

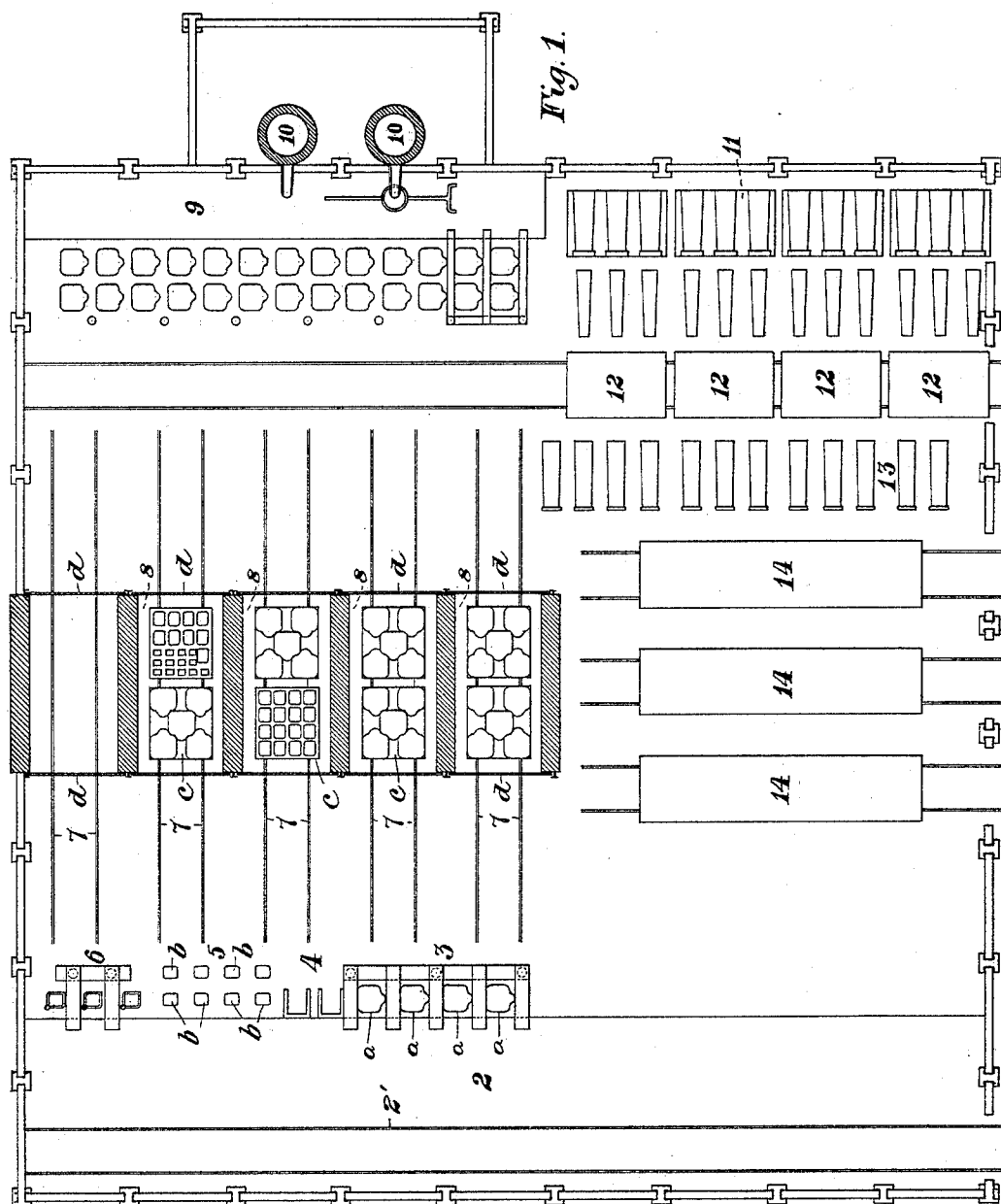
(No Model.)

2 Sheets—Sheet 1.

H. B. A. KEISER.
CASTING PLANT.

No. 497,984.

Patented May 23, 1893.



