

The Tech

Established 1881

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CAMBRIDGE, MASS., JUNE 22, 1917

Price 5 cents

J. M. CRAFT, INSTITUTE PAST PRESIDENT, DIES

Distinguished Chemist and Former Technology Executive Deceased—Flags Flown at Half Mast in Tribute

AGED 78 AT DEATH

Yesterday flags at Technology were flown at half-mast in tribute to Professor Crafts, President of the Institute between 1898 and 1900 whose decease recently occurred.

James Mason Crafts, former President of the Institute and distinguished chemist, died Wednesday at the age of 78, word of his decease being received from his summer home in Connecticut. His death was due to heart trouble.

Professor Crafts was the son of R. A. Crafts, a wealthy Boston merchant, and his mother was the daughter of Jeremiah Mason, a lawyer, who opposed Daniel Webster in many cases. Mr. Crafts was graduated from the Lawrence Scientific School of Harvard in 1858 and studied chemistry for two years in Germany. He then spent four years in the study of medicine at the University of Paris. In 1865 he returned to this country.

At the age of 28 Prof. Crafts was made professor of chemistry at Cornell and two years later became head of the chemistry department at Technology. He was compelled to resign on account of ill health. From 1871 to 1892 he worked in the laboratories of this country and France, but laboring chiefly at the Sorbonne.

He returned to the Institute as an independent investigator and was later appointed Professor of Organic Chemistry. He was President of the Institute from 1898 to 1900. Since that time he had been at work in the laboratories of Boston.

Prof. Crafts won the Rumford medal, conferred in England, and a high honor

(Continued on page 2)

1921

The Tech has a message for you. Learn what Technology expects of you; what Technology has to offer you; what Technology is. The Tech is the only authentic and right-on-the-minute guide to Technology student activities Technology athletics Technology's place in wartime Technology courses Technology summer activities and the Technology calendar

You are coming to the Institute next year. These things are important to you. Next fall you will want The Tech. Start now on the right road and subscribe to the

SUMMER TECH

95 cents during the summer months.

MEMBERS OF PREPAREDNESS BOARD OFF TO NEW YORK

NEW YORK, June 22—Professor Pearson of the Institute, and R. A. Wilkins '18, representing the Joint Preparedness Committee, will arrive in New York in time to address the Technology men leaving next week for ambulance service in France, at the dinner to be given the Field Service men tomorrow evening by the Technology Club. It is with the view of establishing lines of communication with the men leaving for duty in France that the representatives are making the trip.

735 REGISTER FOR EXAMS

More Candidates for Entrance This Year Than in 1915

Seven hundred thirty-five men registered for the entrance examinations to the Institute yesterday and Wednesday, according to the returns given out at the Registrar's office last night. Due to the fact that the daily registration figures from last year are missing, an exact comparison of the tally a year ago and the present figure cannot be made; but it is certain that the number of candidates this year exceeds that of the summer of 1915, and, in the opinion of the Registrar's office, equals last year's record.

According to yesterday's figures, enrollment has caused little decrease in the number of candidates for the Institute and as the majority of the candidates are not of the draftable age, there is little fear of further diminution in this fall's entering class. How the number of students taking the College Entrance Examination Board quizzes compares with the figures of former years will of course have its effect on the size of the class of 1921.

As men not taking all exams may register at the first test taken, it is probable that the above figure will be slightly increased before the close of the examination period this afternoon. For the benefit of the candidates who have not already taken the examinations a resume of the rules concerning entrance examinations follows:

Applicants for admission to the Institute are, in general, required to pass the entrance examinations of the Institute, or the equivalent. Certificates of entrance examinations passed for admission to another college are usually accepted, provided they cover not fewer than three of the subjects required by the Institute. Persons who are considerably past the usual age who are engaged in teaching or technical pursuits, and also applicants who for satisfactory reasons desire only special courses requiring no previous training, may be admitted, at the discretion of the Faculty, without entrance examinations.

