

No. 2228

The Women's Engineering Society.

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7th Day

1935

Received from Miss E. Paves-

the sum of Two Guineas-

being Member's Subscriptions 1934-5

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P. J. White
Secretary.

MISS EAVES

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Dr L.M.Gilbreth, 78, Eagle Rock Way,
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California, U.S.A.

Miss Gars
4

The Sex Problem in Engineering

(From Municipal Engineering, London, Vol. 2, 1930)

We have been somewhat puzzled over the complaints voiced at the Oxford meeting of the Women's Engineering Society. Up to now we had been of the opinion that engineering was sexless, but a Miss V. Holmes, at the Oxford meeting, is reported to have said that they (women engineers) had "problems and difficulties of their own which were quite different from those of men engineers"; and we ask, in all earnestness and with a keen desire to assist, what are those problems and difficulties which apparently do not beset the male sex. She gives one example when she says that "the training of women engineers and finding them jobs when they are trained is not yet so easy as in the case of men"; but there is a very simple reply to this, and that is that women, whether engineers or of any other calling, cannot forget their sex. They cannot even be simple engineers. They must be women engineers. Now, the Institution of Civil Engineers has been established many years, and although admission has always been limited to men, there has never been any idea of calling it the Institution of Men Civil Engineers. It has been the same with other bodies, but directly women start a society they must give its title a sexual flavour. Still we are glad to hear "that the attitude of Oxford women towards the entry of women into the field of engineering is one of admiration and sympathy for what has already been achieved." Here, again, may we ask, what exactly has been achieved?

RESEARCH IN A LARGE ELECTRICAL FIRM

(Being Paper read at the Oxford Conference on September 19th, 1930).

By S. F. DAVIES and E. J. LINFORD,

Members of the Research Staff of the British Thomson-Houston Co., Rugby.

PART II.

The development of the modern photo-electric cell affords a striking example of the function of a commercial research laboratory. Photo electricity is no new thing; the first photo-electric effect of zinc exposed to the light from a spark was noticed by Hertz in 1887. Since this time much scientific data has been accumulated on the photo-electric emission of certain materials, but it was not until the advent of, firstly, the thermionic valve (which enabled the photo-current to be easily amplified), and secondly the talking film (which necessitated a light sensitive device in a form easy to produce in the quantities required) that development became rapid.

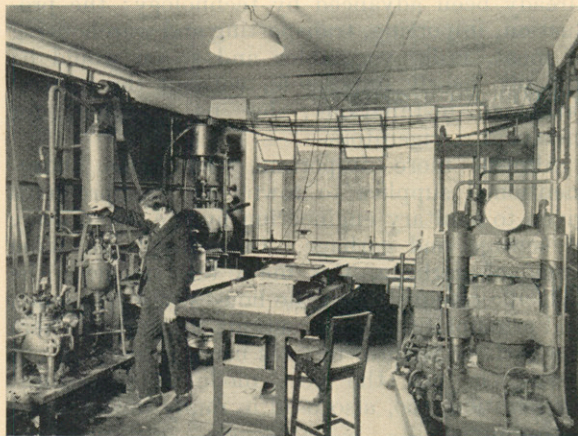
An outstanding example of the co-ordinated efforts of the various Sections of the Laboratory is instanced in the development of the B.T.H. *Sound Film Reproducer*, which was designed by a Section of the Laboratory Electrical Engineering Staff and incorporates rectifiers and photo-electric cells developed in the Vacuum Physics Section. When the equipments were recently required for tropical countries the Insulation Engineers were called in to specify the changes in insulating materials which would be necessitated by the increased severity of climatic conditions.

The subject of Talking Films is a fascinating one, and it is a pity that time does not permit of more than a few brief remarks to-night, particularly as the data is so readily available. The Laboratory is justly proud of the success which has attended its work in this direction. A very large number of cinemas in Great Britain have installed B.T.H. apparatus, and the British Thomson-Houston Co. is the only firm providing a completely British equipment.

