

W. J. Phelps,
Ticket Punch,
N^o 79,498. Patented June 30, 1868.

Fig 1.

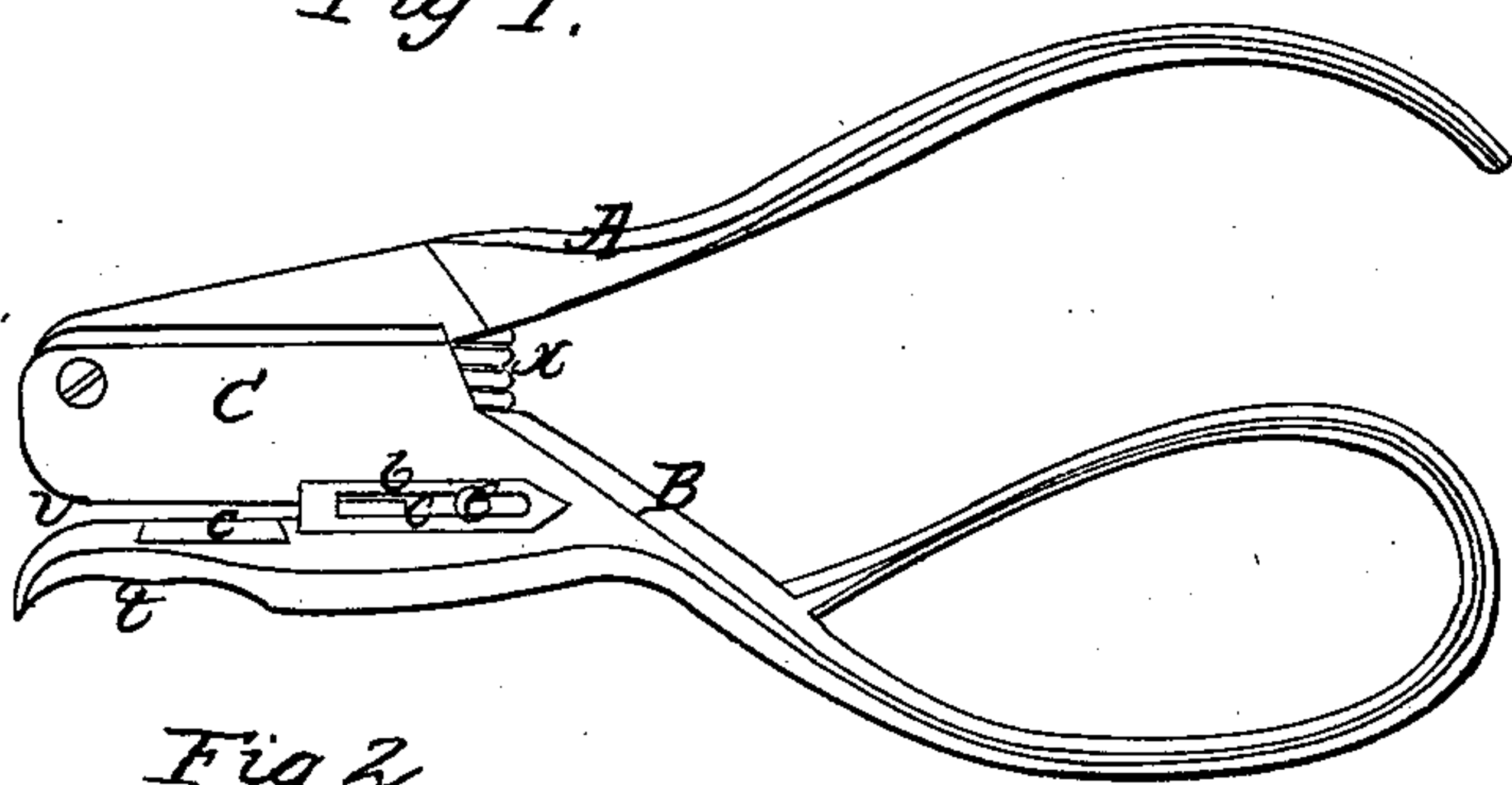


Fig 2.

