

# Research Work by Engineers

Agencies Co-operate in Effort to Salvage the Knowledge Gained in World War.

## CONDUCT INDUSTRIAL STUDY

Special Committees Are Formed to Collect and Disseminate Information—Hundreds of Big Plants Fostering Research Work.

New York.—America is entering on an era of industrial research in which corporations, large and small, are linked with government agencies, engineering organizations and universities, in a systematic effort to salvage the knowledge gained in war and to awaken the nation's latent industrial and economic power. Hundreds of plants are fostering these researches, for which a permanent national system is being worked out by Engineering Foundation, an instrumentality of the United Engineering society to advance the rapidly developing science of engineering.

It is only recently, however, that research has become a really national undertaking.

Activity in industrial research must be co-ordinated and expanded, said Robert M. Raymond, professor of mining in the schools of mines, engineering and chemistry of Columbia. The university, said Professor Raymond, is now conducting industrial research which will be of great value to the nation. Prof. Arthur M. Greene of Rensselaer Polytechnic Institute, Troy, N. Y., chairman of the research committee of the American Society of Mechanical Engineers, took the same view.

### For Specific Research.

This committee, Professor Greene explained, is accomplishing its work by organizing special committees for specific research and by collecting and publishing research information. The American Society of Mechanical Engineers is one of the four founder societies for which the United Engineering society holds certain endowments. Engineering Foundation, devoted to research, under the headship of Charles F. Rand of this city, past president of the American Institute of Mining and Metallurgical Engineers, is a department of United Engineering society, the other organizations which it comprises being the American Society of Civil Engineers, the American Institute of Mining and Metallurgical Engineers and the American Institute of Electrical Engineers.

"The life of every American citizen and the destiny of the republic will be vitally affected by the work in industrial research now going on," said Professor Raymond, who is a member of the Engineering Foundation board, representing, with Prof. Joseph W. Richards of Lehigh university, the American Institute of Mining and Metallurgical Engineers.

"Researches already conducted at Columbia and on which work is now progressing," Professor Raymond added, "enabled Prof. William Campbell, professor of metallurgy in the schools of mines, engineering and chemistry, to ascertain within a few hours just what was the mechanical defect in the shafts of the German ships which were overhauled in New York harbor. As a result of the experiments he is making in testing the construction of metals, Professor Campbell can immediately tell, for example, in what process the defect in a piece of steel arose, and can inform the manufacturer how to correct the fault.

"Columbia has recently equipped an ore-dressing laboratory, in which Prof. Arthur T. Taggart is conducting experiments in the filtration of ores. The laboratory is so equipped that both large and small quantities of ore can be studied. Another Columbia professor, Edward F. Kern, assistant professor of metallurgy, is conducting experiments in the treatment of ores. Industrial research is also being carried on in several other important fields at Columbia, notable examples of this being the work of Michael E. Pupin, professor of electro-mechanics at Columbia, and Walter I. Slichter, professor of electrical engineering.

"The assertion by government experts that this nation's supply of crude oil cannot last for more than 20 years makes increasingly important experiments conducted at Columbia a number of years ago to determine the amount of gasoline which can be drawn from crude oil and the by-products of the oil. Research work of enormous value to the nation should be done immediately to ascertain if a larger percentage of the crude oil could not be used for gasoline. It would be possible to continue this

## Owes Wife \$2,000 for Unpaid Profanity Bill

John Saleeby, wealthy Syrian lace importer of New York city, owes his wife \$2,000 for cursing, according to testimony she offered when she had her husband arrested for disorderly conduct.

Mrs. Saleeby said she had an agreement with her husband whereby he was to pay her \$10 every time he swore but that he had "cussed" 200 times without paying up. The arrest followed an alleged attempt of Saleeby to strike his wife. Saleeby denied the charge, but was placed on probation for six months.

work at Columbia, the logical place for it, if sufficient funds were available.

"Conservation of the nation's resources, which, it is commonly agreed, we have been using with too lavish a hand, is the direct result of a large amount of research work now being done. Big industrial corporations are taking cognizance of this and introducing new methods for the handling of materials. The United States Steel corporation, which mines the coal from which they make coke to be used in the manufacture of steel, is one of the enterprises which has changed its methods as the result of research."

# House Shortage Growing Worse

Latest Statistics Show Amount of Building So Far This Year Less Than Year Ago.

## LARGE CITIES OVERCROWDED

Lack of Price Stabilization One of the Chief Causes of Slowing Up of Construction Work—Little Hope for Drop in Prices.

