

# Aerography from New England to the Philippines

## Washington Will Be Connected by Wireless Telegraphy With all the Country's Possessions.

AND now it has been decreed that the Nation must have a new system of nerves to conduct the directive impulses which dart forth from the great Federal brain—Washington.

The old metallic nervous system of wires is to be replaced by the miraculous, invisible system of electrified ether waves, demonstrated to an admiring world under the name of "wireless telegraphy," or "aerography," as we must say to be technically correct and truly abreast of the times.

A wonderful aerographic circuit is to reach our continent from New England, leap down, across and up to Alaska; to leap across the Pacific to our Asiatic possessions—thus half-way spanning the globe on which we dwell. It is to be installed, equipped, owned and operated by the Federal Government, which, from the executive departments at the capital, will be in touch always with coasting ships passing along and from our detached territory, and in war times with our naval bases and hawk-eyed scoutships, watching for the approach of the Leviathans of a war enemy.

This invisible, throbbing network of nerves will in advance give storm warnings to ships hundreds of miles out at sea. It will automatically transmit warnings protecting our millions of acres of public forest lands from the ravages of the fire demon, and its flashing impulses will defy the very mountains, the fiercest winds, the fiercest tempests, the hottest holocaust, the lightning from the heavens or the earthquakes upheaving the volcanoes under the sea.

**Vast Chain of Stations.**

Our Navy, as well as our Army, has had its attention fixed on this project these six months past and their reports to the intelligence bureau at Washington assure the authorities that the sanguine struggle in Manchuria has demonstrated beyond the shadow of a doubt the practical value of wireless telegraphy. That system of communication is no longer a mere theory or savant's toy. On the basis of this information there was delegated to sit in Washington an "intercontinental" committee with members from the various departments interested in wireless telegraphy. By this body's decree, approved by the President, the control of the future wireless system of the Government is vested in the Navy.

The chain of stations will extend from the New England coast at Boston and Providence, through New York, New York, Lewes (Delaware), Norfolk, Cape Hatteras, Pensacola, Key West, Guantanamo, Porto Rico, Panama, our coasting stations, through the Hawaiian Islands, San Francisco, Portland, Or.; Seattle, Cape Flattery and Dutch Harbor, the most southerly point in the Aleutian Islands. Thence it will jump across to Kamchatka, down to Japan and the Philippines. Then it will return by a southerly route to Guam, Hawaii and San Francisco, thus running half round the world, touching no territory not under the American flag, except Japan, where the service will be operated in conjunction with the Mikado's government. Seven hundred stations are to be equipped in the Philippines alone, while the apparatus is to be installed upon the 240 vessels of the Navy.

**World's Longest Circuits.**

Two of the longest circuits in the world are being established in the region of the Panama Canal zone. These are, respectively



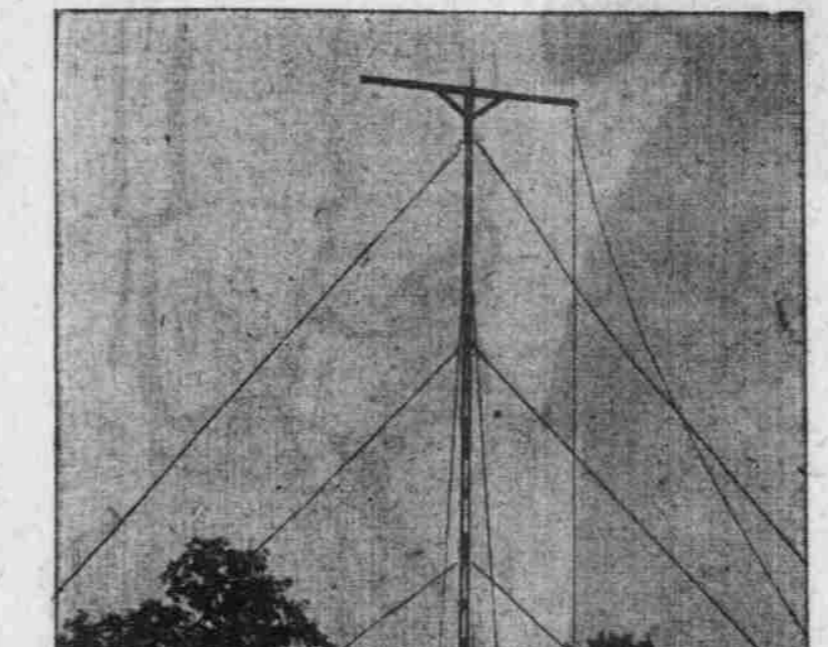
GOVERNMENT'S NEW WIRELESS RECEIVER—MESSAGES BUZZ INTO KAB-TRUMPET.



