THE TECHNOLOGY REVIEW

CONCERNING THE PRESIDENCY

Samuel Wesley Stratton: An Interview
The President of Tech
The Work of the Bureau of Standards
Comment of President Harding, and others

FLYING THROUGH EUROPE

By E. P. Warner

"G. SWOPE, HELPER"

By Willis R. Whitney

VOL. XXV *November, 1922* No. 1

PUBLISHED BY THE ALUMNI ASSOCIATION

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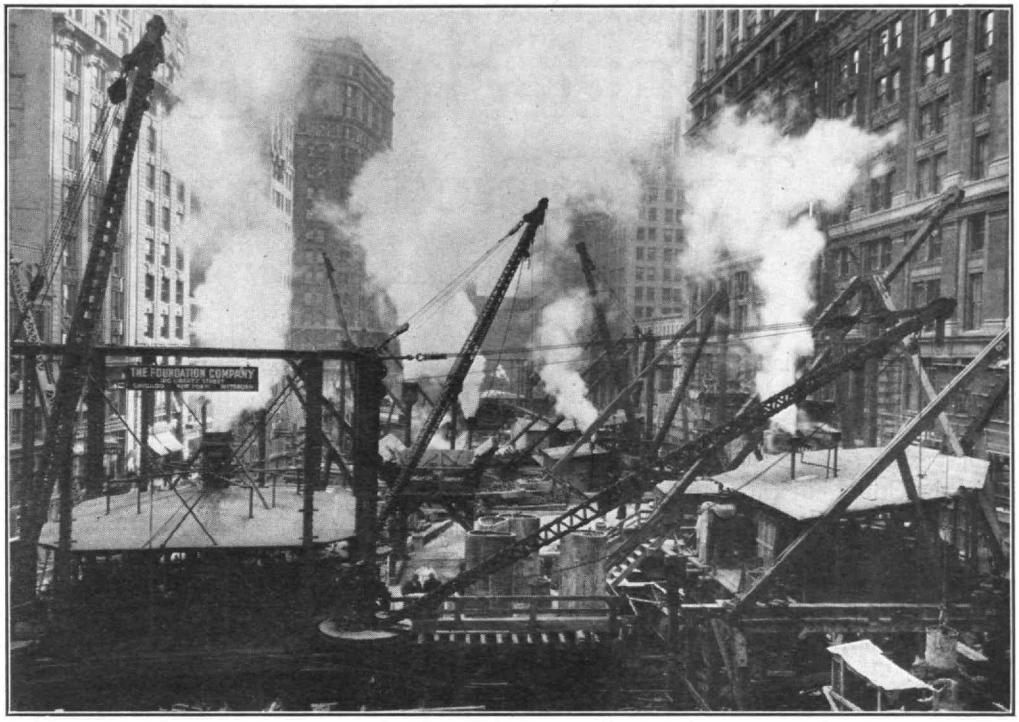

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THE
TECHNOLOGY REVIEW
RELATING TO THE
MASSACHVSETTS·INSTITVTE·OF·TECHNOLOGY

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Harry J. Carlson, *President* Walter Humphreys, *Secretary-Treasurer*

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S. W. Stratton

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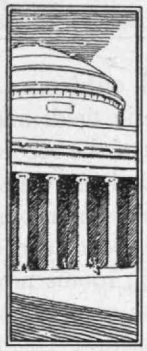


The Past Months

AS the unexpected climax to an uneventful summer, there comes the best of news for Technology. The election of Dr. Samuel Wesley Stratton, present director of the Bureau of Standards to the presidency of the Institute, is fully dealt with on other pages. It is necessary here only to record the fact in its due position at the top of the list of occurrences which have been notable for us since July. With Dr. Stratton's assumption of the presidency on January 1st will come the first assuaging of the sense of loss which has kept a cloud thrown over the Institute since, in January, 1920, Dr. Maclaurin died.

