

THE BEE'S NEW PRESS

Its Editions Now Printed on the Most Modern Machinery.

MECHANISM MARVELOUS TO BEHOLD

Product of the World's Greatest Printing Press Manufacturers.

ELECTRICITY SERVES AS MOTIVE POWER

Every Minute Detail Carefully Foreseen and Provided For.

COMPLETE NEW STEREOTYPING PLANT

Finest Equipment in The Bee Building Possessed by Any Newspaper Published in This Section of the Country.

The Bee is now for the first time printed on a new Hoe double-supplement press of the latest, perfecting, pattern. The preliminary trial of the mammoth new press has been eminently successful, and the transition from the old press plant to the new is today an accomplished fact.

The order for the new big press was placed with R. Hoe & Co. of New York and London some months ago. The firm began building the press in January of the present year, but it takes time to build so intricate and ponderous a machine.

The press is the most modern from every standpoint. It is equipped with all of the latest improvements of the Hoe company, and will turn out papers from four to twenty pages in size at the rate of 24,000 an hour, and deliver papers ranging in size from sixteen to twenty-four pages at half as great a rate of speed.

The new press was built by R. Hoe and Co., at New York, where 2,500 men are employed in building the most improved presses used today. In order to secure the best workmanship possible, the employees, apprentices are trained in theoretical, as well as practical, knowledge of press building, and are graduated skilled constructors of presses.

While the Hoe company was busy constructing the new press for The Bee there were numerous changes and alterations going on about The Bee building, for a new home had to be arranged to house the press. After the various parts of the new machinery had been shipped to Omaha it required two weeks to put it together and get it into working order.

HOW THE NEW PRESS WORKS

Detailed Description of the Operations of This Latest Marvel of Modern Mechanism.

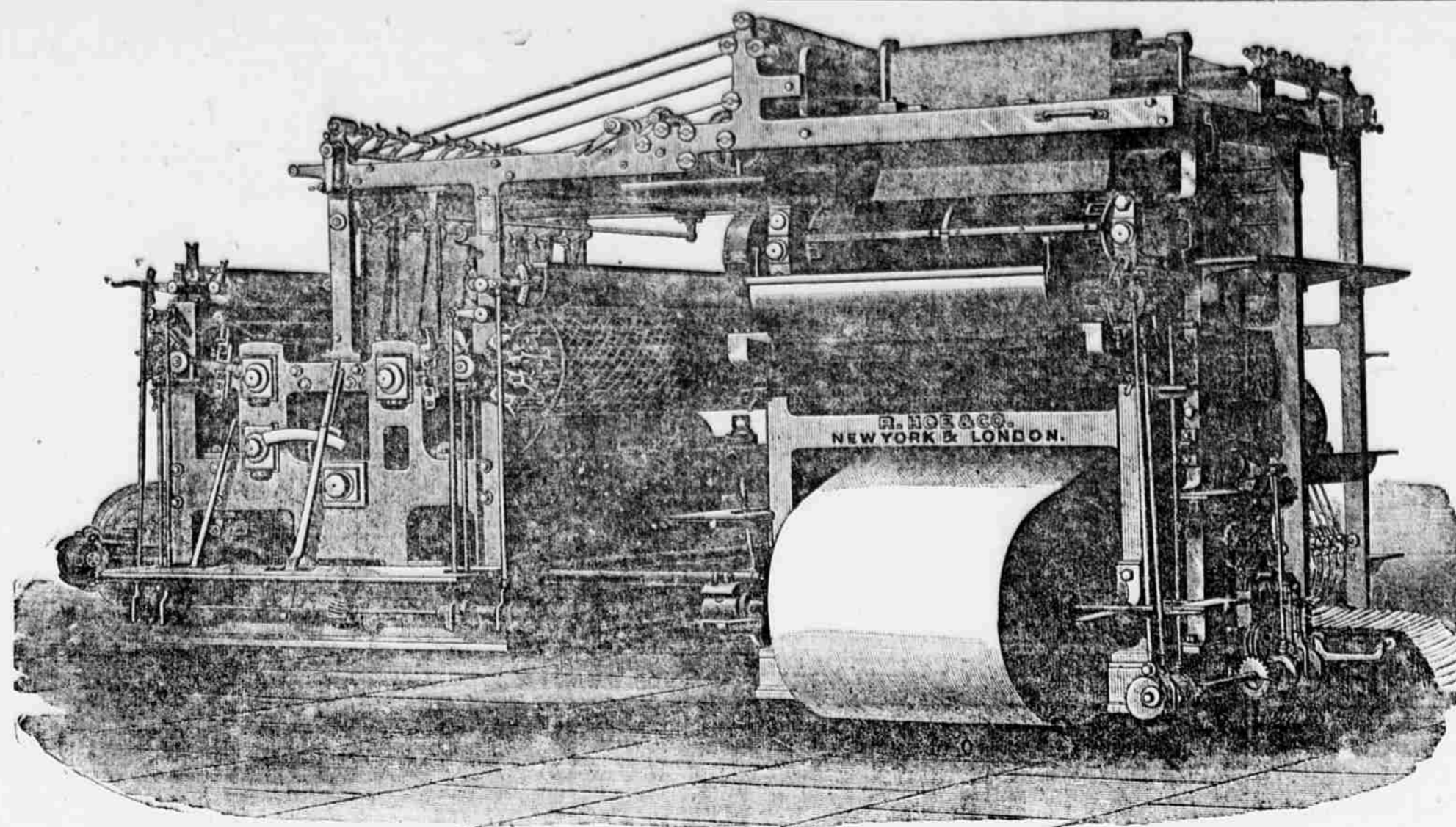
The Bee's new press is practically a combination of a single press and a double press. The two parts can be used together, or either can be used alone. The double, or main press, is the larger part of the big machine, but the single, or supplement press, alone is much larger than a great many presses in use today.

