

Relates History of Bessemer Steel

Geographic Society Gives Interesting Chronicle of Industry's Origin.

CHANGED MAKING OF STEEL

Two Men Working in Different Countries, Without Knowledge of Each Other, Arrive at Same Conclusion About Same Time.

Washington.—In view of the nationwide attention directed toward the strike of steel workers, the National Geographic society has issued a bulletin based on a communication from William Joseph Showwater, concerning the making of steel, which he terms "industry's greatest asset."

"The story of Bessemer steel is one of the fascinating chronicles of the industrial world," the bulletin says. "It seems to have been one of those cases where two men working in different countries, each without knowledge of what the other was doing, reached the same conclusion about the same time. Both were granted American patents; but upon application for renewal, the patent held Kelly to be the inventor. The world, however, gives the credit to Bessemer, and the process is known as the Bessemer process.

Made Ye Olden Cook Pots.

"Kelly was a maker of old-fashioned cooking pots and kettles. It is related that one day he was sitting in front of his furnace and observed a point of incandescence where there was no charcoal—only the metal and the air. This led him to contend that air alone would burn out the impurities from molten iron.

"When he developed his tilting converter his engineer blew such a tremendous blast through the first charge that iron and all went up as sparks, to his discomfiture and the crowd's amusement. He finally succeeded in getting the amount of air regulated, and poured out of his converter the first Bessemer steel. People said Kelly would soon be burning ice. Since his old converter was first used, billions of dollars' worth of steel has flowed out of the world's converters.

"Both Kelly and Bessemer were baffled by the problem of regulating the supply of air so that it would not burn out all the carbon, a little of which is essential to steel. Furthermore, their products frequently proved to be brittle, owing to the fact that the molten metal absorbed oxygen from the air blast. The first difficulty was solved eventually by the expedient of burning out practically all the carbon, then adding exactly the amount required for the specific quality of steel desired.

"The second difficulty was overcome through the addition of manganese to take care of the harmful oxygen. The latter suggestion was the contribution of Robert F. Mushet, a Scotch steel maker. Goranson, a Swedish ironmaster, had previously achieved the same results by using a pig iron initially rich in manganese. Thereafter underdone and overdone steel disappeared.

More Fire Than in Dante's Inferno.

"To go into a great building where there is a battery of Bessemer converters is to see more heat than Dante ever pictured. A converter is a huge egg swung 'amidships' on trunnions. The great egg of steel lined with fire brick has the top off. Twenty tons of molten pig are poured into it, and then through some 200 little holes in the bottom pumping engine pump in a stream of cold air. As the oxygen-laden air sweeps up through the molten iron, it touches the molten carbon and silicon, which constitute the impurities, and carries them away.

"Millions of red and white sparks fill the air, as if some demon within

the fiery fluid were giving a pyrotechnic performance. A thousand engines, with safety valves hissing under tremendous pressure, have the voice of a zephyr in comparison. First the flame that pours forth is violet, then shades into orange, becomes a dazzling white, burning finally to a faint blue, which is a sign that all the impurities are gone.

"Then the blast ceases, the carbon that is necessary to replace the needed portions burnt out is added, the great brick and steel egg swings back to position, the carbon is mixed with the fervent fluid, and then the egg tips over on its side, and out of the top flows the liquid steel into a great ladle. The whole operation takes about 20 minutes—a ton of steel in a minute. Bessemer steel is used for structural material, railroad rails, wire and pipe.