BUT the summer was also notable for the Technology Review. It had been felt for some time that Technology's ever-growing Alumni body needed a more adequate news-service than could be supplied by a magazine issued only four times a year. A number of persons had long regarded a monthly as a thing to be hoped for near the end of time's dim corridor, though not necessarily before. But the release of over 800 new men from the Institute to potential membership in the Alumni Association (which occurred on '22's graduation day) made the issue concrete—dramatized Technology's need for a larger Alumni chronicle. With classes commensurate in size (though of not quite such bulk) in prospect for an indefinite period, it was obvious that a monthly magazine for Technology Alumni was no longer a luxury. Thus necessity has mothered one more fledgling.

CONCERNING THE PRESIDENCY:

For an exclusive interview granted by Dr. Stratton to the "Review," see page 7.

For an account of the work of the Bureau of Standards, see page 11.

For Dr. Stratton's biography, see page 13.

For expressions of opinion from prominent educators of the country, see page 15.

IT is perhaps well to explain to the reader before he attempts to proceed further along this page without the key, that here is a new feature of the Review. Every issue will hereafter contain on its first pages a digest, a resumé, a summary, an abstract of what has happened during the past month, or when a summer lapses, the past months. It will aim to be a close-cropped account of the affairs of Technology and Tech men, written to compass the most happenings in the fewest words. Some of these happenings may receive a more extended news as editorial treatment in the inner pages: some may not. The aim of these two pages is inclusion, not selection — Technology seen through a wide-angle lens.

TWO NEW department heads begin their active terms of service this fall. Prof. C. L. Norton has had both of Professor Wilson's mantles fall upon him, and is now, in addition to being director of the Division of Industrial Co-operation and research, head of the Department of Physics, in charge of Course VIII, and the new member of the Administrative Committee. In the Department of Biology and Public Health, Sedgwick's favorite pupil succeeds to Sedgwick's place. Prof. S. C. Prescott, '94, who has been administering the affairs of the department since the death of its beloved leader, is now confirmed as his successor. Here is a choice that will meet with the widest approval in scientific circles. A glimpse of the personality of the new head, by Prof. C.-E. A. Winslow will be found elsewhere in this issue.

IT was a welcome decision that during the summer Technology was selected the future host of some 3000 scientists from almost every university in the country. From December 26 to December 30, the American Association for the Advancement of Science will hold its 75th convention in Boston. The Hotel Somerset will be the social and the Institute, the scientific, headquarters of the convention.

Prof. S. C. Prescott, head of the department of Biology and Public Health at the Institute, is the general chairman in charge of arrangements. Other Technology professors serving on this committee are, Profs. H. W. Tyler, J. F. Norris, W. Lindgren and R. P. Bigelow. The secretary is Mr. A. L. Townsend, instructor in Mechanical Engineering at the Institute.

The president of the national association for the current year is Prof. J. Playfair McMurrich of the University of Michigan. Other officers are Burton E. Livingston of Johns Hopkins, is permanent secretary. The last meeting was held in Toronto during the Christmas holidays of 1921.

The meeting will also be the occasion of the holding of the first of the Sedgwick memorial lectures, established at M. I. T. in memory of the late Prof. W. T. Sedgwick. The lecture will be given on December 29, by Prof. Edmund B. Wilson of Columbia University.

THE first term of the school year 1922–23 opened on October 2. The early returns from the Registrar's Office indicated a slight decrease as compared with the past year. The total of students in attendance in all courses this year is somewhat over 3100. Last year's revised figures at the beginning of the term were 3535. The decreased numbers this year can be assigned to two causes: first, the decrease of numbers of students pursuing higher education, which always lags about a year behind a severe economic depression; and second, the fact that the Admissions Committee of the Faculty has this year set its entrance requirements higher than before. Also, the Committee on Provisional Students has definitely tightened the conditions of entrance. The number of students enrolled is still, however, greatly in excess of the number which the present buildings were originally designed to hold.

Registration progressed smoothly this year under a system somewhat altered from that of the past and devised by Mr. J. C. MacKinnon, who, as assistant to Professor Merrill, the Acting Registrar, has had complete charge of the Institute's "paper work" since the resignation of Professor Humphreys in June.