As large and heavy as are the rolls from which the paper is printed, the work of setting them in position to feed into the cylinders is not a difficult task. There are new devices for handling the big rolls of paper, and all that two men have to do is to stand at the ends of the press and guide the paper as it rolls into its position.

The ability to combine the printed sheets that come from the main press and from the supplement press makes it possible to print a paper of any number of pages that may be deemed advisable.

Suppose the managing editor gives instructions to run off a four-page edition, an extra that is wanted in a hurry. The main, or double press, will be disconnected from the supplement, or single press. The double press will be allowed to stand still, and only the single press will be run.

On Friday evening last a paper of ten pages was printed, pages 3 and 4 appearing on an insert sheet, the first of



THE BEE'S NEW \$25,000 HOE DOUBLE SUPPLEMENT PERFECTING PRESS.

its kind printed in Nebraska. For a paper of this size the entire press is used, both the single and the double presses being employed. Eight pages are printed from the double press and two pages, the inserted sheet, are printed by the single press.

The standard size of the morning edition of The Bee is twelve pages. To print this edition both the single and the double presses are again used. On the double press eight pages are printed, while four are run off on the single press, both coming together in the folding machine, and being thrown out together as one paper.

Perhaps some morning a sixteen-page paper may be required to contain the matter that is to be printed. To print a paper of this size the single press is again disconnected from the double, and the sixteen pages are run out on the double press alone, while the rate of turning of the press is reduced to 12,000 an hour.

The printing of a twenty-page paper is similar to that of the sixteen-page paper, with the exception that on the last fold of the folding machine the two tens are collected together into one paper; also, no duplicate plates are used in printing the twenty-page paper.

This manner of folding the paper insures its being presented to the reader much cleaner and neater than when folded twice, once each way. Moreover, the delivery boys can now carry nearly twice as many papers as they could when the papers had the two folds. All of the city circulation of The Bee is now printed with the half-page fold.

A feature of the folding machine of the new press is that it can fold either the quarter-page fold or the half-page fold, as desired, and further the method of folding can be changed without stopping the press or even slackening its speed.

The motor is supplied with improved safety devices, and the press may be stopped instantaneously. There are four little buttons situated on different sides of the big press, and any of these will completely stop the press in an instant. Should any one of the pressmen see anything that requires the immediate stopping of the big machine, he would not have to run around to the other side, or call to any one else to turn off the current; this he could do himself by merely touching one of the four buttons that are conveniently located.

