

June 19, 1923.

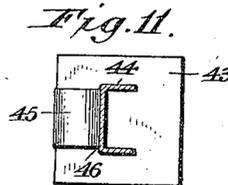
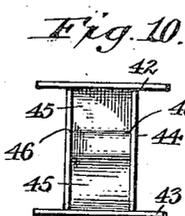
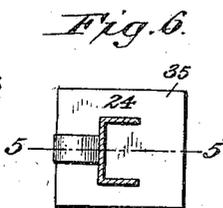
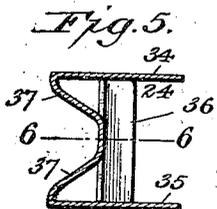
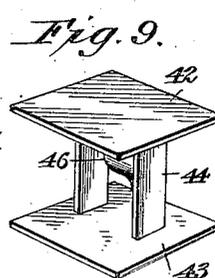
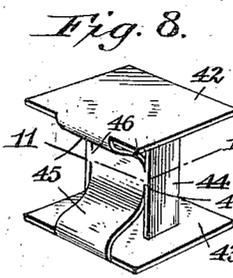
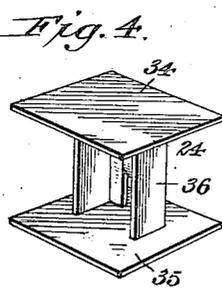
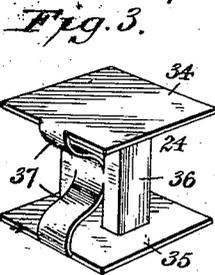
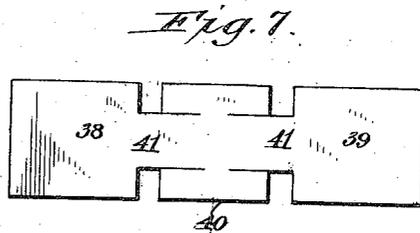
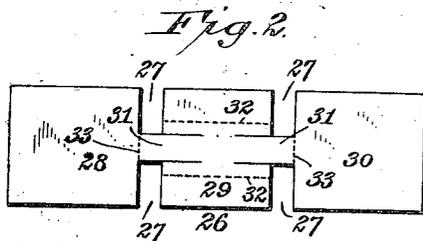
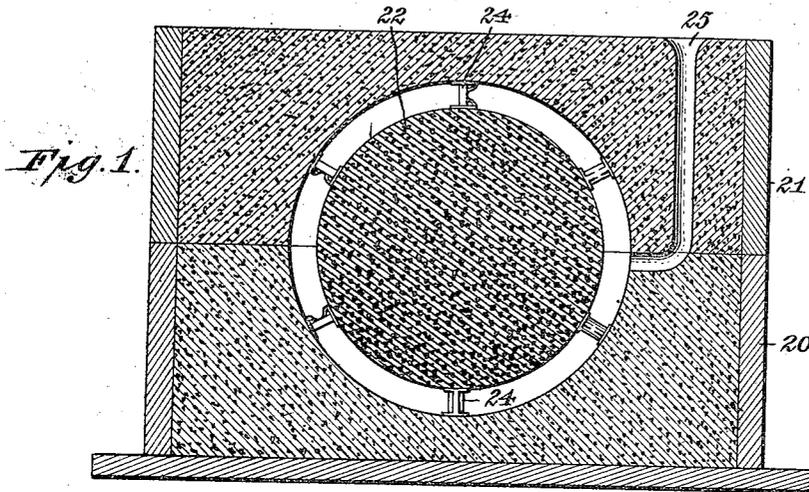
1,459,464

J. W. BRADLEY

MOLDER'S CHAPLET

Filed Sept. 25, 1920

2 Sheets-Sheet 1



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1,459,464

MOLDER'S CHAPLET

Filed Sept. 25, 1920

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Fig. 12

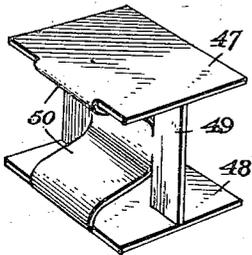


Fig. 14.

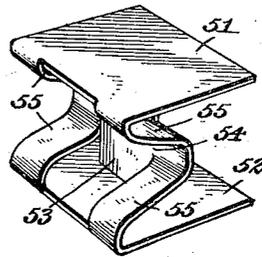


Fig. 13.