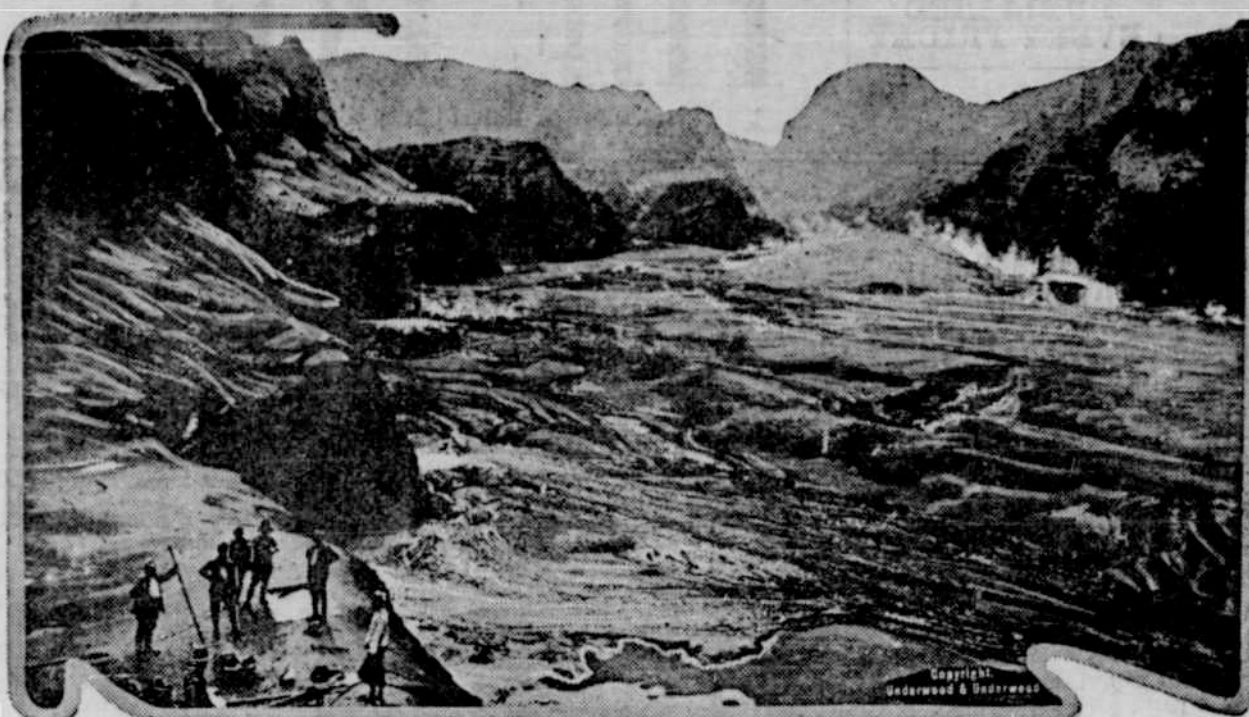
"In 1900 there was twice as much steel produced in the United States by the Bessemer as by the open-hearth process. But with the rapid exhaustion of ores having the proper amounts of phosphorus for converter practice, the open-hearth furnace, which can use with equal success ores which contain either a large or a small amount of phosphorus, largely replaced the Bessemer converter."