The simplest method of sound reproduction is that of synchronising a gramophone disc with the picture

also to the difficulty of "cutting" a film synchronised in this way.

In one method of sound recording on a film, the waves from the voice agitate the centre of a thin metal disc



Experimental Laboratory for Moulded Insulations (showing "Still" for manufacture of Resins, and Moulding Press).

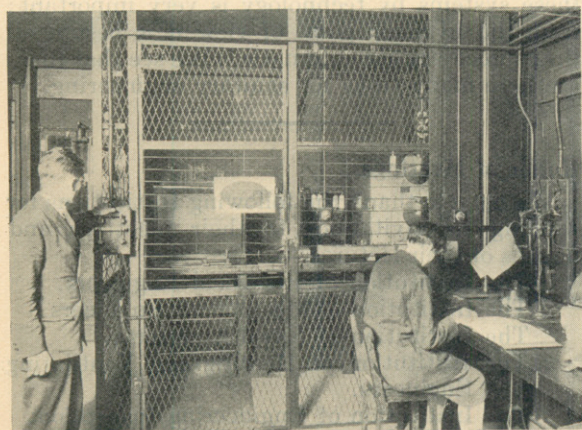
or diaphragm, the oscillations of which vary the resistance of carbon granules packed behind it, thereby producing variations in the current of a local circuit. These, after amplification, pass through an oscillograph, to the coil of which is attached a small concave mirror. The current thus passes through the oscillograph in impulses, each proportional in strength to the sound wave from which it arises, and the mirror is moved sideways by every impulse. A lamp is placed in such a position that a beam of light falling on the mirror is reflected on to a travelling photographic film, on which it comes to a focus as a spot. As the mirror moves it causes the spot to travel sideways across the film, tracing out lines of varying length, which appear as darkened areas after development.

In order to reproduce sound from a film prepared in the manner outlined, the film must be passed between a source of light and a photo-electric cell.

The quantity of light passing through the film on to the cell is regulated by the proportion of darkened film, and the current produced by the cell is regulated by the quantity of light falling upon it. This current is amplified and transferred to a loud speaker, which reproduces it as sound. For pure reproduction the wave shape must remain unaltered through at least 16 energy changes before the final emergence as sound.

Two methods of sound recording are at present in use; the type already described is known as the "Variable Length" method; in the "Variable Density" method, the length of darkened area is constant, but the darkening varies in intensity.

One of the greatest difficulties met with in connection with the development of "talking films" has been that of synchronisation. Since the picture travels through the projector in a series of jerks, whereas the sound recording portion of the film must pass at a uniform rate through its reproduction mechanism, it is



Miss Davies testing Varnished Fabrics by High Voltage.

projector, by gearing the two together. An ordinary gramophone, however, is useless without the assistance of a powerful amplifier and loud speaker. This method is likely to be ultimately displaced owing to the ease with which gramophone records can be damaged and

us the means to fight against the bad influence of their numerous disadvantages to human health. The most difficult problems of our towns, with their huge populations, are, on the one hand, the supply of good food and drinking water, and, on the other, the clearing away of garbage and sewage.

Concerning the supply of drinking water, there are several processes, principally the chlorinating, to clear it, but it is important to be attentive to the quantity for this means, for, when too much of it is taken, there is a bad influence on health. The hygienic supply of food has nowadays already been advanced by technology; the production, importing, transporting and warehousing of meat, milk, vegetables and so on would be difficult, nearly impossible, without the help of technical installations; let us mention, for instance, refrigerators.

Almost more important than the above-mentioned supplies to towns are the problems given to sanitary engineering by the doing away of sewage and garbage. Concerning the doing away of garbage, the main task is here the hygienic removal from the houses, the transport, and principally the destruction; the dumps where the garbage is thrown, as is usual in most of our towns, is not the best mode of procedure; incineration, too, also used in many towns, must be improved.