A fee of five dollars will be charged for admission to the entrance examinations of the Institute. This amount

(Continued on page 3)

INSTITUTE CORPORATION ADOPTS BLANKET TAX FOR STUDENT FUNDS

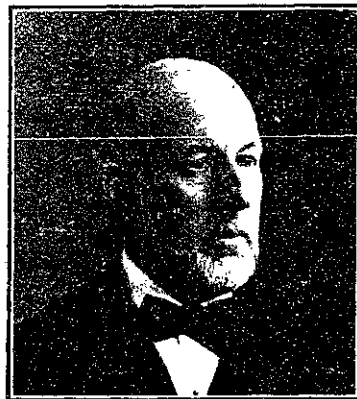
To Levy Charge of Four Dollars per Term on Students for Undergraduate Expenses

NO FRESHMAN EXEMPT

The compulsory student tax is now a reality at the Institute. Acting on the petition for such a tax made by the Ways and Means Committee of the Undergraduates, the Corporation, through its Executive Committee, has announced that hereafter all students entering the Institute must pay a tax of four dollars a term for the maintenance and promotion of student life at Technology. Students already attending the Institute will not be required to pay the tax, but may subscribe to the levy at their option, though unless they pay the amount they will not receive the privileges of the tax-payer.

Inasmuch as the scope of the student life of the Technology woman is narrower than that of the male student at the Institute, the student fee for the co-ed has been set at one dollar, with the stipulation that such moneys will not

(Continued on page 3)



PROFESSOR CROSS RETIRES AFTER 46 YEARS' SERVICE

Professor Wilson Will Succeed Him as Head of Physics Department

A veteran of forty-six years' work in the Physics Department of the Institute, Charles R. Cross, Thayer Professor of Physics in charge of the department and director of the Rogers Laboratory of Physics, has retired and become Professor Emeritus. His successor will be Edwin B. Wilson, hitherto Professor of Mathematics at the Institute.

Professor Cross, who was born in Troy, N. Y., received his degree from the Institute in 1870 with the third class to graduate. He returned to college the year after his graduation as an assistant professor in physics and retained this position until 1875, when he also taught Astronomy and Descriptive Astronomy. In 1878 he became a Thayer Professor of Physics and has

been a director of the Rogers Laboratory of Physics since 1886. In 1907 he was placed in charge of the entire Physics Department at the Institute.

Professor Cross is one of the foremost physicists in the country and his work is known throughout the world. He has spent much time in scientific research and has been continually called upon by firms all over the country for advice as a consulting physicist. For many years he specialized in acoustics and gave to the world much of the valuable data which is now available upon that subject.

It was due to his efforts that in the early eighties a course in Electrical Engineering was instituted in conjunction with the regular physics course and later this became a separate course which has developed so that now it is

(Continued on page 2)

START A SCHOOL A DAY

To Prepare Fishermen to Man New Fleet as First Officers

Thought the first school for the training of fishermen and sailors to become first officers on the great fleet of steel vessels now building under Colonel Goethals, was started under the direction of Dean Burton of the Institute two weeks ago at the Students' Observatory at Harvard University, similar schools have been opened at the rate of nearly one a day, last Wednesday marking the founding of the eighth of this group.

At each of the schools there is an Institute professor or a member of the instructing staff of some other college, but acting under the supervision of Technology, teaching men already familiar with vessels some of the finer

(Continued on page 2)

NOTICE

DISTRIBUTION AND SUBSCRIPTION

The Tech will be distributed Tuesdays and Fridays at the Caf, Co-op, Rupert's and The Tech office.

Subscription books will be on sale at the distributing points Wednesday, June 20, for 95 cents. Men leaving the Institute before the summer issue is completed may have The Tech sent to their summer addresses by leaving their subscription books at The Tech office accompanied by proper mailing directions.



Entered as second-class mail matter September 16, 1911, at the Post Office at Boston, Mass., under the Act of Congress of March 3, 1879.

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Managing Board

John W. Damon '18... General Manager Alfred N. Pray '18... Editor-in-Chief Donald D. Way '19... Managing Editor Augustus P. Farnsworth '19... Circulation Manager

Subscriptions: \$1.00 for the summer months, in advance; single copies, 5 cents. Subscriptions within the Boston Postal District or outside the United States must be accompanied by postage at the rate of one cent a copy. Issues mailed to all other points without extra charge.

News Offices: Charles River road, Cambridge, Mass.; 152 Purchase street, Boston, Mass. News Phones: Cambridge 2600, Main 3810. Business Phone: Cambridge 2600.

