WOMEN CHEMISTS WHO BRAVE DEATH FOR THE CAUSE OF SCIENCE AND HUMANITY

ALMOST unknown to the busy millions that traffic up and down are women in the United States who spend their lives—and risk them, too—in the cause of science. They are among the great pioneers of progress. In quiet laboratories they dare the unknown, the deadly forces of germs and untried chemical reactions. They labor to leave the world better than they found it, because of the useful knowledge they have added to the lore of mankind.

They are the unheralded Mme. Curies, the seekers after new radiums.

To-day they are almost unknown. To-morrow they may be numbered with the immortals. The cold star of their fame may rush meteorlike across the earth over night, and the world scanning the morning paper over its breakfast egg (it is admittedly a man's world) may remark:—"Look at that now; here's another woman discovered something."

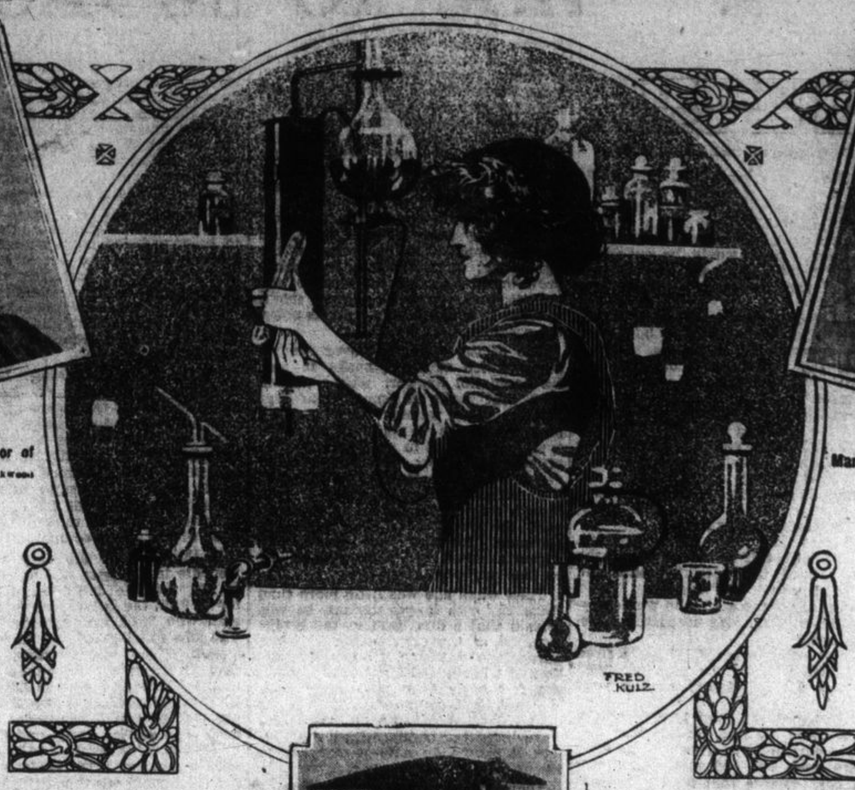
One contribution to knowledge and they are content. For this they spend years over test tubes and on journeys to far off lands.

You would never think of them as deeply learned scientists could you see them. They are quiet and unassertive, as is fitting. It takes time and patience to get them to speak of their work, and when you have succeeded they have little to say and that rather of what they hope to discover than of what they have accomplished.

Such a one is Margaret E. Maltby, Ph. D., of Columbia, who teaches physics and experiments in higher electricity. She is also an A. B., A. M. and S. B. These degrees were disclosed by reference to various published treatises on her work. There may be more—degrees and treatises. One cannot chirp up, "How many degrees have you got?" when a doctor of philosophy and all the rest is sparing a few moments between experiments and classes to speak of her work in science; and particularly when her conversation is of thermo-dynamics and precise methods of measuring rapid oscillations, all delivered in a quick, concise style that you are struggling to grasp, even nebulously.

About forty-five years old, strong and pleasant, her exact speech suggested the science she delved in. She is wholly frank and unpedantic.

Margaret E. Maltby, Assistant Professor of Physics. Photo by Rockwood



Marie Reimer, Associate Professor of Chemistry.

"I spent some years in research work in Germany," she said, "and it was there during a year of private work that I devised a method of measuring rapid electrical oscillations and conductivity. When I find time from my lectures I work on a new point of attack and hope to accomplish something. Beyond a few monographs on discoveries in the frequency of vibration I have done little that I hoped for." (She considered it little that a woman should add to the higher knowledge of electricity, a study in which only men were engaged and recognized a few years ago.) "I am glad to be numbered in the roll 'Men of Science' and hope some day to hit on something useful in my experiments."