New York.—"As we advance into the new year it becomes constantly more apparent that no problem is more urgent need of an early and wise solution than that which is involved in the nation's housing situation," says S. W. Straus.

"From the most reliable statistics obtainable at this time the actual amount of building accommodations throughout the country are considerably less than they were a year ago. While the figures indicate an increased cost of new building contracts awarded during the year 1920 of about 5 per cent, as compared with 1919, this was more than discounted by the added cost of building construction and the loss of available space through fires and deterioration. In brief, the country is going backward in its housing equipment.

"Overcrowding in the large cities has reached such a serious state that health authorities are sounding an alarm. These unwholesome conditions also develop social unrest and lawlessness, and it is apparent that every possible agency should lend itself to the work of helping in the practical solution of this grave problem.

### Building Projects Held Back.

"It is to be hoped that a large building movement will start this spring and summer, but no one can tell what developments may arise meanwhile. Lack of price stabilization has been one of the chief causes of the slowing up of construction work since the armistice. Vast amounts of building

projects have been held back because of the feeling that building costs would recede later. However, experience has shown that those who waited have gained nothing, while those who went ahead with their plans have no cause for regret. During the last year the amount of work projected was about twice as much as the amount of actual operations.

"The uncertainty as to future price tendencies constitutes one of the most unfavorable factors in the situation today.

"The feeling is being fostered by the slump in prices in many commodities. It should be borne in mind, however, that conditions incorporated in the general range of commodities and those in the housing situation are not analogous. The processes of liquidation such as we have witnessed lately with regard to general merchandise cannot include the building commodity. Merchants can move their stocks of merchandise from their shelves by cutting prices, and there always is more or less fluctuation in these lines. Housing space, however, is generally leased on a basis of one year or more. During periods of retrenchment, such as we have witnessed in this country during the last six months, housing, therefore, is affected less than any other commodity. People can quickly adjust themselves to economies in clothing, food and other requirements of their daily lives, while business concerns can reduce quickly operating costs by putting into effect general economies. But in neither instance is it generally possible or advisable to curtail expenditures for housing space.

### No Benefit in Delay.

"Some of the abnormal prices and bonuses which have existed in the construction business will not continue to be paid, but general fundamental conditions at this time do not indicate that there is wisdom in withholding building operations.

"The basic influences which may be expected to exert their force against lower building costs may be summarized as follows:

"Unprecedented demand throughout the country for housing facilities of all kinds.

"Shortage of highly paid skilled laborers in many of the essential building trades.

"Tremendous increases in business, with a corresponding increase in necessary building equipment, after the present period of readjustment and liquidation.

"General tendency toward readjustment to higher levels of income from property.

"Export demand for American building materials as conditions improve abroad.

"Insistence of public on constantly improved standards of living, with corresponding demand for more costly equipment."

## AUTO TOO RISKY FOR AIR ACE

Charles Nungesser, French War Hero, Gives Up Car After It Kills Bicyclist.

Paris.—Charles Nungesser, the French "ace" who ranked second to Fonck as a successful military aviator during the war, and who has been prominent at aerial meetings since the armistice, has decided to give up driving his automobile, saying it is too dangerous and expensive.

Nungesser was racing through Neuilly recently when he knocked down and killed a bicyclist, as a result of which the court ordered him to pay the widow of his victim 30,000 francs (normally \$3,000) for damages.

"I think I'll stick to my airplane hereafter," he told the judge. "If anything breaks, then I'll be the only one to suffer."

## American Woman Runs Constantinople Canteen



Daily scene at Mrs. Bristol's American canteen for Russian refugees at the Sirkedji railroad station in Stamboul. Thousands of Russians were furnished daily with warm drink and food at this canteen. In this crisis, the work of the American Red Cross in Constantinople is a signal achievement. Mrs. Bristol is the wife of Admiral Mark L. Bristol, American high commissioner in Constantinople.

# Germany's Ruin Was Predicted by Bismarck

Prophecy and Bitter Attack on William II in Suppressed Volume of Memoirs.

## CALLS KAISER VAIN AND WEAK

Statesman Said Terrible Catastrophe Would Hit All the Nations of Europe—Attempts Made to Prevent Publication of Book.

London.—"I see great perils arising in Germany, and, indeed, for the whole of Europe. The longer the catastrophe is in coming the more terrible it will be."

The prophecy comes from the long suppressed third volume of Prince Bismarck's memoirs, which have just been made public in Germany, despite the opposition of the kaiser and his friends. Bismarck wrote the story of his life in three volumes, entitled, "Thoughts and Reflections," the first two volumes being the story of his rise to power and the third the story of the Iron Chancellor's dismissal by William II, a boy monarch, whom he characterizes as "dreamy and vain."

