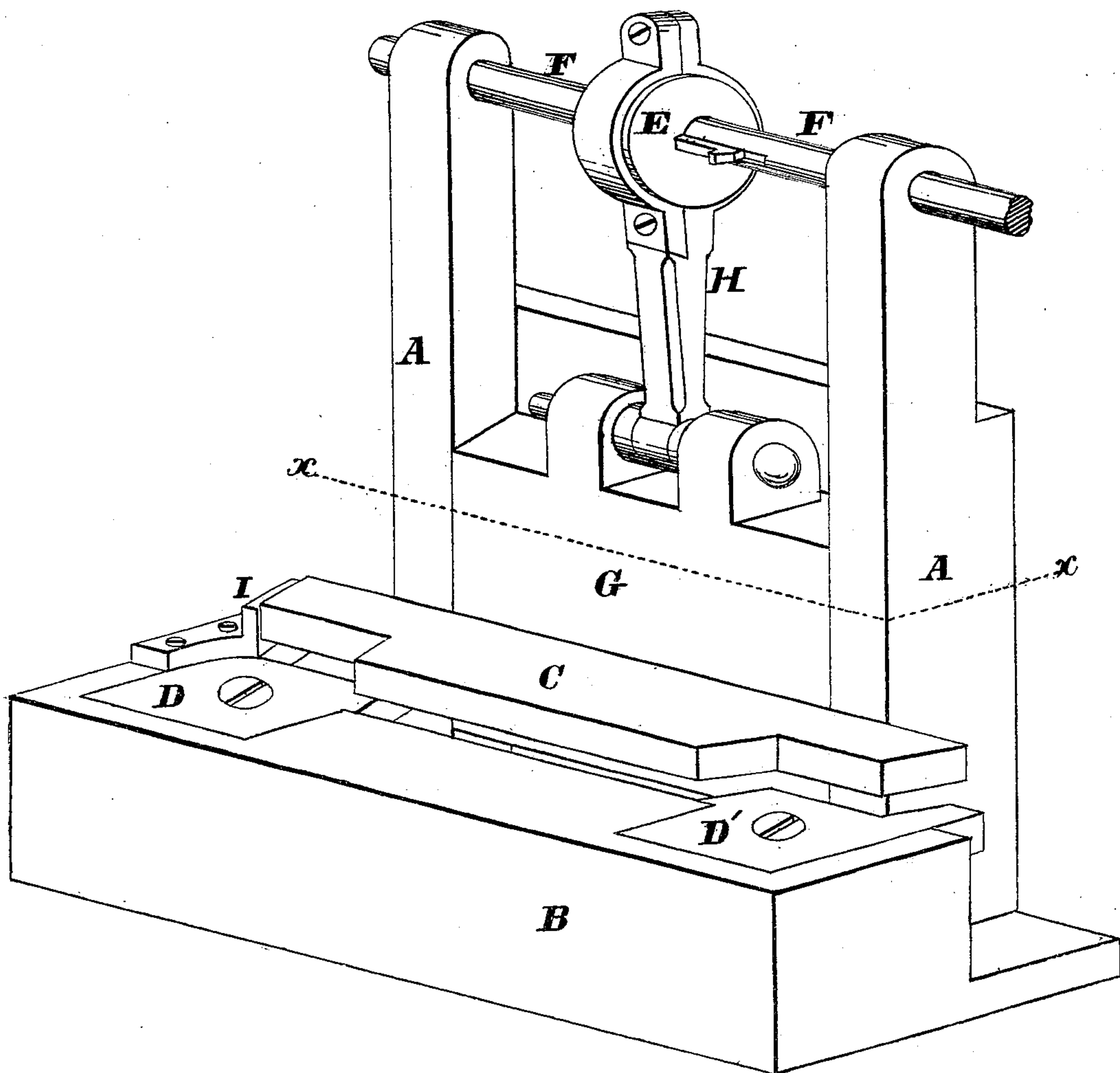


T. INSULL & J. F. DOVEY.
Machines for Cutting Carriage Lock-Plate Blanks.
No. 142,854. Patented September 16, 1873.

FIG. 1.



