

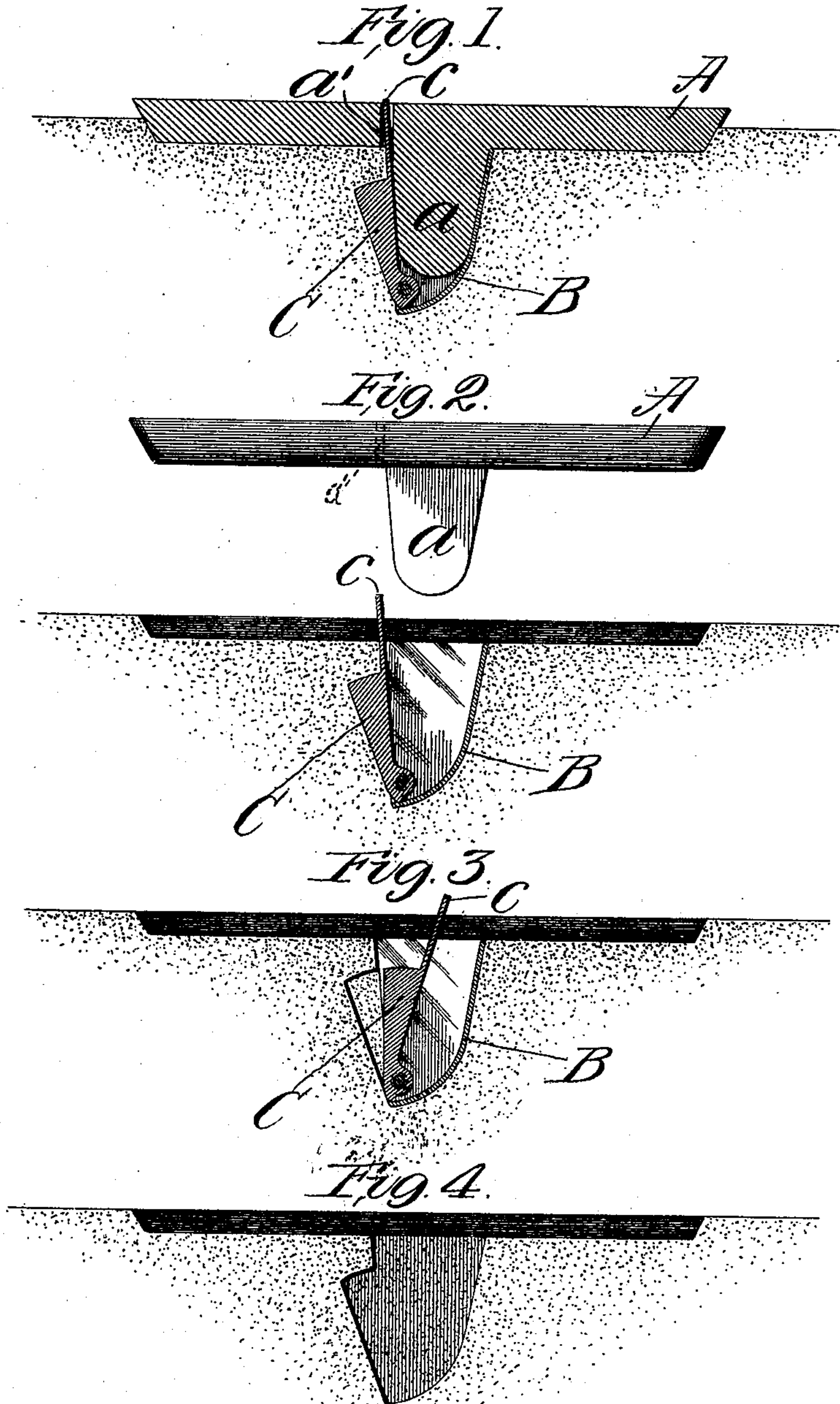
No. 636,481.

