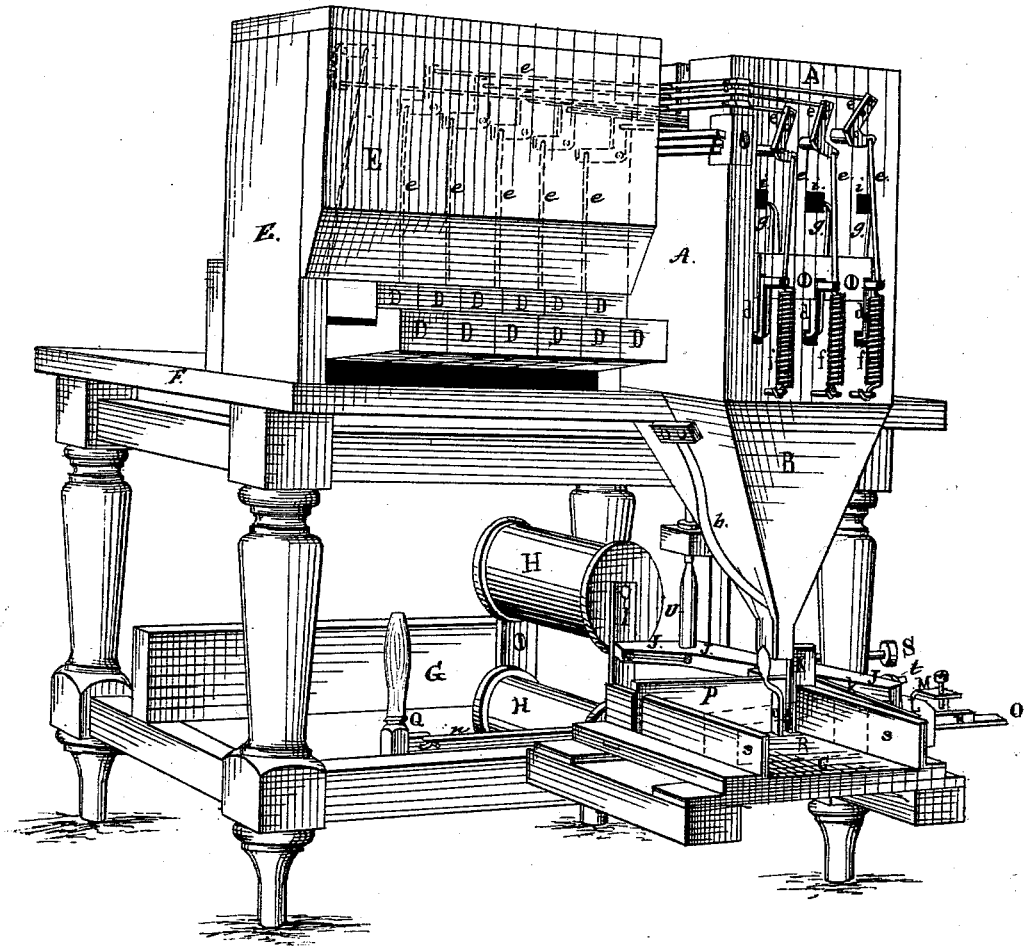
2 Sheets--Sheet 1.

W. D. C. PATTYSON.

Type-Setting Machine.

No. 166,549. Patented Aug. 10, 1875.

Fig. 1.



WITNESSES

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H. B. Munn

INVENTOR

Wm D. C. Pattyson
By his Attorney
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UNITED STATES PATENT OFFICE.

WILLIAM D. C. PATTYSON, OF SHERBROOKE, CANADA.

IMPROVEMENT IN TYPE-SETTING MACHINES.

Specification forming part of Letters Patent No. **166,549**, dated August 10, 1875; application filed January 13, 1875.

To all whom it may concern:

Be it known that I, WILLIAM D. C. PATTYSON, of Sherbrooke, in the Province of Quebec, Canada, have invented a new and Improved Electro-Magnetic Type-Setting Machine; and I do hereby declare the following to be a full and correct description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view of the machine. Fig. 2 is a plan of the type-tubes. Fig. 3 is a transverse section of the funnel. Fig. 4 is a vertical section of the same. Fig. 5 is a detail view in vertical section, on an enlarged scale, of the device for holding and dropping the type. Fig. 6 is a detail view in plan of the devices for giving the lateral movement to the type in line, and the longitudinal movement to the type in column.

The same letter indicates the same part wherever it occurs in the drawings.

