Chinese Educators Adapt American Books to Their School Needs

IN A MANDARIN LAW SCHOOL. A NATIVE DICTIONARY IS NOW IN PRESS

FROM CARPENTER'S NORTH AMERICA PIRATED BY THE CHINESE

A SCHOOL BOY OF PEKING

PAGE FROM CHINESE PRIMER

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SHANGHAI, 1909.—(Special Correspondence of The Bee.)—One of the problems which China is facing is the making of text books. A public school system is being established all over the empire. Academies, colleges and universities are being organized, and books are needed for teaching the new learning. When the system is in full away millions of volumes will be required, and at present there is practically nothing on hand. The old text books describe the earth as flat, with China covering the most of its surface,, and the other countries skirting the edges. The chief studies of the past were the reading and writing Chinese and the committing to memory the sayings of Confucius and Menacius. Today the nation wants one scheme of modern education. The government has resolved that it shall have it, and a compulsory system of schooling is to be generally established. Suppose that tomorrow our president and congress should enact laws wiping out our public schools, replacing them with others vitally different, with an entire new list of books. That is the situation in China today.

Books for Four Hundred Millions.

China, moreover, has four times as many people as the United States. Its children of school age are more than 100,000,000, and in the new scheme the grown-ups as well as the babies are anxious to learn. There are kindergarten and primary departments for the little ones, there are night schools for civil officials, military schools for the army, and law schools for would-be statesmen. All these are under way, and there are no books to feed them. The situation is one of the strangest in history. It has no counterpart in the past, and will probably have none in the future.

In the meantime books are being imported from half a dozen different countries. The great school book publishing houses of Great Britain, the United Sttaes and Japan are studying the field and are shipping in translations of text books of one kind and another. The Macmillans of London and New York have published some, the American Book company and Ginn of the United States others, and as for the Japanese, they are pirating the school books of other nations and sending them here by the ton.

China's Biggest Publishing House.

Up to the present time most of the modern text books in use have been made by the missionaries. One of the largest presses of the far east is that of the Presbyterian mission at Shanghai, another of considerable size belongs to the Methodists, and there are a few of other denominations.

The only large secular house which has yet been organized to take advantage of new conditions is the Commercial Press of this city. It was established a little more than ten years ago, with a paid-up capital of $350,000 silver. It has since grown until it now has a plant covering acres and humming with modern machinery.

I went out to see this establishment last week. It lies within two miles or so of Shanghai proper, on the other side of Hongkew creek. On my way to it I drove past a mile or so of fine foreign residences, with wide porticos and galleries about them, by many stores occupied by Chinese, by schools and colleges run by the missionaries and on out into the country. I was accompanied by one of the managers and with him went through the various branches of the establishment.

The Commercial Press is making everything from kindergarten lesson books to English-Chinese dictionaries, geographies and books of mining and engineering. It has a large lithographing plant, where a dozen presses are turning out school books in colors. In one room they were printing a calendar for the coming year, using twelve different colors, and in another making cards of many colors, depicting plant and animals for teaching the Chinese babies. Much of the printing was done from stones, but there were also large etching and half-tone plants with complete photographic appliances. In one well lighted department I found a dozen Japanese artists working away, and in another was shown machines for reducing drawings to any scale. Some of the engravers were cutting out copper plates for new national currency, and others were etching out plates for school book illustrations. I spent some time watching them printing bank notes. The lithographic stones were placed on the presses and the various colors applied in succession giving sufficient time between the different impressions for the ink to dry. Where many colors were required the sheets were passed on from press to press, a separate stone being used for each color. This was to avoid wasting time in changing ink, one set of presses being equipped with red, another with green and others with blue, yellow or black.

Our alphabet has only twenty-six letters, and the characters used by our printers are comparatively few. The classic Chinese has many thousand characters; and, in the simplest of the school books, several thousand are used. In the Chinese now in use every character expresses a word; the language is idiographic: that is, it is written in words, rather than letters and syllables. A Chinese alphabet is now being formed and a new system of writing inaugurated.

At present all penmanship is with a brush and India ink, the brush being held almost perpendicular. About 2,000 years ago the people had a penmanship based upon curved lines, but this was difficult to produce by the brush, and it was practically abolished. Metal pens and fluid inks will now be brought in, and the old curves will come into use. This will practically kill the brush-pen and India ink business, and a great industry will go to the wall.