The still more important and difficult problem is the draining of towns and the doing away of sewage; here are a lot of interesting and difficult problems for sanitary engineering; one of the great needs of our time is the keeping clean of rivers and streams from drains, as well as from industrial works and administrations. There are various systems for cleaning the waste waters coming from towns and industrial works, depending, for a great part, on the geographical situation of the town.

The method still used of conducting sewage directly into the rivers or lakes, or taking it by special ships to the open sea, is not very hygienic. In Berlin and other towns with dry and sandy soil, and slowly-moving waters, so-called irrigational fields have been established, and fertile fields could be obtained by this manner; but these irrigation fields have also their disadvantages; even the driest soil will grow muddy in time, and besides these fields spread a disagreeable smell; this is a great disadvantage when, with the extension of the town, it is a necessity that houses should be built in the neighbourhood of these fields, which have been established at great cost.

In Munich and some similarly situated towns the great quantity of water coming down from the neighbouring mountains makes the more or less cleaned sewage rush quickly away; in Munich, in the cleaning installations, there are ponds where ducks and fish are living; in this way an economical advantage is reached.

Where there are not the above-mentioned conditions, the sewage of the towns can be cleared

in various manners; there are settling tanks, which do it superficially; in these settling tanks there remains, after the excess cleaned water has left them, a sludge, the drying of which is one of the most difficult tasks for technology. In order to dry this sludge to employ it as fertiliser, we can take special draining machines, or before employing them a digesting procedure, which makes the sludge non-injurious and reduces the quantity. For the digesting process there are large digesting tanks, which in more modern establishments can be heated by digested gases gained from the sludge; this heating shortens very much the digesting process, which in other cases lasts some months.

A new method for the treatment of sewage, in an extended measure used for the first time in Milwaukee, U.S.A., is the activated system. This is a biological process, caused by technical means. A great quantity of air is pressed through the sewage; by the whirling of air and oxygen all deposits in the water are separated as a flocky waste; these flocks absorb dissolved organic substances, too, and a great many micro-organisms begin to exist in them; they decompose the organic substances of the sewage, and make putrefying impossible; the excess water leaves this kind of sewage works very clear, and the remaining activated sludge can further be drained by filters or draining machines and used as fertiliser.

One of the most important questions of all these above-mentioned cleaning systems is that of the draining machines; they are continually improved, for they make the drying process more economical; such machines are, for instance, the Olver vacuum filters and the Dr. ter Meer centrifuges.

As the doing away of sewage and garbage is, in general, very expensive, an improvement of all these systems by technology is very important; from the hygienic point of view it is best if all these processes are automatic. We see that there are here many tasks for sanitary engineering.

Notice of Meetings.

We have to thank the following Institutions for sending us invitations to their meetings and notices of their lectures:—

- The Institution of Electrical Engineers.
- The Institution of Mechanical Engineers.
- The Institution of Naval Architects.
- The Institution of Heating and Ventilating Engineers.
- The Institution of Engineering Inspection.
- The Institute of Marine Engineers.
- The Institution of Welding Engineers.
- The Institute of Patentees.
- The National Institute of Industrial Psychology.

Members who wish to have details of any of these meetings sent to them should write to the Secretary at 46, Kensington Court, W.8.

The Woman Engineer

The Organ of the Women's Engineering Society (Incorporated 1920).

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Editor:—CAROLINE HASLETT.

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EDITORIAL.

Possibilities in Wireless and Motoring.

We have had enquiries recently from several girls who are anxious to take up Engineering on the Radio and Wireless side, and are rather surprised to find that there are still many firms, specialising in this work, who do not fully realise the value of giving women a chance to train in this rapidly developing branch of the Engineering Industry. The work, entailing as it does no heavy physical strain, but requiring patience and accuracy, would seem to point it out as being the obvious type of work in which many women should make headway.

