Boy Scouts
today deem it a pretty trick to
start a fire in similar fashion, but
Indian boys were doing it before
Columbus discovered America.

The Indian knew colors and by
his chemistry produced some good
and lasting ones. Hematite for
brown and red, malachite for
green, ochre for yellow, while for
dyes he took the juice of poke-
berry, the bark of walnut or
butternut.

And the Indian knew how to
make his pigments so as to with-
stand wet and time.

Mexican Indians had calculated
the exact solar year before any
white man saw those marvelous
Aztecs.

Other Indians had grown their
maize potatoes, hominy, squash, ta-
poca—all Indian names—before
the pale face ever dined in the
U. S. A.

And the Indians knew enough
chemistry to understand fertiliza-
tion of the soil. He was the first
to use along the Atlantic coast tons
of fish to enrich his fields.

The menhaden were driven upon
the beaches by blue fish and then
the Indian farmer reaped his har-
vest of fertilizer.

Perhaps, as a medicine man,
the first race of Americans reach-
ed its prime in the domain of
chemistry.

Nearly everybody knows now
the use of aspirin. But centuries
ago and before anybody had pat-
ented a drug on this continent the
Indian knew the curative prop-
erties of wintergreen, using the
leaves as a poultice for rheuma-
tism.

Our white pioneers learned of
that wonderful herb from the red
man and so we today have a big
family of what chemical high-
brows call salicylates.

South American Indians showed
the first Spanish invaders the use
of a strange bark which they
grew upon the cinchona tree. They
chewed the bark, but we now en-
joy the same thing in the powder-
ed form of quinine, or as calisaya.

And were not Indians the first
to employ auto-suggestion as a
great aid in the sick room, a thing
all physicians now regard as high-
ly important?

The Indian medicine man was
not a humbug when he danced and
employed other antics before the
sick. By pretending to remove
a pain in the form of a devil he
employed psychology to make the
patient help cure himself.

Which proves that not all learn-
ing is found in books.

A "Correct" Likeness of Washington



This heroic statue of the commander-in-chief of the first armies of the
United States was made for the city of Portland, Oregon, though not yet deliv-
ered there by the artist. The western municipality has loaned it to the
Sesqui-Centennial International Exposition, opening in Philadelphia June 1
and continuing until December 1, to celebrate 150 years of American indepen-
dence. At the foot of the sculpture is shown Pompeio Coppioli, the sculptor.
Dr. Henry Waldo Poe, of Portland, declares the face to be the most correct
likeness of Washington ever modeled.

NOTICE OF SERVICE BY PUB- LICATION.

North Carolina—Cleveland coun-
ty—In the Superior court.
Cora Henry, plaintiff,
vs.
Tom Henry, Defendant.

The defendant above mentioned
will take notice that an action en-
titled as above has been com-
menced in the Superior court of
Cleveland county, N. C., for the
purpose of dissolving the bonds of
matrimony as in case of divorce ab-
solute on the grounds of five years

separation; and the said defend-
ant will further take notice that he
is required to appear at the term
of the Superior court of said coun-
ty to be held on the first Monday
of November, 1926, at the court
house door of said county, in
Shelby, N. C., and answer or
demur to the complaint in said ac-
tion, or the plaintiff will apply to
the court for the relief demanded
in said complaint.

GEO. P. WEBB, Clerk of the Su-
perior court.
Bynum Weather Atty.



SNAPSHOT OF THE MAN WHO
HAS TO LISTEN TO THIS ALL DAY
LONG AT THE OFFICE —

British Strike Momentous to These Men



The general strike of 5,000,000 workmen in Great Britain is a crisis. But to these men it represents mor-
tan that. To the left is Lloyd George, former premier, who is standing by, ready to step in if the present
administration fails. In the center is J. H. Thomas, Labor leader in Parliament, possible choice for the pre-
iership if the present regime fails. To the right is Stanley Baldwin, present premier, whose continuance
in office may depend on a quick settlement of the trouble.