The new alphabet is to have fifty letters. With it a different system of printing and writing will come into being, and the probability is that the typewriter will be so adapted to the new system that it will come i nto use.

In the Casting Room.

At present every character employed in the printing house has to have its own matrix and be cast separately, and the characters are so delicate that they must be new in order to do good work. In the composing room I visited, six different sizes of type were employed, and of these more than 8,000 characters of each style are kept on hand. This necessitates the making of 50,000 different characters, each of which must have its own matrix, or die, in the shape of a brass type from a quarter to half inch square and an inch long. This die is fitted into a casting box, and by turning a crank the types are turned out at the rate of twenty or thirty a minute. A score or so of such machines were busy at the time I went through the stereotyping department, and their clicking made as much noise as so many corn shellers. In an adjoining room I was shown the matrices of the books already published. They filled the shelves which walled the sides of a large room from floor to ceiling. Anothr room was devoted to storing electrotype plates, everything being catalogued and as systematically arranged as in one of our modern printing offices at home.

In the composing room each printer stood in a little alcove walled with cases, and he usually had a boy to run and fetch the types from other parts of the room.

With the Bindery Girls.

I next went into the binding department and spent some time there watching the girls. There were hundreds of them, dressed in long blue coats and wide trousers, with bands of black silk over their oily black hair. They sat at tables, with their little deformed feet just touching the floor. They worked so busily that I remarked upon it, whereupon the manager, who acted as our guide, said:

"We pay them by piecework, and they have no time to waste."

I asked as to their wages. The man replied:

"Oh, they are making much money, for them! Some of the best earn $7 Mexican per week, or about $3 in gold. The average workman is paid about $1.50."

These girls were stitching and sewing folding and pasting, and also feeding the presses. Their hours were about twelve per day. The department contained much modern machinery, and the work of binding was economically done.

Celestial Book Pirates.

China has no copyright law. I found the Commercial Press stealing everything that its managers think of value for the new Chinese school. No matter what the copyrights are, foreign authors must be content with the hope that their books may do good, even though they do not add to their financial receipts. As I looked over the volumes printed by this company for the new education I found many well known American text books which have been translated into Chinese. I saw also stacks of my own "Geographical Readers," published on cheap paper, with abominable illustrations. I was told the whole series had been prepared for the press, and that my books on North America and Europe were already in use. The matter has been translated by the English-Chinese scholars, and, as far as possible, verbatim, but how correctly only those who can read the Chinese teachest characters can know.

As I looked at my books the manager of the company said they sold well and that he expected to get a good revenue from Carpenter's "Asia," which was then in the press. He explained apologetically that they had been forced to change some of the literary matter in the chapters on China, as their people did not like to be told that they had buttonhole eyes, pigtailed heads and deformed feet. He made no bones about taking my books without pay, and even offered to make a royalty contract with me if I would write him a new reader or so especially adapted to the Chinese market. I replied that I was very busy, and he thereupon suggested that the book could be written for me in their office, and that I could revise it. But in that case they would expect to pay a much less royalty. I told him such a proposition was out of the question, but notwithstanding this he brought it up again and again, and urged it upon me at a Chinese dinner which he gave me that night.

Among the other books in the warehouse I saw piles of Chinese-English dictionaries. They were in two volumes each as big as an ordinary table Webster. They are practically a translation of the Standard dictionary, which is so largely used in the United States. They were edited by Dr. Yan, who has been connected with our legation in Washington. The two volumes are widely distributed; they sell for about $6 in gold. Pocket dictionaries are also printed, and a native law dictionary is now in press. This will be sent out to the law schools, which are now being established at all the provincial capitals.

School Supplies.

After visiting the editors, I was taken to another large building, which contains a curious branch of this publishing house. It is devoted to school supplies, and makes everything from desks to blowpipes for the chemical laboratories. It manufactures pendulums, globes, Indian clubs and dumbbells. The dumbbells are cast from pig iron; they are made in great quantities, and it is intended they shall be used in all public schools.

Every room of this school book factory is lighted by electricity, and all are connected by a telephone system. The machinery is up-to-date, and on the whole it shows one something of what is going on in the new China.

Mission School Books.

