

Specification of the Patent granted to ANTHONY FRANCIS BERTE, of the Parish of St. Dunstan in the West, in the City of London, Merchant ; for a Machine for casting or founding Types, Letters, and Ornaments, usually made use of in Printing. Dated April 29, 1806.

TO all to whom these presents shall come, &c. NOW KNOW YE, that in compliance with the said proviso, I the said Francis Berte do hereby declare, that my said invention is described in manner following ; that is to say : I do construct a vessel of iron, or other fit material for containing type metal in the fused state, or for bringing it into fusion, and keeping it at the proper heat for casting ; and I do make in the side or sides of the said vessel one or more apertures, out of which the fluid type metal is suffered to flow at the time of casting. The operation of casting is performed by applying a mould for casting letters or types, either singly or more than one, at the same time, or other articles for Printers use, unto one of the said apertures, which at that instant, by means of a lock or valve, or any other well known similar contrivance, is opened ; in consequence of which the metal suddenly flows into the mould, and applies itself to the matrix or matrixes with a force which is greater or less, according to the height of the level surface of the type metal in the vessel first before-mentioned, or according to the magnitude of such additional pressure as may be applied in the manner hereinafter to be described. And I do farther declare, that though the said aperture or apertures may be made on any side of the vessel, that is to say, at top or bottom, or elsewhere, yet I do give the preference to a surface or face which shall be nearly horizontal, so that the fluid metal shall
spout

spout upwards into the mould ; and I do prefer, as the most simple and easy method, that each aperture shall be kept closed by a plate of metal lying upon the said horizontal surface, and well fitted thereto: and that I do make and fashion the lower part of my mould flat and true, in order that the same may be applied in like manner, and slid along upon the said horizontal surface ; and that I do slide the said mould by pushing the same against the said flat plate until the plate shall become displaced, and the aperture of the mould shall become directly opposite to the aperture in the vessel, and shall accordingly receive its charge of metal ; after which, the mould being again drawn back, the plate of metal, by means of a weight or spring, or other well-known agent suitable to the purpose, is made to follow the mould and close the aperture, by resuming its first situation ; and, in order that the said motions and effects may be performed and produced without any particular skill or attention in the workman, I do make and apply guides, sliders, stops, or pins, for confining, directing, and limiting the said motions, as will be sufficiently obvious and intelligible to artists employed in works of this nature. And moreover, in order that the said fluid metal may rise with sufficient force into the mould, I do make my vessel of such a figure as that the quantity of type metal intended to be contained therein at any one time shall have its upper surface sufficiently high above the level of the aperture or apertures before-mentioned ; and that I do, in preference, form my vessel of the figure of a box or closed receptacle, having a pipe or tube rising out of the same, so that the pressure afforded by the statical action of the metal in the said pipe or tube shall produce the desired effect at the aperture or place of casting ; or otherwise I produce, or increase the said pressure, by the statical action

of

of water, or any other fluid which may be used, by the well-known means to compress a body of air against the surface of the type metal for the purposes aforesaid : and the said machines, consisting of vessels so fitted up together with the moulds and other parts respectively as before described, may be used by one or more workmen to cast different letters and sorts at the same time from the same mass of metal ; but in case different metallic mixtures should be required to be used, or in case local circumstances should render it needful that the workmen should be considerably distant from each other, recourse must be had to a number of distinct and separate machines of my said invention.

In witness whereof, &c.

Specification of the Patent granted to RICHARD WILCOX, of the Parish of St. Mary Lambeth, in the County of Surrey, Machinist ; for Improvements in Steam-Engines. Dated May 21, 1806.

With a Plate.

TO all to whom these presents shall come, &c. Now KNOW YE, that, in compliance with the said proviso, I the said Richard Willcox do hereby declare that my farther improvements in the steam-engine consist in the following novel and appropriate combination of parts, *viz.*

First. My improvements are on the rotary steam engine, and consist, exclusively, in certain parts generally known by the appellation of gates, pallets, valves or cocks, or any more appropriate name by which they may hereafter be denominated ; which said gates, pallets, valves or cocks, are, by their particular and novel construction, capable or susceptible of confining and detaining steam, or other elastic or dense fluids between the said gates, &c. The said gates,

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&c.

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*Specification of the Patent granted to JOHN PROSSER, of
Back Hill, Hatton Garden, in the Parish of St. Andrew
Holborn, in the County of Middlesex, Smith; for vari-
ous Improvements upon Smoke or Air Jacks.*

Dated October 30, 1806.

With a Plate.

TO all to whom these presents shall come, &c.
Now KNOW YE, that in compliance with the said proviso,
I the said John Prosser do hereby declare that my said
invention, or new invented improvements upon smoke
or air jacks, is and are described in the annexed drawings
and descriptions thereof, and that they are as follows;
that is to say: The first improvement consists in making
the box, case or body of the single smoke or air jack to
extend to the whole length from or near the centre of the
inside of the chimney to the outside or breast thereof, and
inclosing the spindle, and terminating at or near the chain
wheel, as represented by Fig. 1, (Plate VII.) The second
improvement consists in raising the said spindle and chain
VOL. XI.—SECOND SERIES. Y wheel,