Both the Wireless and Motoring Trades, in which women are rapidly becoming more and more interested, should, on the face of things, be anxious to help this movement forward by encouraging apprenticeships for women in their workshops and garages, and giving trained women a chance of showing their skill. While not losing sight of the fact that most trained women would wish to enter the technical side for designing and invention, there should be many possible openings for women in the more practical sides of these two trades. Highly skilled women should not

overlook the fact that many trained men engineers often think it worth their while to go into the Salesmanship side of their business, if these posts are more highly paid, or offer better opportunities than the technical or managerial positions. We hope in the near future to hear of many firms who see the value of adopting this suggestion, and realise the potentialities of engaging women to help in the development of the Wireless and Motor worlds.

NEWS OF MEMBERS AND NEW MEMBERS.

We congratulate **Miss Winifred Hackett**, of Birmingham University, on being awarded a grant by the Institution of Electrical Engineers' War Thanksgiving Education and Research Fund. Miss Hackett is at present engaged on research work on the light current side of Electrical engineering, but as she is working with one of the staff of the Electrical Department on an idea which they hope to patent when developed, it is impossible to give details of her work for publication.

The many members who have met **Miss I. M. Sloan**, of the Ministry of Labour, will join with us in extending a warm welcome to her on her election as an Honorary Member of the Society.

Mrs. C. F. Tipper (née Dr. C. F. Elam, M.A. (Cantab.), D.Sc. (Lond.)), who has recently been lecturing at the Chelsea Polytechnic on "The Application of X-Rays to the Study of Metallurgy," has been elected to a Research Fellowship at Newnham, and has also been put on the Engineering Faculty of the University. We congratulate her on having made her presence felt to this extent of appreciation, and hope with her that the lack of women students in the Engineering Laboratories is only temporary.

On Tuesday, December 9th, at 6 p.m., **Miss Amy Johnson** will read a paper to her fellow-members on her "Journey with Jason." Lady Moir has kindly offered for the meeting to be held in her house at 41, Cadogan Square, S.W.1. As we are expecting a large audience, we hope that all those who intend to be present will send in their names as early as possible, to facilitate arrangements. Admission is by ticket, to be obtained from the Office, 46, Kensington Court, W.8.

SANITARY ENGINEERING.

Depicting the part played by Engineering in maintaining healthy Towns and Cities.

By FRAU ILSE KNOTT-TER MEER, Diplom-Ingenieur.

Appreciating the difficulties of writing a technical article in a foreign language, we must congratulate Frau Knott-ter Meer on her extremely readable attempt.

Sanitary Engineering. At first glance, what does that mean? It is a very important branch of Technology. Where Science is employed to restore the health of ill people or to strengthen the health of the population, then we may speak of Sanitary Engineering. We may here take only a brief view of this branch, but we shall learn that at present we see only the beginning of its development. In the future there must be a still closer connection between engineers and physicians or hygienists, and at technical institutions more attention must be paid to the health of human beings, for health is the greatest riches we possess.

First let us consider technology to restore the health of ill people; in this respect engineers have rendered great assistance to physicians, and a great part of the high standard of the medical science of to-day has been created by technology. The physician uses a microscope in order to make a diagnosis: the microscope has been improved more and more by technology, and only with its help physicians succeeded in finding many different bacteria, and the remedies against them. Therapy by artificial sun, the quicksilver lamp, the diathermic, the apparatus for hygienic gymnastics, the apparatus against deafness, the new invention to introduce glasses directly on the eyeball, and many other inventions, would have been impossible without the help of technology.

But the main task of sanitary engineering is not merely to restore the health of ill people, but to prevent the loss of health. Here the tasks are very various.

Let us first examine the homes of men, since well we know that it is of the greatest importance the people should live in hygienic conditions; much more attention must be paid to the problems of heating and ventilating in our homes and

their influence on the health of the people. In former times, and still also to-day, heating, lighting and cooking deprived us of the oxygen in the air; here, and on many other points, the greater progress of the employment of electricity helps us to better hygienic conditions.