The switch board for the motor is built of fine Tennessee marble, against the south wall of the press room. On the switch board is mounted an indicator that shines as bright as gold. It always shows the exact amount of power consumed at that time by the press. But better than this it also indicates if there is the least part of the machinery that is working badly.

ELECTRICITY AND THE PRESS

Improvement in Methods Used to Drive a Newspaper Plant's Massive Machinery.

The march of improvement in the machinery of a newspaper plant is, perhaps, most strikingly shown by the increasing use of electricity in the production of a modern newspaper. In perfecting its mechanical department The Bee has taken full advantage of the inventions of electrical apparatus designed for newspaper work.

As a result the new Hoe press is the first big press in the United States to be supplied with power from an electric motor that is on the same shaft as the press itself.

Another distinctive feature of the new motor is that it may be run at remarkably low speed. It will drive the press from ten to 200 revolutions per minute, and at any speed intermediate between these two points that may be desired.

Many plants that have adopted electricity to displace other forms of power still continue to use belts to convey the power from the motor to the press. In the new press room of The Bee the motor is located directly alongside of the rear end of the press, and there is just one main shaft under the floor connecting them.

The electric motor which these motors convert into power to run the new presses is furnished by the generators in The Bee's own electrical department. These generators are located in the basement in a room just south of the press room.

The work in the stereotyping department is increased by the installation of a new press. When papers of four, six, eight, ten or twelve pages are to be printed two stereotyped plates for each page are cast and two papers printed at once. On this account there are more plates to be cast by the stereotypers daily.

department there is a powerful electric motor that furnishes the power for running the entire plant of the stereotyping department, and in addition gives the power for operating the twelve large typesetting machines in the composing room. As there is only one hour in the afternoon and about four hours in the morning between the time when one shift of the machine operators leaves and another comes on duty, it will be readily seen that the motor that furnishes the power for the typesetting machines has nearly a continuous task to perform.

NEW PRESS ROOM OF THE BEE

Commodious Quarters Specially Constructed for Convenience and Finest Press Work.

For its size there is no finer or better equipped press room in the United States than the new press room of The Bee. It is located on the basement floor of The Bee building and opens on the street in the rear of the building. The room is just forty feet long, and the ceiling is seven feet high.

The light and ventilation of the room are its best features, no artificial light being needed in the day time at all. The room is lighted and ventilated by means of a number of large windows that open directly on the street, and the walls are painted white.

The new press is located near the center of the room, accessible from all sides. It rests on a foundation built of heavy brick and Portland cement, with stone coping. Below the press there is a pit five feet deep, with walls of brick and stone, and in this is ample room for taking care of the boiler, and the engine is connected with an auxiliary press until another perfecting Hoe press, the counterpart of the one just installed, is at some later day built and placed in position.

On the east and west sides of the new press room are located the paper storage rooms of The Bee. These rooms, separated from the press room by heavy wire partitions, have a capacity for accommodating six carloads of paper at one time.

THE BEE'S AUXILIARY PERFECTING PRESS.

old presses is that the former are curved in a larger semi-circle, the cylinders of the Hoe press being larger, and the curve is across the columns. With the plates used on the old presses the curve was with the length of the column instead of across it. This difference makes it possible to add one, two or three columns to a page on the plates for the new press.

practical use, but the construction is such that it is self-ventilating, and gives off enough air to cool it. When running the press at a high rate of speed it is as cool as the motors in the main electric room of The Bee, which are exposed to the air.

NEW STEREOTYPING PLANT

Complete Machinery for Making All Sorts of Plates—How the Work is Performed.