The first two volumes were published, but the third volume, although in print, was never released to the German people because the men who surrounded the kaiser feared a scandal would result. It has at last appeared, after a legal battle for its suppression, and a summary and extracts of the book have been printed in the Vossische Post. Articles summarizing the volume also have appeared in the English press.

### Called William II Vain and Weak.

Bismarck, in his analysis of William II, depicts him as having Frederick I's craving for show; Frederick II's love for "tall soldier fellows;" Frederick the Great's thirst for glory; Frederick William IV's dreaminess and weakness, and Frederick III's vanity and sensitiveness.

"Only from one of his ancestors did he inherit nothing—from his grandfather, William I," says the Iron Chancellor, who served both monarchs. Such uncomplimentary sketches, together with personal letters from the kaiser which he did not wish to have made public, caused the imperial ban on the book.

The first chapter of the volume tells of the admiration which the young Prince William at first felt for the veteran statesman, who was then imperial chancellor. He spoke of Bismarck's "magnificent work," of his love of the fatherland and his building up of the empire, and uttered the hope that Bismarck would continue to guard and protect his country.

### Hero Worship Short-Lived.

This attitude of hero worship on the part of the prince did not last long, however. The men were basically different, and these differences were soon manifested. A clergyman named Stocker had made himself conspicuous as an anti-Semitic, and Bismarck and the kaiser quarreled over him. William defended the man, while the chancellor declared him doubly dangerous, for "he is a political clergyman and a clerical politician."

The breach widened, and it is evident that Prince William's admiration for Bismarck, if ever sincere, soon cooled. Even in the year before William I died the prince drew up a proclamation laying down the attitude which he intended to pursue once he became kaiser. It said that he should deliberate with his own "colleagues," the higher German rulers and princes, before he gave them their orders, and that these "colleagues" must not be allowed to grow too overbearing. As president of the German bund the kaiser was only the first among equals, and had no ground for adopting this egoistic and dominant attitude. He insisted, however, that this decree should be sealed up and sent to the various Prussian embassies and legations throughout the empire, there to be promulgated on his coronation day so that all might know his wishes and be advised of what he proposed to do, even before he began to command.

### Burn Document, Says Bismarck.

Before doing so, however, he sent

the document to Bismarck, and asked his opinion.

"May I respectfully ask your royal highness to throw the draft you have so kindly sent me into the fire without delay?" was Bismarck's answer.

When the prince came into authority Bismarck was retained as imperial chancellor, but now found that he had a group of opponents to deal with in the new government. The grand duke of Baden, Waldersee and Botticher all conspired against him both at court and in parliament. Bismarck in the memoirs scores these men and the new circle of friends that the kaiser had gathered about him. He speaks, for example, of Heyden, "of whom politicians say that he is a painter, and painters say that he is a politician." Botticher, who owed his place to Bismarck, won great influence over the kaiser at Bismarck's expense, and the young monarch gave less heed to the older man's counsel. The time was slowly approaching for the "dropping of the pilot" who had stood so long at the helm of Prussia and the empire.

Many of the kaiser's policies at this period show a creditable amount of enlightenment, although Bismarck did not believe them practicable. William II at this time expressed sympathy for the working classes and dreamed of better labor laws and class reconciliation. Bismarck, on the other hand, thought that the workers ought to be kept down. The kaiser had his own way and better labor laws were passed, despite Bismarck's opposition. Such defeats weakened the chancellor's power and he even wondered whether he ought to send in his resignation.

### Bismarck Considers Resigning.

Thus the storm gathered in January and February, 1890, and was marked by a scene in the imperial palace at Berlin. Tempers had risen on both sides over the matter in dispute, and at last the chancellor put the direct question:

"It appears, then, that I am in your majesty's way?"

"The kaiser," adds Bismarck, "said nothing and therefore assented."

After this Bismarck again considered offering his resignation, but he did not do so. In fact, he became obstinate and ultimately decided to make it as difficult as possible for the kaiser to dismiss him. Meanwhile, however, the kaiser was growing stronger in the government. The ministers in the cabinet turned against Bismarck and he felt his grip weakening. Once he asked for an explanation of why the ministers favored the kaiser against him, and one replied confidentially: "We must do something to please him" (meaning the kaiser). Bismarck answered ironically that he was glad to see the monarchy so firmly established—the monarchy that was so shaken when he became chancellor.

