

L.J. - Sunoco. Tuesday, Aug. 7, 1945.

GOOD EVENING EVERYBODY:

(It may be that, according to the evaluation of future history, this August the Seventh should be marked down as the ~~xxxx~~ second day of the atomic era. Reverberations from around the world indicate that the human race realizes that yesterday's atomic bomb ~~that~~ that hit Japan marked the beginning of an epoch in which the affairs of man may be determined by the control of the deepest force of nature, ~~the~~ the primordial and elemental force in the atom.

The latest about the atomic bomb is an official statement, just released, that more plants for the manufacture of that thing of elemental devastation are under construction right now. At Oak Ridge, Tennessee, a fantastic town dedicated to the development of atomic destruction in war, new buildings are being put up to turn out increasing quantities of the

most violently destructive force that has ever been controlled by the hand of man. This is factual backing of President Truman's warning to Japan - that the predatory empire of the Pacific must yield and yield at once or be destroyed by forces unlocked from the deepest recesses of nature.

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The Japs, themselves, spoke in tones of vague panic of the thing that hit them. They intimate that great destruction was caused, and say that the atomic bomb came down by parachute and burst above the ground - apparently to spread a downward blast over a great area. The Japs are saying that there were several of these missiles, but we ~~know~~ know from definite

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statements by the American side that only one atomic bomb was let loose - the first in the history of mankind.)

President Truman arrived home this afternoon exactly a month after he left to attend the ~~Rumix~~ Potsdam Conference - one day after he had made the announcement of the release of the atomic force.

It is being ~~kk~~ taken for granted that the American-British-Chinese warning to Japan of a week or so ago was deliberately planted in advance of the atomic bomb, the Japs warned in time. They did not ~~ymt~~ yield, and then, according to schedule, elemental devastation hit them.

There ~~is~~ ^{is} ~~some~~ ^{tonight} surmise that another warning may follow, this one telling them that if they do not give up and submit now, ~~Japan~~ ^{their country} will be obliterated by the power locked in the atom.

ALCHEMY

As we so often find in the course of human events - the newest is the oldest. At any rate, the atomic bomb that now startles the world is the fulfillment of one of mankind's oldest and most fantastic dreams - the dream of the alchemists.

In an immediate sense, the explosion of the uranium atom goes straight back to the discovery of radio -activity -- which culminated in the development of radium by Professor and Madame Curie. *It all has to do*

with the splitting up of atoms to form other atoms, one element changes *ing* into other elements, uranium turning into other elemental substances. And *there you have it, the* ~~that's basically the~~ transmutation *ta* of metals - which was sought as the final goal by the ~~the~~ alchemists of old.

In ~~these~~ *that were* laboratories *like* witches' kitchens, with weird crucibles and retorts, they labored for centuries - trying to transform one metal into another metal. Above all things, they tried to turn baser metals into gold. The alchemists were practical fellows, that way. Obviously, by transforming

something like brass into gold, they'd be rich as

~~Croesus~~ ^{Midas.}

The alchemist, in fact, would be old ~~Croesus~~ ^{Midas}

himself - who turned everything he touched into gold.

However, the ideas of the alchemists went beyond that mercenary and pecuniary motive. They realized that the transmutation of metals meant a penetration of the deepest of the secrets of nature. They figured that if they could turn one metal into another, they would go far beyond the profitable business of manufacturing gold. They [^]~~tried~~ [^]~~the~~ [^]~~whole~~ thing to such fabulous ideas as the philosopher's stone and the elixir of life.

Ironically, it turns out that our modern transmutation of metals with the release of atomic energy, is not so much an elixir of life as an elixir of death - the most tremendous force of destruction ever dreamed of.

However, it might possibly be the other way around. Scientists are saying that the atomic explosion is so destructive that it may end wars. It may turn out that nations, faced with the obliteration

of the atomic^c_^ bomb, will not dare to go to war. In that case, the miracle sought by the alchemists of old and found by the scientists of today, might bring about world peace - and that would be a sort of elixir of life.

FOLLOW ALCHEMISTS

(On the sombre side, a speculation about the atomic future was expressed today in England. The Manchester guardian ^{stating what many have been saying, and then} ~~stated~~ "Man is at last well on the way to the mastery of the means of destroying himself utterly. Let us recognize", the Manchester Guardian goes on, "that this discovery brings upon civilized mankind the greatest imaginable responsibilities")

One British scientist, who is prominent in the development of the atomic bomb, makes a disclosure, a disclosure that rather frightens one. He is Sir Charles Darwin - a name that rings in science, recalling the discoverer of evolution. Sir Charles Darwin states that the splitting of the atom, which is the key to the whole thing, was accomplished by a German ^{also,} in Nineteen Thirty-Six, a German scientist named Hahn.