DE FOREST'S NEW WIRELESS



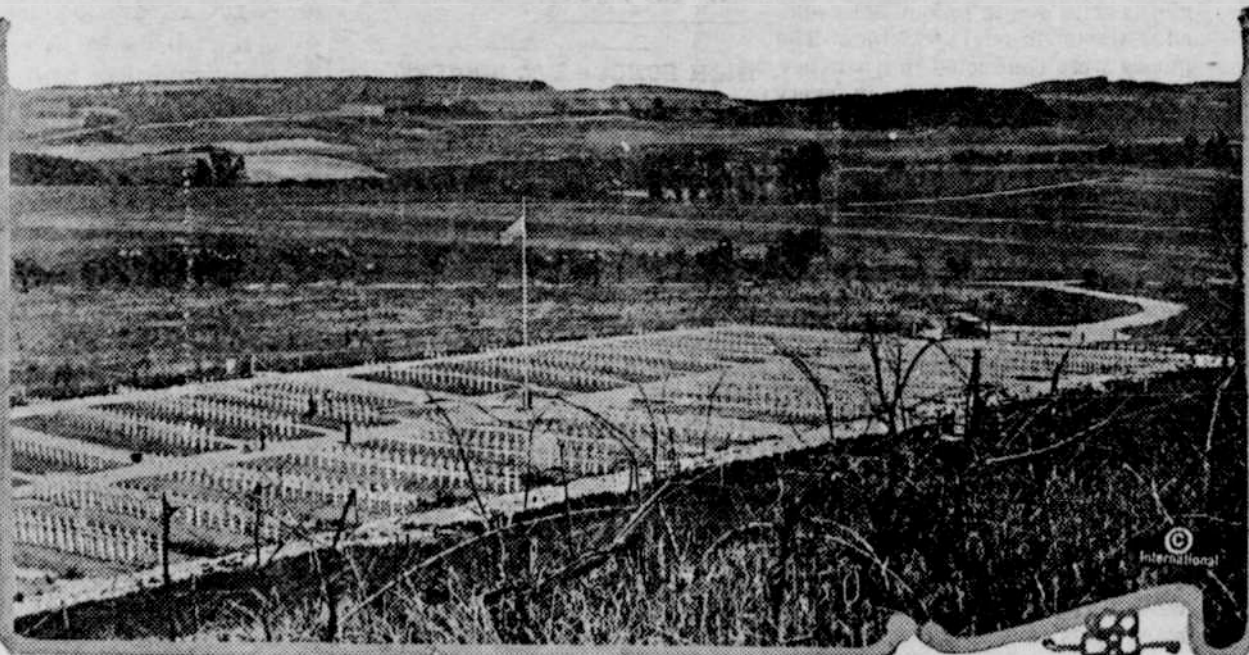
Dr. Lee DeForest has given the public the latest word in wireless telephony. This portable outfit may be connected with any ordinary lamp socket and, without aerials or further apparatus, a conversation may be carried on with any similar instrument within a radius of about 25 miles. All that is necessary is to connect the plug with your lamp socket and talk. Sound-wave adjusters prevent anyone else "listening in."

MOUNT KLOET JUST AFTER ITS GREAT ERUPTION



Photograph taken two days after the disastrous eruption of Mount Kloet in Java, which occurred May 20.

WHERE OUR BRAVE BOYS SLEEP IN BELLEAU WOOD



How upon row of crosses in the American cemetery in Belleau Wood, near Chateau Thierry, mute evidence of the gallant lives that were laid down so that the world might be a safe place in which to dwell.

Cripple Is Cause of Many Deaths

Ringleader of Murder Band That Operated Under Bela Kun in Hungary.

INGENIOUS HORROR CHAMBER

Corvin Responsible for Death of 500 Political Suspects and Active Agent in Torturing of Ten Times as Many More.

London.—Otto Corvin, a hunchback, was the ringleader of the murder and torture band that operated under Bela Kun in Hungary, according to Lucien Jones, writing to The Daily News, of London, from Budapest. Jones says of Corvin:

Had I not examined the police minutes taken after the preliminary examination of Corvin and his associates, and had I not questioned Corvin myself, I should not have believed such fiendish practices to be possible in the twentieth century. It appears from the police minutes and statements Corvin has made that he himself was responsible for the death of five hundred

political suspects and was an active agent in torturing ten times as many more.

One of the favorite methods of torture was to fix a gag in the mouth of the prisoner so that his jaws remained wide open, while a lighted match was held in the mouth until the victim either confessed knowledge of counter-revolutionary plans or agreed to pay a large sum of money.

A Dagger in the Throat.

Another form of torture was to thrust a dagger down the throat of the prisoner until he assented to their demands. The favorite method, however, was to bring a prisoner into a room where various portions of the human body, such as noses, eyes, lips, ears, which had been cut off previous victims, were lying on a table. He was then given a choice of a form of dismemberment if no confession of money was forthcoming.

Many died under torture rather than yield, and every night a cart called around for corpses, which, loosely strung together, were weighted and slung into the Danube.

It is interesting to note that Corvin admits that as long as a year ago plans for this terrorism were laid in Moscow, with the active help of Lenin and Trotsky.

Another of the leading terrorists captured is Gabor Schon, formerly a sub-lieutenant in the Chinese corps formed by the bolsheviks. He was brought into the police station one morning from the country where he had been found in hiding by peasants.

He had been terribly beaten and disfigured. Nearly \$15,000 in British and French notes was found on him, and a number of blank forms for the immediate execution of any who were political suspects under the old regime.