Of course, many kinds of tasks for sanitary engineering are in the factories and works of industry; here the health of the workman must be guaranteed by installations preventing the formation of dust, or taking off poisonous fumes and gases in chemical and other works.

The better air in many towns to-day, which we owe to the electrification of railways, is made worse by the gases of numerous auto-cars; this spoiled air is injurious to our health, and in future mankind will be compelled to invent means against this fact. Our great power-stations, and

many factories, too, send fumes and gases to the air with poisonous influences to our health, which to-day are perhaps not yet so well known to mankind. Here it is the task of sanitary engineering to find means so that the smoke of chimneys contains little dust and ash and no injurious quantities of poisonous gases; there are already filters and other installations, but they must be improved and more employed. Only by technology the enormous extension of the great towns of to-day is possible; it will, too, procure



Frau Knott-ter Meer.

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THE NEW AERONAUTICAL SECTION.

For some time now the Society has taken an interest in Aviation, and it is proud to number among its members the Hon. Lady Bailey, D.B.E., and Miss Amy Johnson, C.B.E., and with Miss Peggy Salaman's recent brilliant exploit, we must realise that there is now no reason why women should not enter into all the new careers which aviation has opened up.

In spite of the fact that women have proved themselves capable and efficient in the air, it is still very difficult for a woman to obtain training in Ground Engineering, Navigation or other Technical Aeronautical work, and when obtained, the training has been expensive, and in some cases not satisfactory. It has now been suggested by Lady Bailey that we should form a special Aeronautical Section, which would work for the opening up of the more technical side of aviation to women. We hope to be able not only to help them in obtaining training, but also to follow their careers, and to help them in obtaining posts.

There has been an increasing number of requests for advice with regard to training from

girls anxious to take up this work, and from their parents, and it will be the endeavour of the new section to obtain facilities more easily in future than is possible at present. The Committee is hoping to have the co-operation of Mrs. Pender Chalmers, whose recent lecture to the Electrical Association for Women on the holiday flight which she and her husband took across Asia to Baghdad, Babylon and Ur, many will remember.

We shall be pleased to receive applications for membership of this new Section from girls who are interested in Aviation but are finding difficulty in obtaining the necessary training. We should also, naturally, be very pleased to welcome to our lists those who have already been successful in obtaining training, that we may have the benefit of their advice and experience, and in the hope that their combined influence may help to open wider the door of Aviation for women.

THREE NEW AERONAUTICAL MEMBERS.

Mrs. Pender Chalmers is a Director of Electric Super-Service Co., Ltd. She is very keen on aviation, and has taken a short course on Maintenance of Aircraft at the London Aeroplane Club. Mrs. Chalmers is an enthusiastic member of the E.A.W. Council, and is very much interested in our new Aeronautical Section. She and her husband are enjoying the possibilities of flying as a hobby, and recently they spent a three weeks' holiday flying across Europe and Asia, to Baghdad, Babylon and Ur.

Miss D. N. Spicer has an "A." Ground Engineer's licence, and has also studied Compass Adjustments and Compensation, and has a "C." Category in Cirrus and Gipsy engines. She is now acting as Ground Engineer to Miss Pauline Gower, who has taken her "B." Pilot's Commercial Licence, and "plies for hire." Miss Gower is one of the very few women who have qualified for a "B." Licence, which involves much technical work.

* * *

Miss Olive W. Dennis, who is a member of the American Railway Engineering Association, has been elected a Member. She took her degree in Civil Engineering at Cornell University, and after working as draughtsman in the Bridge Engineering Department of the Baltimore and Ohio Railroad Company, she is now the Engineer of Service for that Railroad.

Miss Cecilia V. Galvin has just taken her degree in Civil Engineering at the National University of Ireland in Cork, and she is now hoping to go into a Civil Engineering firm. Miss Galvin was elected a Member.

