

(No Model.)

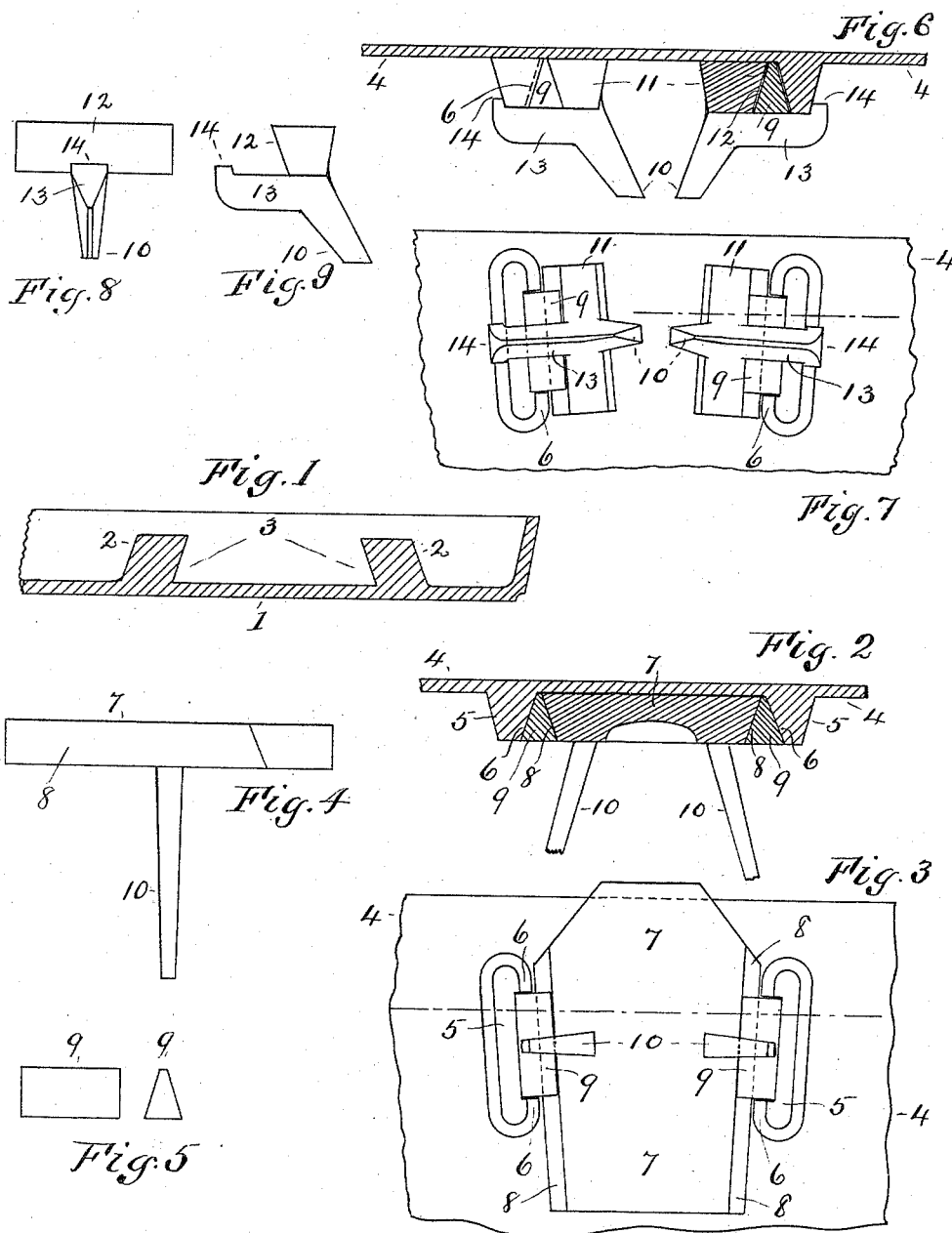
2 Sheets—Sheet 1.

O. DAMAN.

CHILL CORE FOR MOLDING SOCKETS FOR STOVES.

No. 493,911.

Patented Mar. 21, 1893.