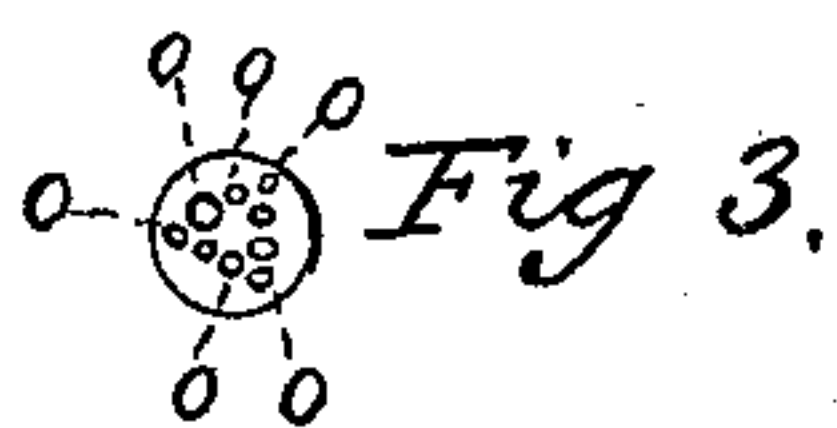
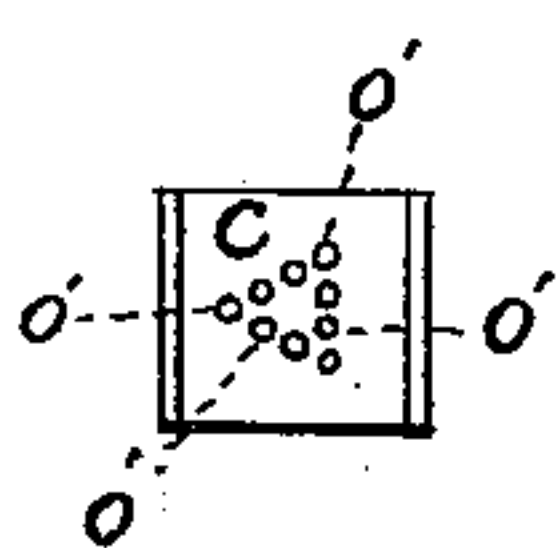


Fig 4.



Witnesses;

F. A. Curtis
H. E. Rice

Inventor;

W. J. Phelps

United States Patent Office.

WILLIAM J. PHELPS, OF SPRINGFIELD, MASSACHUSETTS.

Letters Patent No. 79,498, dated June 30, 1868.

IMPROVEMENT IN TICKET-PUNCHES.

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

TO ALL WHOM IT MAY CONCERN:

Be it known that I, WILLIAM J. PHELPS, of Springfield, in the county of Hampden, and Commonwealth of Massachusetts, have invented a new and useful Improvement in Ticket-Punches; and I do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification, and to the letters of reference marked thereon, in which—

Figure 1 is a side view of a punch with my invention applied.

Figure 2 is a side elevation of the spindle or die.

Figure 3 is a plan view of the die.

Figure 4 is a plan view of the counter-die.

My invention relates more particularly to the die or punching-portion of what is known as a conductor's punch or ticket-punch, although it is equally applicable to a ticket-punch for use in the office or counting-room, for cancelling papers; and it consists in such construction of the die and counter-die of a punch, whereby the printed or written matter upon a ticket will still remain plain and discernible, even after the said ticket or coupon has been cancelled or punched.

In most of the railroad-corporations, the conductors upon the different trains have different-shaped dies in their punches, each conductor's punch having a different-shaped die from any of the others, and many of these dies are of such form that when a conductor punches a ticket to cancel it, some important figure or character upon the coupon or ticket is often cut out and lost. These tickets or coupons are generally used in the office, when returned, in settling up the conductor's ticket-account, and it is known what conductor punched each ticket or coupon by the shape of the hole punched in each ticket, each conductor being known by the peculiar shape of his die in his punch.