At present a large proportion of the new text books are printed upon the mission presses. The missionaries have been at work in China for a century, and they have established schools in all parts of the country. They were the authors of the first new text books, and as teachers their graduates are now in demand. The American Presbyterian mission press at Shanghai has been pouring out volumes for a number of years at the rate of 90,000,000 pages per annum, and the consolidated mission press of the American Methodists has also published numerous educational works. The American Bible society distributes between 500,000 and 1,000,000 volumes of the Scriptures in Chinese each year, and there is now a mission educational association, supported by all the Protestant sects, which is preparing new text books for the schools. At some of the missionary stations they are making school museums, including such things as stuffed birds and animals, mounted fishes, electrical machines, globes and model railways. They have printed charts of the Chinese provinces, with the principal industries and resources marked upon them, and have inaugurated new methods of teaching the people. Indeed, the work which the missionaries have done cannot be overestimated, and the situation here just now is such that money spent upon missions will return a thousand-fold.

Carnegie of China.

In this connection a bright woman clerk of the mission book store of Shanghai said to me today:

"What China needs more than anything else is a system of circulating libraries, which shall contain the simpler books of our modern literature, including the scriptures, concordances and the western classics. These people are pining for the new learning, but they are unspeakably poor and cannot afford to buy books. The Chinese women want them. In every community clubs are already established where the women come together weekly or daily to gossip and talk. If they could have such books they would be read aloud at these meetings and a great educational movement might thus be instituted. As to the Chinese translations, they are cheap. The concordance of the scriptures costs less than 20 cents gold and there are few books of any kind that sell as high as a dollar."

I cite this conversation as a suggestion for some rich American who would like to be known as the Carnegie of China.

New Chinese Literature.

The inauguration of the new school system and the new civilization is bringing in translations of the most popular books of the western world. Today 221 novels, originally written in English, French or German, are in circulation. They have been translated into Chinese, and the demand for them is increasing. In one year fifty-seven such novels were issued. They included translations of "Uncle Tom's Cabin," Jules Verne's "Voyage to the Moon" and Charles Lamb's "Tales from Shakespeare." One of the most popular of the new issues is Conan Doyle's "Memories of Sherlock J. Holmes" and another is "Robinson Crusoe." Among translations from the French are "Les Miserables" and "Manon Lescaut," and the most popular English stories are "Ivanhoe" and other novels of Sir Walter Scott. These works are published on cheap paper; they are sold by booksellers in various cities, some bringing as little as 10 cents apiece. One of the recent translations of this nation sold to the extent of 400,000 copies, and that within a year; another had a circulation of 158,000 copies within eighteen months.

In addition to novels, some heavy works, such as Darwin's "Origin of Species," Spencer's "Evolution" and Mill's "Essay on Liberty," are being published, and the new constitution has created a demand for treatises on politics and parliamentary law.

Dr. C. D. Tenney, formerly head of the Chinese university at Tientsin, and now the Chinese secretary of our legation at Peking, has published a number of school books, which are in a general use, including readers, primers and geographies, and Mr. Mylie of the London Mission has prepared a complete series of text books and mathematics in the Chinese for the Japanese translators.

A large number of the new translations come from the Japanese. The written languages of Japan and China are somewhat similar, and the Japanese scholar learns quickly to speak, read and write the Chinese. In the Commercial Press editorial room a large number of Japanese men are employed as translators, and I find Japanese teachers in all the Chinese educational centers. Much of the new school furniture has been made in Japan, and a large number of the modern maps and charts.

The Japanese teachers will work for lower salaries than other foreigners, and this is one reason for their employment. As a rule, they are not thorough, and the probability is that they will eventually be replaced by Americans, Englishmen or Germans. I look for the steady increase in the number of American teachers. There are hundreds of Chinese now studying in the United States, and there are many American-Chinese graduates in China. All of these have a high regard for our methods of education, and they would favor the selection of our college graduates as leaders for the new schools.

FRANK G. CARPENTER.

In the Field of Electrical Experiment

Why Street Car Lights Are Dim.

WHO has not noticed when riding on the street cars at night that sometimes the lamps which light the cars burn very dim for a minute and then seem to burn very bright? Sometimes they almost go entirely out, then suddenly come on again. To the ordinary traveler all this is very mystifying, but to the electrical engineer it is simplicity itself.