She neglected to mention that in the list "Men of Science" there is a star before her name. Also she neglected to say that she is the first woman to receive a scientific degree in Germany. She is a graduate of Oberlin (Mass.) Institute of Technology and Goettingen University, Germany. It was while engaged in private research in the Physikalisch-technische Reichanstalt that she made her discoveries.

Then there is Marie Reimer, Ph. D., of Barnard College, who has numerous degrees and has done research work in Berlin. She is engaged now in experiments on the reaction of light on various organic compounds. If the subject were not serious one might be tempted to say "whee!" on reading the titles of some of the published accounts of her discoveries.

Here is one:—

"The Action of Light on Esters of Cyanocinnamylidenacetic Acid." One experiment covered six months, that of Ethyl a-Cyanocinnamylidenacetate (stable form). Of it Miss Reimer writes:—"This ester melting at 113° may be prepared quantitatively from the acid by heating the latter with a three per cent solution of hydrochloric acid in ethyl alcohol or by the Claisen condensation of ethyl cyanoacetate with cinnamic aldehyde." Several things happen to the mixture, and among them she finds that part of the ester is "polymerized" and that "oxidization and isomerization occur."

Another published work is "Reactions with Methyl a-Phenylcinnamylidenacetate."

But the palm of polysyllabics is borne by a compound used by Miss Reimer in her work of discovery. The linotype man cannot get it all in one line, but his is the worry. Are you ready? Repeat slowly:—"Diphenyltetramethylenebismethylenecyanacetate."

Never mind if you don't know what it means. Suffice it to say that the scientific world understood and accepted it gratefully as an addition to knowledge. Anyhow, what does the superior business man know of such things? If, however, after reading this, he admits that perhaps some women know more than he, the point of the story will be partly gained. Miss Reimer and her work may be some day largely understood, but it is doubtful. It is only when something big is discovered by her, something that will be tremendously useful to mankind, that her name and the nature of her experiments will be known. And even then the commercialized celerity of speech (provided the thing was marketed) would quickly change the name of the discovery (in the advertising department) and call it by some catchy word, easily pronounced.

Ida H. Ogilvie, Ph.D., Barnard College. Photo by Aimes & Co.

And up in Barnard, too, there is Ida H. Ogilvie, Ph. D., calm eyed mountain climber, explorer and instructor in geology. It is not such writings as those of hers around "Analcite-Bearing Camptonite from New Mexico" and "Igneous Rocks" that the layman would be interested. Rather the fact that every year she dares unknown paths and makes ascents of hitherto unclimbed mountains in quest of knowledge, is the thing to level surprise and admiration at.

All the way from British Columbia and its snow topped mountains, far from the course of civilization, down to the heart of Mexico, Miss Ogilvie has prospected with hammer and pick—but not for gold. She was trying to discover something hitherto unknown in the great world of science.

In Mexico she descended volcanoes and prospected over almost impassable country. Her adventures have been numerous and at times dangerous. Much of her time was spent in the Ortiz Mountains of New Mexico, which afforded interesting data on erosion in an arid climate. These mountains also told their secrets to Miss Ogilvie, secrets they had kept since the pleistocene period, when they lay south of the great ice fields.

This work, coupled with a few trips after glaciers (they are supposed to be moving down this way but they don't come very far) have occupied Miss Ogilvie's time when she was not teaching in Barnard. When you combine the ideas of volcanoes and glaciers in one paragraph and ascribe the trip to a woman there is action enough for even the hardiest. These things has Miss Ogilvie done without any reward other than the satisfaction of working for the advancement of knowledge. And if the result of some newly blazed trail is a book on igneous rocks, with analyses carefully figured out, we can at best read it humbly, not knowing much about igneous rocks ourselves but willing to learn. Some day Miss Ogilvie may strike a specimen that will suggest a new theory of creation or prove one of the several that are lying about loose.

While noted professors are battling with deadly germs in laboratories all over the world, striving to find the means of stopping disease, rather than the cure, there are women in New York who work side by side with some of the most noted of them. In Rockefeller Institute there are Dr. Martha Wollstein and Dr. Linda Bertels Lange, who conduct experiments in bacteriology and pathology.

