

# New Presses and Stereotyping Plant Combine Highest

## FIFTY THOUSAND AN HOUR FROM NEW MACHINES

To Print Eight Pages in Three Colors and Black is Something No Other Rotary Press Can Do.

Fifty thousand eighteen page newspapers in an hour.

This is what The World's new press built by the Duplex Press Co. of Battle Creek, Mich., is capable of doing, and even in these days of time annihilating machinery, the achievement is worthy of more than passing note.

The press, which is of the largest type constructed at the Battle Creek works, is thoroughly up-to-date and of proven efficiency. It is the largest machine constructed in the famous Battle Creek works, and is what is termed an Augmented Octuple. Besides being able to print an 8, 10, 12, 14, 16 or 18 page paper at the rate of 50,000 per hour, it can produce a paper of 20, 22, 24, 26, 28, 30, 32 pages at the rate of 25,000 per hour; all folded in book form. The color equipment will admit of printing eight pages in three colors and black, something no other rotary press of present construction can do.

**Built on a New Principle**  
A new principle is in the basis of the construction of the press. The old method was to have the rolls of paper in a series of decks, one above another, but now they are all assembled on a uneven level and at no point are they more than six feet from the floor. Both sides of the web are open to the inspection of the foreman, which enables him to see that the color scheme is correct without having to examine the finished product.

The press drive consists of four units, which are so arranged that any one unit can be run singly or with one or more of the others.

Technically the press is termed a 72 plate machine. It is equipped with color section on two units and when fully loaded carries 88 plates.

**Paper Starts in the Basement.**

The printing operation begins on the basement floor where the white paper is fitted into the machine to be delivered in printed and folded paper on the ground floor.

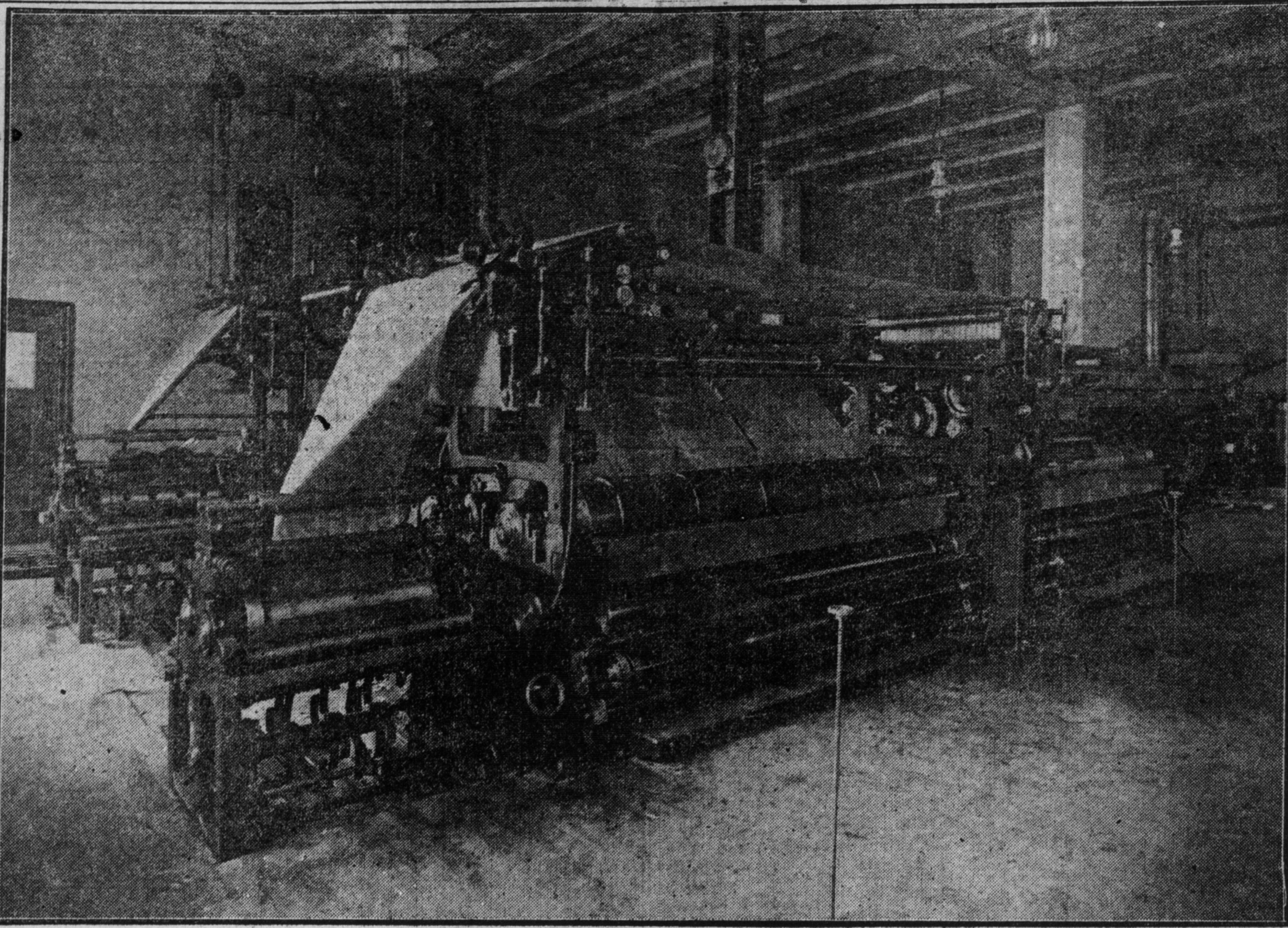
The press is equipped with two fold-ers, one of which will deliver the paper in a 4-fold in shape for mailing, while the other gives a half page fold.