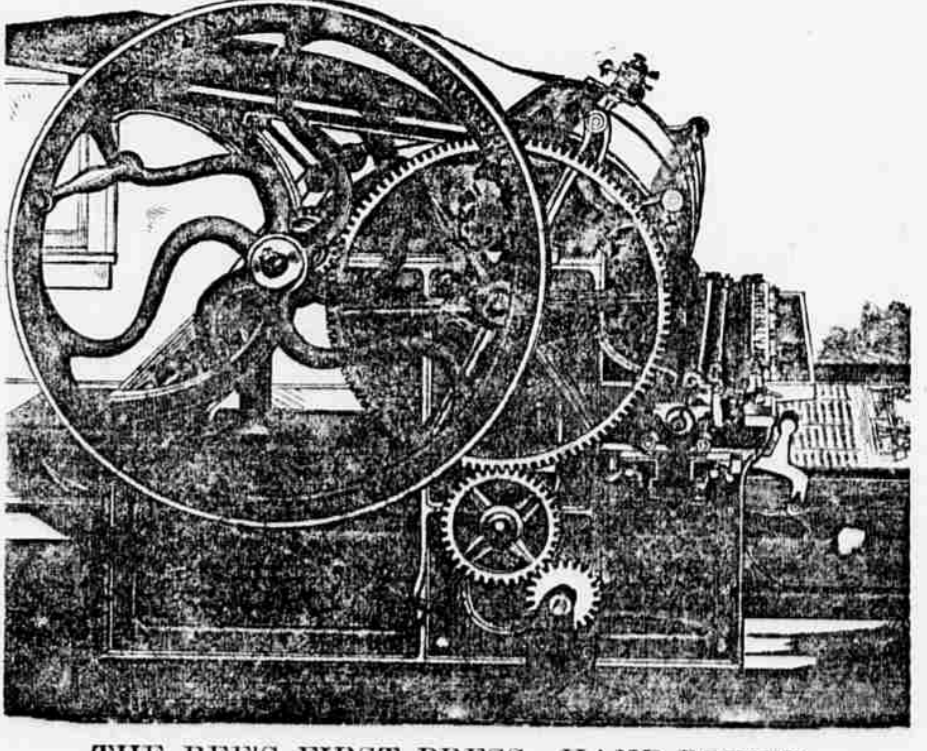
The installation of a great new press has been accompanied by noteworthy improvements in co-ordinate departments of The Bee. One of the marked changes is found in the stereotyping department, considerable new machinery having been placed in the rooms devoted to this department in order to stereotype new forms of plates for use on the big press.

The stereotyping department of The Bee is now fitted with two complete sets of the latest stereotyping machinery. The old set is retained for the making of the matrices and casting of plates for the Potter press, which is to be used as an auxiliary press, and the new set of machinery just placed in will perform similar work for the new Hoe press.

One difference between the plates used on the Hoe press and those used on the

plete four-page sheets per hour. The power first employed in turning out The Bee was an able-bodied and intelligent contractor by the name of Archie Richmond, who was for a long term of years employed in The Bee building, and who died a few years ago at a ripe old age. At his best he was capable of running off 275 complete papers an hour, so that beginning about 1 o'clock in the afternoon he kept on grinding until he managed to get out the entire edition of about 500 or 600 copies. This is in striking contrast with the new Hoe press of The Bee today, which will turn out in one hour 24,000 twelve-page papers, cut, folded and counted. Had Archie Richmond been compelled to run off today's twenty-four-page edition on the old Cincinnati press it would have taken him fully thirty days of ten hours' hard labor each day.

The old Cincinnati press belonging to the Redfields was used by The Bee until after the fire in June, 1872. After moving into the lower Farnam street office Mr. Rosewater invested in a second three-revolution Hoe press, with a capacity of 2,500 to 3,000 four-page impressions an hour. This Hoe press was about twelve or fifteen years old then and was in use in The Bee office for ten years. When taken out it was still a first-class machine, and was the first Hoe press brought into Nebraska. To it was added in course of time a Cottrell & Babcock large cylinder second-hand press. This printed about 1,400 papers an hour. Then Mr. Rosewater made another venture, and bought a new two-revolution Cottrell & Babcock press, which was considered to be a marvel in this section. It was used in printing the paper and also in job work. About 1881, soon after the first folding machine was put on the market by Chambers, of Philadelphia, one of these machines was purchased. This was the first folding machine brought into the state.