FRIDAY, JUNE 22, 1917

THE PLAN ADOPTED

FINAL sanction has been given the profoundly worked out and admirably coordinated plan of the Ways and Means Committee for a general student tax in support of the hitherto inadequately recognized student needs. The Institute Corporation has announced the levy of a uniform student tax of eight dollars per year, for all male students of whatever year, course or classification. As levied the tax embodies all the recommendations of the Ways and Means Committee in practically unchanged form, with the addition of a small reserve fund. The intention of the students as represented in the Institute Committee has expressed itself in a measure of lasting effect and benefit.

The need for a constant and reliable source of funds for carrying on student functions, always becoming more and more apparent with the embarrassing condition of Institute athletics, became an immediate necessity when the privileges and responsibilities of the Walker Memorial were faced. The student enterprises which were to occupy and maintain that building could not be trusted for support to the spasmodic triumph of conscience which might make the dilatory pay class dues or the generous contribute to athletics. Every means of raising money for athletics, for class and activity maintenance, except a general compulsory tax, has been tried at Technology: tried and found lacking. Dues are dodged by those men who are unable or unwilling to perceive the value of class organization in their own lives: the contributions of self-supporting and profitable student activities toward the management of less fortunate ones are unreliable and have been known to fail entirely in unlucky years. There remains but the blanket

tax, which to be valid must have the authority of the Institute Corporation behind it.

The objects attained by the tax are few in number, simply what experience has proven to be the elementary community needs for a college of size and standing. It provides for athletics in the degree to which any student may participate without exceeding the limits of his spare time. It arranges for the upkeep of the Walker Memorial, in whose benefits everyone will share. It provides for universal contribution to the class funds; for health insurance service to all students; for Institute Committee appropriation; and for a reserve fund in case of emergency. It is specifically provided that no part of the money raised shall be devoted to any purpose unless all students are admitted to its benefits without further charge.

The Walker Memorial, the most modern and one of the most appropriate student buildings of any college's boast, the Technology field, said to be the finest for track athletics in New England, were provided by the generosity of alumni. It should be, and will be in years to come, our pride at least to contribute to the sports and the activities for which their provisions have been so magnificent. It is a step toward the wider participation in student activities, toward the time when no Technology man will consider his day at the Institute finished with the day's classes.

Professor Crafts was not a familiar figure among Technology students, except the undergraduate of a decade and a half ago. His name is best recalled to the student of analytical chemistry. His preferred line of research. His death leaves but two living ex-presidents of the Institute, Dr. Pritchett and Professor Noyes of the Institute instructing staff. Professor Crafts was President for two years until 1900, when the Institute must already have been showing signs of growth up to the capacity of the Boston plant. Although over sixty years of age at the time, he has lived to witness the full attainment of the highest hopes of Technology's founder and builders: he has seen the work of development in which he was an executive factor reach its culmination, and pass to a new stage of expansion.

INSTITUTE PAST PRESIDENT DEAD

(Continued from page 1)

in chemistry. He was a chevalier of the Legion of Honor and was awarded the Jecker prize at the Paris Academy of Sciences. Harvard made him a doctor of laws in 1898. He was a fellow of the American Academy of Arts and Sciences, a member of the American Association for the Advancement of Science, the National Academy of Sciences, the American Chemical Society, the Washington Academy of Sciences, the British Association for the Advancement of Sciences and was an honorary member of the Royal Institute of Great Britain. He held membership in The Country, Somerset and University Clubs.

TRAVELLING ARCHITECTS WILL AWAIT END OF WAR

R. M. Stowell '16 is Fourth Winner of Fellowship Held Up

Raymond M. Stowell '16 is the winner of the 1917 Traveling Fellowship, according to the announcement made yesterday by the Department of Architecture, second place having been awarded John F. Hogan '16. Stowell is the fourth to win this Fellowship since the outbreak of the war, and like the rest will be obliged to defer his trip abroad until peace is declared.

The design for the competition was described as a permanent group in the court of honor of an exposition containing three buildings each commemorating an epoch in the nation's history. The first of these, a pantheon or great hall; the second, a museum for the display of products of science; and the third building, a museum for the liberal arts, were situated on an artificial island in the Charles River Basin, directly in front of the new Technology. The fellowship award consists of a sum of one thousand dollars to be devoted to travel-study in accordance with an agreed-upon itinerary, reports to be made from time to time during the journey.