DURING the summer, the office of the Superintendent of Buildings and Power was somewhat active. It was found imperative this year to release the cramped Registrar's Office into a space more appropriately large. The office arrangement on the first floor of Building 3 has consequently been largely revised. The collection of radiators and coils in the old "refrigeration lab" has been moved outdoors to a new building erected beyond the athletic field, and the Registrar's Office, with the exception of the record room, has joined forces with the Admissions Office upon the other side of the hall. The suite of rooms thus released on the south side has now been turned over to the Dean's Office. Two waiting rooms now grow where one grew before: one to take care of the throngs waiting for the Dean and Assistant Dean; the other for those seeking to come before the presence of those in the Admissions or Registrar's offices.

THE summer session was large and furious. The Institute gave no impression of running on one cylinder. It does not, of course, yet attract some 12,000 school teachers from the South and Middle West, in the manner of Columbia University, but it has increased greatly in the past few years. Technology's is almost distinctive among summer sessions in that as a session, it neither begins nor ends. Each course has its separate calendar. Some began on Graduation Day, others began two weeks before the fall term opened. The rest of them went off sporadically in between times. The formality and strict rigidity of the winter schedule is thus abolished, and the change, psychologically, is of excellent advantage to the students.

As yet, there has been little attempt to make the summer session appeal to non-collegiates. There are few courses especially designed for detached consideration by people not aiming at a college degree. The personnel of the summer session is made up almost wholly of regular college students of two classes: the wary, who are anticipating, and the not-so-wary, who are repeating.

The sum of these two totalled 1363 this year.

FRIDAY, October 13, was the interesting date upon which the newest addition to the line of All-Technology Smokers was held. This smoker is the first annual get-together of the school year and is the time at which, each year, the Institute undergraduate activities issue to the freshman class their first official clarion call for candidates. Some 2500 students turned out this time. They were plied with food, cigarettes, cider, milk chocolate, speeches, advertising blotters, lollypops and movies. All of these things they enjoyed, possibly to varying degrees. Food was by the Committee in Charge, of which H. I. Beadle, '23, was Chairman; cigarettes and blotters were by VooDoo; cider was by the Musical Clubs; milk chocolate was by The Tech; lollypops were by Tech Show; speeches were by Dr. Allan Winter Rowe, K. C. Kingsley, '23, Dean Talbot, and H. J. Carlson, President of The Alumni Association. The movies were by The Technology Review and Harold Lloyd.

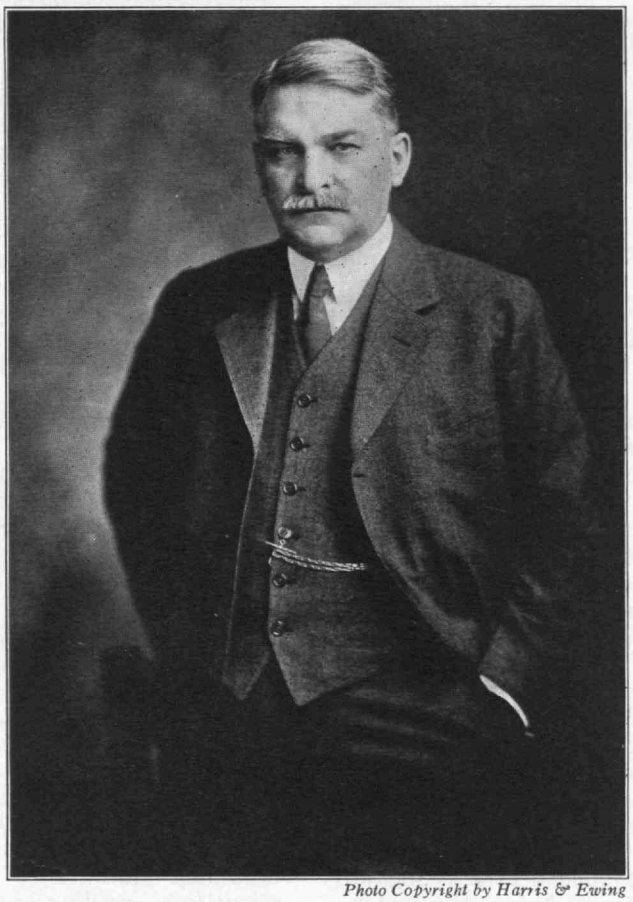
Samuel Wesley Stratton: An Interview*

The first authorized statement given by him after his selection for the presidency.