Dr. Wollstein has published in the Journal of Experimental Medicine several of her discoveries. She is getting closer all the while to the discovery that may some day leave pneumonia no longer dreaded. She may save millions of lives by a single discovery. Her work is dangerous. Patients with communicable diseases are under her observation in wards separated by partitions of glass. On the assumption that disease transmission comes mainly from direct contact with the infected parts, her work is most dangerous because she is daily using millions of germs in her experiments.

One of her tests was to find whether "the pneumonic lesion produced by the streptococcus was a form of pneumonia caused by a less virulent organism." She found it wasn't. So she decided "that leucocytic infiltration of the framework of the lungs which occurs invariably in streptococcus pneumonia and which is practically absent in the lesions caused by the virulent as well as by the non-virulent pneumococcus, is a strong enough feature to form a dividing line between the two forms of experimental pneumonia."

Imagine such a thing as a woman some years ago telling the scientific world of the action of germs in experimental pneumonia! Yet Dr. Wollstein is listened to and her monographs are eagerly read by doctors all over the world.

Other women scientists are scattered about in colleges and private laboratories. Their very names are hard to discover and nothing is known about them, except that they are highly trained and devoted to research. Any one of them may be the Mme. Curie of America through some experiment that discloses something of worldwide importance.

These women may be called the truly great ones of the feminist movement, they and the other women who devote themselves to the welfare of humanity along lines of scientific uplift and moral regeneration.

Not one of the Mme. Curies who were interviewed showed the least trace of aloofness or irascibility that is encountered sometimes in men scientists who often adopt the foibles of the truly great as their own glory increases. They were women of great knowledge, which they are required to display constantly while fighting for a foothold in the scientific world. That realm is perhaps the only one where bluff has no part. All that is there is precise and determined and can be acquired only with effort.

After learning all that has been attempted along their chosen scientific lines, they must plan "points of attack," as Mrs. Maltby, of Columbia, called her experiments. In this way they discover the unknown. And to this end they are striving for the good of the world.

Concerning Your Daughter.

THERE is nothing that indulgent mothers love quite so dearly as dressing their little ones in the handsomest of finery. Those that are wealthy think a week wasted in which some dainty little addition has not been made to the juvenile wardrobe. Even the poorest mother is inclined to spend her hard earned money on a new sash or a new bonnet for her child. But all these fond and indulgent mothers should be careful not to overdress their children. They should remember that the simplest frocks are in the best taste.

This warning may not apply to the majority, but it certainly applies to a great many, too many, unfortunately. The women who belong to this class are those who "want to get their money's worth." If they spend fifteen dollars on a frock for a child they want that frock to look like fifteen dollars, not like five. They do not appreciate the fact that a dress need not be gaudy and overtrimmed in order to look expensive.

It really does not look well for a little girl to be laden down with heavy trimmings and cheap laces. A plain dainty little frock is much more childish and sweet than the gaudy one and will never look cheap. Now, an overtrimmed dress, no matter how much it costs, always has a tawdry air which a simple frock never has, no matter how low in price it may be.

Simplicity should be the keynote of every child's wardrobe. Until the little one passes into womanhood, plain patterns, good material and excellent workmanship should be the rule in selecting the little girl's dresses.

Don't let other mothers or your own children talk you into overdressing your little girl. Don't let them mislead you by telling you that a plain frock, worth twenty-five dollars, does not look as if you had paid ten for it, simply because there are no coarse lace and gaudy trimmings on the gown. A well made, pretty frock of good material will make your child stand out from a crowd of overdressed youngsters like a dove in a flock of peacocks.

Aside from the cheap appearance of overtrimmed frocks, gowns of this kind teach your little girl wrong lessons. They make the youngsters value the sham things in life and not the real. Imitation laces, loved in childhood, crowd out a love of real lace in adolescence. The very dressiness itself makes the little girl conscious of her clothes and herself.

Teach your daughter when she is young to value a dress only for the daintiness of its pattern, the prettiness of the lace or the excellent quality of its material. Show her that the chief difference between her everyday dress and her best dress is not in the style, but in the material.

No matter how limited your means may be, see to it that your child has one party dress, even if she has only one school dress besides. This so-called party dress need not be more expensive than the school dress, but so long as it is a light color and is not used on ordinary occasions the child will feel as dressed up as if she were in silks and satins.

NEW YORK'S "BREAD LINE ON WHEELS," A WORTHY CHARITY, PUT ON BUSINESS BASIS

NEW YORK, Saturday.