The nature of my invention consists in the peculiar construction and mode of operation of a machine for setting types, in which the types are placed on end in tubes, and delivered in the desired order and position in line and column upon a galley, by means of mechanism chiefly operated by keys and levers controlled by the hands of the workman, the lateral movement of the type in line being produced by the power of electro-magnetism, called into action by the weight of the descending type as it enters the galley from the tube, all as hereinafter more particularly set forth.

The operative parts are supported upon and attached to the frame F of a substantial open table. To the top of the table is attached the box A, containing the tubes *a a* for the reception of the types. There are as many tubes in the box as there are different types to be used. The type are supplied to this case in any suitable manner, the method of placing them in the tubes forming no part of my present invention. Each tube *a* is provided with a valve, *d*, operated, by means of connecting-rods *e* and suitable bell-crank levers, by the keys D. These keys are placed in the lower part of box E, which is attached to the table by the side of box A, as shown in Fig. 1. By depressing a key the valve connected with it is opened, and a type is allowed to drop from one of the tubes *a* into the funnel B. The types *l l'* (see Fig. 5) are placed face upward, and one on top of the other, in the tubes *a*, leading to the funnel. Each type is, in its turn, supported below by the valve *d*, pivoted at *h*. The form of the valve is clearly shown in Fig. 5. It is drawn out of the tube *a* by the rod *e*, operated by one of the keys D. To the upper part of the stem of valve *d* is attached a spring-arm, *g*, which, when *d* is retracted to let type *l* fall, is thrown into the tube *a* through opening *i*, and, engaging with type *l'*, holds it up until the valve *d* re-enters the tube to receive and support type *l'*. The funnel B is attached to the bottom of the box A, and into it the lower ends of the tubes *a* open, as shown in Fig. 4. A mouth, T, in the lower end of the funnel, is of the proper size to allow the passage of a single type. A spring, *b*, presses lightly against the side of the type as it is passing out of the mouth T, to hold it in proper position while descending into the galley. Below the funnel B is placed the galley C, provided with vertical sides *s s*, a movable back, P, and a sliding block, R, the last shown in dotted lines in Fig. 1. A slide, O, moves laterally in a groove in the back of the galley, and receives the type from the funnel. It forms with the back P, against which it slides, a device having the same function as the ordinary composing-stick, to receive and hold the type as set in line. As each type descends, the slide O is moved to the left a distance sufficient for the reception of another type by the lateral movement of the type-setting block K, impelled by the lever J, attached to the armature I of the electro-magnets H H. These magnets are excited by an electrical current broken and closed through the poles L M by means of the librating-lever N. (See Fig. 4.) One end of this lever is slightly heavier than the other. The lighter end projects under the mouth T of the funnel, and each type, in entering the galley, descends upon that end and depresses it, raising the opposite end into contact with the pole M, to complete the circuit and excite the magnets H H. The armature I is attached to one end of a bell-crank lever, J, (see Figs. 1 and 6,) which turns horizontally upon an upright fulcrum-shaft,

A. K. PHILLIPS.

Needle Wrappers.

No. 166,550. Patented Aug. 10, 1875.

Fig. 2.

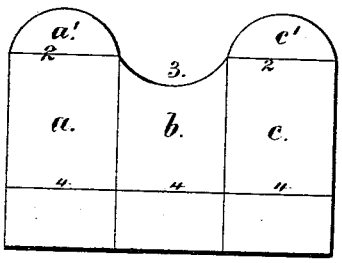


Fig. 3.

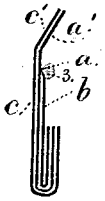


Fig. 4.

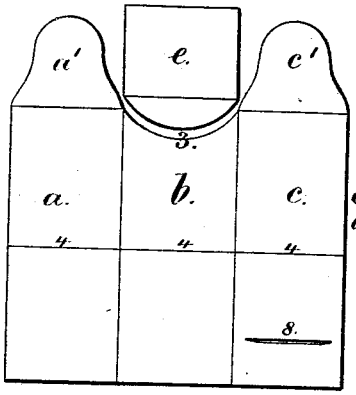


Fig. 5.

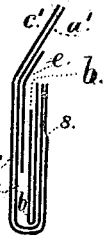
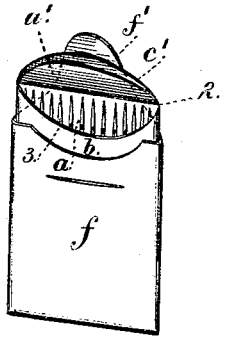


Fig. 1.



Witnesses

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