SENDING APPARATUS ADOPTED FOR GOVERNMENT'S NEW WIRELESS LINES.



WIRELESS SHORELINE STATION—UNITED STATES NAVY.



MAST AT GOVERNMENT WIRELESS STATION.

tively 1000 miles from mast to mast, extending from Key West to Panama, and Key West to Porto Rico. Other great spans will be from Panama to our station on the south coast of Cuba—720 miles; from the same station to Porto Rico—600 miles, and from Pensacola to Key West—450 miles. Between these various stations tremendous areas of land, as well as of water, intervene and the electric currents will cross and recross. They will leap over the islands of Cuba and Hayti, and will penetrate the network of cross-currents set up not only by our own stations, but those on the foreign coasts of Central America and of the foreign islands on both sides of the isthmus.

**World's Highest Mast.**

The highest mast in the world erected for wireless telegraphy is to be put up at Panama. While its exact height has not yet been determined it will be nearly if not quite as tall as the Washington monument. The Government is to energetically apply in the neighborhood of the Isthmian Canal zone the strategic lessons which its attaches have learned in the Orient where the Japanese ships by means of their wireless equipment have been enabled to keep in close touch with each other as well as with their home ports and the central government headquarters. It is known that the information thus conveyed has been responsible for some of the signal victories of Admiral Togo and General Kuroki. Our strategists have observed the tremendous disadvantages at which the Czar's forces have been placed through this well-equipped system of the Japanese.

So there will be no reports of cables cut and wires down, so far as our Government's future telegraph system is concerned. Our 50 stations on the Atlantic and Pacific Coasts will be in uninterrupted wireless communication with warships, army transports and vessels of the merchant marine—within 300 miles of shore or of island stations along the eastern

coast of the United States. The Atlantic and Pacific Coasts will be in uninterrupted wireless communication with warships, army transports and vessels of the merchant marine—within 300 miles of shore or of island stations along the eastern

and western coasts of mid-Pacific and within 1000 miles from shore, if needs be, in the region of the canal zone. Ultimately all commercial vessels of any importance will be equipped with apparatus for their own convenience and safety.

It will thus be possible to transmit, step by step, a wireless message from a ship 300 miles out to the European coast to the Philippines. Marconi, having demonstrated the possibility of sending a message 2035 miles across the ocean, with very powerful apparatus, the practicability of such regular communication with our lines will be a mere matter of development. The Navy will transmit necessary wireless messages to and from ships free of charge, where it has no commercial competitors and until Congress shall pass necessary laws fixing the question of tolls.

**Interception impossible.**

Those readers who have kept well posted as to the developments of wireless telegraphy under the great Italian inventor, Marconi, have, of course, commenced to wonder how the Government in this coastwise transmission will be able to hurl its electric impulses through a crisis-cross of dispatches without suffering a vast confusion of utterances, words and that which caused the tower of Babel to fall from the clouds. While Great Britain has equipped all of her warships with the wireless telegraph, the Government has been conducting a series of rigid tests, extending over a period of several months, during which several wireless stations were in simultaneous operation in the same magnetic field. The invention which has stood the test was that of a young American inventor, Lee De Forest, a graduate of Yale. Dr. De Forest, by an ingenious invention is able to "tune" any circuit so that its messages will not be received by any crossing circuit, "tuned" as when it is desired to find some circuit crossing his to be tuned as his is, he can regulate the apparatus so that it will work independently. Interception of his messages is therefore practically eliminated and upon the basis of this he finds some circuit crossing his to be tuned as his is, he can regulate the apparatus so that it will work independently. Interception of his messages is therefore practically eliminated and upon the basis of this he finds some circuit crossing his to be tuned as his is, he can regulate the apparatus so that it will work independently.