If a small hole was drilled in a water pipe just above a faucet, the water, under pressure, would rush out at terrific speed; but if you should open the faucet the pressure would immediately drop down so low the water would all but cease to flow out of the tiny hole. This is exactly what happens to the incandescent lamp in a street car when they suddenly grow dim, only it is electricity we are dealing with instead of water. To start a loaded street car requires an enormous amount of electricity, the motors fairly eat up the current in order to get the necessary starting power, or torque, as it is called. Using such a quantity of electricity relieves the pressure, or voltage, of the system, and of course the lights burn dim until the car is under way.

Nearly all street car systems operate at 550 volts pressure. The lamps in the car consume current at 110 volts pressure and they are connected in groups of five in series across the 550-volt circuit. When the voltage for these lamps drops below 110, because of the large amount of current going to the motors under the cars, not enough electricity is being forced through the lamp filament to heat it to incandescence and of course the light is dim. Opening wide the current conductors to the motors suddenly lowers the line pressure, which in turn reduces the pressure on the lamps. Once the car is under way the motors do not require so much current and the pressure returns to the lamps and they continue to give their rated candle power until the next time the car is started.

Progress in Electrical Farming.

There is no longer any reason why even the farmer of moderate means should not enjoy all the home comforts of his city cousin. The day when bath tubs, lighting plants, water systems for fire protection and heating furnaces were to be found only in the larger villages and in the cities has gone forever. Today there are few rural villages too small to boast of all these things and the farmer has caught the spirit of the times and his up-to-date farm house is lighted with electricity and heated by steam. It is supplied with fine bath rooms and running water and other modern conveniences.

A few years ago the electric light and power plants installed on farms were very few and far between. A few adventurous farmers had dared to harness their mountain pasture streams and turn their water energy into electricity for use about the house and barns; a few more had installed gasoline engines for the same purpose. These early installations proved a success from the first and it was not long before their worth had been talked and written about until almost every well-to-do farmer was considering the question of a similar installation.

Aside from the many benefits and economies of electricity for lightly, heating and cooking in the farm house, it readily assumes most of the hard work about the farm which, in the past, has been a most discouraging factor in securing farm labor. Electricity easily does the milking, separating and churning as well as turning the washing machine and the wringer. In the barn it is applied to feed cutters, corn shellers, feed grinders and to all other small machinery, such as the grindstone, lathe and a small buzz saw for cutting fire wood. The threshing machine and fanning mill are very easily belted onto the portable motor. In Germany and a few other foreign countries electricity is also used to advantage to pull the plows, harrows, rakes, cultivators, binders, mowers and other outdoor machinery.

In the house the farmer's wife can have her electric cooking devices and electric flatiron as well as her city sister.

The number of electrical plants on farms is increasing with marked rapidity. A few of these plants run by small water powers, but the majority use small gasoline engines and storage batteries. The time is surely coming when the majority of farmers will consider electricity a necessity and no matter how far they are located from electric power stations, or power transmission lines, they will find means to secure plenty of cheap electricity. Many of the electrical engineers of the General Electric company predict that in a few more years the electric power lines will extend out from the cities and large towns into the highways and byways of the country where every farmer can tap the line and purchase at a very reasonable figure all the power he requires for his farm work.

Train Dispatching by Phone.

Reports from Hannibal, Mo., state without qualification that train dispatching by telegraph on the Burlington system between Hannibal and St. Louis is to be dispensed with this month and the telephone substituted. Nearly all of the telegraph instruments on the Hannibal division and also on the Mexico line, were silenced a few nights ago, but some dispatching is yet being done by telephone, owing to the fact that the telephone line is not quite complete.

About a year and a half ago the Burlington built a line between Chicago and Mendota, Ill., on the Aurora division, and began dispatching trains on that stretch of track by telephone. Soon the entire Aurora division was equipped with telephones, and later the Galesburg division. Only recently the telegraph instruments on the Brookfield division between Hannibal and Brookfield and Brookfield and Quincy were removed and train dispatching on that division is now being carried on with the aid of the telephone.

Several other divisions of the Burlington system are equipped with telephones, but not all. However, the officials expect to eventually do away with the telegraph instruments altogether, and probably by next summer not a sound of the telegraph instrument can be heard over the great "Q" system.

