

Women as Astronomers.

A venerable lady who died at Pan, France, eight years ago, provided in her will for a prize of \$20,000 to be given to the person who will find a means of communicating with a star, Mars, for example, and receiving a reply to the communication. The prize money is held in trust. But the quaint bequest is a reminder, most substantial, of the interest that women of the present day take in scientific advancement. The number of women who contribute out of their private means to the maintenance of observatories and who equip poor but zealous astronomers for individual investigation increases every year, and at

matter what thrilling revelations the astronomer may discover with his glass, his work is almost valueless to science unless subjected to mathematical proof. Now he photographs those views verbatim and preserves the plates, to be examined at leisure. The authorities at several observatories habitually exchange the photographs taken of the same stars and planets in order that comparisons may be made regarding their aspect from different latitudes. Thousands of such photographs are measured and computed in any single observatory during a year, and women do the work, laborious, patience-taking, but as necessary to the development of science as to growing a crop.

The most unique mathematical calculator of the gentle sex in America to-day is Mrs. Elizabeth P. B. Davis, who works at the government ob-

SALADA

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will displace all Japan Tea the same as Salada black is displacing all other black teas.

She is the wife of a seafaring man, who is often detailed on government missions, and the mother of two charming children, who have no reason to bewail their parents' devotion to science.

Many women computers are employed at the Harvard observatory, and among them four original workers engaged in making investigations with the Draper telescope under the direction of Mrs. Williamina Fleming, Mrs. Fleming is a native of Dundee, Scotland. Her responsibilities have steadily increased, and she conducts much important investigation, having discovered a number of variable stars and confirmed the discovery of several new stars to be accredited to her assistants, the Misses Leland, Maury, Stevens and Wells. Nearly all of the discussion of photographs taken at the Harvard observatory and at its minor stations.

Marguerite Palmer has done much computing in the Yale observatory bulletin of transactions. She has computed a definite orbit for the comet discovered by Maria Michel. Up to a few months ago Hannah Mace was assistant at the United States Naval Observatory. A woman, formerly chief computer at the Goodsell observatory, Northfield, Minn., is one of the associate editors of an astronomical monthly. Among the amateur astronomers who have private observatories is Miss Rose O'Halloran, of San Francisco, who makes a study of eclipses, meteors, variable stars and general aspects. Miss Dorothea Klumpe, of the same city, is one American woman who puts her energies to foreign service. She is now director of the bureau for the measurement of the plates of the Paris observatory. Of the six women computers in the department, she is the only American, having become identified with the observatory in 1887, when she entered it as a student. Her advancement has been rapid, and her observations of the minor planets and of the Temple-Swift comet have been published in the French scientific journals. It was her remarkable thesis at the time of her examination in 1893 that first opened the way for the employment of women in the Paris observatory.

REPARTEE.

He, sentimentally—I wish I were a star.

She—I wish I were one, too!
He—May I dare to guess why?
She—Because it is known that every star is millions of miles away from the next one.

POSITIVELY THE LAST CHANCE.

Polson & Co., Kingston, Ont., will after the insertion of this notice withdraw the very liberal offers, they have been making to send a 25 cent trial size, FREE, of their marvellous guaranteed Catarrh and Bronchitis remedy, "Catarrhoxone." If you are a sufferer from any form of Catarrh, Bronchitis, Asthma, Throat Irritation, write at once; it is positively the last time this offer will be made. Enclose 10 cents to pay postage, boxing, etc.

WESTERN ASSURANCE COMPANY.

The forty-ninth annual report of the above company will be found in another column of this issue. It will be seen by the financial statement that the company has had a most satisfactory year's business. After payment of losses and expenses there is a profit balance of \$118,642.60 on the year's transactions, a result which must be highly gratifying to the friends of the institution. Two half-yearly dividends will be paid at the rate of 10 per cent. per annum, and the reserve fund has been increased to \$1,100,380.50. We notice in the report of the directors that they have established a branch office in London, England, under promising auspices. We congratulate the President, Geo. A. Cox, Esq., and the board of directors on the continued prosperity of the Western Assurance Company.

The estimated cost of the projected memorial bridge across the Potomac at Washington is from \$1,000,000 to \$2,100,000.

How's This?

We offer One Hundred Dollars Reward for any case of Catarrh that cannot be cured by Hall's Catarrh Cure.