The winners in competitions during the year were announced as follows: Student medal of the American Institute of Architects to Harold Sterner '18 of New York City; Rotch prizes to Harold Sterner and Willard B. Riddell '18 of Hamilton, Ont.; Boston Society of Architects, prizes to Robert H. Seannell '17 of Felton Hall, Cambridge, and William B. Colleary, special student, of Forest Hills; Chamberlain prize to John M. Batschy '17 of Quincy, Ill.; F. W. Chandler prizes, 5th year, to Edwin M. Woodward '17 of Odlin, Ill., 4th year, to Frank S. Carson '17 of Halifax.

START A SCHOOL A DAY

(Continued from page 1)

points of navigation, such as the use of the sextant and the computations necessary for sailing by dead reckoning. The group of schools is under the care of Henry Howard, '85, at the head of the Shipping Board, who has left the details of arrangement with Dean Burton and his associates on the faculty.

The first school was for convenience placed at the Student's Observatory at Harvard, where Professor Harland T. Stetson has thirty men prepared to take the examinations for chief officers' positions in the merchant marine next week. Then followed a school also of thirty men at Greenport, L. I., under Mr. C. H. Turney of Southbridge, the third is at New Bedford, twenty-five men, under Rudolph Beaver, M. I. T., '17, and the fourth at Machias, under Professor George L. Hosmer, where thirty men are under instruction. The largest school is now four days old, that at Portland, where sixty men are assembled learning navigation under the instruction of Assistant Professor J. W. Howard of the Civil Engineering Department, and another school being opened at Rockland, Me., under the care of Professor Frederick Slocum of Drexel Observatory, Wesleyan University.

The eighth school will open on Monday at Boothbay with Professor Ransom, of Tufts, in charge. Mr. Howard's plan is to prepare the good material that lacks only a little special training for the command of the merchant marine that is to be built. There are on the coast of the country thousands of experienced sailors of intelligence whose only lack is familiarity with the use of instruments. Every other detail of management and technique they thor-

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one of the largest a Professor Cross ha years chairman of t Committee in the of Arts and Science- warding scientific chairman of the Rese the Committee of Or American Association- ment of Science. He of many noted scien both in this country

Professor Cross, viewed by a reporter said: "I am leaving department in as go has been in several who has been chosen certainly a very able to see the departm his guidance"

When asked if he any research work la have had very little to my having given

J.U.U

A summary of the criticisms is as follows: Some Technology men lack ability to conform to the conditions in which they find themselves in the industrial field and lack tact in their relations toward men of practical experience. A recent graduate has the tendency to feel that his education and his efforts are not fully appreciated and in consequence drifts from a company just at a time when he is becoming most valuable to them. The remarks also include a comment on the ability of the engineer to write clear non-technical English. Dr. Talbot expressed his hope that the practical experience afforded in the XA course would eradicate these unfortunate defects among our graduates.

Professor Noyes spoke briefly on the necessities of maintaining our normal supply of fertilizers and outlined several sources of the potassium and nitrogen compounds with which he had become familiar in his recent trip through the West.

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the Institute. I may do some later, but I don't know, and I can hardly be expected to tell what I don't know."

In regard to his plans for the summer he said: "I don't know what I shall do this summer. My plans are very unsettled, but I shall probably spend the greater part of the summer at my home in Brookline."

At the recent election of the faculty, Professor E. B. Wilson of the department of Mathematics, was placed in charge of the department of Physics, a position made vacant by the retirement of Professor Charles R. Cross.

Professor Wilson is a Hartford, Conn. man and has the degree of A. B. from Harvard and Ph. D. from Yale. He has also done much post graduate work abroad at the Sorbonne and the College de France. In 1900 he was made instructor of mathematics at Yale, which position he held for six years, and for the next two years, the position of associate professor. He was called to the Institute in 1907 as an associate professor and was advanced in 1911 to the rank of professor. Although officially a mathematician, Professor Wilson has made an extended study of the physical aspects of the subject and did thesis work along specialty lines while at Yale, where he was a student under Professor J. Willard Gibbs. He has written several text books along these lines besides doing much special investigation work in making formulas for the flow of electricity, heat and radiation.