Electrical Notes.

The North Dakota is the first ship of our navy to be equipped with electric ranges for the officers' mess.

The wireless apparatus on the Cunard liner Caronia is the most powerful of any in steamship service, having a radius of 1,200 miles.

In a few more months it may be possible to telegraph photographs across the Atlantic from New York to London by processes now being perfected.

A new windmill apparatus for generating electricity for farm use has been perfected in England. A storage battery supplies the current when the wind is not blowing.

The contractors building the Southern Pacific extension through the mountains near the Jalisco-Tepic boundary where there is heavy tunnel work, will have the use of electric power.

A gyroscopic car weighing twenty-two tons and carrying forty passengers has been successfully tested in England. The car is propelled by electricity produced from a gasoline engine-driven generator.

American show window lighting is being introduced in London. It is customary in the English capital for shop keepers to barricade every window with heavy iron shutters just as soon as the day's business is over. This is a relic of those ancient days when it was not safe to leave the shop unprotected, but the American plan of window displays and well lighted store fronts is being successfully introduced.

It remained for a boarding house full of girls in the city of Boston to discover the real merits and possibilities of the electric flatiron. With many of these girls economy in their habits was strictly necessary, and when they found out they could get a small electric flatiron, which could be readily attached to the lighting fixture, and press all their laces or even a shirtwaist, they were quick to invest their savings for this little household economizer. But one of these self-same girls, with a bit of inventive genius quickly discovered that the electric iron could be very easily turned upside down and used as a small cook stove. On the flat face of her iron she easily boiled water, made fudge or even fried eggs and did other cooking.

The Kitchen of the Future.

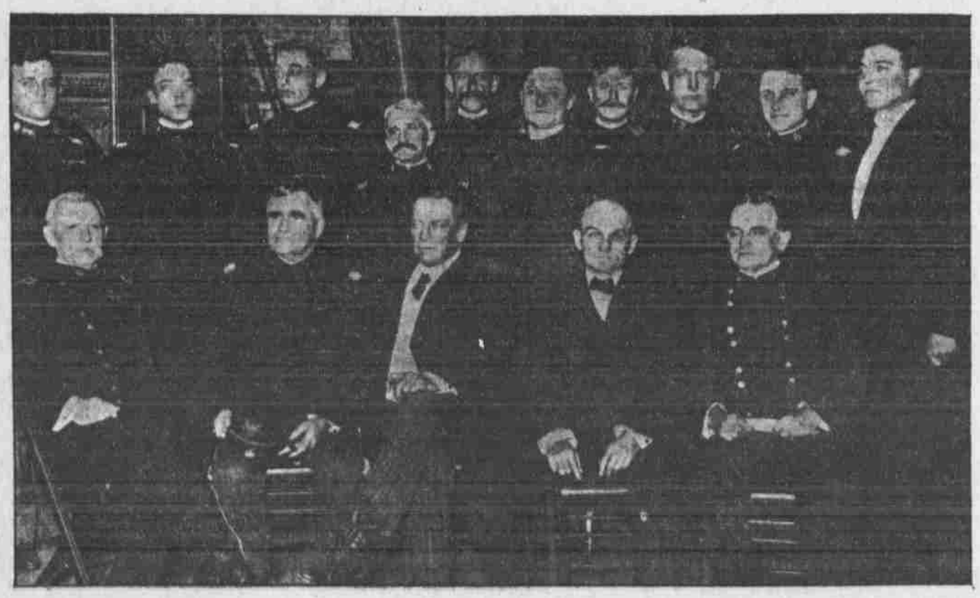
Science, which has for years worked to lighten the labors of man, has now turned to aid woman in the household. She who once prepared the family meals over a red-hot stove; washed in a steaming laundry and cleansed her floors by vigorous broom strokes, can now practically do it all by the manipulation of a button attached to the electric light system in her house.

At the recent electrical exposition in New York, according to Gertrude Penrose in the Van Norden Magazine the "kitchen of the future" exhibited there, had none of the disadvantages with which women for centuries have had to contend. An electric motor, on a porcelain stand no bigger than an ordinary card table, turned the crank of a patent bread kneader and cake mixer, ran a fruit press and an ice cream freezer, churned butter, beat eggs, whipped cream, chopped meat, ground coffee, sharpened knives, polished silver and even peeled potatoes.

