

(Model.)

T. A. EDISON.
TYPE WRITER.

No. 295,990.

Patented Apr. 1, 1884.

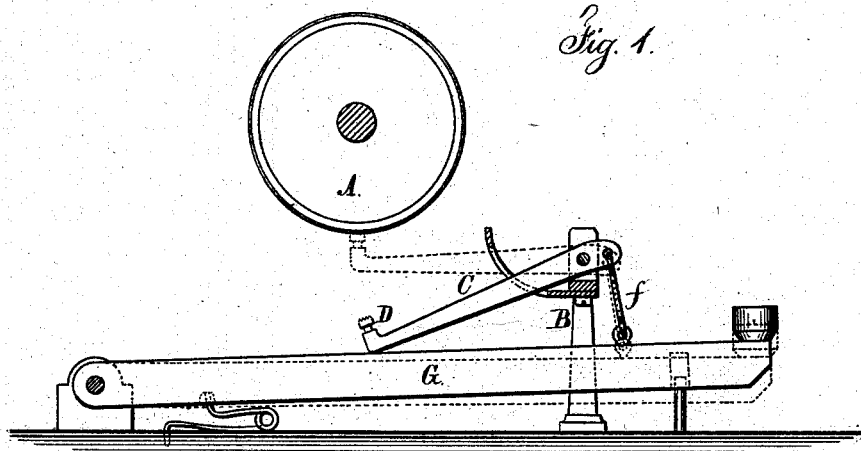
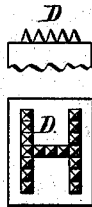


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

THOMAS A. EDISON, OF MENLO PARK, NEW JERSEY.

TYPE-WRITER.

SPECIFICATION forming part of Letters Patent No. 295,990, dated April 1, 1884.

Application filed December 9, 1878. Renewed May 25, 1883. (Model.) Patented in England October 29, 1875, No. 3,762; in France May 6, 1876, No. 112,719; in Belgium May 8, 1876, No. 39,502; in Austria August 23, 1876, No. 26,935; in Italy August 26, 1876, No. 8,733, and in Canada September 6, 1876, No. 6,508.

To all whom it may concern:

Be it known that I, THOMAS A. EDISON, of Menlo Park, in the State of New Jersey, have invented an Improvement in Duplicate Printing, (Case No. 167,) of which the following is a specification.

In Letters Patent No. 180,857, granted to me, I have set forth a pen for perforating paper, and a press in which the perforated paper is stretched in a frame, and ink from a roller forced through the perforations, and an impression made on a sheet of paper laid on a bed.

Type-writing machines have been made in which the type is impinged upon the paper to produce an impression, and in stamp-canceling machines types have been used having roughened or pointed surfaces.

My invention relates to the method of producing printed impressions in duplicate, consisting in pressing upon paper types in succession each of which has a surface of points so as to perforate the paper, and then forcing through the perforations ink upon the sheet of paper, and thereby printing upon the same.

In the drawings, Figure 1 is a section representing one key and lever of a type-writer, and Fig. 2 is a side and face view of the letter magnified.

A is the roller upon which the paper to be perforated is secured, in the usual manner, felt, blotting-paper, rubber, or other soft material being placed over the roller, and against this the paper to be perforated lies.

B is the standard or part of a ring, and all the type-levers are arranged so that the perforating-types upon their extreme ends will strike one common center at the roll A. Only one lever and perforating-type is shown in the drawings.

C is the type-lever; D, the type; f, the wire to the finger-key G.

The surface of each type is composed of numerous fine points that will perforate the paper when pressed upon it. The paper,

after it has been perforated by the types in the words, lines, and sentences required for one page, is removed from the type-writing machine, and the printing is performed by forcing ink through the perforations upon a sheet of paper in a manner similar to that set forth in my said Patent No. 180,857. It will be evident that these perforating-types may be introduced into any type-writing machine in which sufficient force can be applied to perforate the paper and form a stencil of type-letters, each letter being composed of numerous perforations.

This method of printing is to be distinguished from that in my aforesaid patent, because each perforated letter is made complete by the pressure of a type, whereas in the said patent the letters or characters had to be written or drawn out by hand, and hence could not be made as rapidly or perfectly as by the impression of a type of numerous points. This method is also to be distinguished from the stamp-canceling devices in which a single stamp is forced into the paper to perforate or mar the same in a manner to prevent alteration, and the perforated paper was not used for printing with ink. My method of printing, therefore, necessarily comprises all of the successive operations, and is an improvement in duplicate printing.

I claim as my invention—

The method herein specified of producing printed impressions in duplicate, consisting in impressing upon paper types in succession, each of which has a surface of points, so as to perforate the paper, and then forcing ink through the perforations upon the sheet to be printed, substantially as set forth.

Signed by me this 4th day of December, A. D. 1878.

THOMAS A. EDISON.

Witnesses:

STOCKTON L. GRIFFIN,
GEO. E. CARMAN.