-- Study Again The Plat Of Our Hilltop Section --

SHOWN IN MONDAY'S STAR. COMPARE THESE PRICES WITH THOSE OF ANY OTHER HIGHLY IMPROVED HIGHLY RESTRICTED,
AND HIGHLY DESIRABLE HOME SECTION—MAKE AN HONEST COMPARISON AND WE HAVE NO FEAR BUT THAT—CLEVELAND
SPRINGS ESTATES WILL BE YOUR CHOICE.

Prices Mean Little---Therefore See The Real Article And Be Convinced of its Merit and Value

-- COME OUT TODAY --

AND

LET US SHOW YOU THE TWO
MASTER SIX BUICKS WE ARE
GOING TO GIVE AWAY

— FREE —

We are located this week at the FAIR
GROUNDS in Manufacturers Hall.
The second booth on your right.

COME SEE US. LET US EX-
PLAIN OUR PLAN, AND RESERVE
YOUR HOMESITE.

— PRICE LIST OF UNSOLD LOTS IN CLEVELAND SPRINGS ESTATES —

BLOCK "M"		BLOCK "Q" Continued		BLOCK "Q" Continued		BLOCK "T" Continued	
Lot 12	\$2000.00	15	\$1500.00	43	\$1500.00	17	\$1800.00
		16	\$1500.00	44	\$2000.00	18	\$1800.00
BLOCK "N"		17	\$1500.00	BLOCK "R"		19	\$1800.00
Lot 1	\$4500.00	20	\$3000.00	Lot 1	\$2700.00	20	\$1700.00
2	\$3000.00	21	\$2850.00	2	\$2700.00	21	\$1700.00
BLOCK "O"		22	\$4000.00	10	\$3000.00	22	\$1700.00
Lot 9	\$2500.00	23	\$2000.00	11	\$3500.00	23	\$1750.00
10	\$2000.00	24	\$1500.00	12	\$2250.00	24	\$1800.00
BLOCK "Q"		27	\$1500.00	14	\$1500.00	25	\$1850.00
Lot 1	\$3000.00	28	\$1500.00	15	\$1500.00	26	\$1900.00
2	\$3000.00	29	\$1500.00	19	\$2250.00	27	\$1950.00
3	\$3500.00	30	\$1940.00	BLOCK "S"		28	\$2064.00
5	\$1500.00	31	\$1940.00	Lot 12	\$2500.00	29	\$2064.00
6	\$1500.00	32	\$1940.00	BLOCK "T"		30	\$2064.00
7	\$1500.00	33	\$1940.00	Lot 10	\$2300.00	31	\$2064.00
8	\$1500.00	34	\$1940.00	11	\$2340.00	32	\$2064.00
9	\$1500.00	35	\$1940.00	12	\$2064.00	33	\$2064.00
11	\$1500.00	36	\$1940.00	13	\$2000.00	34	\$2000.00
12	\$1500.00	37	\$1500.00	14	\$2064.00	35	\$2064.00
13	\$1500.00	38	\$1500.00	15	\$1800.00	36	\$2310.00
14	\$1500.00	39	\$1500.00	16	\$1800.00	BLOCK "U"	
		40	\$1500.00			Lot 2	\$1350.00
		41	\$1500.00			3	\$1500.00
		42	\$1500.00			4	\$1100.00

-- REMEMBER --

These prices include:— Paved
Streets, A Complete Storm and Sani-
tary Sewage System, Complete Water-
System, Including Hydrants For Fire
Protection, Complete Electric Lighting
And Heating System, A Share Of
Stock In The Golf Course And Club
House, Also The Privilege Of Living In
One Of Carolina's Finest Residential
Sections.

The Best Investment On Earth Is Earth Itself. Don't Hesitate---BUY NOW---In



Cleveland Springs Estates

"Carolina's Most Dependable Development"

