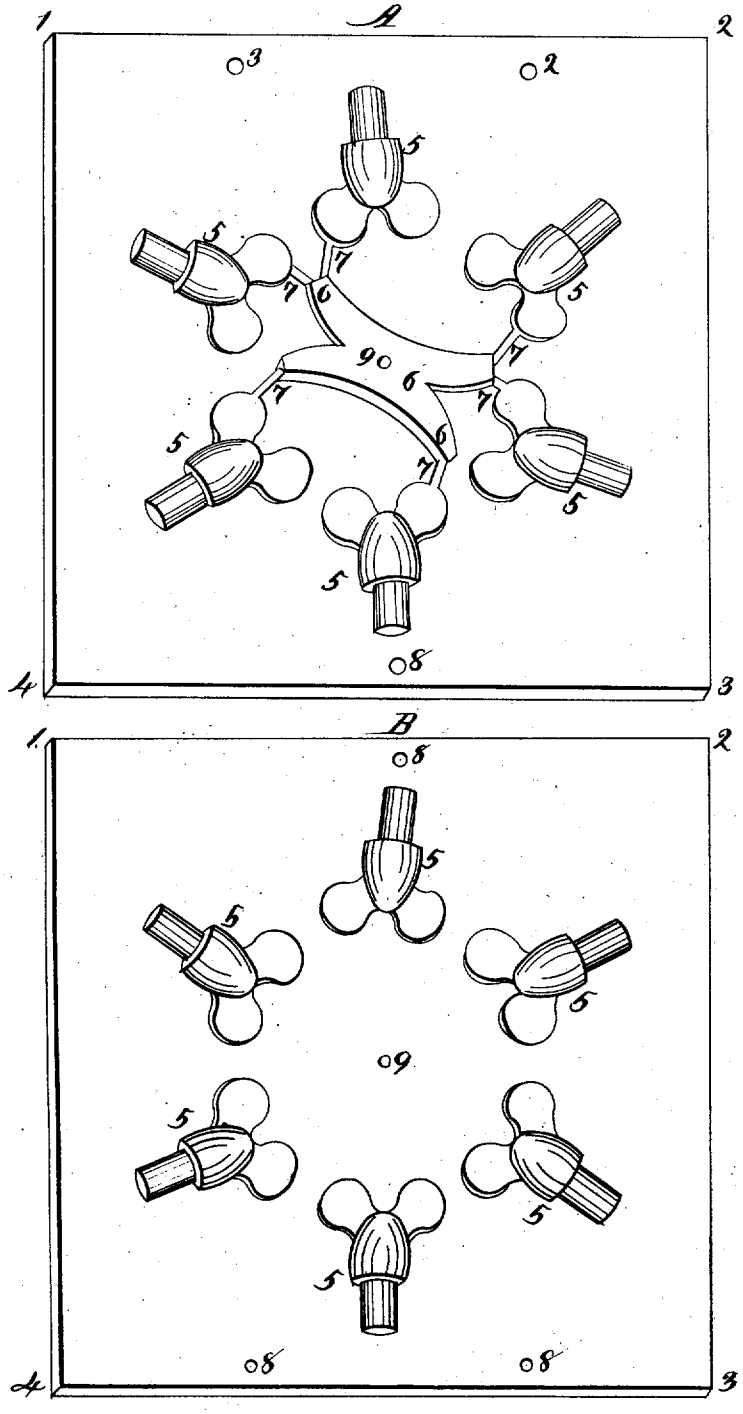
5799X J. Leonard, Jr., Brainard & Siver,

Pattern for Casting.

Patented Jan. 28, 1830.



N. PETERS, PHOTO-LITHOGRAPHER, WASHINGTON, D. C.

Jonathan Leonard Jun.r Jared S. Bracinard & Amasa Fizer

X5799 Letters Patent. Jan. 28, 1830

The schedule referred to in these Letters Patent and making part of the same containing a description in the words of the said Jonathan Leonard Jr. Jared S. Bracinard & Amasa Fizer themselves of their improvement in the construction of Patterns used for forming Moulds for casting Iron Brass &c. —

Know all men by these presents

That we Jonathan Leonard Jr. of Meriden, Jared S. Bracinard & Amasa Fizer both of Wallingford, have jointly invented a new and useful improvement in the construction of Patterns used in forming Moulds for casting Iron, Brass, or other metals, where a portion of the mould is formed in two or more parts of the flask commonly used for moulding which improvement we specify in the words and figures following (viz.) In the first place we make in the usual manner one or more patterns, according to the number of articles we intend to cast in a flask, which patterns are made in effect representations of the things we wish eventually to produce except that they must be large enough to allow for the shrinking of the metal, which takes place both in casting the pattern and the things to be formed in said metals, moulded and cast in the common way. In the next place these patterns are to be imbedded or let into a board or other proper substance one half of their thickness plainwise, & a mould is then to be formed from each pattern, in all respects in the manner above directed. If the things to be cast are small, as for instance the common thimble, by a judicious arrangement of them several may be moulded in the same flask, with a screw to produce a pattern such as is represented in the annexed drawing marked A. In the next place take some thick