By H. E. LOBDELL

In collaboration with E. F. Hodgins

In the writing room of the Cosmos Club in Washington there hangs a portrait of Francis Amasa Walker, the third president of the Massachusetts Institute of Technology. It was in every way fitting that here in the presence, as one might say, of the third president, I should have my first conversation with the ninth. Fitting, because the impression one gets is that Samuel Wesley Stratton is a contemporary version of Francis Amasa Walker. Two days before, when I had studied Dr. Stratton's camera portrait with a new interest and a new regard, I had been struck by an odd reminiscent flash which told me that Technology had known such a man before. I had, however, no clear idea of what was in my mind until I found myself talking with the coming president under the gaze of one of the past. Then I knew. I do not want to be misunderstood — there is no overwhelming physical resemblance between the two, and yet a resemblance is there. General Walker was years before my time, of course. All I have ever learned of him I have got from photographs and from his writings that I have read, and from talking with those who did know him. Just as obviously you do not get to know a man with all intimacy during the course of some five hours spent with him, but by comparison of what I knew concerning General Walker with what I learned that day in Washington of Dr. Stratton, I know that beyond mistake these two are of a single type.



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"Samuel Wesley Stratton is a contemporary version of Francis Amasa Walker . . . . Beyond mistake, these two belong to a single type."

I had arrived early that morning. It was a busy morning for him (as most mornings are), and while he attended department meetings, I sat and read documents telling of the wonders that his twenty-one years at the Bureau have brought about. When Dr. Stratton had come to it, I learned, he had found a meagerly furnished office and four employees. When he leaves it, as he will in January, he will leave an organization of 1000 scientists and scientific artisans housed in some ten or twelve buildings that occupy all of a thirty-four acre site. The more I read of this, the more I became obsessed with the idea that Technology has a second Walker. Stratton did with the Bureau of Standards what Walker did with the Census. He found nothing and he left something.

The time that I waited was not sufficient to let me learn of more than a fraction of the accomplishments that Dr. Stratton has crowded into these twenty-one years. It was about noon when he emerged from the entanglements of department conferences and I met him face to face.

His photographs are truebills. He is a short, stocky, muscular, broad-shouldered man with shrewd blue eyes and light hair that now has much gray mingled in it. He is a man of good square angles — a cubist could build him out of rectangles with ease. His shoulders are square, his close-cropped mustache is square, his hair is combed squarely across his forehead. Down to his finger tips he is right-angled. Although he is short and heavy, his is a protein weight. His muscular strength impresses you as being distinctly above the average. Certainly, his physical motions are as swift and accurate as an athlete's. But he is economical with them. There is no lost motion. He has a habit of looking at you with his head tilted slightly downward and to the left, and when those eyes meet yours, you may have a bad minute if your conscience is not clear. There is nothing of the inquisitor in his manner, but he impresses you as seeing anything that should be seen, independent of whether you would like him to or not.

He talks to you in a rather deep voice, which he uses quietly and without display. When he believes something to be worth-while, he states his convictions about it clearly, and brings to his support a remarkable amount of corroborative detail. Yet there was never a man who found less use for the first person singular. When he sat across the luncheon table and talked, I was extremely anxious to steer him into talking about

himself. He was extremely anxious to talk about anything else. He did. Anything and everything else. We did not discuss the personality or the achievements of Samuel Wesley Stratton.

Naturally, the subject that claimed most of his attention was the problems and possibilities of the Tech Presidency.

"Doctor Maclaurin was decidedly right when he said that a technical school was not doing its duty unless it co-operated to the fullest extent with industry," he said. "But business men must learn the full meaning of that word 'co-operation.' They must learn that they have got to feed men in to the faculties and staffs of schools like Tech, as well as entice them away. The manufacturer who brings his problem to the Institute or to the Bureau and obtains a successful solution, all too often tries to hire away the research worker who solved the problem for him. The manufacturer should realize that by too strenuous efforts to take men from great institutions like Technology, he may badly hamper the progress of his own industry. When a manufacturer takes a research man away from a public or semi-public institution, to a certain extent he isolates him scientifically, and narrows his field.