Miss Olga Platt, B.Sc., B.Com., is Director and Secretary of the firm of Isaiah Platt, Ltd., Bright Bolt and Nut Manufacturers, of Wednesbury. In this work she is succeeding her father, the late Mr. Isaiah Platt, M.I.Mech.E., who founded the firm.

WHAT ARE ARMAMENTS?

By Colonel DAVID CARNEGIE,
C.B.E., M.Inst.C.E.

The question, "What are armaments?" has puzzled experts. In general terms, armaments are anything that can be used by the nations for offensive or defensive purposes, the walking stick or the largest gun; the mustard and pepper used at our breakfast table, or the deadly compounds exploded from bombs or shells; the bicycle or motor car; tanks, railways, locomotives and submarines; iron ore or battleships; zinc and copper or cartridge cases; coal or trinitrotoluol; electric light or the electric death-wave; cotton or cordite; wheat or acetone; timber or aeroplanes; nickel or armour-plates; in fact, the whole range of the materials used in the industrial life of a nation.

In any definition of armaments, brains must have their place. Not only are soldiers, sailors and airmen included, but the whole civilian population with its science and art.

The French Government reached this general conclusion and put it into a Government Bill passed by 500 votes to 31 on March 5th, 1927. The Act stipulates that should war break out, the armaments at the disposal of the Government will consist of the entire material and human resources of the nation, irrespective of sex and age.

The definition given by the Temporary Mixed Commission for the Reduction of Armaments was "all personnel and materials which constitute the effective fighting strength maintained by a nation." Thus man power as well as materials is included in the definition.

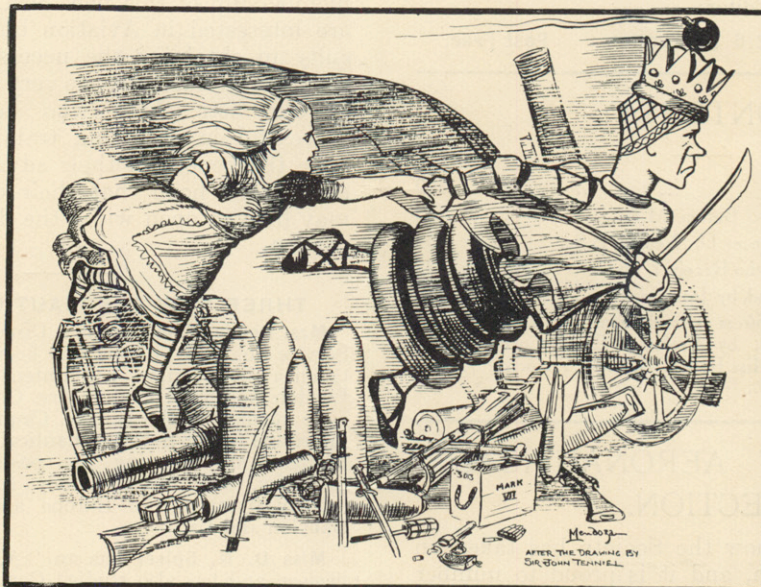
The Measure of Armaments.

Passing from definitions to the measure of a nation's armaments, the question is of another kind.

It is sometimes asked if armaments are necessary. The answer is given that so long as the nations require policemen on their highways, so long will organised forces be required to maintain order in a State, to protect overseas possessions and to maintain the safety of trade routes. The League of Nations recognises

the necessity for armaments; it has never advocated their prohibition, but the member States of the League have pledged themselves to reduce their armaments to the lowest point consistent with national safety and the enforcement of international obligations. The first part of the pledge throws the responsibility on each nation to determine what armaments are necessary. The second part calls for the co-operation of the nations in determining what

THE ARMAMENTS RACE



By courtesy of League of Nations Union.

The Red Queen said to Alice,

"Faster, faster! Don't try to talk. It takes all the running you can do to keep in the same place."

(With apologies to "Alice through the Looking Glass.")

additional armaments are necessary to carry out the collective obligations assumed.