Professor Wilson is a man of great breadth and understanding, as is shown by the fact that he was elected by the National Academy of Science for editor of its Transactions, a position which, on account of the special character of the papers and the profound nature of their contents, requires the ability of a man of his calibre.

At the Institute, there has been evidenced by official actions, an increasing desire to keep in touch with the business needs. This has been shown by the addition to the course of Chemical Engineering of the practical training during which the students travel about the country studying practical work, by co-operation in electrical methods with telephone companies, by the appointment of advisors in Naval Architecture, by the special vacation courses in the summer, by the relationships maintained with great mining interests and the efforts to keep closely in touch with the commercial world in this subject. In physics, in the same way, the officials have seen the necessity of keeping abreast of the commercial developments and specialties of this subject and also strengthening it along the lines of physical and mathematical research. With its new buildings and equipment, Technology has given, at this time, the control and building up of this subject to the direction of Professor Wilson.

735 REGISTER FOR EXAMS

(Continued from page 1)

will, however, be credited towards the tuition fee for the first term of students who enter the Institute. A candidate dividing his examinations will pay a fee only for his first examinations. A candidate who is rejected will be required to pay a second fee if he repeats his examinations, and his original fee will not be credited to him if he is ultimately admitted. Fees may be paid to the Bursar at the time when the examinations are taken.

A second series of examinations for admission, and for applicants conditioned at the first examinations, will be held in the Institute buildings in Cambridge on the first Saturday, Monday and Tuesday after September 11.

Applicants for admission after the September examinations will be received only when some good cause, such as illness, has prevented attendance at those examinations.

CORPORATION TO TAX STUDENTS

(Continued from page 1)

be used for the benefit of athletics or the Walker Memorial.

According to the statute authorizing the levying of a compulsory tax, no part of the amount raised can be used for any class function or activity which discriminates against any member of the student body. It is further provided that the Institute Committee shall have charge of the care and expenditure of the tax money, subject to the approval of an advisory committee of the Corporation.

The actual plan as outlined differs only in one or two minor details from the scheme suggested to the Institute Committee early last term by the Committee on Ways and Means, which lead the larger body to petition the Corporation for the adoption of the compulsory system. In figuring the amount of the tax, the Corporation added to the items covered in the Student Committee's report—Institute Committee, Class Dues, Athletics, Walker Memorial, and Health Insurance—the provision for a reserve fund, bringing the original estimate from \$6.80 to \$8.00 for the Institute year.

The adopting by the Corporation of the compulsory system came as a glad surprise to most Technology men who have been connected with the collecting of money from student activities by the various methods used in previous years, such as the blanket tax, athletic dues, or voluntary contribution. That the tax had really been authorized was announced in a circular enclosed in the report of standing sent to each student last Monday. A copy of the notice follows:

The following rules regarding the student tax have been promulgated by the Executive Committee of the Corporation:

1. That a tax of \$4 per term be levied on all male students attending the Institute who enter after September 1, 1917, and who pay, or have paid on their behalf, more than half the regular tuition fees for the term and that the corresponding tax for students who pay one-half the regular tuition fee or less be \$2 per term.
2. That in the case of female students the tax be \$1 per term for those who pay more than half the full tuition and \$0.50 per term for those who pay half or less, and that no part of this tax be appropriated for the maintenance of athletics or of the Walker Memorial.
3. That this law be levied on all students, including graduate students, special students and unclassified students.
4. That the tax be remitted and the corresponding amount supplied from funds applicable to such purposes in the

case of all students who are granted scholarships on the basis of financial need and of others who may be exempted from the payment of the tax by a committee appointed to deal with such matters.

5. That the proceeds of the tax be devoted to the promotion of student life at the Institute with special reference to the physical and social welfare of the students. No part of the tax shall be spent for any class function, athletic event or social entertainment that is not open without charge to every qualified member of the student body in good standing.

6. That this tax be expended under the general direction of the Institute Committee subject to the approval of an Advisory Committee appointed by the Corporation.

7. That during the first year the tax be apportioned approximately as follows:

Institute Committee	\$0.17
Class Dues	.75
Athletics	2.50
Walker Memorial	3.00
Health Insurance	1.00
Reserve and Contingent Fund	.60

RICARD C. McLAURIN,
 President.