Witnesses:  
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Inventor:  
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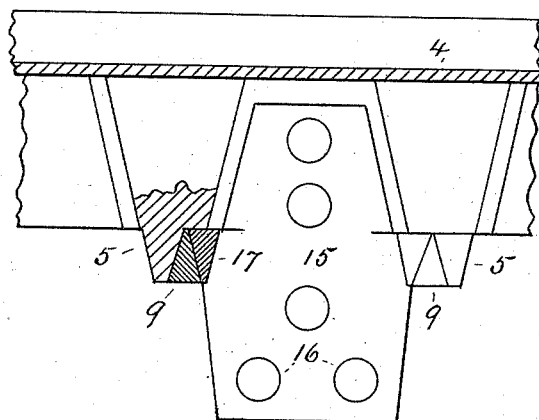


Fig. 10

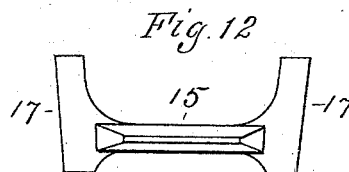


Fig. 12

Fig. 11

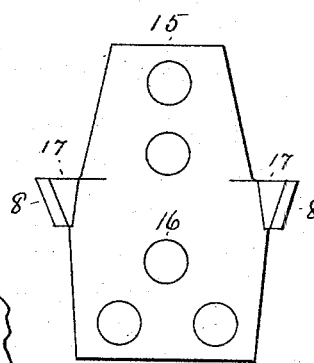
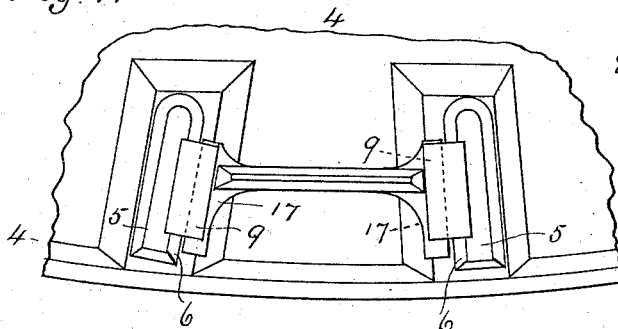


Fig. 13

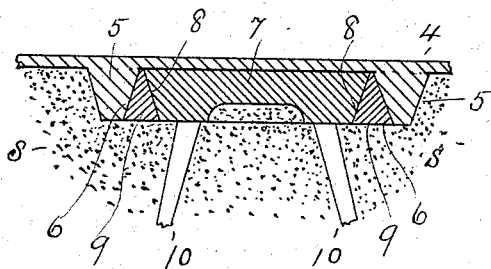


Fig. 14

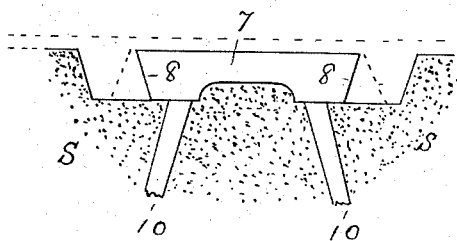


Fig. 15

Witnesses

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# UNITED STATES PATENT OFFICE.

OSCAR DAMAN, OF MINNEAPOLIS, MINNESOTA, ASSIGNOR TO THE NORTH-WESTERN STOVE WORKS, OF SAME PLACE.

## CHILL-CORE FOR MOLDING SOCKETS FOR STOVES.

SPECIFICATION forming part of Letters Patent No. 493,911, dated March 21, 1893.

Application filed May 23, 1892. Serial No. 433,984. (No model.)

*To all whom it may concern:*

Be it known that I, OSCAR DAMAN, a citizen of the United States, residing at Minneapolis, county of Hennepin, and State of Minnesota, have invented certain new and useful Improvements in Chill-Cores for Molding Leg-Sockets for Stoves, of which the following is a specification.

My invention has for its object the providing of convenient means for casting chilled ribs on the under side of stove-bottoms for forming dovetailed recesses to receive and retain the lateral portions of stove legs. This object is accomplished by the devices illustrated in the accompanying drawings, in which—

Figure 1, shows, in vertical section, a portion of a stove bottom (inverted) with a dovetailed leg-socket of the usual form and as produced by the use of the devices of my improvement. Fig. 2 shows a similar section of a portion of the pattern for a stove-bottom with the chill core and wedges in place to form the mold. Fig. 3 is a plan view of the devices of Fig. 2 inverted. Fig. 4, is a side elevation of the chill core of Figs. 2 and 3. Fig. 5, shows side and end views of one of the wedges used in connection with the pattern and chill core. Fig. 6 shows a modification of the chill core, and also the wedges and a portion of the pattern (partly in vertical section). Fig. 7, is a bottom view of the same. Figs. 8 and 9 show this modified form of chill-core in detail. Fig. 10 shows a vertical section of another modification of the chill-core together with the wedges and a portion of the pattern (partly in elevation and partly in section). Fig. 11 is a bottom view of the same. Figs. 12 and 13 show the latter form of modified chill-core detached from the pattern. Fig. 14 shows the pattern, chill-core and wedges of Fig. 2 in the sand, and Fig. 15 the mold formed upon removal of the pattern and wedges—the mold and chill-core being indicated by full lines and the positions of the removed pattern and wedges by dotted lines.