**Sending and Receiving.**

To illustrate how the new system will work we will select for example the long circuit between Key West and Panama. The instruments at these two stations will be tuned exactly alike, to begin with. Under the giant mast at Panama, in a building connected with the top of the mast by electric wire a man will rapidly operate a telegraph key, using the alphabet employed by the telegraphers whom we daily see in offices and railway stations. He fingers out his messages at the rate of 35 words a minute, and every time the key in his hand ticks a small spark of lightning is let loose from the apex of the mast's tip into space, and passes faster than thought through the fiercest West Indian tornado, the highest tidal wave or the most powerful seismic repetition of Mont Pelee, instantly they have reached the apex of the twin towers at Key West connected by wire with a building underneath wherein sits a man; not with a telegraph sender before him, as in the usual case, but with a receiver and a telephone helmet, such as the "hello girl" wears, clamped to his head and holding a receiver at his ear. The sparks of lightning which the transmitter at Panama is shooting out into the clouds a thousand miles away reach the ear of the snapper at Key West, not in the original clicks of the telegraph key nor in the sharp snap of the sparks of wireless telegraphy, but in a series of buzzes which sound as though a giant Jersey mosquito were trying to telephone a message from Atlantic City. When the transmitter across the Gulf of Mexico makes a short click the receiver hears a short buzz, and when a long click is heard an equally long buzz responds. Thus a short buzz makes a dot and a long buzz a dash of the Morse telegraphic code. To make it possible for a person not familiar with the telegraph alphabet to transmit wireless messages by this system there can be connected with the transmitter a device resembling a typewriter. When a key is touched the connecting lever automatically translates the letter into the dot and dash code.

An important result of this wireless telegraph enterprise of the Government is the transfer to the Weather Bureau of all control of ocean weather prediction heretofore done by the hydrographic office of the navy—hitherto our "old probe" on the high seas. The navy's 50 wireless stations on the coast will receive at least one daily weather observation from each ship with wireless apparatus within the 300-mile limit. When there are marked changes of the barometer more frequent observations will be transmitted to shore. The 2000 ships hitherto sending, by one way or another, daily weather observations to the hydrographic office will now send them to the Weather Bureau, together with the prompt wireless weather reports. These data will all be thrown into the hopper of the great weather mill at Washington and be ground out in the form of forecasts wired direct to the wireless telegraph masts along the coast and thence oceanward.

More lives will be saved and more cargo delivered from the waves through this innovation than can be readily estimated, for the result will be our first thorough system of marine storm forecasts. The Pacific chain of stations will be of great importance to internal communication since all of our general storms pass in from the Western seaboard, and miles, the distance at which observations can be secured from the Pacific, represents one day's movement of the average marine storm. Our cities and towns will thus be one day further ahead of the weather than they are from the Pacific. Our Southern stations will in the same way further anticipate the progress of the dread West Indian hurricanes, which play havoc along our Atlantic and Gulf Coasts, and often inland. Warnings will thus be prepared many hours in advance of these gales.

An automatic wireless service is further being planned by the Secretary of Agriculture for the protection from fire of the 75,000,000 acres of timber in our Federal Forest Reserves. The transmitters for this system are so arranged that they will of their own accord sound an alarm whenever excessive heat encroaches upon them. The great reserves are to be divided into sections, with masts and stations underneath for the alarm receiving and transmitting apparatus. A ranger will be in charge of each station about eight hours each day, and he will transmit a message of approaching fire if he perceives it before the instrument does. An alarm thus sounded at the stations along the border, foresters, squatters, miners and farmers will be able to mount their horses and hasten to the scene of danger in time to save hundreds of thousands of dollars' worth of lumber. The system will be installed at the Hills Reservation, which is 60 by 100 miles in extent.

The Federal Government has not planned to compete with private wireless telegraph companies, which the Department of Commerce and Labor will issue licenses for private stations, but under regulations preventing their interference with Government circuits necessary to the National defense.

It is very probable that many new laws must be made by all countries as a result of the wireless telegraph, "aerography." (Copyright, 1904.)

JOHN ELFRITH WATKINS.

## THE WORLD'S CONGRESS OF MINERS AT PARIS

John Mitchell Tells How Representatives of Two Million Workers Strive for Reform.

PARIS, Sept. 1.—(Special correspondent.)—For five days the representatives of the miners of the world were meeting in the Bourse de Travail at Paris under the auspices of the Miners' International Congress. For 15 years this congress has held annual sessions, at which questions of interest to the miners of the world have been taken up and discussed.