F. J. CHENEY & CO., Toledo, O. We, the undersigned, have known F. J. Cheney for the last 15 years, and believe him perfectly honorable in all business transactions, and financially able to carry out any obligation made by their firm.

WEST & TRUAX, Wholesale Druggists, Toledo, O. WALKING, KINNAN & MARVIN, Wholesale Druggists, Toledo, O. Hall's Catarrh Cure is taken internally, acting directly upon the blood and mucous surfaces of the system. Price, 75c. per bottle. Sold by all druggists. Testimonials free. Hall's Family Pills are the best.

It is a source of regret to all women that the Johns Hopkins University continues to exclude women from admission to its graduate courses.

Western Assurance Company

The annual meeting of shareholders was held at the company's offices in this city on Wednesday, March 7, 1900. The President, Hon. G. A. Cox, occupied the chair.

The following annual report of the directors, with accompanying financial statement, was read by the secretary:

FORTY-NINTH ANNUAL REPORT.

The directors beg to submit herewith the annual statement of the company's accounts for the year ending 31st December last.

The revenue account shows a satisfactory growth in premium income, and after payment of losses and expenses there is a profit balance of \$118,642.60 as a result of the year's transactions. Two half-yearly dividends have been provided for at the rate of 10 per cent. per annum, as well as an amount to cover depreciation in securities, and the reserve fund has been increased to \$1,100,380.50.

Taking into account the fact that during the year 1899 the fire losses in the United States were exceptionally heavy, the directors feel that these results must be regarded as exceedingly satisfactory.

For some time past your directors have had under consideration the question of extending the agencies of the company beyond the limits of the North American continent, and shortly before the close of the year arrangements were completed for the establishment of a branch office in London, England, under what appear to be favorable auspices.

Toronto, 26th Feb., 1900.

Geo. A. Cox, President.

Summary of financial statement:

Total cash income	\$2,582,741 60
Total expenditure, including appropriation for losses under adjustment	2,414,098 90
Balance	\$118,642 60
Dividend declared	100,000 00
Total assets	\$2,321,762 85
Total liabilities (including capital)	1,221,382 35
Reserve Fund	\$1,100,380 50
Capital paid	1,920,000 00
Capital subscribed	1,000,000 00
Security to policyholders	\$3,100,380 50

The President, in moving the adoption of the report, said:—It cannot fail to be gratifying to the shareholders, as it is to the directors and officers of the company, to note the evidence of the appreciation by the insuring public of the security offered by the Western to its policyholders which is afforded by the growth in the volume of business transacted—the total income for the year having exceeded, for the first time in the history of the company, two and one-half million dollars. It is still more satisfactory to note that notwithstanding the exceptionally heavy fire losses which have occurred in some of the chief cities in the United States—where the business proved generally unprofitable to the companies engaged in it—we are able to show as a result of the year's transactions a profit balance of \$118,642. The experience of the year 1899 in Canada was exceptionally favorable, and the diminished fire waste in this country is certainly a matter for congratulation, aside from our interests in the business of the insurance. It is to be hoped that the introduction of improved fire protection in our cities and towns, and the adoption of more substantial methods in the construction of buildings, will tend to a further reduction of the burden which the payment of some five million dollars per annum by insurance companies for fire losses in Canada imposes upon the community. I need scarcely say that this has to be provided from the premiums collected from the insuring public. I desire to emphasize what I believe to be a fact—that it is only by adopting measures that will reduce this serious annual loss, and a consequent reduction in the tax which the public pay in the insurance premiums can be brought about, for it is only necessary to refer to the Government reports showing the income and expenditure of companies licensed to do business in the Dominion to prove that there has been, during the whole period embraced in these returns, but a very moderate margin of profit to the companies at the rates and under the conditions which have prevailed in this country in the past.

In this connection it may not be out of

so time since astronomy was have there been as many women constantly engaged in the mathematical part of the work.

The improved instruments now available and the universal application of photography to astronomy has opened the door wide for the woman computer and astronomer's assistant. At all the notable observatories and those more or less newly established in what used to be considered remote parts of the earth—India, Mexico, at the Cape of Good Hope, in far Scandinavia and up in the East Andes—there are women working in the laboratory departments of astronomers. Some of these women are able to make original investigations, being in sympathy with the science and having studied its principles. Others are purely calculators and accurate measurers, measuring the photographs and computing and reducing the estimates obtained as dispassionately as any schoolgirl plods at her equations.