The safety of the operator is a very important consideration; in fact one of the good aims of modern machinery is to guard the well being of the employee. The object is largely humanitarian, but there is of course a practical side, for it is as well to avoid disability claims.

The placing of plates on the cylinders of the new press is much simpler and safer than with the less up-to-date kind. The cylinder works lengthwise with the machine, so that the operator doesn't have to reach inside to fasten the plates, while the gears are absolutely concealed and covered.

Powerful Motors Supply Power.

Two powerful motors supply the



View of the Press Room in The World's New Home, Showing the Two High Speed Presses That Are Capable of Turning Out Fifty Thousand Eighteen Page Papers Per Hour.

any station the pressman can start or stop the machine or increase or decrease its activity. Between the minimum and the maximum there are no less than 26 gradations or registrations of speed attained. Violent jerking is thus prevented, minimizing the danger of tearing the sheets of paper.

**Every Device for Ensuring Safety.**

A safety device with which each station is equipped prevents the press from being started until released, so that pressmen in handling any portion of the machinery run no risk of accident, and the machine being started without due warning.

The general public is probably little familiar with the manner in which the plates from which the paper is printed are made, so that a brief description of the World's splendid new plant may be given.

After leaving the compositor in type form it is reproduced in paper by the stereotypers, this being effected by placing over the surface of the type a pulp preparation called a "matrix,"

cold water on the surface, completely cooling the hot metal. It then continues over a set of brushes, which revolving quickly remove all moisture, thus delivering the finished plate ready to be placed on the cylinder of the press without any tooling. The whole operation from the time the plate is placed on the casting until it is ready for the press occupies only about thirty seconds.

**DURABILITY OF BUILDING STONE.**

**Most Lasting of Materials When Used in Intelligent Way.**

(From Engineer Digest.)

While the presence, to a greater or less degree, of interstitial water, or "sap," in all stone has been recognized for a century, the part that it plays in the weathering of stone was unknown until comparatively recently. The quarryman and stone worker found that a stone fresh from its bed

off as moisture and frost got a lodgment. While a disregard of this precaution is responsible for a large portion of the defective stone work of the last 50 years, it has played no part in recent work, and the future is secure. There have been thousands of instances of disaster, often costly in human life, following the use of poorly mixed concrete, badly burned and improperly laid brick and defective iron and steel work. The percentage of failure in stone is lower than in any other material.

**The Aeroplane Industry.**

In Europe the manufacture of aeroplanes has become an active industry. Six firms are actively engaged in the business, each one turning out flying machines in regular series. Since he made his flight across the English Channel, Louis Bleriot has booked orders for 150 small, one-man aeroplanes and for twelve passenger-carry-

## Just Inside the Doorway

Simple but Attractive Appearance of the Business Office.

Nearly all who enter The World's new building have the same remark, "You have pretty fine offices here now."

