

W. J. REAGAN.
Patterns for Castings.

No. 154,904.

Patented Sept. 8, 1874.

FIG. 3.

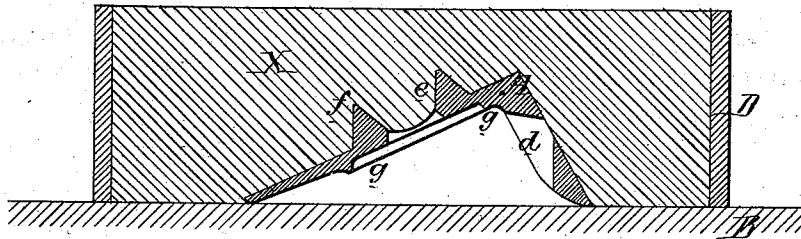


FIG. 4.

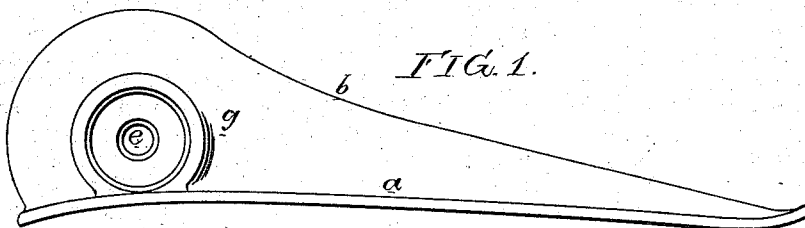
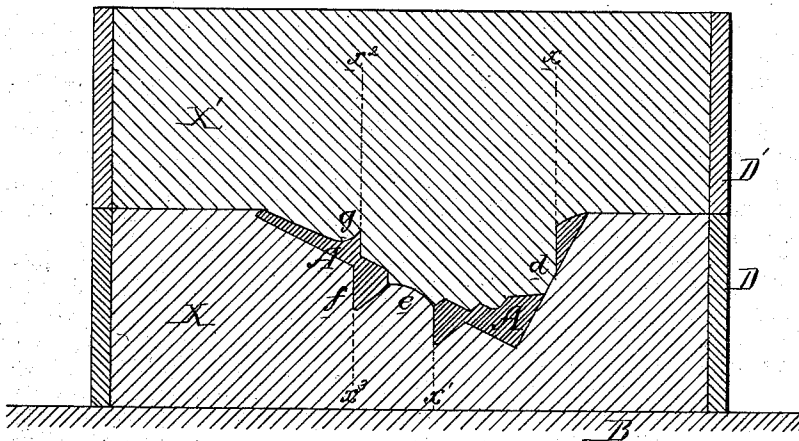
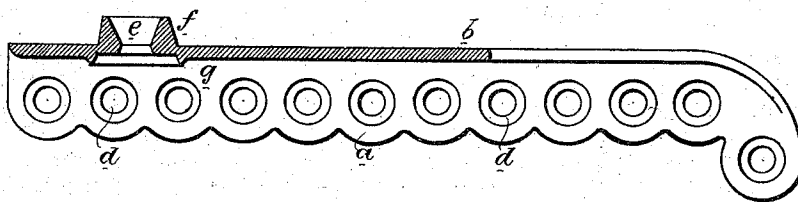


FIG. 2.



Witnesses, Harry Smith
Thomas M. Swan

Wm. J. Reagan
by his Attys.
Horton and Son

UNITED STATES PATENT OFFICE.

WILLIAM J. REAGAN, OF ROYER'S FORD, PENNSYLVANIA, ASSIGNOR TO
ROYER'S FORD IRON FOUNDRY, OF SAME PLACE.

IMPROVEMENT IN PATTERNS FOR CASTING.

Specification forming part of Letters Patent No. **154,904**, dated September 8, 1874; application filed
June 13, 1874.

To all whom it may concern:

Be it known that I, WILLIAM J. REAGAN, of Royer's Ford, Montgomery county, Pennsylvania, have invented an Improvement in Casting Arms for School-Desks, of which the following is a specification:

The object of my invention is to mold and cast those arms of school-desks which are illustrated in Figures 1 and 2 of the accompanying drawing without resorting to the usual cores, the making and adjustment of which demand tedious manipulation, the casting being complete and ready for use after it has been removed from the mold and suitably cleansed.

The arm consists of two portions, *a* and *b*, at right angles to each other, or thereabout, the former having a number of countersunk screw-holes, *d*, while in the latter there is a hole, *e*, for the joint, surrounded at its opposite sides by annular flanges *f* and *g*.

In ordinary arms of this class the countersunk screw-holes and flanged hole for the joint are arranged at such angles in respect to each other as to effectually prevent the drawing of an ordinary single pattern from the sand in molding said arms, so that it is necessary to either employ cores, or to afterward drill the screw-holes in the casting, both of which plans are tedious, and add considerably to the cost of the arm.

In my improved arm the joint-hole *e*, its flanges *f* and *g*, and the countersunk screw-holes *d* are constructed, in respect to the arm and to each other, in the manner best observed in the sectional views, Figs. 3 and 4, so as to offer no obstruction whatever to the drawing of the pattern, and to entirely obviate the necessity of using cores.

This will be readily understood from the following description of the method of molding and drawing the pattern: The pattern *A* is first laid upon a follow-board, *B*, in the po-

sition shown in Fig. 3, and is then covered by one section, *D*, of the flask, into which sand *X* is packed, the latter filling the tapering joint-hole *e*, and surrounding the upper annular flange *f*. This having been accomplished, the section *D* of the flask, with the pattern and sand contained therein, is inverted upon the follow-board. Another section, *D'*, is added, and sand *X'* is packed in upon the inverted pattern, as shown in Fig. 4, until it has entirely filled all the countersunk screw-holes *d*, and has entered the space within and around the flange *g* of the joint-hole. It will now be observed, on reference to Fig. 4, that those portions of the countersunk screw-holes *d*, of the tapering joint-hole *e*, and of the flanges *f* and *g*, surrounding the latter, which ordinarily obstruct the drawing of the pattern, coincide, or nearly coincide, with vertical lines *x*, *x'*, *x''*, and *x'''*, so that the section *D'* of the flask and the sand contained therein can first be lifted from the pattern without risk of disturbing the molded sand, and the pattern can be as readily drawn from the sand in the lower section *D* of the flask, after which the sections can be again fitted together and the casting obtained, the latter being ready for use after having been removed from the mold and suitably cleaned.

I claim as my invention—

The within-described pattern for a school-desk arm, having countersunk screw-holes *d* and a flanged joint-hole, *e*, formed in respect to each other as set forth, so as to permit the molding and casting of the said arm without the use of the usual cores.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

WM. J. REAGAN.

Witnesses:

WM. A. STEEL,
HARRY SMITH.