FOURTEEN years ago a brightly colored van drove into Herald Square and it was announced that lunch would be served there at any hour, day or night, except Sunday. That was the pioneer owl wagon in New York. Boys and men at that time felt it something of an adventure to climb into a restaurant on wheels, and the convenience of it made a strong appeal to men whose work kept them out at night and who found it difficult to get their food when and where they wanted it. There were not so many restaurants open in the wee small hours in those days as there are now.

"From that lunch wagon," explained Miss M. K. Graham, general secretary of the Church Temperance Society, "has grown a great and unique work. Learning that an application had been made for all night licenses by 200 saloon keepers, my father, to whose place as secretary I succeeded after his death two years ago, went to Boston, where they already had experimented with the night lunch wagon, and looked into what they had done there. On his return he made a report which so favorably impressed the members of the society that they decided to see how a venture of that sort would succeed in New York. As there were many night workers in and about the neighborhood of Herald Square and the accommodations for providing them with good and inexpensive food were entirely inadequate, it was decided to make the start there.

"It did not take long to prove the value of the lunch wagon. A friend gave the first one and other friends were ready to pay for others as the need arose. We did not attempt to undersell the cheap restaurants; we merely supplemented them. Moreover, we gave the men the best food of its kind that money could buy, and we have gone on doing that and, in spite of the fact that we have to pay more for our food than formerly and that our employes have to be more highly paid, we have never raised prices nor reduced the size of the portions. I think we probably hold a record on that.

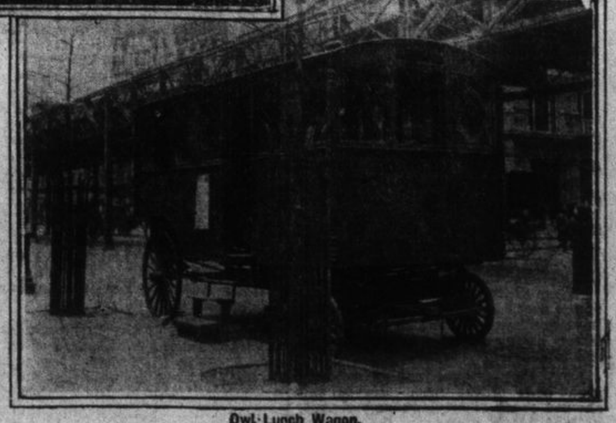
"We aimed to make a profit from the lunch wagons, not for the sake of a profit but in order to extend and make more effective our work. We do not believe that temperance work can be carried on by simply forbidding men to drink without giving them something in place of what is taken away. We provide a place for men who would rather go and eat somewhere else than to the saloon if it was easily accessible. All classes of men have patronized our lunch wagons in these fourteen years—students, clerks, laborers, workers of all grades. The wagons are neat and clean, so that the most fastidious are not offended, that the customer can see just what is being prepared and how it is done as he waits for his order to be cooked.

Interior of Owl Lunch Wagon.

Mrs. George S. Bowdoin.

"The society has seven wagons now in various parts of the city, the latest one being in Madison Square. This was purchased from the ten thousand dollar fund left to the society by Miss Caroline Phelps Stokes to maintain a wagon in perpetuity. The price of lunch wagons, like other things, has advanced. We can no longer buy them for $1,000 each as we did at first. Neighborhood conditions change, too. Union Square, where we formerly had a much patronized wagon, is now the heart of a wholesale district that is comparatively deserted at night.

"Out of the profits of the lunch wagons we have paid for our work among the longshoremen, which is what we are especially interested in furthering at present. About four years ago a longshoreman wrote to us, telling us how difficult it was for the longshoremen to find any place in which to pass their waiting hours except the ever open saloon, closing his letter by saying:—'This is more than I have writ to thirty years.' We did not know much about the character and conditions of the longshoreman, but we set to work to inform ourselves. There are about fifty thousand of these men, and their work is unlike that of any other. They never know beforehand when they are to work and when they will be idle. A lot of them 'shape up' for a job and when enough have been chosen the others go away and wait for the next job. This irregularity and uncertainty makes it difficult for the men to get proper rest or recreation and still harder for them to save any of the money they get for their work long enough to get home with it.



Owl Lunch Wagon.

"We went to the steamship companies, but they gave us little encouragement. Indeed, almost every one, including the men themselves, were very lacking in enthusiasm, but the more we saw of the water front and of the men whose work was there the more convinced we became that here a much needed work which no one was making it his business to undertake. So we decided to do it. Taking all things into consideration, we thought the Chelsea district the best one for our purpose, and we tried to rent one floor of a house in Eleventh avenue, between Twenty-second and Twenty-third streets, but the owners refused us. Then we hired the entire house, fitted it up and called it the Longshoremen's Rest.