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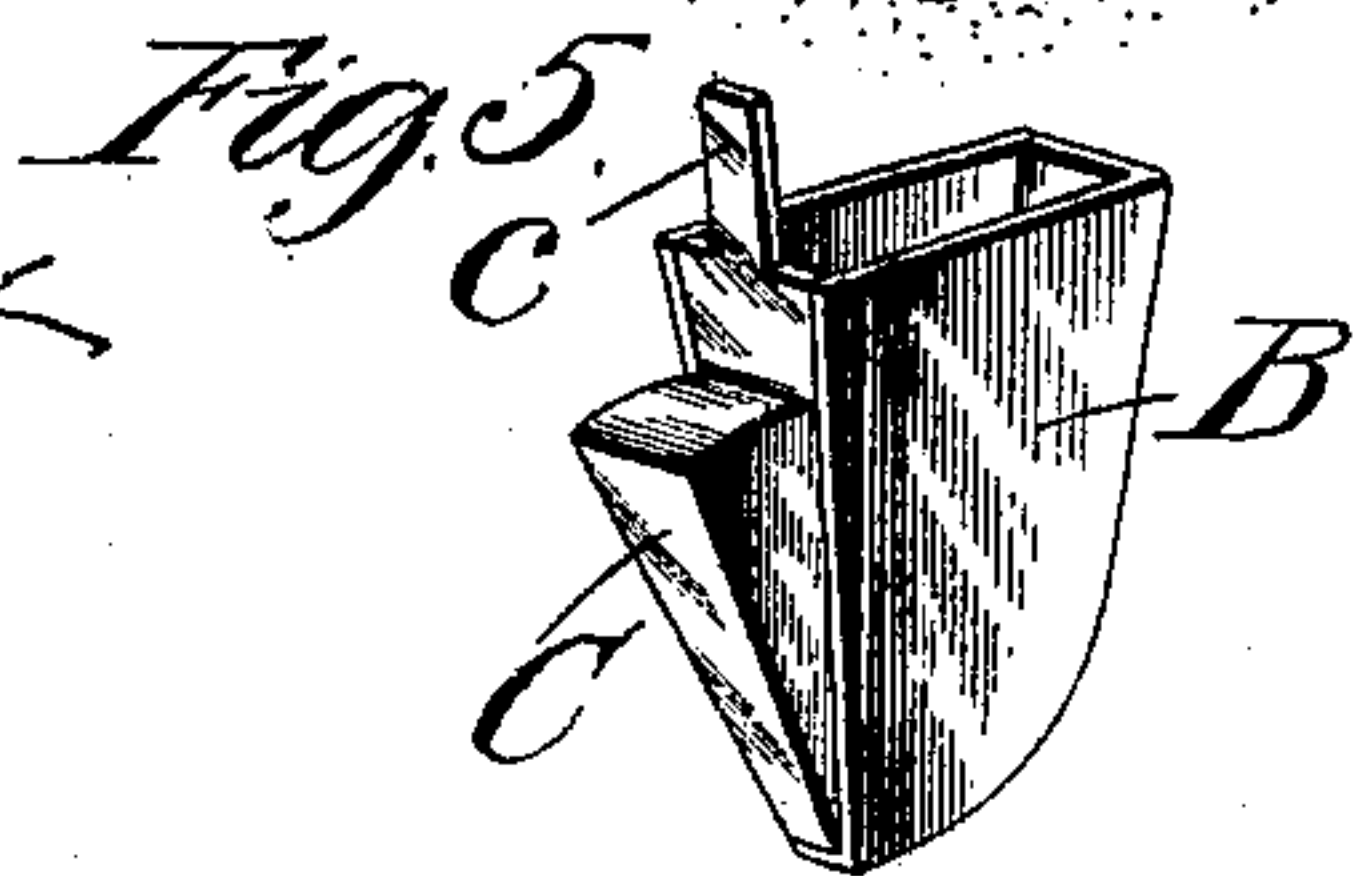
F. ANDREAS.
MOLDING APPARATUS.

(Application filed July 10, 1899.)

(No Model.)



Attest:
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UNITED STATES PATENT OFFICE.

FREDRICK ANDREAS, OF ST. LOUIS, MISSOURI.

MOLDING APPARATUS.

SPECIFICATION forming part of Letters Patent No. 636,481, dated November 7, 1899.

Application filed July 10, 1899. Serial No. 723,509. (No model.)

To all whom it may concern:

Be it known that I, FREDRICK ANDREAS, a citizen of the United States, residing at the city of St. Louis, State of Missouri, have invented a certain new and useful Improvement in Molding Apparatus, of which the following is a full, clear, and exact description, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a sectional view of my improved apparatus, showing the manner in which the same is used in the sand. Fig. 2 is a similar view showing the manner in which the major part of the pattern is withdrawn. Fig. 3 is a detail view showing a part of the molding apparatus collapsed. Fig. 4 is a detail view of a resultant mold-matrix, and Fig. 5 is a detail view of part of the molding apparatus in perspective.

This invention relates to a new and useful improvement in molding apparatus, the object being to construct an apparatus of the character described to be used particularly in connection with stove-patterns for molding the keeper projections thereon, which projections are formed with shoulders to coöperate with the latches on the doors or other movable parts of the stove. Heretofore these keepers have been formed by attaching to the pattern before the mold is made a separate sheet-metal pocket of the desired shape, which pocket was left in the mold after the pattern was withdrawn, and the molten metal when introduced flowed into the pocket and filled the same, so that when the casting was removed this sheet-metal pocket formed an outer section or shell on the projection.

My invention consists in the employment of a movable or collapsible section in the pattern which when in its outer position will form the shoulder of the keeper projection and which when retracted will be out of the path of the sand in order that the pattern may be evenly drawn.

In the drawings, A indicates part of a pattern used for the purpose of illustrating my invention, on which is formed a projection *a*.

B indicates a removable casing or shell which is of the shape of the body portion of the keeper projection, said casing having pivoted or otherwise movably secured therein a tongue or folding piece C, which is preferably formed with a projection *c*, received in an opening *a'* in the body of the pattern, as shown in Fig. 1. This tongue or shoulder projection C when the pattern is introduced into the sand is in its outward position, as shown in Fig. 1. When the pattern is drawn from the sand, the shell B is left therein, as shown in Fig. 2, after which the folding shouldered tongue C is turned inwardly, as shown in Fig. 3, and removed by grasping the projection *c*, leaving a matrix of the form shown in Fig. 4. It is obvious that while I have shown a separate shell as a support for the folding shouldered tongue, said tongue can be mounted in a recess in the projection *a* on the pattern, so as to become part of the original pattern.

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

1. The combination with a pattern having a projection, of a shell or casing removably secured to said projection, and a pivoted shouldered tongue in said shell or casing which is held in its outer position by said projection.

2. The combination with a pattern formed with a projection, of a shell or casing removably secured to said projection, a shouldered tongue pivoted in said shell and held in its outer position by said projection, and an upward extension or handle on said tongue which projects through a suitable opening in the pattern and, in the absence of the pattern, affords a grasping projection extending above the face of the mold, whereby the tongue may be moved inwardly and, with its shell, withdrawn from the sand; substantially as described.

In testimony whereof I hereunto affix my signature, in the presence of two witnesses, this 5th day of July, 1899.

FREDRICK ANDREAS.

Witnesses:

F. R. CORNWALL,
WM. H. SCOTT.