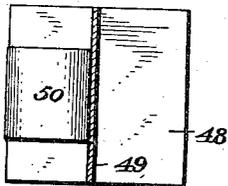


Fig. 15.

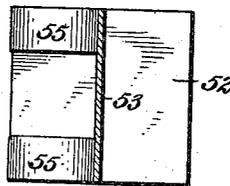


Fig. 16.

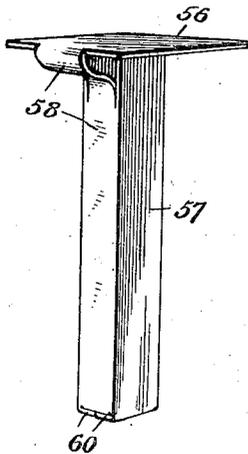


Fig. 17.

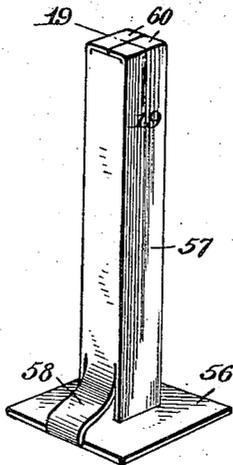


Fig. 18.

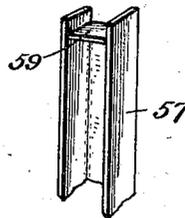
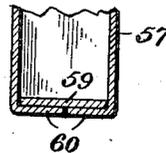


Fig. 19.



John W. Bradley, Inventor.  
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Attorney.

# UNITED STATES PATENT OFFICE.

JOHN W. BRADLEY, OF BUFFALO, NEW YORK.

MOLDER'S CHAPLET.

Application filed September 25, 1920. Serial No. 412,338.

*To all whom it may concern:*

Be it known that I, JOHN W. BRADLEY, a citizen of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Molders' Chaplets, of which the following is a specification.

My invention relates to molders' chaplets adapted to hold cores spaced from the walls of the molding spaces formed in molds for producing metallic or other castings.

The invention has for its primary object the provision of a chaplet which is cheap, exceedingly light in weight, simple in construction, and capable of sustaining comparatively large cores of considerable weight.

Another object of my invention is the production of a chaplet which can be constructed of lighter material than other chaplets of the same size and which are so constructed that the tendency of being depressed into the sand of the mold is reduced to the minimum.

A still further object is to provide a chaplet having two imperforate bearing portions and a support for said bearing portions arranged centrally thereof, yet being integral with said bearing portions.

With these and other objects in view the invention consists in a one-piece chaplet having two imperforate bearing portions and a support centrally between said bearing portions.

It further consists in the novel features of construction and arrangement of parts to be hereinafter set forth and more particularly pointed out in the subjoined claims.

In the drawings:—

Fig. 1 is a sectional view of a mold showing my improved chaplet to support a cylindrical core within two semi-cylindrical cavities formed, respectively, in the cope and drag of the mold.

Fig. 2 is a plan view of the blank from which the preferred form of my chaplet is constructed. Figs. 3 and 4 are perspective views of a chaplet formed from the blank shown in Fig. 2, these figures being viewed from different points.

Fig. 5 is a vertical section taken on line 5—5, Fig. 6.

Fig. 6 is a horizontal section taken on line 6—6, Fig. 5.

Fig. 7 is a plan view of a blank from which a modified form of chaplet is constructed.

Figs. 8 and 9 are perspective views of this modified form of chaplet viewed from different points.

Fig. 10 is a side elevation of the chaplet shown in Figs. 8 and 9.

Fig. 11 is a horizontal section taken on line 11—11, Fig. 8.

Fig. 12 is a perspective view of another modified form of chaplet embodying my invention.

Fig. 13 is a central horizontal section through the same.

Fig. 14 is a perspective view of a still further modified form of chaplet constructed according to my invention.

Fig. 15 is a central horizontal section through the same.

Fig. 16 is a perspective view of a chaplet constructed according to my invention and having a single bearing member.

Fig. 17 is an inverted perspective view of the chaplet shown in Fig. 16.

Fig. 18 is an inverted perspective view of the lower portion of the leg of the last-mentioned chaplet showing the same before being completely formed.

Fig. 19 is an inverted enlarged section taken on line 19—19, Fig. 17.

Reference being had to the drawings in detail, similar reference numerals indicate similar parts in the different figures.