"Some persons shook their heads and said that the longshoremen would never come, but we went ahead and sent out invitations to all the longshoremen in the city to bring their pipes and come and make themselves at home. These men have a very complex organization and this made things even more difficult, but we asked those who belonged to both unions and those who belonged to none to come to the Rest, and assured them that politics would have no place here. They distrusted what we were after, thought that we might have some sort of an alliance with the employers or that we were going to attempt to proselyte or to preach. Gradually they began to drop in, however, and when they found comfortable chairs and games and illustrated magazines, all to use at their pleasure and not a rule in the place, they succumbed, and we usually have four or five hundred men a day dropping in for the comfort of the Rest.

"The first thing we did was to put in chairs, benches, ice water fountains and lavatories. Then we hung pictures on the walls, the kind of pictures those men could appreciate; bought magazines and games and plenty of playing cards and told the men to enjoy themselves. It is their Rest, without restrictions.

"Another branch of our work is that of sending out two coffee vans all during the social season, so that waiting chauffeurs and coachmen may have refreshments. Early in the winter we send notices to the hostesses who are glad to avail themselves of the advantages of the wagons. Just now the Squirrel Inn, our place for the unemployed on the Bowery, is demanding much of our attention. We have bought the building and must find the money to pay the taxes and keep up the running expenses. Here the men can find warmth, shelter and some of them work. We do what we can to keep up their courage and give them a fresh start."

Miss Graham gives all of her time to the work. The president of the Woman's Auxiliary is Mrs. George S. Bowdoin and Bishop Frederick Courteney is the president of the general society.

Of Interest to Women.

Two causes have led to the reappearance of the petticoat, no longer by any means tempestuous. One of these is the chill in the air appropriate to the season. The other is the prevalence of semi-transparent materials for gowns, which would be quite impossible without a petticoat or underskirt. The latter word seems favored by tailors, some of whom appear to imagine that a savor of indelicacy hovers about the good old name "petticoat." It means exactly the same as the French "jupon," little skirt. The new petticoats are slit up at various points, so that they can be worn with skirts, also slit, but not in the same way as the petticoat.

At a recent French race meeting one smart woman appeared in a novel gown that at once won its way to favor in the eyes of all beholders. It was immediately dubbed "the pillar box," from the startling scheme of color in which it was carried out.

The skirt, a quite simply draped one, was of white cloth cut on the regulation lines with fulness at the hips and a slight opening above the feet in front.

What Every Girl Should Know About Housekeeping.

RUNNING the home is just as much a business to the women who do it as any man's work is to him. In fact, it is a much bigger business than most men would care to handle. It involves many side issues which are a great deal of work in themselves.

The kitchen alone requires not only an artist in the culinary line, but an expert business woman in all other lines. Few women combine both these requisites, unfortunately, and perhaps that is the reason why so few kitchens are really perfectly conducted. There should be as much system in running the kitchen as the most exacting business would demand.

One absolutely essential part of any business is clear, well-kept accounts, and so it should be with the kitchen. Accounts of every item should be recorded at once and added up each week.

Unhappily, most women are blind to this business side of the kitchen. The slipshod method of ordering at will and paying the bills at the end of the month is too easy and requires no work, while the systematic ways call for a little added trouble.

In justice to these careless women, however, let it be said that very often it is not because of the added work that they shun accounts, but because of ignorance of the folly of ordering at will and settling monthly. Then, too, it is largely a matter of habit. Once let a woman fall into that carefree, shiftless method of running the kitchen and it will be hard to break her of it.

It really is sheer recklessness and extravagance to let the bills run without keeping accounts. The butcher, grocer, baker and all the other tradesmen know very well those of their customers who keep accounts and those who do not. It is a very simple matter to discover whether or not a new customer is a business woman. The tradesman just overcharges once on the bill as an experiment, and if the customer lets it go he knows she has no record of her purchases of that date and he is tempted and sometimes does overcharge frequently.

In one way the tradesmen are not to blame. It is a great temptation to the small dealer to know that careless customers will pay larger bills than they have run and never know the difference. Very few shopkeepers are so honest that they will send in strictly accurate bills under such circumstances, and if the customers are cheated let them blame themselves and turn over a new leaf.

The thing to do is to keep a book of accounts. One section should be reserved for the butcher, another for the grocer and so on. When the purchases arrive, there is always an itemized bill with them. After checking off the articles, to be sure that everything has come, each item should be entered in the account book.