

A.S.M.E. Detroit Section Pays Tribute to Alex Dow at Meeting Describing Shell-Turning Machine He Suggested

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ONE hundred and eighty members and guests attended the April 7 meeting of the A.S.M.E. Detroit Section in the small auditorium of the Horace H. Rackham Memorial. Over one hundred had attended dinner prior to the meeting.

In opening the session, the chairman, A. M. Selvey, pointed out the importance of the evening's subject in that the country was at war and needed an ever-increasing output of shells, and that the machine to be described was largely the outcome of the vision and foresight of the late Dr. Alex Dow, Fellow, Honorary Member, and Past-President of the Society, who had passed away only a few days previously. The chairman spoke of the sincere respect in which Dr. Dow was held by both the local and national membership. In behalf of the Society, Prof. A. E. White of the University of Michigan gave before a standing audience the valediction to Dr. Dow.

Mr. Carroll R. Alden, chief engineer of the Ex-Cell-O Corporation, in introducing the evening's speaker, Christian A. Birkebak, in charge of the development of the shell-turning machine, spoke of the valuable part that Dr. Dow had freely and generously assumed in originating and perfecting this ordnance tool ahead of the present emergency.

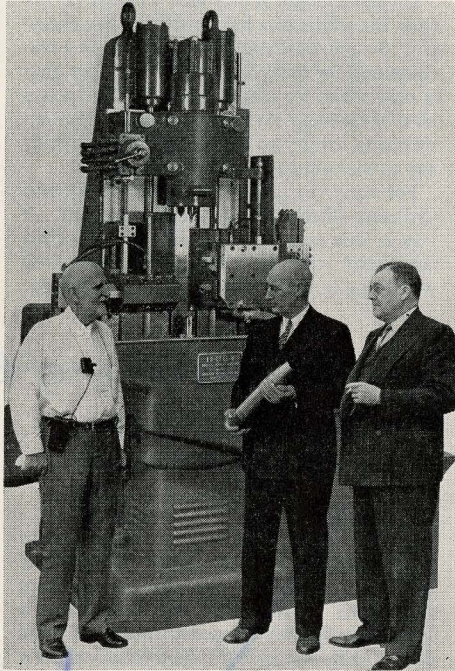
Mr. Birkebak described the machine with the aid of slides showing different stages of construction and various details of design. This is a simple, rugged machine for ultra-rapid turning of 75 to 155-mm shells. The design, operation, and arrangement of tools were fully described. A lively discussion brought out many problems in machine tools and operation, materials handling, and lubrication.

Tribute to Alex Dow

By A. M. SELVEY

TO THE Detroit Section, and to the Society as a whole, the loss of Alex Dow is a severe one. Through his friendly personality and his expressive addresses made before innumerable Detroit and national audiences, he became known to all of us more as a friend than as an industrial executive or as one holding the highest office and honors our Society can confer, and he won a corner in all our hearts. Who of us will ever forget his ability to tell a pointed story at the proper time, or to recite from an unlimited memory some lines of beautiful poetry? We cannot take leave of him without showing our sincere respect and admiration.

His story was one of great human interest. From a poor Glasgow boy without worldly advantages but inheriting, like most Scotchmen, a strong sense of the right and a capacity for work, he rose to a position of world leadership in the engineering profession. He was an



LAST PICTURE OF DR. DOW TAKEN IN THE SUMMER OF 1941

Shell-turning machine designed by Ex-Cell-O Corporation in conjunction with Dr. Dow (left); right is Phil Huber, president, and center Thor M. Olson, vice-president of the company.)

idealist, as are many of his countrymen, but he was a realist too, and therein lay his greatness. No business problem was so large, no personal problem so small, that he would not give it his careful consideration and, where he thought it necessary, formulate some equitable judgment.

Through his vision much was created of great service to the people. Tonight we are particularly interested in his work on a shell-turning machine which surpasses in production all previous records. Through his industry and co-operation with others, this machine was perfected several years ago and given to the United States Government to be ready to fill a great need when the time came.

Now he has left us to carry on. It is very right and the wish of the Society that before proceeding we pause to perform our last duty toward one who has meant so much to our community and our fraternity. The deep feeling in the minds and hearts of all of us is beautifully expressed in the following lines by Alfred Lord Tennyson:

And the stately ships go on
To their haven under the hill;
But O, for the touch of a vanished hand,
And the sound of a voice that is still!