The League of Nations does not dictate to the nations what shall be the measure of their armaments. That is not its way. But the League demands co-operative action by the nations in fulfilling the pledges given to Germany that the limitation imposed on her armaments was but a first step to a general reduction and limitation of the armaments of the world.

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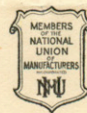
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Miss Elsie Eaves,
c/o The McGraw-Hill Publishing Co., Inc.,
320, West 42 Street,
New York City, U.S.A.

20th,
December,
1935.

Dear Miss Eaves,

I have just received your name and address from Miss Heneker who, as you probably know, is a director of the International Federation of Business & Professional Women.

I have been worrying her for some considerable time to try and put me in touch with women who are engaged on work similar to mine and she has at last given me your name as being the nearest to it.

I happen to be Sales Manager of a Structural Engineering firm in London and I never realised how odd this job is until I tried to join a few structural societies and associations. An application seems to create a minor earthquake wherever it is sent and the replies received are almost inevitable. All the man-made institutions tell me in fact, that a woman connected with structural engineering in a responsible way is such an exception that it does not warrant making special regulations for their benefit, and I am told that if I can find one or two women employed in a similar capacity, they will be very pleased to reconsider the decision.

I am writing to you because I should very much like to know whether women in your country are experiencing the same difficulty and if so, whether a little united action would help.

Yours very truly

Haume Savage
(Mrs)

January 15, 1936

Mrs. Jeanne Savage,
T. C. Jones & Co. Ltd.,
93-95 Wood Lane,
Shepherd's Bush,
London, W.12, England.

Dear Mrs. Savage:

Your letter of December 20 arrived during one of those periodic peaks of activity that the publishing business is heir to and I have not been able to give it the thought that I should like to before replying to you.

I regret that I did not know of your interest in women in structural engineering activity when I was in London this spring, for we might have found it more satisfactory to discuss the subject than to correspond over it.

I cannot tell from your letter whether you are trained in civil engineering and are practicing the technical side of structural engineering or whether you are more interested in the business end of this work.

There are a number of women in this country who have graduated from engineering colleges and have held or are holding positions in engineering offices. Unfortunately, they are so scattered that I do not know any of them personally and only know of them through newspaper clippings which people see and send me or which I pick up myself. I graduated in civil engineering from the University of Colorado, specializing in structural engineering. For several years I was a combination secretary and office engineer in the office of Herbert S. Crocker, consulting engineer of Denver, Colo. Colonel Crocker is an eminent engineer in this country; is a past president of the American Society of Civil Engineers. Since I left Denver in 1926 I have been employed by Engineering News-Record, first as Director of Market Surveys and now in addition as Manager of the Business News Department, which gathers through 125 field reporters the news of construction activity throughout the country; reports that news in classified items published in a report section of the

Mrs. Jeanne Savage-- 2

January 15, 1936

magazine and develops from that news the Engineering News-Record construction statistics.

I do not remember the date, but I think it was 1927, I was admitted to the American Society of Civil Engineers as an associate member which is a corporate membership carrying voting powers and requires at the time of admission "responsible charge of work as principal or assistant for at least one year and shall have been in the active practice of his profession for at least eight years." Since that time Miss Jane Rider has been admitted to corporate membership in the American Society of Civil Engineers. Her branch of the profession, however, is sanitary engineering and she was for several years acting in the capacity of State Sanitary Engineer for the State of Arizona. There are several junior members of the Society. Those with whom I have been in touch have specialized in sanitary engineering or work in hydraulics.

It is a little hard right now to judge what kind of a reception women engineers are getting in this country. Unfortunately, the civil engineering profession has been very seriously affected by the depression, from which we apparently are now beginning to emerge, and as nearly as I can tell from observations the girls who have had engineering training have fared neither better nor worse than the men who are their contemporaries. I think the girls undoubtedly have a handicap in overcoming the sheer force of habit of thinking in terms of men for an engineering job.

Do you know Miss Hazlitt in London, and are you familiar with her activities and the work she has done for the Women's Engineering Society, Ltd.?

