(No Model.)

T. HALL.

TYPE PLATE FOR TYPE WRITING MACHINES.

No. 336,481. Patented Feb. 16, 1886.

Fig. 1.

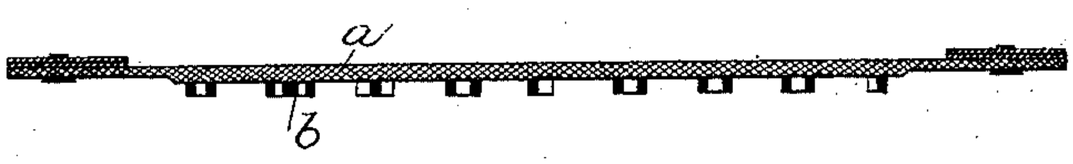


Fig. 2.

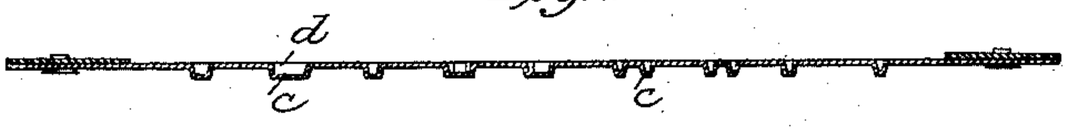
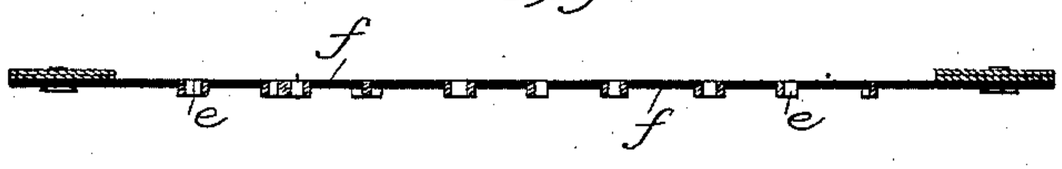


Fig. 3.



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UNITED STATES PATENT OFFICE.

THOMAS HALL, OF NEW YORK, N. Y., ASSIGNOR TO THE HALL TYPE WRITER COMPANY, OF SAME PLACE.

TYPE-PLATE FOR TYPE-WRITING MACHINES.

SPECIFICATION forming part of Letters Patent No. 336,481, dated February 16, 1886.

Application filed September 1, 1884. Serial No. 141,950. (No model.)

To all whom it may concern:

Be it known that I, THOMAS HALL, of New York, in the county of New York and State of New York, have invented a new and useful Improvement in Type-Plates for Writing-Machines; and I do hereby declare that the following, is a full, clear, and exact description of the same.

My invention relates to type-writers of that class in which the type are set upon a plate, which is moved to bring the letters into alignment. It is particularly designed for the type-writer shown in Letters Patent granted me by the United States on the 1st day of March, 1881, but it may be used in other forms of type-writer, or in a machine not in all respects the same as that shown in said patent.

In the accompanying drawings, Figure 1 shows a section taken vertically through the plate and type. Fig. 2 shows a section of a modified form. Fig. 3 shows another modification.

In carrying out my invention I may use several methods or plans, differing somewhat in detail, but all involving the same general principle of the elastic or flexible plate and hardened letters. In the first place, I make the type-form and letters of rubber, as described in my said patent, the form and structure being precisely the same; but of this rubber I make that of which the letters are formed sufficiently hard by the ordinary processes to print through several thicknesses of paper at the same time, while the plate or back is also made sufficiently elastic or flexible to be depressed out of line with its frame and through the opening in the bottom plate of the machine above referred to. I may make this same form by using in the type form or plate two kinds of rubber, one for the types that will vulcanize hard and the other for a plate which will remain soft or flexible between the types. This is shown in Fig. 1, in which *a* represents the soft and flexible part of the plate, and *b* represents the hardened type.

I may carry out my invention in another way by forming the type-plate of thin flexible metal, as shown in Fig. 2. This plate is made by electroplating over a suitable form, the face of the electrotype-plate showing the letter in relief, as at *c* and the back showing the depression, as at *d*. In this case the letters are hard and capable of printing through several thicknesses of paper, while the plate is sufficiently elastic or flexible to allow the letters to be depressed through the opening in the bottom plate, as explained in my said patent.

Fig. 3 shows also another mode of forming the type-plate in which the letters *e* are made of metal and are attached to a flexible sheet, *f*, of rubber or other material. It will be understood that this plate is carried in a frame, (shown at F.) This surrounds and carries the plate and form and holds the edges rigidly while a part of the plate is temporarily bent or sprung out of line of the frame.

I claim as my invention—

A type-plate consisting of a backing of elastic material having hard types fixed upon it, in combination with the frame surrounding and holding the edges of said plate, substantially as described.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

THOS. HALL.

Witnesses:
JAS. S. HALL,
V. H. YARNALL.