WITNESSES

H. M. Corwin
C. Byrnes.

INVENTOR

Henry B. A. Keiser
by T. B. Bicknell
his attorney

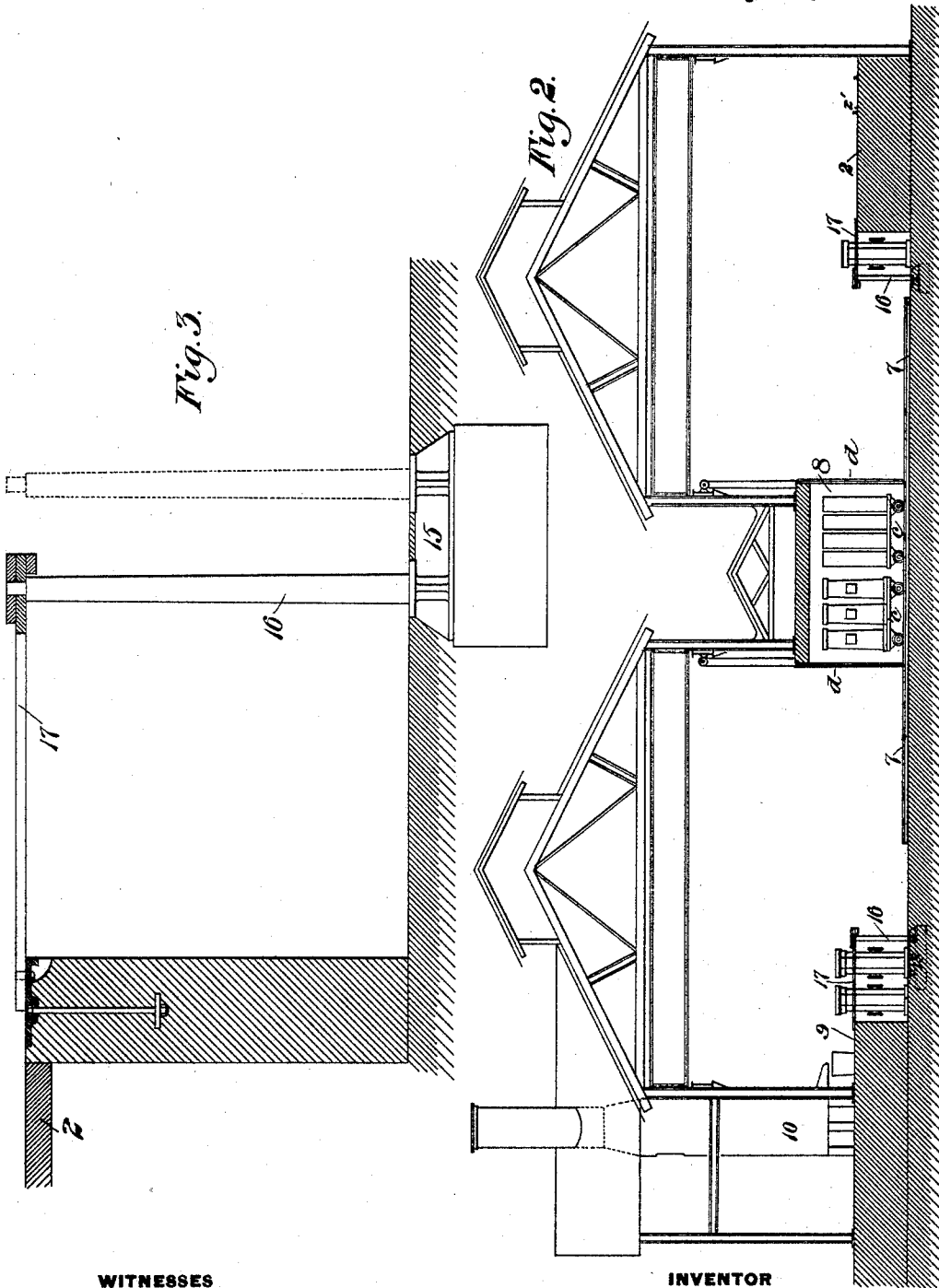
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WITNESSES

H. M. Corwin
W. D. Corwin

INVENTOR

Henry B. A. Kaiser
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his attorneys

UNITED STATES PATENT OFFICE.

HENRY B. A. KEISER, OF BRADDOCK, PENNSYLVANIA.

CASTING-PLANT.

SPECIFICATION forming part of Letters Patent No. 497,984, dated May 23, 1893.

Application filed April 15, 1892. Serial No. 429,296. (No model.)