Schon was noted for his extreme avarice, and confesses to a number of cases in which, under his orders, the gold-filled teeth of wealthy residents of Budapest were pulled out with pliers, and without an anesthetic.

Accused of Murder.

I have also examined the documents relating to one Emery Harangozo, a pale-faced, evil-looking little man, formerly a shoemaker, but under the communist government chairman of the executive committee of soviets at Nagy Gerecs, a few miles from Budapest.

Harangozo is accused of the murder of four Roman Catholic priests. Before they were shot Harangozo tapped them on the shoulder and said: "Give my greetings to your White God." Harangozo, like Schon was found hiding in a forest.

A large crowd is assembled outside the police station and it is with difficulty that the bolshevik prisoners are saved from being lynched.

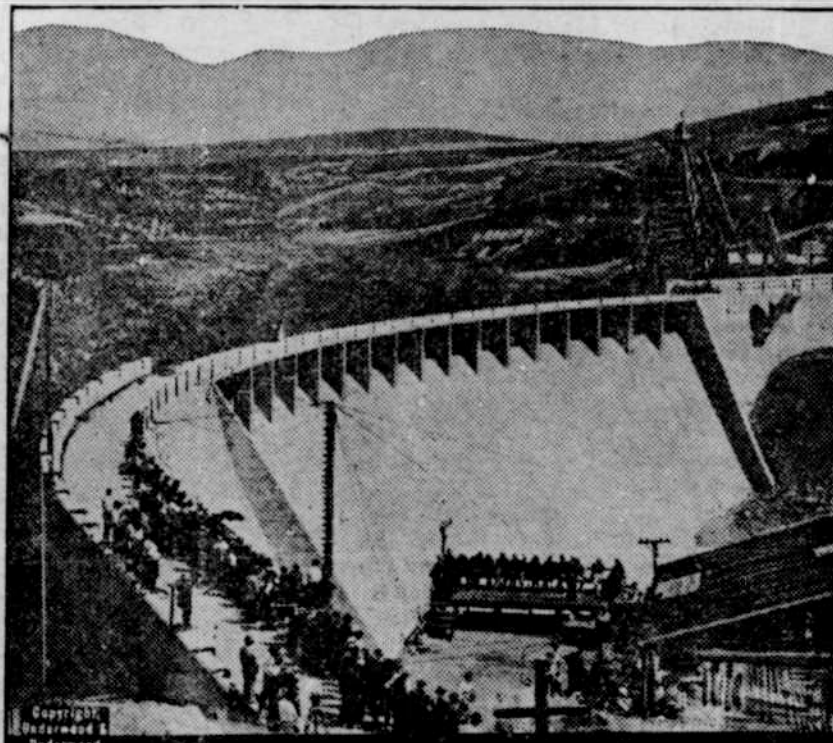
ROME GAINS FROM U. S. MEN

Cab Drivers and Guides Reap Harvest During Visit of General Pershing.

Rome, Italy.—"Itching palms" were extended to the enlisted personnel attached to General Pershing's staff during the American commander in chief's visit to Rome. Cab drivers, professional guides, beggars, novelty vendors and guidebook sellers preyed on the Americans with avidity. One soldier paid \$3 to be driven from the station to St. Peter's, a trip ordinarily costing 40 cents, or by trolley four cents.

