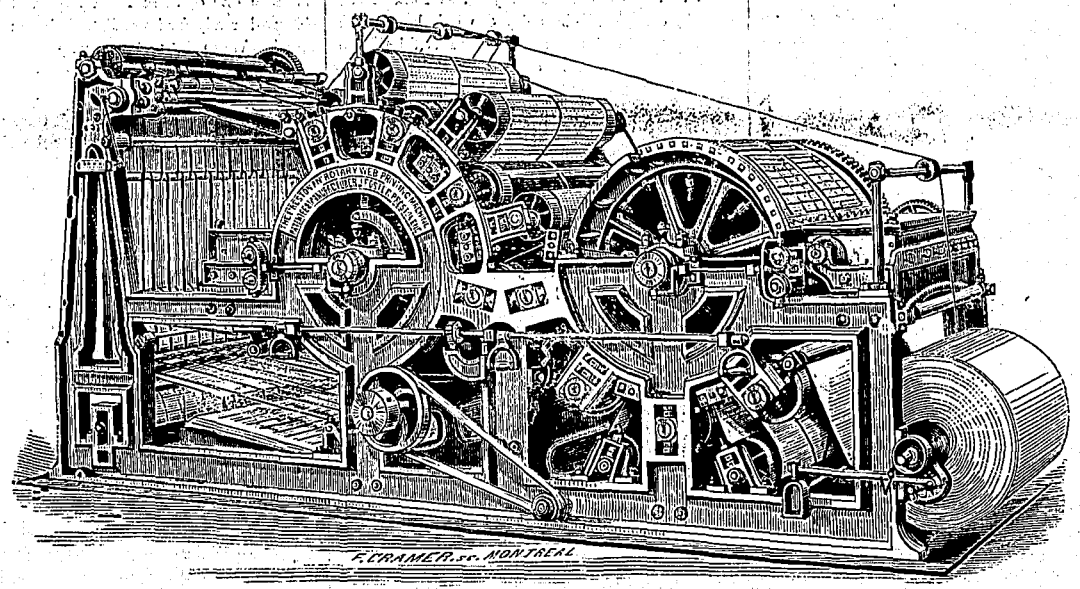
Dominion Printer.

PUBLISHED BY THE DOMINION TYPE-FOUNDING COMPANY.

Vol. I. MONTREAL, AUGUST, 1875. No. 5.

The Prestonian Web Printing and Perfecting Press.



ONE of these celebrated Printing Presses has recently been set up in the office of the Montreal "STAR." It is a massive and compact machine, seventeen tons in weight—18 feet long, 6 feet wide and 8 feet high; the movements are all on the rotary principle, and the type beds present a curved surface; this system is universally allowed to be the only means of printing rapidly, and was first successfully used in the Hoe Rotary Press, which, however, employed a number of lads as feeders or deliverers of the sheets, and only allowed of the printing off one side at a time.

The Web Perfecting Machine principle was since developed, and of this the most successful employment is found in the Prestonian, which, among other merits, has that of being the only Web Press capable of printing from moveable types as well as from stereotypes. The appearance in action of the machine may not easily be explained without the aid of diagrams; but we submit the following particulars of the *modus operandi*. The most prominent features of the machine are two large cylinders supported horizontally by strong bearings and a massive framework. Curved on the exterior of these cylinders are the type forms of the four pages of matter composing the STAR—two on each—held in position by screws and other apparatus familiar to the trade, the type bed of each page forming a section of the cylinder, technically termed a "turtle." In contact with the first type cylinder and immediately below it is the first impression cylinder, clad with thin blanketing, with the roll of paper to be printed fixed in close proximity. The almost endless sheet of paper, extending 3½ miles in length, is carried round this impression cylinder, and as the machine rotates, the type, standing a little higher than the rest of the cylinder, imparts its first impression here. The sheet then passes round an adjacent cylinder called a carrier cylinder, and returns to the second impression cylinder, and is printed a second time on that part of the sheet immediately preceding the first impression. The same process follows with the third and fourth cylinders. It will thus be seen that in one revolution of the first type cylinder four impressions of one long, continuous sheet have been produced, and so long as this cylinder revolved an undivided length of paper printed on one side only would be produced; but it will at once occur to the reader that the same mechanical arrangement of cylinder and type that produced a succession of impressions on one side of the paper, will be capable of doing it on the other. The sheet is now conducted to the second type cylinder, where, revolving over a succession of impression cylinders and carrier cylinders, identical with the arrangements already described in the first half of the machine, each page is "backed" with the one necessary to its completion, and an endless stream of newspapers in one unbroken length is evolved. The ink necessary for the work is contained in two ducts, one at each end of the machine, is distributed upon the smooth surface of those parts of the type cylinders not occupied by the "forms," and is imparted to the type by a couple of rollers inserted between each impression cylinder. Thus far, we have only seen the paper printed; but it remains still to be cut into separate sheets, and piled on to the receiving table. For the separating process, the sheet is carried by means of tapes from the last impression cylinder through several small cylinders to the larger ones, in one of which is a perforating knife, which separates the paper across the entire breadth. Passing them through another series of tapes, the newspaper is delivered. To those initiated in trade mysteries it will not be necessary to say that no one "flyer" could deliver papers printed with the rapidity achieved by this machine; but an ingenious arrangement has been perfected by which the flyer lays down two sheets with one stroke, thereby gaining time for its return and the interval necessary for the preceding sheets to rush beneath it. An indicator being attached to the perforating cylinder, an accurate record of the number of papers printed is preserved during the entire period the machine is in motion, the indicator registering in single numbers up to 99,999.

This machine is produced by the celebrated establishment of JOSEPH FOSTER, Esq., Preston, England, and is the first of the kind on this continent.

We are prepared to take orders for the Prestonian, and have no doubt every newspaper of extensive circulation will find it to its advantage to purchase one.