

R. S. Merrill,
Type.

No. 97,426.

Patented Nov. 30. 1869.

FIG. 1.

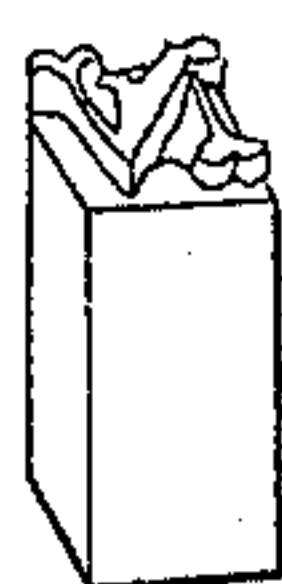
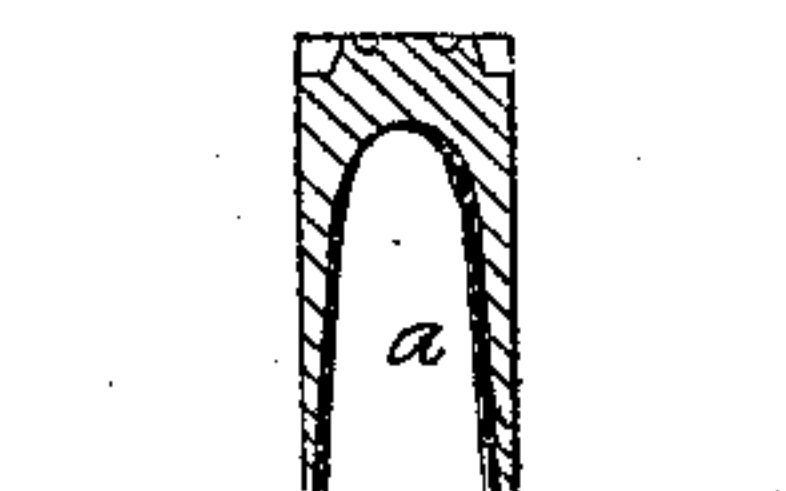


FIG. 2.



Rufus S. Merrill
by his attorney
A. Russell

WITNESSES.

W. S. Sailing

Wm. G. Milne
" " "

United States Patent Office.

RUFUS S. MERRILL, OF CAMBRIDGE, MASSACHUSETTS.

Letters Patent No. 97,426, dated November 30, 1869.

IMPROVEMENT IN PRINTING-TYPE.

The Schedule referred to in these Letters Patent and making part of the same.

To whom it may concern:

Be it known that I, RUFUS S. MERRILL, of Cambridge, Middlesex county, Massachusetts, have invented certain new and useful Improvements in the Construction and Manufacture of Printing-Type; and I hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, in which—

Figure 1 is a perspective view, and

Figure 2 is a vertical section of a type made in accordance with my invention.

My invention consists of a printing-type, made of hard metal, or other suitable type-metal, which is cast or otherwise made hollow, or of a skeleton form, thereby reducing the amount of metal needed to produce the type, and making it lighter and consequently cheaper, while, at the same time, the external form of the type is preserved, and the shell is left on all sides, so as to avoid all danger of the type being crushed.

The invention, while applicable to all sizes of type, is yet peculiarly adapted to the larger kind, which can be thus rendered lighter, cheaper, and better fitted for use, without detracting at all from their strength.

I am aware that skeleton "quads" and "quotations" have been used heretofore by printers; but it is needless to say that such devices resemble in no respect printing-type. The latter have usually been made solid, rendering them not only inconvenient to handle, but also expensive, while, as demonstrated by my invention, much of the material employed has been mere surplus, adding nothing to the real value.

In some instances, very large type have been arched out underneath; but, in such cases, two of the sides are cut away, and unless a considerable thickness of metal be left on top, the type is liable to be crushed by pressure.

By my invention, however, the shell remains intact, so that it preserves its external form and loses no needed strength, while deprived, at the same time, of a large quantity of surplus metal; and, further, the mode of reducing the metal, by removing a core, admits of the invention being applied to all sizes of type, where the metal saved would constitute an appreciable item.

In the drawings, the hollow type is clearly shown in fig. 2.

The form of the recess *a* is such that the type can be cast without trouble, while it will be seen that the whole of the metal core, which formerly occupied the cavity, is saved.

The metal at the upper end of the cavity is arched or curved, so as to present a surface best calculated to resist pressure induced upon the face of the type, and to transfer such pressure to the walls of the shell.

The type can be made of hard or type-metal, or brass, or other substance fitted for the purpose; and it can be cast hollow, or cored out by suitable means, according to the nature of the material employed.

It will be apparent, however, that hard metal is the only practicable material to be employed, as type made in this manner from soft metal would be soon crushed and unfitted for use.

Having now described my invention,

What I claim, and desire to secure by Letters Patent, is—

A hollow printing-type, as a new manufacture.

In testimony whereof, I have signed my name to this specification before two subscribing witnesses.

RUFUS S. MERRILL

Witnesses:

WM. A. BLODGETT,

C. CURRY