The meeting this year was the most important since the organization of the International Congress. For the first time in its history there were present at the congress delegates from the United States and thus the 77 members represented almost all the coal-mining countries of the world, or, in other words, almost the entire coal-mining population of the world, that is, 2,068,500 miners. There were representatives from all parts of Great Britain, from Germany, Austria, France, Belgium and the United States, which countries produce over nine-tenths of the entire amount of coal mined. It is always extremely difficult for men of different nationalities and speaking different languages to meet and discuss problems of common interest. The majority of the representatives understood English but neither French or German, while those who spoke either French or German were ignorant of the other two languages. As a consequence all the important speeches of the delegates, had to be translated and retranslated, so that it took 30 minutes for a ten minutes' speech to be understood by all the delegates. However, the translators were extremely able, and the delegates limited their speeches to the most important matters, with the result that the proceedings were very rapid and intelligible than might have been expected.

**Resultant Advantages.**

It would be difficult to exaggerate the advantages which have resulted from the annual meetings of the Miners' International Congress. The effect has been to inspire the delegates from the more backward countries with the hope of improving the condition of the miners whom they represent. In the past the initiative in these congresses was usually taken by the English miners. At first the German, French and Belgian delegates were unfamiliar with parliamentary rules, and the course of the sessions was delayed by a number of men trying to speak at once; but in the last session a number of secretaries, the congress was conducted in the most admirable method, and the rules of parliamentary procedure were adhered to most strictly. The various nationalities displayed the utmost courtesy and consideration toward one another, and friendliness and good-fellowship reigned throughout the congress.

Since the beginning of these annual congresses the conditions of European miners have been everywhere improved. Wages have risen, the hours of labor have been reduced, and the sanitary condition of the mines has been bettered. Another gain during this time has been the prohibition by practically all the countries represented of work by women inside the mines. While many women in Europe pick slate and do other rough work on the outside of the mines, almost none work inside.

**Businesslike Proceedings.**

The proceedings of the congress are conducted in a rapid, sensible and businesslike manner. Each day a president is elected, who serves for that day only, and for each nationally a secretary is also elected. The credentials of the

delegates are passed upon by members of their own nationality, and only in cases of dispute (which have not yet arisen) are questions of this sort submitted to the business committee. This business, or international committee, which agrees upon the proceedings and acts as a sort of executive committee, consists of one member from each nationality. The delegates to the congress must be either miners' secretaries, but the public are admitted to the deliberations. In discussing any measure or motion one speaker is heard from each nationality, and the speeches are usually made as short as possible, the speedily certain needless waste of time in translation.

Much of the discussion during the present congress bore upon the subjects of labor laws, the establishment of a minimum wage, the reduction of labor hours, and the establishment of a minimum wage. The hours of labor have already been somewhat reduced in Continental countries, while in the United States they are already shorter than in any other country. The miners of Europe are endeavoring to secure a universal eight-hour day for miners, and considerable progress has already been made in this direction. The congress was unanimous in its vote to obtain by such means as were best suited to the situation in the various countries, the speedy establishment of a minimum wage. The greatest possible difference exists between the wages of miners in various parts of Europe. In Great Britain wages are high, and in certain parts of Germany, notably in the Eastern or Silesian district, and in Austria, the rate of remuneration is low that the workman cannot live on his own earnings. The delegates are endeavoring to spread uniformity in wages throughout Europe, in order to maintain a fair rate of wages for coal mining throughout the world.

**Mine Sanitation.**

One of the most serious questions discussed by the congress was that of mine sanitation. In many parts of Europe, in Great Britain, France, Belgium, and in other countries, the miners suffer from a worm disease called ankilostomiasis. This worm disease is very common. It is usually found in damp and badly ventilated mines, and it destroys the red corpuscles of the blood and causes a general debility and an entire absence of vitality, which prevents the men from doing effective work. There are mines in which as many as 80 per cent of the miners are affected by this disease, which not only reduces efficiency of the men, but weakens them to such an extent that they become highly susceptible to other diseases. The congress took action looking toward the investigation of the worm disease, and advocated that legal measures be taken to arrest and combat its propagation.

The chief importance of the congress was the adherence of the unions in general. The European newspapers devoted considerable space to the proceedings of the congress, and much interest was manifested in the future plans of the organization. With each year the influence of the congress becomes greater as the miners in the world realize that the problems which beset them are more or less similar in

with. This is especially true of Germany. The attitude of the great producers of coal is one of absolute, uncompromising and unwavering hostility, and at all times they refuse to meet with the union or discuss terms. The rates of wages, the hours of work, and the conditions of employment are fixed by the large operators, who post notices on their walls. There is no recognition of the union, no conference between representatives of the two sides, no answer that the men can make except silent acquiescence or a strike. The operators, though organized into huge trusts, are opposed to the very existence of unions, and would, if it were possible, take away from the workmen the legal right to join trades unions. The hostility of these large employers goes so far, in fact, as to express a desire for the withdrawal of the franchise from the workmen by the abolition of universal suffrage.