Whether such a statement is inspired by the contrast to the old building, where in past years The World established its reputation as a metropolitan daily, is hard to say, but at any rate it is a well recognized fact that in the selection of a new site and in the style of the building erected excellent judgment was exercised. It goes without saying that the equipment of The World newspaper is complete thorough, every department having received the proper attention due to its fitting it out in a manner most convenient for turning out a paper on a large scale.

**Most Attractive Office.**

Of all the departments, however, the one to which special attention has been devoted and which is mainly responsible for the general impression the public may have as to the complete equipment of the paper, is the business office. Practically everything about The World is new, but no department will have a more attractive appearance than this one. It is the one department that the management realizes is most closely in touch with the public and for the transaction of business they have made it most accessible to those who have occasion to visit the office. In the layout of the public meet with every convenience and visiting it is at liberty to judge for themselves as to whether or not it is

arranged in every particular to meet general approval.

The entrance to the office is through a revolving door opening off Richmond street, landing the visitor on a mosaic floor passageway, which runs fifty feet north to the press-room wall, where on turning to the left is to be found the main stairway and elevator. Behind the counter to the right is the general business staff and immediately to the north the private office of the advertising manager and his staff. In the latter section is located a room furnished with tables and chairs for the use of the public in writing advertisements. To the left of the main entrance is the circulation department. The counter in front of the circulation department runs almost the full length of the passageway.

**Simple But Effective.**

Simple and unique has been the layout of the office and in its allocation particular care has been given to arrangement, the first consideration being general utility and adaptability to the requirements of the business. At the same time the pleasing and symmetrical plan followed reduces all obstructions in the way of partitions to a minimum, but still allows sufficient privacy for those of the staff who have to meet the public in private conference.

The furnishings of the office are splendid throughout. The two counters which run almost the full length of the office and from the centre aisle are made in quarter cut oak with marble tops. The marble and oak combination gives a rather attractive finishing touch to the whole appearance of the office. They are at the same time convenient for customers who would much prefer to do business with a clerk straight over the boards rather than be compelled to peer thru a little hole in some glass or wire cage in which the clerk may happen to be enclosed.

## GETTING COPY FROM EDITOR TO MACHINE

Glimpse Into Busy Composing Room Where Hundreds of Thousands of Words Are Hustled Into Type.

Of the many departments that are included in the establishment of a modern newspaper, the one about which the public knows the least and surrounding which is a mystifying air—but yet is most vital to "turning out" the paper—is the composing room.

This all centres around that fatal bugbear of the composing room—space. When the composing room foreman advises the editorial staff that space is "tight," it brings joy and sadness to the reporting staff. The man with a big story—he grumbles; his fellow whose assignment has produced "nothing worth while" is more than satisfied. When space is light it is a safe gamble that more copy will be set than will ever get into the paper, and the general order is to boil, boil, boil—said out the "verbs."

**Order Out of Seeming Chaos.**  
To the unskilled visitor the composing room itself represents both hell and chaos. But there is no unnecessary noise, and out of the seeming disorder emerges later the well edited, concise, chatty and all-informing paper.

Let it be known, that the composing room is a place of ceaseless energy. Here it is that the linotype machines, which will ever be associated with the name of Otto Altenpather, with the "comps," who come in far more abuse than praise, work day in and day out, week after week, thru the whole year. There are the men, and these are the machines—that set the copy ready for the forms. Copy is a nice sounding name, and copy looks good when it is typewritten. Now, copy is either good or bad. In the majority of cases it is the latter, and often the exasperated composes his compliments to the city editor and asks if he can read the copy himself. However, good or bad, the story after it reaches the composing room soon takes shape, and the manuscript is quickly reduced to a number of regular lines of solid type metal, punctuated, spaced, ready for the heading and then the printing.