Valediction to Alex Dow

By A. E. WHITE

ALEX DOW, pioneer, executive, engineer, philosopher, and humanitarian, passed away on Sunday, Mar. 22, 1942, leaving behind a host of friends and an amazing number of accomplishments.

Born in Glasgow, Scotland, in 1862, and with opportunity for but six years of schooling, he rose to be one of America's great engineering leaders. He was respected and honored for his work in the utility field; for his sound guidance of The Detroit Edison Company group for 46 years, of which he was president for 28 years; for his ever-willing service to his city which he served for twelve years as a member of the Board of Water Commissioners; for his work with the War Department; and for his services to engineering-society activities.

His contributions to the utility industry were monumental. As early as 1896 he foresaw that a frequency of 60 cycles would be best for alternating-current service, a frequency which has now been almost universally adopted.

In 1898 he inaugurated the differential rate for electric service and his reasoning was so sound that practically all rate schedules in this country now embody this feature.

He was the first to adopt large boilers and, though these are extensively used today, it took courage and farseeing pioneering to authorize their construction in 1910.

His depreciation policy has won the praise of state and federal commissioners. His plant valuations, based on "original cost," which he laid down in 1912, were adopted 25 years later by the Federal Power Commission. He eliminated the "holding company" phase of The Detroit Edison Company's existence in 1915, 20 years before Congress enacted the death sentence for the holding-company idea.

These are but a few of his many accomplishments, but give undeniable proof of his intelligence and ability and account for the great respect in which he was held by all those with whom he came in contact.

Always interested in national-defense matters, he served his country without thought of self from 1932 until his death, as Chief of the Detroit Ordnance District.

He gave ungrudgingly of his time to engineering-society activities and in recognition of his achievements both the American Society of Civil Engineers and The American Society of Mechanical Engineers bestowed honorary membership on him. He was also awarded the Edison Medal by The American Institute of Electrical Engineers.

He served The American Society of Mechanical Engineers on the Special Research Committee on Thermal Properties of Steam for ten

years, six of them as chairman. He was a vice-president of the Society from 1906 to 1908 and president in 1928.

In Detroit engineering fields he was a charter honorary member of the Engineering Society of Detroit and since 1936 had been president of the trustees of the Rackham Engineering Foundation.

For his many deeds of high-minded public service, he was given by Wayne University, the University of Detroit, and the University of Michigan the highest honors within their powers.

Though Mr. Dow's deeds and services will live on through succeeding generations, those of us who had the rare privilege of knowing him personally think of him as a man and as a leader of men; one who was filled with sympathy and justice for all.

We see his scintillating personality on the platform. We remember his words of wisdom and cheer intermingled with his rare wit. We recall his vast knowledge of subjects far removed from engineering and finance. We recall his ability to converse as an equal with those profound in their knowledge of philosophy, religion, history, and kindred subjects. Yes, not only did he meet these men on their own ground, but he frequently proved to be more than their equal.

We recall his sense of fairness and justice. We recall the adoration of all those with whom he came in contact, irrespective of station or rank. These are the things Alex Dow means to us who knew him.

In his death his city, his state, and his country have suffered a genuine loss. Even though a great leader has been taken from the engineering profession and The American Society of Mechanical Engineers, in particular, Mr. Dow will live on in the hearts of his friends and in the brilliant record of his accomplishments.

Alex Dow and the Shell-Turning Machine

BY CARROLL R. ALDEN

SEVEN years ago, when Mr. Huber, now president of Ex-Cell-O Corporation, was asked by the Ordnance Department to design an advanced type of lathe that would more adequately meet this country's armament needs, Mr. Birkebak was working at Ex-Cell-O in its engineering department. On carte-blanche instructions from Mr. Huber he spent many months at the Frankford Arsenal in Philadelphia—at first gathering working information so that we might go ahead with a roughing machine for producing shells faster and, later testing out both roughing and finishing machines immediately after their installation at that arsenal. At the present time, Mr. Birkebak is devoting his entire time to providing these shell-turning lathes to the many private industries producing 75 to 155-mm shells under the war program.