From this it would seem that Hitler ^{also} might have had the stupendous engine of destruction in his own hands ^{— might have had it ahead of us,} ~~far in advance. It is known, of course, that~~ many ^{of us knew} that German scientists toward the end of the war were working feverishly on the atomic bomb, ^{and now we know that they} ~~and~~ had almost developed

it when Nazi power collapsed. Hitler might have had it in time, ^{is the word from} ~~according to the~~ London ~~statement~~ today.

The whole thing is summarized by Professor James Kendall of Edinborough University, who declares: "If Hitler ^{had} any sense, he would have delayed making war until the Germans had developed the atomic bomb. If ^{he goes on,} he had done so," the war would have ended in six days instead of going on for six years, to a Hitler defeat".

~~The news dispatch from London ^{contains} ~~goes on with~~ one other interesting surmise. This refers back to an episode of two months ago.~~

~~An international scientific meeting was being held in Moscow, And eight prominent British physicists were scheduled to attend. Their trip to Moscow was suddenly cancelled, the British government forbidding them to go. The London Dispatch states that these were scientists who might well have been engaged in the atomic bomb research. And the suggestion is made that their trip to Moscow was called off because of the imminent success of the atomic bomb research.~~

All of which suggest fantasies along the line of old romance - recalling a story by the writer who anticipated so many things, Jules Verne. He wrote a tale of a French scientist who developed an explosive so powerful that with it he could dominate the world. Well, right now the United States and Great Britain have the secret of the atomic bomb. Maybe they alone have it. We do ^{it} ~~not~~ know whether any other countries now possess or will possess the ^{is} ~~is~~ terrifying magic of destruction. And imagination suggests the possibility that the two English-speaking nations may have in their hands the weapon to control the world. Anyway, there was President Truman at the Potsdam conference - knowing that we were about to hurl the atomic bomb.

~~At the same time, we are warned against over-emphasizing the peacetime possibilities of this newest model. There has been glib talk about engines driven by atomic power - when in fact, the experience of the past shows that violent explosives are not useful means of propulsion.~~

URANIUM

The atoms that explode are those of the fantastic element, uranium, which, like fabulous radium, is radio-active. And, lucky for us, these United States of ours have deposits of the miracle stuff. That is, one state in particular - Colorado.

We get uranium from a Colorado ore called - carnotite, named ~~fm~~ after a President of France, the almost forgotten French President Carnot. That seems odd, Colorado miners naming a new kind of ore after a President of France.

There's a story behind it - just as there are dramatic stories behind so many angles of this astounding new development of science - ushering in the atomic age.

I, myself, am from Colorado, and as a boy worked in the Colorado mines, ^{those} ~~at Cripple Creek, the~~ ^{at Cripple Creek --;} legended gold mines - but we knew nothing about the digging out of radio-active stuff, ^{in those days. But, it} ~~that~~ was happening in another part of the state. Word of it got around, and in recent years I've talked to Colorado mining men

who ^{have been running all this business of} ~~were running things in the section where~~ radio-
active ores ^{that they've taken out on the} ~~were being taken out of the ground.~~
Western ^{slope of the Rockies,}

Today I made some inquiries, and got the story clearly - the Colorado mine story that lies behind the hurling of devastating powers of nature against Japan yesterday.

The radio-active ore is mined in southern Colorado at a place with an appropriate name - Paradox Valley. Well, radio-activity is a cosmic paradox all right - but the valley gets its name from something else, another freak of nature. This consists of a river that flows, not down the valley, but across it. Which certainly is a weird one. A river seldom behaves that way - but in southern Colorado the Dolores River flows across Paradox Valley, ^{near where I once lived on ranch.}

In the mines there, back in eighteen ninety-nine, a new type of ore was discovered, which turned out to be radio-active. It included both of those radio-active substances, radium and uranium. These had recently been discovered - radium by Professor and Madame Curie.

In Europe, both radium and uranium had been derived from an ore taken out of a mine in Silesia, stuff called pitchblende. Now, in Paradox Valley, Colorado, another kind of ore was discovered containing those same two elements. And the discoverer^{and} gave it a name honoring the French professor and his wife who had found radium. That is they did so by naming ~~They named~~ it after the ^{then} President of France, Carnot. They called it - Carnotite. ^{and} So that's how the ore mined in Paradox Valley, ^{Colorado,} was named after a President of France - the stuff that produces the atomic cataclysm now hurled at Japan.

As I remarked last

night

One of the startling things about the atomic bomb, ^{was} ~~is~~ the way it was kept secret - in spite of the fact that thousands of people, all the way from top scientists to war workers, were engaged in its development. And especially ^{as} ~~in spite of the fact that~~ the test had to be one of the most spectacular phenomena that this earth has ever witnessed. That is - the tryout in New Mexico where, on July Sixteenth, three weeks ago, ^{when} the first atomic bomb was exploded. The test ~~was~~ made out in the desert, ^{with} ~~the~~ the detonation ~~was~~ so vast that thousands of people ~~for~~ many miles ^{away} heard it and saw it.