**Persecution by the State.**

The hostility of the large operators in Germany toward the unions is reinforced by a determined persecution on the part of the state. Like other public meetings, those of trades unions cannot be held without obtaining permission from the police at least 24 hours in advance, and without the presence of police officials at the meetings. The law, however, seems to be enforced with great strictness against the unions that against other bodies. The policeman sits upon the platform next to the presiding officer and whenever he considers anything is said or done illegal, he rises, takes off his helmet and respectfully informs the audience that the meeting is dissolved. In many sections of the country where the unions are still boycotted by the owners of public halls, and in some cases it is practically impossible to hold meetings in any suitable place. Even the meetings of the local organizations are considered public meetings requiring 24 hours' notice and the presence of the police, and it is often necessary to forego having meetings at all and to secure the opinion of the members upon important subjects by meeting them individually. The police are harsh in their judgment of offenses committed in trade unions, and unionists have been sent to jail for two or three years for offenses which in America would not entail more than a small fine.

Notwithstanding all the obstacles, the organization of the miners of the world is proceeding rapidly, as is evidenced by the congress of 2,000,000 miners, of whom over 1,000,000 are already enrolled in trade unions. JOHN MITCHELL. In collaboration with Walter E. Weyl.

**Once Upon a Time.**

Clifford Chase, in Leslie's Monthly, heard once my old nurse telling stories by the fire at night. All about big, bearded giant. Till I shivered in fright; Then her voice came from a distance From a drowsy, far-off clime, Echoing the sweet old cadence, "Once upon a time."

Read it once a golden story Of King Arthur's wonder court, Laureate and Guinevere, All the knights of brave report; But amid the loving, hating, Still I heard the insistent chime Like a cuckoo clock, repeating, "Once upon a time."

When the earth and day and sunlight Gently fade away; When the years that we have lived here Seem like one brief day; Shall we hear again at twilight Echo of our nurse's rhyme, "Here you lived, loved and labored, "Once upon a time."

## HOW SMITH CAUGHT VAUDEVILLITIS

And How He Was Cured—A True Story by Wexford Jones.

WILLIAM SMITH was just the sort of man you would expect from his name. He was an unobtrusive citizen. He wore clothes of the same style as a thousand other men, and lived in a cottage of the same style as a thousand others in the suburbs. He caught the 8 o'clock car to town in the morning and the 8 o'clock car home in the evening, after a faithful day's work in a real estate office. On Sundays he went to church with his family, and every Sunday he dutifully spent a week at the seaside. In short, Smith was an excellent example of the average steady Portland citizen, and he would no more do anything out of the way than fly. His most painful recollection was of a morning he had gone down to business in a new suit on the back of which one of the children had mischievously pinned a large price tag. This was Smith before he was seized with vaudevillitis.

One evening Smith went to a vaudeville show. There is nothing strange about that; hundreds of Smiths do the same thing, and yet it was a fateful evening for William. The next night he went to a vaudeville show again, and the next and the next. For weeks this went on, until he became restless during the day and waited impatiently for the evening. He abandoned church on Sundays and spent the afternoon and evening at his favorite entertainments. At length one morning, in the office, just as an important deal was being concluded, Smith looked up from his desk and began to sing:

Up in the clambled of old Washington There dwelt a fellow as fat as a bun, Walked as if he had a bun, Dug up oysters with a spade— "Now, then, chous," he cried: "Saxo, Saxo, My Saxonism." "Mr. Smith," exclaimed his employer, "Smith stopped suddenly, looked around sheepishly and resumed his work. When Smith went home that evening he entered the dining-room, and, taking off his coat and hat, laid them on the table.