### Chancellor Defies Kaiser.

Matters came to a crisis toward the end of March. Bismarck had received Windthorst, the leader of the Center party, at his home, and the kaiser resented this act. Bismarck claimed the right to receive distinguished politicians whenever and wherever he pleased. The kaiser asked:

"Even if I, your sovereign, forbid you to?"

"Yes, even then," Bismarck answered.

William then talked about the new reichstag and about insurance, both subjects on which he knew the chancellor's views were opposed to his own. He spoke of his great wish to visit the czar as soon as possible.

Bismarck did not approve of this and the kaiser knew it. The chancellor's answer to the suggestion was to take a document from his portfolio and warn the kaiser against the visit saying that Prince Hatzfeld, the German ambassador at London, had made notes of some very unpleasant things the czar had said of the kaiser. These notes were contained in the document which Bismarck exhibited, but would not show to William. The kaiser insisted that he read them, but Bismarck said that such distressing statements could not very well be read aloud. The kaiser snatched the document from Bismarck's hands and began to read for himself. His face grew pale with anger, for, as Bis-

marck observes, "the things said about him were really very nasty."

### William's Vanity Wounded.

The chancellor derived great pleasure from the incident, but William was very hurt and angry, both at the czar and at Bismarck, because of the situation in which he had found himself placed and the wound to his vanity. Shortly after this, while his rage was still hot, he heard of some ill-founded report by an obscure German consul in Russia which told of an alleged mobilization of the Russian army. Bismarck had not thought it worth calling to the kaiser's attention, as there were slight grounds for believing the report. But the kaiser believed every word of it, and wrote a discourteous note to the chancellor asking why such important information had been withheld from him. He declared that the empire was threatened and that counter measures must be taken at once against the threatened Russian menace.

Bismarck's policy had been traditionally pro-Russian for 30 years, and he knew that there was no ground for alarm. Action on the part of the German empire would have caused unnecessary complications and might have ended in real trouble. Bismarck won his point, but at the cost of greatly strained relations with the throne. This quarrel soon merged into another, for Bismarck, who felt that he was being supplanted by others in the confidence of the kaiser, suddenly insisted on a constitutional clause, 40 years old, which forbade the ministers to converse officially with the sovereign except through the medium of the premier. Bismarck was both Prussian premier and imperial chancellor, and was determined to let no one but himself exercise a direct personal influence on the monarch. The kaiser, who liked to talk personally with his ministers and who favored a direct government policy, demanded the abolition of the clause. Bismarck refused, but offered to resign.

The offer was a mere gesture. Bismarck had tendered his resignation many times before when he wished to gain a point, and had always won. At one time the kaiser had returned a written offer with the word "Never" scribbled across it. But now he sent the chief of the civil cabinet to call for the offer of resignation at Bismarck's house. The chancellor refused to be hurried. Carefully and slowly he began the wording of the resignation. An afternoon and evening passed, and the next morning the kaiser lost patience and sent an adjutant with the message:

"His majesty will wait until two o'clock for the document."

Bismarck told the adjutant that he was "ready to sign his own resignation at any moment," but that he needed time to write out his offer if the tone was to befit the dignity of his office. But the kaiser did not waiver in his decision. Bismarck was dismissed. In an effort to conciliate him William conferred upon the outgoing chancellor the title of duke, but the honor was not accepted.

General Caprivi was at once named as his successor and as soon as his resignation had been received Bismarck was hurried out of the chancellor's palace with unseemly haste. He says that while his servants were still packing up his possessions the lackeys of his successor "occupied the stairs, doors and passages of the palace," and part of the palace was already taken possession of by General Caprivi before Bismarck left.

In the third volume Bismarck, having brought the story of his own political career to an end, adds a malicious chapter of criticism of the kaiser. He also attacks Caprivi for exchanging Zanzibar for Heligoland and for not renewing the treaty with Russia. He closes with the prophecy of ruin and catastrophe for the nations of Europe.

### Bars Pickle and Pretzel Lunch.

Harrisburg, Pa.—Eating of pickles and pretzels as a school recess lunch was banned by public health nurses of the central part of the state at the first of their conferences, and resolutions were adopted that nurses should urge parents to provide good, wholesome, old-fashioned bread and butter.

## Where Mr. Coolidge May Reside



The high cost of Washington rentals which confronted Vice President-elect Coolidge, has been solved by President-elect Harding. The Harding home at 2314 Wyoming avenue, has been offered the Coolidges. Friends of Mr. Coolidge say he will probably accept the offer. The house is unpretentious but spacious, and well suited for entertaining.