WITNESSES:

Walter Allen
W. H. Pearce

INVENTOR:

Thomas Insull & James H. Dovey
By *Knights & Co.* Attorneys.

T. INSULL & J. F. DOVEY.
Machines for Cutting Carriage Lock-Plate Blanks.
 No. 142,854. Patented September 16, 1873.

FIG. 2.

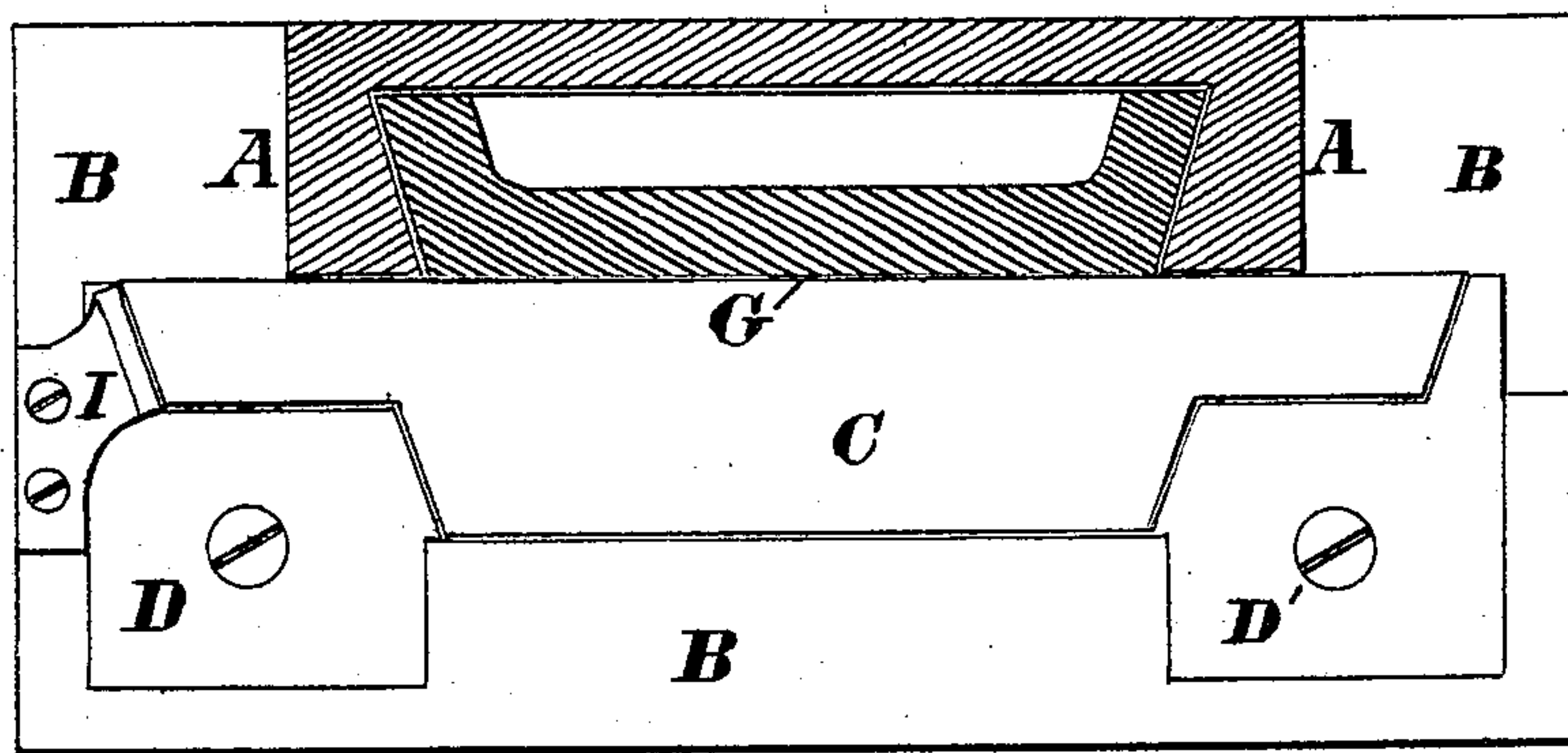
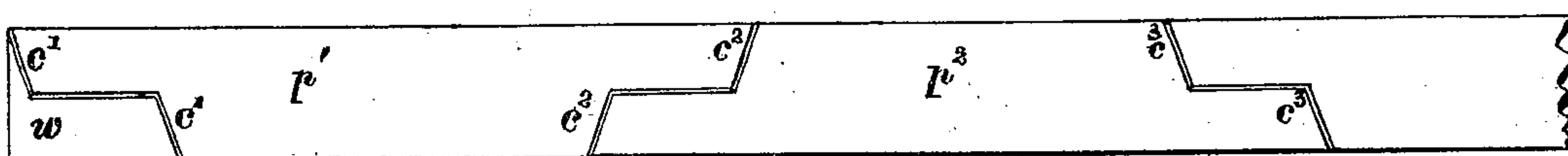