I am afraid I have not been very helpful. Perhaps you will tell me more about yourself and give me another chance.

Cordially yours,

Elsie Eaves
Manager, Business News Department

ENR.VV

M. ELSA GARDNER

71 BEVERLEY ROAD

UPPER MONTCLAIR

NEW JERSEY

TELEPHONE MONTCLAIR 8648

ASSOCIATE MEMBER
AMERICAN SOCIETY OF MECHANICAL ENGINEERS
SOCIETY OF AUTOMOTIVE ENGINEERS

MEMBER
BRITISH WOMEN'S ENGINEERING SOCIETY

January 15, 1931.

My dear Miss Caves,

For some time I have planned a meeting of the women engineers in the Metropolitan district and thought Miss ^{Hilda} Lyon's visit here offered a very good occasion for such a gathering. On Saturday afternoon, January 31, from three to six I am giving a tea for Miss Lyon and shall be delighted to have you come out to meet her. Miss Lyon is a member of the B. W. E. S. and the Royal Aeronautical Society. She is one of the designers of the airship R-101 and is now engaged in experimental airship work at M. I. T.

I have heard so much about you and have been very anxious to meet you. I too worked for a McGraw Hill publication so we have quite a bit of mutual interest there. I was on the American Machinist staff for quite a while.

In case you do not know the easiest way to reach Montclair, a Public Service bus leaves New York at West 40th Street near Fifth Avenue, and a DeCamp bus from 36 and Sixth Avenue, or you can pick one up anywhere on Seventh Avenue below 32nd Street. They run to Montclair every fifteen minutes. We live on the corner of Grove and Beverly so get off at Grove Street and cross Bloomfield Avenue to the Safety Isle where the Orange-Tattersall bus stops before turning over on Grove Street; or you can take a taxi up.

Hoping to see you on the thirty-first, I am

Yours sincerely, Elsa Gardner

CE

Adams

523 College Station
Pullman, Washington
March 20, 1929

Miss Elsie Eaves
Director of Market Surveys
Engineering News Record
McGraw-Hill Publishing Company, Inc.
New York, New York.

Dear Miss Eaves:

Professor Phelps kindly gave me the letter you wrote him concerning my obtaining a job in the field of engineering, and I want to express my gratitude to you for your kindness.

You offered to send names of some structural engineers and architects on the Pacific Coast with whom I can get in touch. I will certainly appreciate it for the only ones I have found are in the eastern part of the country, and although if I get a chance I will gladly go East, I believe I would prefer to stay out here.

I thank you for your offer, and for your advice. I have had some experience in office work, but had not thought of it as a wedge until I read your letter.

Yours very truly,
(Mae) Mabel Adams

Sherwood Drive
Westmoreland Heights
Beardon, Tennessee
April 25, 1938

Miss Elsie Eaves
Engineering News-Record
330 West 42nd Street
New York, New York

Dear Miss Eaves,

You were nice enough to listen to my plea the last time I wrote to you for advice that I am taking the liberty of consulting you again.

For the past two years since I completed my course in Civil Engineering at Syracuse University, I have been employed by the Tennessee Valley Authority, first in Knoxville and then in Norris, Tennessee, but due to a budget cut and consequent curtailment, I lost my job.

Now I am wondering if there is any chance of working for the Engineering News-Record in any department. (I would anything to get a start.) If you think that I might have a chance, whom do you suggest I contact?

I have always had an interest in writing and during my high school days I took a course in journalism as well as acted as feature editor for the school paper. Of course in college this interest had to be used frequently in composing various and sundry engineering reports.

While with the TVA in Knoxville I helped

edit reports for the Special Assignments Section of the Hydraulic Data Division under Mr. A. S. Fry, as well as kept the costs for the division, so I have had a little experience in engineering writing.

I would certainly appreciate your candid opinion and any suggestions you care to offer.

Sincerely yours,

Virginia A. Swaty