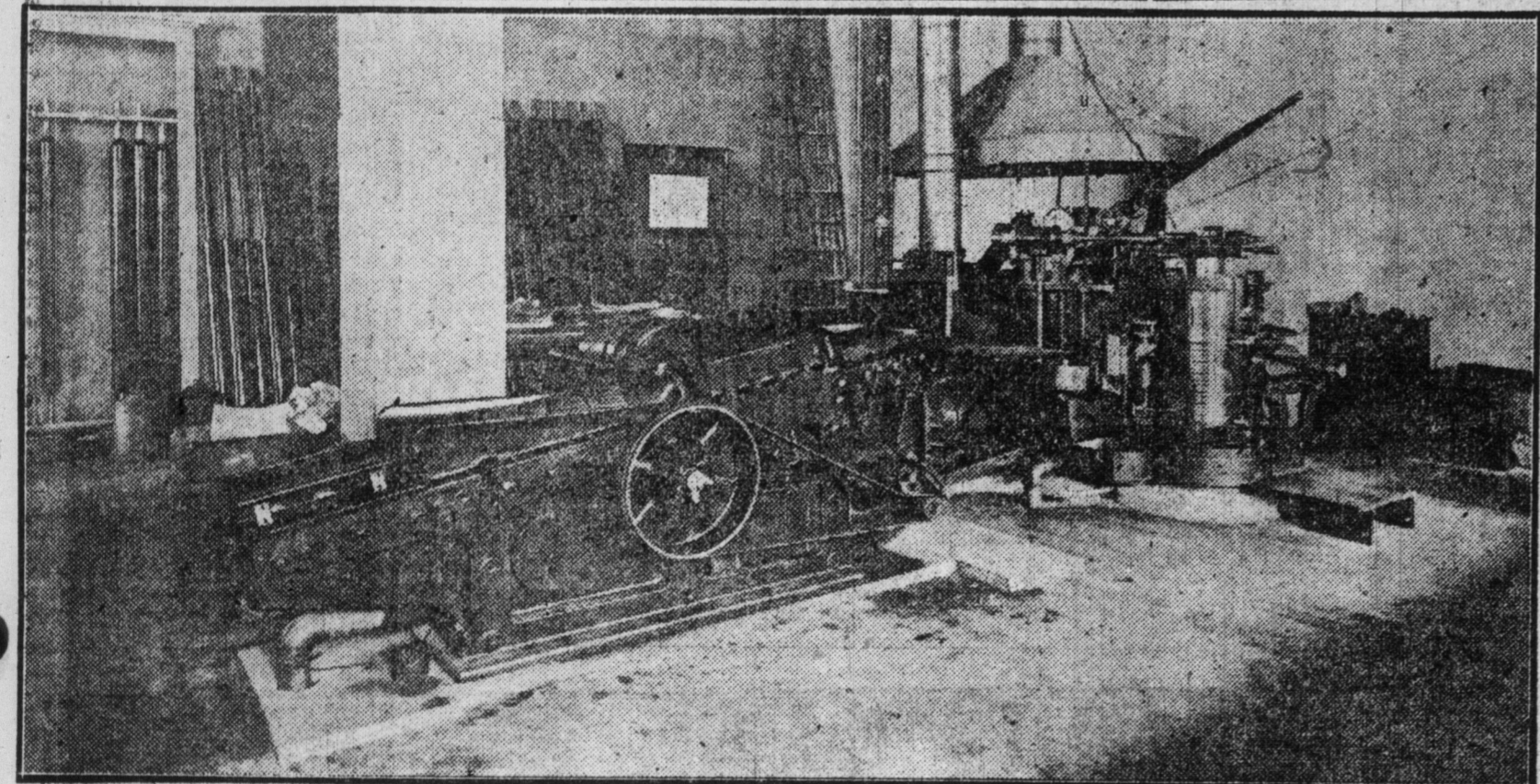
**When the Foreman Comes Down.**  
Talking about space, the editorial staff often takes to the cyclone cellar when the composing room foreman comes down stairs at five o'clock. He is saying, "Do you think I have a rubber stick that I can get all this stuff into a column?" Be it known that the foreman's rubber stick is a mental hold the type when setting. It may be a heading with too many letters to the line that is agitating him, or perhaps he has enough copy for "a half-column" and he doesn't intend to let it go. When press time comes and the make-up man gets busy, the foreman and his staff indulge in idle gossip. Talk in restrained, subdued whispers. At make-up time there is an air of apprehension around the place. A story here or there may be unfinished that is keeping a form open; perhaps a robbery, murder, fire or hold-up may happen at the last moment, and there is the thought that a murder is usually done in the make-up man's heart. No matter how crowded the paper is room can always be found for a good story.

Newspaper practice above all others is subject to such contingencies. So much for the general atmosphere of the composing room. How about the mechanical equipment? The chief mechanical feature, of course, is the linotype machines. As before indicated, these machines have revolutionized typesetting. The newspaper of the average size requires from eight to twenty linotypes. The more machines it has the more time and care can the editors bestow upon the copy, the news stories can be sorted and a wider range of subjects covered. After the type is set, proofs are taken in order to correct mistakes. Skilful as the proofreader may be, typographical errors often pass the eagle eye of the proofreader, while not infrequently is not always responsible for the little mistakes that appear in the paper. Late copy is trusted to providence—but with varying results depending probably upon the amount of faith employed. A short time ago one machine acted in an unduly manner, and a quarter-column story went into the paper with something like twenty typographical errors.