General Groves, one of the officers in charge of the test, gives this eye-witness account: "First came the burst of light of a brilliance beyond any comparison. Then came the shock wave, followed by the sound. A massive cloud was formed which surged and bellowed upward with tremendous power, reaching the substratosphere in about five minutes. The cloud travelled to a great height, first in the form of ~~it~~

a ball, then mushroomed, then changed into a long chimney-shaped column".

Now what about ^{those} people in the district for ^{those people who heard and saw?} miles around? Today residents of southern New Mexico, Arizona and western Texas state that the explosion was felt like an earthquake in parts of those three states.

A locomotive engineer on the Santa Fe was just outside ^{the city} of Albuquerque when the explosion occurred many miles away. "All at once", he says, "it seemed as if the sun had suddenly appeared out of the darkness. There was a great red glare and high in the sky there were three tremendous rings. They swirled and twisted as if they were agitated by a great force. The glare seemed to last about three minutes, then all was dark again".

That impression of the sun rising suddenly at night is repeated by a woman who was at the New Mexico - Arizona state line, a hundred and fifty miles from the test. "Suddenly", she says, "the mountains were illuminated by daylight for about three seconds. Then

it was dark again. It was exactly as if the sun had come up and then suddenly had gone down again".

The ultimate fantasy is the case^e of a blind girl near Albuquerque. Even her sightless eyes perceived the incredible light. Between the time of the flash and the subsequent arrival of the sound of the explosion, the blind girl exclaimed: "What was that?"

People who witnessed this stupendous phenomenon were told that there had been a terrific explosion of ammunition out in the desert - that was the word spread to conceal the first tryout of the atomic bomb. Maintaining the secrecy.

LAWRENCE FOLLOW SECRETY

Here's a personal contribution that I can make to the story of the atomic bomb. A year and a half ago I was on a trip to the Pacific coast, and looked up an old friend whom I hadn't seen in some time - Rex Barton, who had been in the business of writing and publishing in New York.

I called Rex, and he gave me the interesting information that he was now working with Dr. E. O. Lawrence, the physicist. That was exciting - because Dr. E. O. Lawrence had won the Nobel Prize, sharing the award for Physics with a fellow scientist. The prize winning exploit had been ^{a revolutionary} ~~the~~ development of science, the cyclotron, an atom splitting machine. This tied in with rumors ^{I had heard} of the atomic bomb and approaching miracles in the ultimate realm of atomic power.

Rex Barton asked me, ^{would} ~~should~~ I like to meet Dr. Lawrence - and I jumped at the chance. ^{That night we} ~~we~~ all had dinner at Trader Vic's, a fabulous hostelry out there.

We gathered around a table with talk and laughter, and ^{tongas and zombies,} Rex, Dr. Lawrence, another scientist, and their wives.

I asked Dr. Lawrence about rumors that the Germans might have developed an atomic bomb. He replied - he didn't think they had.

One thing struck me as curious. Rex Barton of the writing and publishing world, ~~was~~ doing administrative work on a job with which Dr. Lawrence was connected. It seemed odd that a first rate talent like Rex Barton should be working on administration for what seemed like a couple of professors experimenting in a laboratory. I wondered at the time - why all that ^{high-powered} administration?

This passed out of mind. Not a word was said that might give me a clue - although we chatted around the table for hours about all sorts of things. And Rex and I had the long chat of a couple of old friends.

Of course it all now comes like a flash. Rex Barton was engaged in the huge amount of administrative work that accompanied one of the greatest wholesale operations that science has ever known - the development of the atomic bomb in piece-meal work, by

thousands of people in plants and laboratories all over the country.

Today I phoned ^{him across the continent} ~~Rex Barton~~ ^{by long distance} ~~all the way out there~~ ^{at} the University of California at Berkeley, ~~and to~~ ^{and to comment} congratulated ^{him} on how well they ^{had} kept the secret - not the slightest hint during that festive evening a year and a half ago. Rex laughed.

However, I did get something that night out of the table talk with Dr. Lawrence. I got the ~~fm~~ revelation of a vibrant scientific mind; nothing of the dry as dust professor. ~~It~~ was a vivid impression of what the scientific mentality is like at its best - hard sense, such a lack of abstract theorizing that at one point I was ~~positively~~ shocked. ^{put back on my heels,}

Dr. Lawrence was talking about the mathematics of modern physics. He said that, if experimental research disclosed two theories that contradicted each other, he would accept them both as true - and never mind the contradiction. If one experiment indicated yes, and the other experiment indicated no,

he would accept both yes and no ^{as} ~~were~~ correct - and never mind if they were opposed in theory. Do I agree with that scientific logic - well yes, and no.

Now Hugh have you anything to say? I hope you don't say yes and no!