These figures upon the tickets or coupons, it is very desirable and almost necessary to preserve, as oftentimes much confusion and difficulty arise in the settlement of conductors' ticket-accounts from some of the figures being cut or punched out. Conductors are often, and in fact are generally, instructed to be careful, in cancelling tickets on a train, not to punch out the figures, but, as the trains are often crowded, and various other causes arising, which compel them to cancel their tickets in more or less haste, they cannot or do not observe where they punch the tickets. Much has been done to remedy the difficulty, but as yet to no purpose. So, also, in the counting-room, it is often desirable to cancel answered letters, or check orders which have been filed, or other written or printed matter, by punching, without cutting out any important characters or figures, or destroying any part, so that its value cannot be ascertained.

By the use of a punch with my invention applied, all danger of mutilating printed matter or written is entirely obviated, while all the tickets may be cancelled in nearly the same place, or at the same distance from the edge.

That others skilled in the art may be able to make and use my invention, I will proceed to describe its construction and operation.

In the drawings—

Fig. 1 is a side view of a ticket-punch, its general construction being similar to that for which Letters Patent were granted me, bearing date September 17, 1867, but the cutting-die I now make in the following manner:

d represents the spindle, the upper part, *f*, being made flat down to the shoulder *s'*, and the lower portion, or the part below the shoulder *s*, I construct by cutting or milling away all the lower portion of the die up to the said shoulder *s*, except the projections *o o o o*, which I leave sufficiently long to protrude through the paper or ticket to be punched, and into the counter-die *c*. Said counter-die *c*, I make of the proper form to be introduced into its place in the lower jaw, of the body *C* of the punch, and in said counter-die *c*, I make a series or group of perforations, *o' o' o' o'*, the general form of the whole series or group corresponding to that of the whole series or group of projections *o o o o* upon the die or spindle *d*, and each perforation, *o'*, in said counter-die *c* being of the proper size and shape to closely fit around its corresponding projection *o*, when said projection

is within its perforation, so that when the article to be punched is placed in the slot *v*, and between the die *d* and counter-die *c*, and the die or spindle *d* is brought down by forcing the two levers A B together, each projection *o* upon said die is forced through the paper or ticket, and down into its corresponding perforation *o'* in the counter-die *c*, carrying before it the small bit cut out of the paper, which falls out at the orifice *t*.

It is obvious that any character which can be used by making the cutting-portion of the die solid, can also be used in my invention, by making or grouping the whole series of projections *o o*, and the corresponding perforations *o' o'*, in the same general form; that in the accompanying drawing being in the form of a triangle, while it might, with equal facility, have been made in the form of any letter, figure, or character.

It is obvious that the projections *o o* may be either prismatic or cylindrical in form, in either case the perforations *o' o'* in the counter-die *c*, being, of course, of a corresponding form to the projections *o o*; and the projections *o o* may be somewhat longer upon one side of the die, and decreasing in length towards the other side, in order to give a shearing cut, or to enable some of the projections *o o* to partially make their cut before the others, thus partially relieving the strain required to make the perforation of the whole series.

A ticket-punch made with my invention applied is durable, is as compact and convenient as any other punch in use, and can be manufactured as cheaply as the ordinary punch, while the advantages attending its use, in preserving important written or printed matter upon certificates, coupons, tickets, and other articles, is quite manifest.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a ticket-punch, a die and counter-die, consisting of a group or series of projections *o o*, and corresponding perforations *o' o'*, said group or series of projections and perforations being formed into any desired letter, figure, or character, all constructed and operating substantially as described, and for the purposes herein specified.

WM. J. PHELPS.

Witnesses:

T. A. CURTIS,

F. E. RICE.