As all of us are well aware, machine tools like the shell-turning lathe that is to be illustrated tonight do not "just happen." They are invariably the outcome of a pressing need and considerable mechanical ingenuity. Their consistent development is often due to the in-

fluence and encouragement of those personally interested in them. This is decidedly the case with the Ex-Cell-O shell-turning machine.

It is my privilege now to speak of the man—a past-president of this Society—who originally brought this machining problem to us. I refer to Mr. Alex Dow, whose recent death is a distinct loss to this Society and to many of us personally.

On first thought it may seem a rather far cry from the affairs of a busy public-utility executive to a practical and official interest in a machine tool for government arsenals. But that is only when we forget that Mr. Dow was a man of far-flung interests, a man with an unwavering loyalty to his long-adopted country and to the community in which he lived.

For many years, he was Chief of the Detroit Ordnance District for the War Department. It was in this capacity, and also because of his familiarity with the pioneer work Ex-Cell-O was doing in the field of precision machining,

that he asked our company to devise the shell-turning machine.

Mr. Dow's co-operation was always intensely practical. At his own expense, he inspected the arsenals of the United States and Canada and traveled all through Europe, including France and Germany, to acquire firsthand an idea of just what the exact needs were in shell turning. He returned with considerable data from his observations at the different arsenals in these various countries. All this knowledge he readily made available to the War Department and to us.

It is because of all this and because of many other intimate associations with Mr. Dow, that we feel our part on this occasion tonight would be lacking if we did not specifically refer to the important part he had in the development of the shell-turning lathe. Incidentally, I might add that the picture shown here of Mr. Dow is the last photograph taken of him. It was made by our photographer last summer.

Meetings of Local Sections

President Parker Addresses Baltimore on Defense Problems

AT the Mar. 16 meeting of the Baltimore Section, President James W. Parker, A.S.M.E., addressed more than 65 members and guests. His topic, "A.S.M.E. Faces a Fork in the Road," covered an outline of work of A.S.M.E. men in war industries as well as a discussion of some engineering problems arising in connection with defense work, particularly in the power and light field in the Detroit area.

The Engineer in Defense Work Subject at Birmingham Meeting

Members and guests of the Birmingham Section heard Col. A. C. Polk speak on "The Engineer in Defense Work," presenting the particular problem of red tape in defense contracts, emphasizing the need for full co-operation between civilian and military engineers. He especially commended the spirit of determination shown in accomplishing present tasks in the Army construction program and pointed out that work was progressing with all possible speed.

Record Audience at Buffalo Section Hears Clyde Mitchell

Over 300 members and guests at the Mar. 11 meeting of the Buffalo Section heard Major Clyde Mitchell, Fred Flader, and Max Stuper jointly discuss "Aircraft, Old and New." The speakers treated of the history of aircraft development, indicating effects on present designs. Major Mitchell, prominent aviation expert, gave a summary of the organization of the Air Corps. In concluding this interesting meeting, sound pictures, depicting both Bell and Curtiss aircraft production, were shown.

Students Compete for Prizes at Central Indiana Meeting

Four timely talks were made by students in competition for prizes at the Mar. 13 meeting of the Central Indiana Section. The topics, "Wing Vibration and Flutter," "Locomotive Speedometer," and "High-Speed Indicators" contributed to an absorbing and novel meeting.

High Pressures Featured at Central Pennsylvania

More than 200 members and guests of the Central Pennsylvania Section heard Dr. P. W. Bridgeman, professor of mathematics and natural philosophy at Harvard University, at the Mar. 4 meeting. Professor Bridgeman was brought to the campus under the co-operative sponsorship of the Society of the Sigma Xi and the Section. He described the steps by which measurable laboratory processes have been successively raised from 3000 atmospheres to 4,000,000 atmospheres or 6,000,000 psi. At such extremely high pressures, polymorphic transition is a common phenomenon. Dr. Bridgeman then proceeded to explain changes in properties of materials under extreme pressure.

At its second March meeting, held on Mar. 24, the Section had as its guest speaker Prof. Chas. E. Gus, whose topic was "Teaching with Animated Cartoons." The theme of the talk was the use of animated cartoons as a visual aid to teaching; in addition, Professor Gus discussed the development and manufacture of these cartoons and finally presented several of his own dealing with engineering topics.

Cleveland Engineers See Sound Film on Generators

More than 75 members and guests at the Mar. 12 meeting of the Cleveland section were