"One of Technology's chief functions, apart from co-operating with industries, is to show manufacturers in the same, or interdependent industries, how to co-operate with one another. This is a lesson that is just beginning to be taught in American business, and Tech has a wonderful opportunity for missionary work. German industry was the marvel of the world in this respect before the war and it was Germany's technical schools that blazed the trail for it."

The talk drifted to the subject of the Institute's present curriculum. "In these complex days," he said, "if a technical institution can, during four years, impress on the undergraduate some sense of where the boundaries of science really are and give him some slight idea of how to make the proper scientific approach to the problems he is later apt to meet, it will be doing well. It is no longer possible to hope for more than a training in fundamentals during a man's undergraduate career. Even that is a good deal to hope for. In some of our best schools this groundwork is shockingly neglected. It is hard to tell just what is the matter. Probably we need a good deal less mental forcible feeding of applied science, before the undergraduate has any conception of what physics and mathematics really mean. If we are to make our groundwork thorough, perhaps we must take more time. This may mean deferring a number of courses in applied science until a man has completed his undergraduate career. In consequence, the average scientific graduate school may, I think, tend to become more and more like the co-operative courses which Technology has originated in chemical and electrical engineering. After all, the way to apply science is to apply it."

"Do you approve of a separate graduate school?" I asked.

His answer was emphatic. "No," he said. "I am thoroughly glad that at Technology there is no segregation of graduate students from the undergraduates. We need more personal contact between these groups to inspire the undergraduate to spend an extra year or two in study. The arbitrary four years is fast becoming too short a time."

The President was most interested in this subject and we discussed it for some time. When Dr. Stratton warms to his subject, he does not drop it until he feels satisfied that he has done it justice. When he stops, it is on a period and suddenly. He is no rambler.

"What about the present agitation concerning a limitation of numbers?" I asked.

He thought for a moment. "With so large and so insistent a demand for the kind of men that Technology aims to turn out, it does not seem to me that a policy of arbitrary restriction would be wise; but, on the other hand, Tech cannot waste its time trying to make an engineer out of a man who should have specialized in music. The problem of determining whether a man is educable must be unusually complex at Technology. It is now hopelessly trite to say that the entrance examination method is unsatisfactory and badly in need of modification; but I think we are distinctly not approaching the solution of the problem by making entrance to college contingent upon the evanescent thing, 'personality' as it may be determined by several men whose ideas of a desirable college citizen may be narrow and bigoted. I should like to see Technology enlarge the scope of its work and increase its facilities for giving instruction to the greatest extent, and yet have it preserve its high academic standard and absolutely shun anything that suggests quantity production. Sometimes a man knows his own qualifications better than his teachers; sometimes his teachers can see his qualifications, or more probably, his lack of them when he cannot; sometimes no one knows. The so-called psychological tests are at present in an empirical stage, as their proponents are free to admit, but I confess that I am greatly interested in them.

"Everyone who applies for admission to Technology has not been given the sort of brains which would make him fit to master its curriculum, nor the shrewdness to know how to apply it, nor the integrity and character to use it with advantage to mankind and himself, but when some one does come to us and has all these things, we have got to find it out. The present American college entrance examination system often excludes this man and lets in others whose lack of the proper mental equipment seriously hampers classroom efficiency. One solution which has found fairly wide application is the policy of admitting almost unlimited numbers to the freshman class and then relentlessly weeding out the unfit at the end of their first year. Naturally, you know a man far better after you have seen a year's specimen of his work than after you have seen the specimen he has turned out in three hours, but this policy, good though some of its qualities are, clogs some of our classrooms almost intolerably."

The conversation shifted to more material things. We spoke for a moment of the president's house. He was interested to learn of its proximity to the dormitories.

"How large are the present dormitories?" he asked.

I told him that they accommodated 167 men out of a student body of, this year, over 3100.

"We must have more dormitories. Men with common interests should live together to get the most out of these interests, whatever they are. This is particularly true of students. The associations formed through dormitory and fraternity life cannot be formed in any other way."

"What about student activities," I asked him.

"I am in hearty sympathy with them," he said