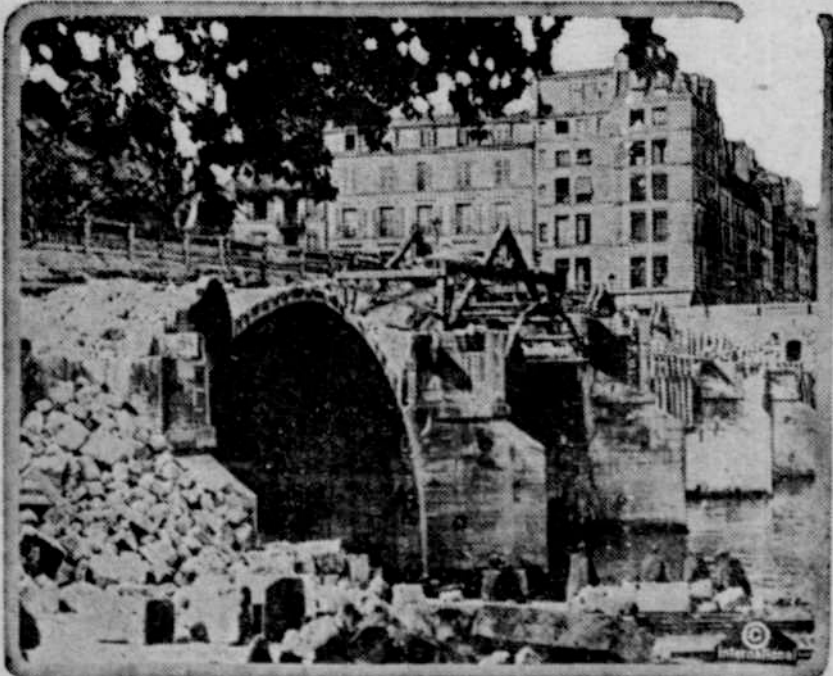
A guide at the Coliseum exacted \$4 for taking three privates and a sergeant through the upper tiers, while another guide at St. Peter's demanded \$7 for taking two boys through the Vatican museum, both of which are free to the public.

GREAT OTAY DAM IS COMPLETED



The great Otay dam, 22 miles from San Diego, Cal., replacing the old structure destroyed by the unprecedented floods of 1916, has been completed. The new dam is 750 feet long, 200 feet high, 150 feet thick at base, 15 feet thick at top, harnesses 19,000,000,000 gallons of water which irrigates the Otay valley and will supply the city of San Diego in case of emergency.

DEMOLISHING FAMOUS BRIDGE IN PARIS



This photograph shows the demolishing of the famous de la Tournelle bridge over the Seine in Paris to make way for a modern structure. It was built in 1656 during the reign of Louis XIV.

CONDENSATIONS

A pedal operated nut cracker enables much speed to be made in opening nuts.

On most voyages of a first-class ocean steamship about 3,000 pieces of crockery and glassware are broken.

The telephone business of Shanghai has increased so rapidly that it has been impossible to connect any new lines since December, 1918.

The Department of State announces that the American consular agency at West Hartlepool, England, has been closed.

YOUNG HERO OF THE WAR



Morris Bailey, sixteen, of Jackson, Me., got to France by smuggling himself in his brother's barracks bag. He is home with two wound stripes, four service stripes and a Croix de Guerre. His brother died at Chateau Thierry and his father, Sergt. Victor Bailey, was killed in the Champagne. Morris was wounded at Chateau Thierry and St. Mihiel. He was decorated for heroism near Toul.

Newspaper With One Subscriber.

It has been the inflexible custom in the imperial family of Japan, says a writer in East and West News, to withhold all newspapers and magazines from its members until they attain their eighteenth year; but the rule was waived in the case of Hirohito, the present crown prince. Four months before his imperial highness entered upon his eighteenth year he was allowed to begin reading a specially prepared journal.

This curious newspaper was edited by an official of the imperial household and printed in the imperial printing office. It was set in special type and printed on thick, Japanese paper. The reading of it did not require a great deal of time, for it was of small size and on a single sheet.

New Type of Airplane Liner.

Upholstered armchairs on aluminum frames and a porthole beside each seat are features of the newest type of airplane liner turned out by Vickers, Ltd. The manufacturers claim that it is the first of its kind. The new liner can carry ten passengers in addition to two pilots. The ensilage fuselage is water tight and will float in case of descent into water. The machine is a tractor biplane, with two Rolls-Royce Eagle eight engines of 350 horsepower each; it has a cruising speed of 95 miles an hour and a gasoline capacity of 200 gallons, and can rise readily to a height of 14,000 feet.—Trade Commissioner H. G. Brock, London.

MAULED BY STRIKERS AT INDIANA HARBOR



A strike breaker, who has been beaten by steel mill strikers, is being assisted by guards at the Mark Manufacturing company's plant at Indiana Harbor, Ind.