THE BEE'S FIRST PRESS—HAND POWER.

Then a double cylinder second-hand Hoe press with a capacity of 2,000 eight-page papers an hour was purchased, and shortly afterwards a Dexter automatic folder, which was followed by another, being attached to the double cylinder press. A new double cylinder press was added about 1883. It had a capacity of 3,500 eight-page papers an hour, and was equipped with

and there is a full set of signal electric bells so that the one may advise the other of the coming of the plates.

Visitors in The Bee building have always found the stereotyping department one of the most interesting. The alacrity of the workmen there, the ease with which they handle the heavy plates, the quickness with which the molten metal is converted into plates ready for the press, have proved fascinating to large numbers of visitors, and since the introduction of the improved machinery there this department is likely to be more popular than ever.

For the benefit of those not familiar with the details involved in the printing of a great newspaper, it may be worth while to briefly review the work of the stereotypers. When a form of type, representing a page of the paper, is rolled into the stereotyping room from the composing room, it is taken in charge by expert stereotypers. The type is brushed clean, and is then placed down. A brush moist with oil is rubbed over the face of the form, and a film of oil is spread upon the type to prevent adhesion to the matrix which is to be laid upon it. The base of the matrix is especially prepared paper known as "matrix paper," almost as thin as tissue paper before its preparation. The matrix is prepared in advance of its use by using paste to get enough of the paper united to make the correct degree of thickness. It is then stored away for seasoning. When placed on the type it is about as heavy and as thick as pasteboard. The paper is pounded down upon the form by two men with brushes, and in a moment they have the exact impression of the type transferred to the matrix. The Bee also has a patent molding machine for doing this work, but the brushes are preferred by the stereotypers.

The form of type with its matrix cover is next put into a steam chest, known as a steaming table, and allowed to bake for from five to ten minutes, until the matrix is thoroughly dried. A heavy steel cover is screwed down over the form and the steam heated box soon cooks the moist paper made to a firm reproduction of a page of the paper, the exact reverse of the type. The matrix is placed in a casting-box, and against it is poured a ladleful of molten metal heated to 600 degrees. From this box is taken the metal plate from which a page of the paper will be printed. But first must the plate be cut and smoothed to fit the cylinder of the press. All the rough edges are trimmed off first by machinery especially adapted for this work. On the chiseling block all spaces and protrusions that might make black spots on the paper are chiseled out. From the chiseling block the plate is placed face downwards on a planer, where it is shaved off to the proper thickness and evenness. Now the plate is ready for the press, after it has been given a cold bath in its own bath-tub to cool it off. The plate is put on the elevator and dropped down to the press room in just thirty seconds, while the signal of its coming is given to the foreman of the press room.

An important part of The Bee's stereotyping department is a complete job plant. With this the cuts of the advertisers are stereotyped. The pictures of men whose lives have been saved by six bottles of something, and other cuts that find their way through the business office of the paper are stereotyped. These and other cuts are also mounted for use in this plant. The Bee's stereotyping plant will therefore compare with that of any plant in the country.

FORMER PRESSES OF THE BEE

Always a Pioneer in First Introducing the Most Modern Mechanical Improvements.

The press on which the first copy of The Bee was printed was a Cincinnati hand cylinder, purchased by Redfield Brothers somewhere in the '60s, a cut of which is given. The capacity of this press was about 700 impressions an hour, or about 350 com-

plete four-page sheets per hour. The power first employed in turning out The Bee was an able-bodied and intelligent contractor by the name of Archie Richmond, who was for a long term of years employed in The Bee building, and who died a few years ago at a ripe old age. At his best he was capable of running off 275 complete papers an hour, so that beginning about 1 o'clock in the afternoon he kept on grinding until he managed to get out the entire edition of about 500 or 600 copies. This is in striking contrast with the new Hoe press of The Bee today, which will turn out in one hour 24,000 twelve-page papers, cut, folded and counted. Had Archie Richmond been compelled to run off today's twenty-four-page edition on the old Cincinnati press it would have taken him fully thirty days of ten hours' hard labor each day.

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