To all whom it may concern:

Be it known that I, HENRY B. A. KEISER, of Braddock, in the county of Allegheny and State of Pennsylvania, have invented a new and useful Improvement in Casting-Plants, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification, in which—

Figure 1 is a plan view of a foundry plant arranged in accordance with my invention; and Fig. 2 is a longitudinal sectional view through the drying ovens. Fig. 3 is a detail view hereinafter referred to.

My invention relates to the arrangement of the various parts of a foundry plant, and more especially of plants for the making of ingot molds, the manufacture of which is at present extremely troublesome and costly. In the present practice, a pit is provided having about the same depth as the height of a mold to be made and in this pit the operations of molding, core making and casting take place. Thus in one day enough flasks and cores are rammed up for the next day's use and these are then put in the ovens. But as the casting takes place in the same pit and the pit is filled up early in the day with dried flasks and cores ready to pour, the molding has to be stopped and the operators remain idle the rest of the day, on account of the heat from the pouring operation and the lack of space. As soon as possible the filled molds are lifted out of the pits, laid alongside the same, and opened. This operation about covers the available floor space and prevents all further work. My invention obviates all these difficulties and enables all the operators to work as long as desired, and also relieves the molders from the liability to prostration from the heat of the casting, as they are entirely removed therefrom.

In Fig. 1, which illustrates my preferred form, 2 represents a bank which is of about the same height as the molds and extends along the entire line of the molding operations; 3 representing the molding station proper; 4 the blacking stands; 5 the core blacking station, and 6 the core-making stands. Thus the flasks, &c., stand on a level with the foundry floor instead of in a pit as previously. When the molds *a* and cores *b* are completed they

are loaded upon trucks *c* moving upon tracks 7, and run into the drying-ovens 8, through which the tracks pass. These ovens have doors *d* at both ends and are of sufficient capacity to dry twelve hours' work in about the same length of time. From the ovens when dried the molds and cores are drawn out on the trucks and set alongside the casting bank 9, as shown, where setting up of the molds and casting are continuously carried on, the metal being drawn from suitable cupolas 10, 10. As soon as filled the molds are loaded upon trucks and run out into the cleaning shed at 11, where the molds are allowed to cool. The parts are then separated and the flasks and core barrels placed upon trucks 12 on suitable tracks and switched outside and returned to the molding bank 2. The sand is also assorted, tempered and forwarded to the molding department.

13 represents the point where the finished ingot molds are cleaned and shipped upon cars 14. Suitable overhead travelers or cranes may be provided for moving the various parts from place to place.

It is evident that in the above system the various operations may be carried on continuously day and night if desired, one being entirely separated from the others.

Fig. 3 shows in detail the staging upon which the operators stand in preparing the molds, plates 15 being secured in the floor at a suitable distance from the bank 2, and standards 16 passing through holes therein. Cross-bars 17 connect the outer supports with the bank, and upon the staging supported on these cross-bars the workmen stand in tamping the molds which are placed beneath the staging and alongside the bank. Two or more series of holes are made in the plates 15 at different distances as shown, so that the staging may be made wider or narrower as desired.

The advantages of my invention are apparent. The different workmen each perform the same task continuously and hence become very expert therein and can work much faster than before. The molders, in the form of Fig. 1, are not subjected to the heat incident to casting, and the various operations may take place without interruption.

Many variations may be made in the form,

dimensions and arrangements of the parts without departure from my invention, since What I claim is—

- 5 1. In a molding department, the combination with the molds, of a raised bank extending alongside the molds, and a stage attached thereto and extending outside the molds; substantially as described.
- 10 2. In a casting-plant, a molding department, a casting department, and drying ovens located between and separating the same; substantially as described.
- 15 3. In a casting-plant, a molding department, a casting department, drying ovens located between and separating the same, and a cleaning department separated from the other departments; substantially as described.
4. In a casting-plant, a molding department,

a casting department, drying ovens between and separating the same and having doors 20 leading to both departments, and a separate cleaning department; substantially as described.

5. In a casting-plant, a molding department, a casting department, drying ovens between 25 and separating the same, and a cleaning and loading department extending alongside the molding and casting departments; substantially as described.

In testimony whereof I have hereunto set 30 my hand this 4th day of April, A. D. 1892.

HENRY B. A. KEISER.

Witnesses:

H. M. CORWIN,
W. B. CORWIN.