Note: It will be observed that the tax is compulsory only in the case of students who enter the Institute after September 1, 1917. In the case of those students already at the Institute who combine their courses in later years, the tax will be voluntary, but the benefits accruing to those who pay the tax will not be extended to those who do not pay.

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HALF OF ALIEN ENEMIES IN U. S. ARE GERMANS

Form Two Per Cent of Country's Total
Population

(From The Tech Bureau)

WASHINGTON, June 17—According to information now available there are 4,662,000 alien enemies resident in the United States, approximately five per cent of the total population of the country. This figure has been compiled from data obtained from the census of 1910, the reports of the Bureau of Immigration and the estimated mortality between 1910 and the present time.

The distribution of these foreigners, according to country or birth, is as follows: Germans, 2,349,000; Austrians, 1,376,000; Hungarians, 738,000; Turks, 158,000; Bulgarians, 110,000.

Assuming that the proportion of aliens—that is, persons who have not applied for naturalization certificates—among these foreigners is nearly the same in 1917 as it was in 1910, the

number of male aliens twenty-one years old and over included in the above total would be approximately 964,000, or about 3.2 per cent of the male inhabitants of the United States twenty-one years of age and over.

NELSON PRIZE AWARDED TECHNOLOGY GRADUATE

J. W. Anderson '17 Gets Second Award
for Paper on Plumbing

J. W. Anderson '17 has been awarded one of the Nelson prizes in plumbing, in competition with trained officials and college instructors, according to an announcement made yesterday by Professor G. C. Whipple, chairman of the awarding committee. The first prize of \$100 went to T. J. Claffy, assistant chief sanitary engineer of the Chicago Board of Health, for a paper entitled "Plumbing"; while Anderson took the second prize of \$50 with an article on the different types of pipes used in the disposal of rain water.

The Massachusetts Institute of Technology CAMBRIDGE

RICHARD C. MACLAURIN, M. A., Sc. D., LL. D.

President

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY offers courses, each of four years' duration, leading to the degree of Bachelor of Science, in Civil, Mechanical, Mining, Electrical, Chemical, and Sanitary Engineering; in Architecture, Chemistry, Electro-chemistry, Biology and Public Health, Physics, General Science, Geology and Naval Architecture, and in Engineering Administration.

To be admitted to the first-year class, applicants must have attained the age of seventeen, and must pass satisfactory examinations in Algebra, Plane and Solid Geometry, Physics, English, History, French, and German, and must present teachers' certificates for two of a series of elective subjects. A division of these entrance subjects between June and September or between two successive years is permitted.

Entrance examinations are held at the Institute in June and September of each year. In June, applicants may be examined also by the College Entrance Examination Board in New York, Philadelphia, Chicago, and many other cities in America and Europe. A circular stating times and places is issued in advance, and will be mailed on application.

Graduates of colleges and scientific schools of collegiate grade are admitted, without examination, to such advanced standing as is warranted by their previous training.

Graduate courses leading to the degrees of Master of Science, Doctor of Philosophy, and Doctor of Engineering are also offered. Special Research Laboratories of Physical Chemistry, Applied Chemistry, and Sanitary Science have been established.

Correspondence should be addressed to Prof. A. L. Merrill, Secretary of the Faculty.

PUBLICATIONS

The Annual Catalog (issued in December), the Report of the President and the Treasurer (issued in January), the Programme (issued in June), and circulars in regard to Admission of Students from other Colleges; Summer Courses; Advanced Study and Research.

Any of the above-named publications will be mailed free upon application

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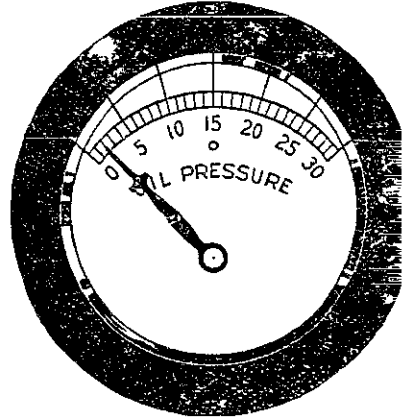
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