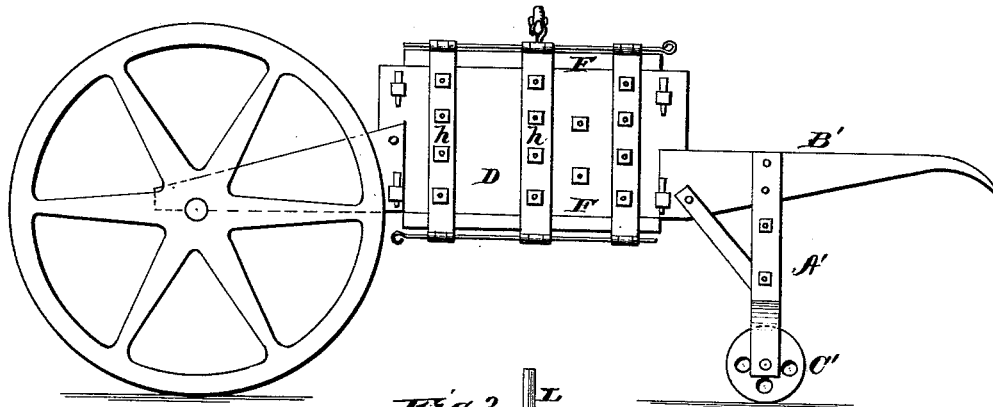
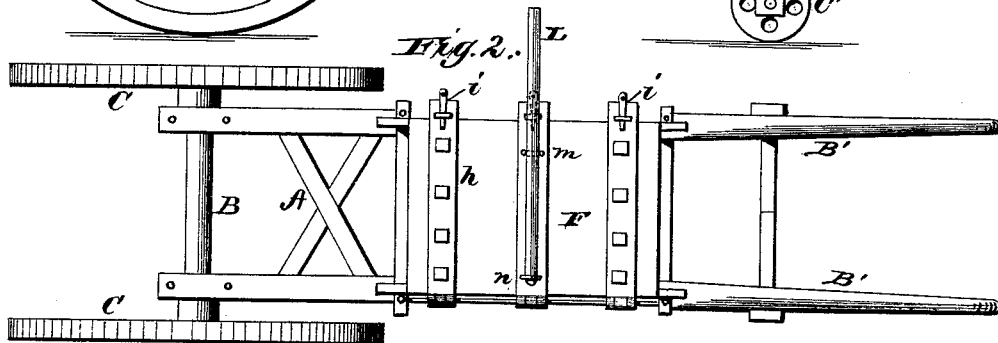


J. PECHMANN.  
 Conversion of Cinders into Building Material.  
 No. 218,768.      Patented Aug. 19, 1879.

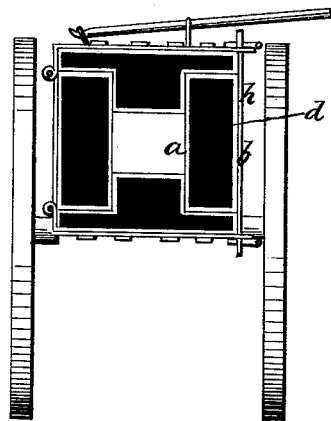
*Fig. 1.*



*Fig. 2.*



*Fig. 3.*



WITNESSES

*J. L. Curran,*  
*H. Aubrey Touchman.*

INVENTOR

*Julius Pechmann*  
*Alexander D. Mason*  
 ATTORNEYS

# UNITED STATES PATENT OFFICE.

JULIUS PECHMANN, OF CHATTANOOGA, TENNESSEE.

## IMPROVEMENT IN CONVERSION OF CINDERS INTO BUILDING MATERIAL.

Specification forming part of Letters Patent No. **218,768**, dated August 19, 1879; application filed June 7, 1879.

### *To all whom it may concern:*

Be it known that I, JULIUS PECHMANN, of Chattanooga, in the county of Hamilton, and in the State of Tennessee, have invented certain new and useful Improvements in the Conversion of Cinders from Blast and other Iron-Furnaces into Building Material; and do hereby declare that the following is a full, clear, and exact description thereof, reference being had to the accompanying drawings, and to the letters of reference marked thereon, making a part of this specification.

The object of my invention is to utilize the cinders from furnaces by casting the same into blocks of any desired shapes and sizes for building purposes; and the nature of my invention consists in the construction and arrangement of a mold mounted upon wheels for carrying out the above object, as will be hereinafter more fully set forth.

In order to enable others skilled in the art to which my invention appertains to make and use the same, I will now proceed to describe its construction and operation, referring to the annexed drawings, in which—

Figure 1 is a side elevation, and Fig. 2 a plan view, of my apparatus. Fig. 3 is a vertical cross-section of the mold.

A represents a frame of any suitable dimensions, having at one end the axle B, placed in convenient boxes. C C are the wheels placed on the ends of the axle B.

A' represents an upright frame, with rollers or small wheels C' C' at the bottom. B' B' are the handles, firmly secured and braced to the upper end of the frame A'.

The mold is secured by bolts to the frame A and handles B' B', the whole thus forming, as it were, a wheelbarrow.

D represents the mold, which is open at top and bottom, and provided with top and bottom lids F F, which swing on hinges.

The walls or sides, as well as the top and bottom covers, consist of an inside metal lining, *a*, an outside metal lining, *b*, and an intermediate layer, *d*, of fire-brick, and they are then strengthened by wrought-iron straps *h h*, which form the hinges.

The two covers are secured in place by means of keys *i*, which enter perforations in tenons formed on the ends of the upright straps, said tenons passing through slots in the ends of the straps on the doors.

The machine is to be brought near the cinder-hole of the furnace—whether the same be blast, puddle, heating, or still furnace—with the bottom closed and the covering-lid opened, so as to receive the charge. After the mold is properly filled the covering-lid is closed, which compresses the material in the mold.

For the purpose of bringing the top lid to its true position or pressing it down, a ring, *n*, and fork *m* are fastened to the same, so as to admit of the speedy appliance of a lever, *L*, as shown. This is to do away with air-bubbles or reduce air-holes in the building material, as far as practicable.

After the casting has cooled off, the pins or bolts holding the bottom to its place are removed, and the completed product will drop out.

The box or mold may readily be removed from the wheels, if desired, and replaced by another of requisite shape and size.

With my apparatus blocks and other articles for building purposes may be made—such as, for instance, for the construction of walls, window and door sills, brackets, cornices, and other ornamental work, &c.

This process of utilizing the cinders has the twofold advantage of removing the same without any expense to the iron-manufacturer, while on the other hand this waste material is transformed into a valuable product.

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

1. A mold mounted upon wheels for the purpose of bringing the same close to the cinder-hole of a furnace, substantially as herein set forth.

2. The combination of the frames A A', wheels C C', handles B', and the mold D, all constructed substantially as and for the purposes herein set forth.

3. The combination of the mold D, top and bottom covers F F, straps *h h*, and keys *i*, substantially as herein set forth.

In testimony that I claim the foregoing I have hereunto set my hand this 8th day of May, 1879.

JULIUS PECHMANN.

Witnesses:

H. AUBREY TOULMIN,  
S. A. KEY.