The chill-core of Figs. 2, 3, 4, 14, and 15 consists of a metal-plate 7, tapering slightly from its outer to its inner end and having its sides 8 beveled, so that when placed between the

inclined walls 6 of the pattern ridges 5 there is formed a wedge-shaped opening between them and the ridges for receiving the wooden or other wedges 9, adapted to fill such cavities in the formation of the mold. Suitable prongs 10, secured to the under side of the chill-core 7, extend at angles in the sand S to hold the chill core in place after the pattern and wedges are removed. The pattern, the chill core and the wedges being all in place, as shown in Figs. 2 and 3, and sand rammed upon and around them, as shown in Fig. 14, the pattern can be lifted off and the wedges removed, leaving the chill core in the sand (as shown in Fig. 15). This arrangement of the devices, as will be understood, will form a mold corresponding to the shape of the removed pattern and wedges; and, the chill core being retained in place while the casting is made, the rib 2 will be formed with chilled inclined inner surfaces forming the dove-tailed recess 3 for receiving the stove-leg.

In said drawings 1 designates a portion of a stove-bottom, 2 the ribs on its underside forming the dovetailed recess 3 for the reception of the lateral portion of a stove leg.

The pattern 4 is such as is commonly used in producing the mold for the stove-bottom and, of course, is substantially a duplicate in shape of the casting to be made, (except as to the ribs forming the leg-socket.) The ribs 5 at the under side of the pattern 4 form a portion of the mold to produce the ribs of the casting and their inner walls 6 are preferably inclined about as shown. The chill core of Figs. 3 and 4 is a metal plate 7, tapering slightly from its outer to its inner end and having its sides 8 beveled, so that when placed between the ribs 5 there is formed a wedge-shaped opening between them and the ribs 5, for the reception of wooden, or other, wedges 9 which are used to fill the cavities in forming the mold. Suitable prongs 10 secured to the under side of the chill core 7 extend in angular directions into the sand to hold the chill core in place when the pattern and wedges are removed. The pattern, the chill-core and the wedges being all in place, as shown in Fig. 2, and sand rammed upon and around them in the usual manner, the pattern can be lifted off and the

wedges removed, leaving the chill-core in place in the sand to remain until the casting is made. This arrangement of the devices, as will be understood, will form a mold corresponding to the shape of the pattern and wedges; and, as the chill-core is retained in position when a casting is made, the ribs 2 will be formed having chilled inclined inner surfaces, producing the dovetailed recess 3, for reception of the stove-leg.

In the modification illustrated by Figs. 6 to 9, the chill-core is composed of two separate parts or bars 11, one for each rib, and the two are equivalent to the single plate 7 and have their outer sides 12 similarly beveled. Lateral arms 13 formed on the bars 11 have lugs 14 for engaging the outer edges of the ribs 5 of the pattern to hold the wedges 9 in place. And prongs 10 are provided for holding the chill-cores in the sand. The pattern and wedges may be the same for this two-part chill-core as for the single plate heretofore described.

In the modification illustrated by Figs. 10 to 13 the chill-core consists of a vertical plate 15, which may have perforations 16 to allow sand to enter and hold it in place and it has at its sides horizontal portions 17 having sloping outer walls, similar to the walls of the plate 5 or bars 11. This form is best adapted for use in casting stove-bottoms of curved form having deep flanges extending downward, while the forms of devices previously described are

the more desirable in stoves having slight or no downward flanges from the base. In case the flanges are extended the form of the pattern differs slightly, but the ribs 5 are provided similar to those on the pattern 4. Either of these forms of chill-cores when used in connection with a suitable pattern and wedges supplies a convenient means for producing the dovetailed recesses for receiving the stove-legs.

Having described my invention, what I claim is—

1. In a device for molding leg-sockets for stoves, a pattern having ribs with oppositely inclined adjacent sides, in combination with a chill-core having prongs or their equivalents for holding it in the sand and having tapering walls forming wedge-shaped openings between the core and ribs, and independently movable wedges for filling such openings, substantially as set forth.

2. In a device for molding leg-sockets for stoves, a pattern having ribs with oppositely inclined adjacent sides, a two-part chill core having arms adapted to engage said ribs and tapering walls forming wedge-shaped openings between the core and ribs, and independently movable wedges for filling such openings, substantially as set forth.

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