With the aid of these appliances a cool and smiling young woman turned out to admiring spectators bread, cake, pies and biscuits as crisp and crusty as any from the best coal oven that ever baked, roast meats that were all crackly brownness outside and juicy tenderness inside, steaks and chops broiled just right over their entire surface, stacks of golden griddle cakes, piles of brittle toast, pots of steaming coffee, doughnuts, "rabbits," Newburghs; everything the heart—or at least the palate—of man could desire.

While the young woman in pink demonstrated the possibilities of electric cooking, another young woman, equally cool, fresh, smiling and unruffled, did a family wash. A motor connected with an electric light socket turned a highly modern washing machine, wringer and mangle. Current of electrically heated air dried clothes in an enclosed space no bigger than an ordinary bathroom. And electricity conveyed by wire from an electric light socket over the ironing board heated the flatiron, for there was but one, kept always at exactly the right heat.

Omaha's Soldiers in New Armory



Seated, from left to right: Brigadier General Charles Morton, U. S. A.; Colonel Cornelius Gardener, Sixteenth United States Infantry; Judge Lee S. Estelle; Mayor James C. Dahlman; Adjutant General Hartigan.
Standing, from left to right: Lieutenant Otho E. Michaelis, aide-de-camp to General Morton; Captain Joseph P. Gohn, Sixteenth United States Infantry; Major Ed P. Berryman, quartermaster general on governor's staff; Captain Joseph F. Gohn, Sixteenth United States Infantry; Major Ed P. Berryman, governor's staff; Captain W. K. Jones, U. S. A.; Major Kesterson, governor's staff; Lieutenant Colonel A. D. Fetterman, inspector general, governor's staff; Major E. H. Phelps, assistant inspector general, governor's staff; Lieutenant Colonel A. D. Falconer, quartermaster general, governor's staff; Lieutenant Colonel W. E. Baehr, First regiment, Nebraska National Guards.

NOTABLES WHO ATTENDED THE DEDICATION OF THE NATIONAL GUARDS ARMORY IN OMAHA.

THE formal opening of the new National Guards armory in old Fraternity hall, on Harney, opposite the public library, was made the occasion of a brilliant military event Monday evening. There were present, in addition to the representatives of the local militia companies, a number of the governor's military staff and a number of officers of the regular army connected with Department of the Missouri headquarters and adjacent military posts.

Those of the regular army were Brigadier General Charles Morton, commanding the Department of the Missouri; Lieutenant Otho E. Michaelis, aide-de-camp; Lieutenant Colonel F. F. Eastman, chief commissary; Major D. E. McCarthy, chief quartermaster; Colonel Cornelius Gardener of the Sixteenth infantry, Captain Joseph F. Gohn, Sixteenth infantry, and Captain W. K. Jones, Sixth infantry, assistant quartermaster United States Army.

Adjutant General Hartigan of the Nebraska National Guard was present as the special representative of the governor.

Lieutenant Colonel W. E. Baehr of the First regiment Nebraska National Guards, acted as master of ceremonies. The Sixteenth United States Infantry band from Fort Crook furnished the music for the affair.

The address of welcome was delivered by Mayor J. C. Dahlman, and short addresses were delivered by Brigadier General Morton, Colonel Cornelius Gerdener of the Sixteenth United States infantry, Judge Lee Estelle and Adjutant General Hartigan. All the addresses bore particularly upon the necessity for an organized National Guard, as a nucleus for a volunteer army in the event of war.

The new armory will house the provisional battalion of the National Guard, consisting of Companies I and G of the Second regiment and L of the First regiment. The provisional battalion will be under the command of Lieutenant Colonel Baehr, and for the first time in the history of Omaha militia companies, the three companies are housed under one roof.

The hall has been admirably equipped for the purpose and will tend to increase the esprit de corps of the militia organizations here. Following the reception of Monday evening, which was attended by a large number of men and women of Omaha, a dance was given, being the initial military ball in the new armory.

The regular nights for drill will be Monday, and the public is invited to visit the armory on these evenings in order to become better acquainted with the National Guard, and to learn what it is and what it is for.

The establishment of the new armory has already had the tendency to increase the enlistments in the several companies, and it is hoped that in due time they will be recruited to their maximum.