FIG. 3.



WITNESSES:

Walter Allen
W. H. Pearce

INVENTOR:

Thomas Insull & James F. Dovey
 By *Knights* Attorneys.

UNITED STATES PATENT OFFICE.

THOMAS INSULL AND JAMES F. DOVEY, OF PHILADELPHIA, PA.

IMPROVEMENT IN MACHINES FOR CUTTING CARRIAGE LOCK-PLATE BLANKS.

Specification forming part of Letters Patent No. **142,854**, dated September 16, 1873; application filed August 21, 1873.

To all whom it may concern:

Be it known that we, THOMAS INSULL and JAMES F. DOVEY, both of Philadelphia, in the State of Pennsylvania, have invented an Improved Machine for Making Lock-Plates for Carriages, of which the following is a specification:

Our invention relates to a machine by which lock-plates of proper shape may be cut from a bar of proper width with little or no waste of metal. To this end we provide right and left dies, or a single die, of suitable shape to impart the desired form to the two ends of the plate, and fix them at the necessary distance apart in a bed-plate. In connection with these dies, we employ a reciprocating punch or cutter, which, at each downward stroke, cuts a lock-plate from the bar, the latter being inverted after each cut, so as to work it up completely without any considerable waste, as hereinafter described.

In the accompanying drawing, Figure 1 is a perspective view of a machine, illustrating our invention. Fig. 2 is a horizontal section thereof at $x x$. Fig. 3 is a plan of a bar, illustrating the mode of severing successive lock-plates therefrom.

A A are standards rising from a bed-plate, B, in which are fixed right and left cutting-dies D D'. C is a cutter or punch attached to a gate, G, which is fitted to slide within or between the standards A, and through the medium of a pitman, H, derives reciprocating movement from an eccentric, E, keyed upon the rotary shaft F, which has its bearings in the standards A A, and may be driven by either belt or gearing.

The cutter C being in its elevated position,

the bar is inserted with its forward end against the gage I. The descent of the cutter then produces the two cuts $c^1 c^2$, in the form shown, severing the waste piece w and the first lock-plate p^1 . The bar is then inverted and slid along until the edge c^2 , which now forms the end of the bar, comes against the gage I, and even with the edge of the die D, with which it corresponds in shape. In the next descent of the cutter the cut c^3 is produced by the edge of the die D', severing the second plate p^2 , the die D having nothing to do after the first cut, which severs the waste piece w .

As a modification of this invention, the second die D' and the gages may be dispensed with, in which case the inversion of the bar after each stroke, as already described, will enable the single die D, with a corresponding cutter, to produce the right and left cuts, severing a complete lock-plate at every cut after the first.

The lock-plates produced as above described require no finishing, and are adapted for welding directly to straps which connect them to the spring bars or bolsters, in customary manner.

We claim as new and of our invention—

The combination of the cutter C, actuated by an eccentric, cam, or its equivalent, and the die or dies D D', all constructed and arranged to operate as herein described, for the purpose of forming lock-plates for carriages, as specified.

THOMAS INSULL.
JAMES F. DOVEY.

Witnesses:

OCTAVIUS KNIGHT,
WALTER ALLEN.