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of wood or other substance about one inch wide, and one eighth of an inch in thickness, or as thick as the plate represented in each of each of the drawings is marked to be 4 of such length and number as that when they are formed together at their ends they will form a square or such other figure as is needed & as large as the said plate is intended to be made, the size and shape of which plate will of course be made to correspond with the flask to be used in moulding from the plate and pattern attached to the same, Then place this frame on the sand in the lower part of a common flask, filled in the usual way and moulded as already described so that the frame will keep the metal within itself & place the upper part of the flask upon the lower part with the frame between them which will keep the two parts asunder a small distance equal to its thickness. Some small pieces of some hard substance should also be placed between the outer parts of each portion of the flask, which pieces should be of the thickness of the frame & are of use to prevent the weight which is to be placed in the usual manner upon the flask, from imbedding the frame into the sand. The crucible should be formed in the usual way at a little distance from the mould to prevent the metal from washing the mould &c in that way produce a defect in the pattern. It will be necessary that a gate way should be formed for each pattern & cast at the same time, or afterwards placed upon the pattern and care must be taken, that the metal should be of a proper temperature when poured in, that the work may be as perfect as it can conveniently be made. The plate and patterns attached to the same being now cast should be then cut and finished in the usual way, If the object is to form a plate with pattern [illegible] for casting thereof in copper, &c at a time, the same is illustrated by the annexed drawing [illegible]. The plate when thus finished must have two or more [illegible] that the number of [illegible]

each thereof, the object of which is that the plate when used may be kept steady in its place by as many pins of suitable size passing thro' the holes in the plate and made fast at one end in one part of the flask, and entering when the flask is put together into holes of suitable size and depth made in the other part of the flask. The two parts of the flask with the plate & patterns attached between them and the whole kept steady by the pins being thus prepared are ready to receive the moulding sand, or to be poured. Each part of the flask is now to be filled with moulding sand, and then if that part of the flask to which the pins are made fast is uppermost lift off this part of the flask and the plate together, & then take off the plate, but if the other part of the flask is uppermost, take off this part & then take off the plate from the other part, so that in both cases the pins shall guide the plate during its removal. —

By proceeding in the way above specified or with perhaps some slight variation, a pattern or draft plate with raised worked patterns or drafts for most kinds of work which are ordinarily moulded in different parts of a flask, may be formed, and moulds made therefrom as is already described.

The plate might be formed first and the parts of the pattern attached thereto by soldering or otherwise, though with much more difficulty and expence, the plate & the parts of the pattern may be also formed separately in wood and fastened together, & in large & heavy work, this would probably be the better mode.

The whole solid plate and pattern, might be carved or cut out of solid wood, but this would also be in general too difficult and expensive. The advantage attending moulding in the above manner are principally experienced in work of a moderate size, where our pattern lift care and skill are requisite in drawing or removing the patterns without destroying the moulds, the plate enables us to attain to this by drawing or removing a considerable number of patterns at one operation, all the sand

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as much as prevents from working over or beyond the middle or scale of the pattern & by that means certifying or enabling when the pattern is drawn; other less important advantages are not mentioned The Drawing referred to in the foregoing description is annexed and makes a part of this Specification, together with the annexed description of the drawing and the reference to the same ——

We claim as our specific improvement that we have invented a new and useful mode of constructing patterns formed of Metal, Wood, or other suitable material, & consisting of a plate with raised work or projecting figures on each side thereof, to be used in making moulds the parts of which are in different parts of a flask and which moulds are fitted for casting work in iron or other metal

But we do not claim the exclusive right of making Patterns, for moulding, or any mode of using them which has heretofore been practiced

In testimony that the above is a true Specification of our said joint improvement as above described, we have hereunto set our hands, and seals, this Nineteenth day of November, A.D. 1829 —

Witness

James Carrington
Medad H. Munson

Jonathan Leonard
Jared L. Brainard
Almond Sizer

Explanation of Drawings A. & B. 1.2.3.4 represents the plate, on which are the raised Patterns, A. showing one side, & B. the other side of the plate. 2.2.2. The raised or projecting patterns. 6.6.6. a projection to form a chamber, on the mould connected with the above and the gateways. f.f.f. & the gateway for leading the metal to the moulds made by Patterns 5.5.5. The [illegible] the pattern in the flask [illegible] g. the [illegible] the runner for [illegible] part [illegible] with [illegible] when moulding