**Speed in Making Plates.**

Assuming, however, that the setting is correct, the type is trimmed and laid on the table for the foreman. He comes along, finds the correct heading and puts the story into the form, which corresponds to a page of the paper. When filled, the form is locked and sent to the stereotypers, who make a matrix from which the cylindrical plates are cast for the press. The wet matrix—a composition of set pulp paper—is laid over the face of the type, pressed into the interstices of the type by passing under heavy rollers, placed upon a steam table where huge presses filled with steam quickly dry out the moisture. After a little trimming the matrices are sent to the casting machine, and in a few moments—actually at the rate of three to the minute—the heavy cylindrical plates are cast out of type metal and are ready for the press.

The mechanical equipment of The World is the most improved in Canada, and is probably unequalled by any paper on the continent. In the stereotyping branch especially, has a great saving of time been gained by the installation of new machinery. This machinery is such that the forms can be handled with great rapidity they can be kept open longer and the latest word happenings included in your morning budget. Or in the case of a special edition, The World can outstrip competitors by half an hour.



Another View of Press Room, Giving an Idea of Stereotyping Plant. The Junior Autoplate Machine for Casting Plates is in Rear, While on Left is the Machine for Shaving and Cooling Plates.

electric current which runs the press. They are mounted on a concrete pedestal immediately under the floor of the press-room, are directly connected with the gears of the press and are so arranged that both motors and both presses can be run as a unit. Should an accident befall one or if one section is not full plated the other can be operated as an independent press.

As economy of time is so needful the rapidity with which the sheet can be threaded or passed thru the machine is particularly gratifying. Should the web suffer a break only a minute and a half is required to thread the broken sheet thru the machine and resume operation. When it is said that with the older press such a misadventure means the loss of ten or fifteen minutes the advantage gained is obvious.

Not the least notable feature of the press is the perfect control over the speed, which can be regulated to a nicety. The electrical controller performs this important function. From

and then passed thru a machine known as a matrix roller.

This drives the pulp sheet down on the face of the type which is then placed in a steam bed and baked for four minutes. On being removed the matrix is shot thru a chute to the casting room where it is placed in a casting box of the plate machine. A single movement of the operator's hand causes a volume of molten metal to be pumped into the machine. This starts the mechanism and the plates are delivered at the rate of three per minute.

**Most Up-to-date Equipment.**

It is here that the auto-shaver comes in. A second operator places the plates in the auto-shaver. This wonderful device, which is decidedly up-to-date to accord with The World's entire stereotyping equipment, after receiving the plate automatically shaves it to a uniform thickness and trims the ends and sides. It is then passed along to a cooling device which pours a volume of

and full of quarry water was easy to work, and that it grew harder when the sap had dried out. Hence stone was frequently cut and set in a building before it had seasoned, and thus fell a victim to frost. Now the architect and the builder know the danger in certain varieties of "green" stone and provide, against it, their specifications. No one expecting a satisfactory and durable job would think of using unseasoned timber, and similar safeguards are called for in the use of stone.

Much of the defective stone work of the past was caused by a neglect of a fundamental principle in stone masonry—the need to set all stone or a markedly stratified or laminated formation on its natural bed. As such stone splits most readily along the plane of stratification, the easiest way was to split it up for thin ashlar and set it upright in the wall. But this quality of cleavage naturally caused it to scale

ing machines. By the end of the year he will have sold two hundred aeroplanes. At the present moment six completed machines are being turned out per week, and contracts have been booked or are about to be booked which will absorb the output for several months ahead.

Volsin, who has been in the business longer than anybody else, has sold forty machines during the past year, his total production being about sixty. Henry Farman has sold, or has orders on hand for forty machines, and Antonietti declares that he has produced or has under construction sixty monoplanes. Bayard-Clement, the well-known automobile constructor, has made arrangements for producing 100 aeroplanes similar to the one with which Santos-Dumont made his cross-country flights.



One of the Big Motors Which, Mounted on a Pedestal of Concrete in the Basement, Drives the Press at High Speed. This is as it Appears Unharnessed.