Both classes of workers are valuable for astronomy as a science is absolutely dependent upon mathematics. No

place to refer to the fact that during the past year a number of new companies have come into the field, offering fire insurance at lower rates than those current with the old established offices. It will be interesting to observe whether these experiments will prove more successful than previous attempts which have been made to afford indemnity against loss by fire on more favorable terms than companies which have been long engaged in the business feel safe in offering. While as insurers we may hope these new companies may have discovered the secret of combining cheapness with security, we cannot overlook the fact that the record of the fire insurance business in Canada during the past twenty years shows a loss of upwards of two million dollars of capital, which was invested in companies organized to transact business at what are termed "cut rates." We may at least feel assured that companies working upon these lines, whose entire cash assets are limited to fifty or sixty thousand dollars, are scarcely in a position to assume any considerable share of the many millions of liability which fire insurance companies are carrying for the protection of merchants and property holders in Canada, and it has been shown that, with due regard for the safety of stockholders and the security of policyholders, any material reduction can be made in fire insurance rates in this country, your directors do not feel warranted in advocating any departure from the policy we have been following for many years past.

But to return to the consideration of our business during the year under review, it will, no doubt, be interesting to shareholders to learn that the marine branch, which has been responsible in some former years for rather serious losses, has shown a profit upon the business of 1899, and that the general outlook in this branch appears to be more promising than for some time past.

In our earnings from interest there has been a falling off, such as might naturally be looked for owing to the reduced rates obtainable, particularly in Canada, on the securities which are held by this company.

There is one matter to which I wish particularly to refer at this time. It is now within a year of half a century since the company commenced business in Canada. Some twenty-five years ago it completed its system of agencies throughout the United States, and I think I am warranted in saying that it is now established over the whole of the North American continent on a favorable footing, with an efficient force of branch managers, special agents and local agents working in its interests. Under these circumstances your directors have turned their attention to the consideration of the question of the desirability of following the example of the majority of the successful British fire offices and embracing a larger field of operations than we at present occupy. In view of the efforts which are being made—happily with no small measure of success—to enlarge the trade relations between the mother country and her self-governing colonies, and to cultivate intercolonial business connections, we have felt that the present is an opportune time for making a similar effort to secure some measure of reciprocity in the business of fire insurance. As a practical step in this direction it was decided to establish a branch office of the company in London, England. This was opened on the 1st of December last, and placed under the management of Mr. W. E. Melville—a gentleman who, we believe, possesses all the qualities of a successful insurance manager. A Board of Directors has been appointed in London, upon which will be fortunate in securing the following gentlemen to serve, namely: The Right Hon. the Earl of Aberdeen, G.C.M.G.; the Right Hon. Mr. John Kennaway, Bart., M.P., and Mr. James Stevenson of Messrs. Grahams & Co., British and East India merchants, and I am pleased to say that we feel that we have every reason to be encouraged at the start which we have made in the chief metropolis of the empire and at the agencies which have thus far been established in connection with this new branch.

Mr. J. J. Kenney, the Vice-President, seconded the adoption of the report which was carried unanimously. The election of directors for the ensuing year was then proceeded with, resulting in the unanimous re-election of the following gentlemen, viz.: Hon. Geo. A. Cox, Hon. S. C. Wood, Messrs. Robert Beatty, G. R. Cockburn, Geo. McMurrich, H. N. Baird, W. R. Brock, J. E. Osborne and J. J. Kenney.

At a meeting of the Board of Directors, held subsequently, Hon. Geo. A. Cox was re-elected President and Mr. J. J. Kenney Vice-President for the ensuing year.

servatory at Washington. She has for a number of years, calculated the ephemeris of the sun for the Nautical Almanac, a publication of first interest to navigators and explorers. There are volumes and volumes of the Almanac bearing testimony to this woman's calculations. The advance sheets have to be got ready three or four years ahead of time to forestall the needs of those shops' captains who essay long experimental voyages and who may be away for years and deprived of such assistance. The woman calculator shortens the formulas, makes explanatory notes and does an amount of work involving much astronomical and nautical deduction, besides much proof reading of mathematical text-books.

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This triumphant victory over the deadly bacilli is far reaching in its effects, for there is no longer room for doubt that the gifted specialist has given to the world a boon that will save millions of precious lives.

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