"I've just run in to give Clarabel her lesson in acting," soothed Smith, gesturing wistfully toward the window. Just then Mrs. Smith entered from the kitchen, followed by the children. "Dinner will be ready in a minute, William," she said. "Ha! Clarabel!" exclaimed Smith, bobbing his head to indicate a bow. "Mrs. Smith's name was Mary; so she didn't quite know what to make of this. "Just in time for your lesson," continued Smith. "Here's the railroad track." "Yes, mamma, let's play trains," cried both the kids in chorus. Mrs. Smith looked puzzled. "Look out, Clarabel; you'll be run over," cried Smith, jumping toward his wife with such realism that she sprang back and fell against the table. "O, William, you frightened me," she said. "I thought there was something there." "There goes the mail train," said Smith, watching the floor. "Heavens, there's a child on the track. Let me save it," and he dashed across the room, to the intense enjoyment of the young Smiths. "Saved!" he cried, picking up an imaginary object. "Here, Clarabel, take

this and we, who have no children of our own, will adopt this little stranger." "But, William," feebly protested Mrs. Smith, who by this time was in a state of collapse. "Yah, ooh, ooh, mamma," screamed the children; "we don't want a 'dopted baby.'" "And, oh, the chicken will be burnt to a crisp," cried Mrs. Smith, galvanized into action by the miserable recollection of a forgotten duty. When she returned with the over-roasted bird, she appeared to be his usual self, and his wife attributed his action to reaction after too laborious a day in the office. When dinner was over, Smith put on his hat and went off to town, where he attended another show before going home. When he got out of the car on his return, he deliberately smashed in his hat, tore his collar open, ruffled his hair and rubbed dust over his eyes, and advanced unsteadily to the door of his house, singing, "Fr heah jolly gow' flow." When the door was opened, he tumbled in on the mat.

"Ask me wh' time 'tis," he said to his wife. "Why, what time is it?" exclaimed Mrs. Smith, who was in a state of fright. "Twelve o'clock," answered Smith, and then he began: "Cuckoo, cuckoo, cuckoo."

Mrs. Smith sprang to the phone and called up Dr. Johnson, who lives next door, imploring him to come over instantly as William was in a fit. As the last "cuckoo" was dying from the lips of the patient, Dr. Johnson, "Drunk," was his thought, soon as he saw Smith. Taking hold of the patient, he led him into the room. "Aren't you ashamed of yourself to come home in this state—coming into your house drunk. "Yes, drunk," he repeated, as Smith looked shocked. "Drunk," said Smith, "I'm not drunk—haven't had a drink in ten years." "Didn't I hear you just this minute chucking and cooling around here like an aviary?" "Fshaw!" replied Smith, "that's the way every human being comes—in vaudeville. Everyone I've ever known in this town has been drunk, and his wife asked him how late it was, and he said 'twelve o'clock,' and the Swiss clock cuckooed three times and he had to stand on the stairs and cuckoo nine times more."

"Yes, but this isn't vaudeville," objected the doctor, and Smith was silent. "There's only one cure for this," mused Dr. Johnson, "desperate diseases require desperate remedies. I will inoculate him with the virus of comic Sunday supplements."

The antidote worked. Smith now reads all the New York papers every Sunday and Dr. Johnson is preparing to electrify the American Medical Association with a monograph on vaudevillitis.

WEXFORD JONES.

**As Explained.**

Chicago News. Gyer—There's one sensible poem in the current number of Blank's magazine. Myer—Get out! Who ever heard of a sensible magazine poem? Gyer—Well, the one I refer to is all right enough. It was written to advertise a new brand of soap.

## WHY DO YOU SUFFER?

When the Great Chinese Doctor

# C. GEE WO

can cure you of any ailment by his powerful and harmless Chinese medicine. He is a true and a medical science of this country. His wonderful cures throughout the U. S. alone tell the story. Thousands of people are thankful to him for saving their lives from

## OPERATIONS

Then why let yourself suffer? This famous doctor knows the action of over 50 different remedies that he has successfully used in different diseases.

**The following Testimonials from well-known people tell of the wonderful curative powers of nature's own herbs and roots:**

Thomas Walsh, 70th and Everett street, city, cured of stomach trouble two years' standing.

Miss Helene Eberge, 505 Vancouver avenue, city, suffered many years with dyspepsia of the stomach and long trouble, and was said by doctors to have incurable consumption. I have fully regained my health and strength. I recommend all that are sick to go and see him.

George W. Bass, 706 Fourth street, city—I had suffered from inflammation of the womb and ovaries and from weakness, and tried many doctors, but all said I would die if I did not have an operation. I tried Dr. C. Gee Wo's medicine as my last resource, and am thankful to say that after four months' treatment I was entirely cured.

He guarantees to cure Catarrh, Asthma, Liver, Kidney, Lung Trouble, Rheumatism, Nervousness, Stomach, Female Trouble and all private diseases.

Hundreds of testimonials. Charges moderate. If you are sick with any of the above ailments, then call and see him.

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Patients out of the city write for blank and circulars. Inclose stamp.

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