In Fig. 1 I have shown a mold for casting a cylinder, the reference numeral 20 indicating the drag portion of the mold and 21 the cope portion thereof, each portion having a semi-cylindrical depression formed in the tamped sand thereof so arranged that they form a cylindrical casting space in which a cylindrical core 22 is placed and spaced from the surrounding walls of the two mold portions, the core being held spaced from said walls by my improved chaplets 24.

The in-gate or sprue designated by the numeral 25 is formed in the sand of the mold so as to deliver the molten metal into the casting space at any suitable point.

Reference being now had to Figs. 2 to 6 inclusive, my improved chaplet is formed from a blank such as shown at 26, Fig. 2, having notches 27 extending inwardly from opposite longitudinal edges, thus forming three parts 28, 29, 30 of equal widths, the end parts 28 and 30 being connected to the intermediate part by narrow connecting members 31 which are continued into the

intermediate part 29 by forming incisions into said intermediate part from opposite ends thereof in line with the edges of said connecting members. This blank is bent 5 along the parallel dotted lines 32, and the end parts 28 and 30 are bent along the dotted lines 33. The bending of the intermediate part along the dotted lines 32 converts said part into channel shape or form 10 and when bending the end parts 28 and 30 along the dotted lines 33, said end parts are forced laterally in the same direction to cause the narrow connecting members 31 to be bent into substantially ogee shape, 15 thus enabling the end parts to be placed centrally at opposite ends of the channel shaped intermediate part.

In this manner the chaplet 24 shown in Figs. 3 and 4 is formed. This chaplet 20 comprises two imperforate bearing members 34, 35 which were the end parts 28, 30 of the blank, the central supporting member 36 which was the intermediate part 29 of the blank, and the ogee shaped connecting 25 parts 37 which were the connecting members 31 of the blank. Said connecting parts 37 extend from a point near the center of the support 36 outwardly to two corresponding edges of the bearing parts 34, 35 and 30 have their longitudinal edges free or disconnected from other parts of the chaplet while its opposite ends are directly connected to said bearing members and said support, respectively. By reason of opposite longitudinal edges of the connecting 35 parts 37 being disconnected from other parts of the chaplet these connecting parts are non-supporting, by which is meant that they do not serve to support the bearing 40 members as these receive support solely from the supporting member. The chaplet is therefore constructed of one piece of sheet metal and has a central supporting member integral with the opposite bearing 45 members, the means of connection between the supporting members and bearing member being the ogee connecting part 37, the inner ends of which are connected to the support at a point centrally between the 50 ends thereof. By providing a chaplet with an imperforate bearing member, or members, a much better bearing is provided than has heretofore been possible in a chaplet whose support is arranged centrally of 55 the bearing member, or members, as the case may be; at the same time the tendency of sand from the mold working through openings or spaces in the bearing members is entirely eliminated, thereby assuring cleaner 60 castings than heretofore possible when using chaplets having central supports with openings in the bearing members.

In the modification shown in Figs. 7 to 11, the chaplet is formed from the blank 65 shown in Fig. 7, which has the end parts 38,

39, an intermediate part 40 and connecting members 41 for connecting the end parts 38, 39 with said intermediate part 40. This blank is substantially of the same outline 70 as the blank shown in Fig. 2, with the exception that the connecting parts 41 are wider and the intermediate part is adapted to be bent along the lines of the edges as 75 said connecting parts, the end parts 38 and 39 being bent upon the connecting parts in the same manner as indicated in Fig. 2. A chaplet formed from this blank has the two bearing members 42, 43, a central support 44, and the connecting parts 45. This 80 chaplet, however, differs from the preferred construction shown in Figs. 3 to 6, in that its support is not of channel shape in cross section, as the connecting members 49 are 85 connected to the edges of opposite edges of the support, as at 46.

The modification shown in Figs. 12 and 13 is formed from the blank shown in Fig. 7 without bending the intermediate part 40 upon itself. In forming a chaplet of this 90 kind from the blank shown in Fig. 7, the end parts 38, 39 are bent along the extreme ends of the connecting parts 41, said connecting parts being bent into ogee shape so that the opposite side portions of the 95 intermediate part 40 will assume a central position between the two end parts 38, 39, and when completed, this chaplet has two bearing members 47, 48 and a straight lined support 49 connected at a point midway 100 between said bearing members to the ogee shaped connecting parts 50, which were the connecting members 41 of the blank shown in Fig. 7.

In the modification shown in Fig. 14 I 105 have provided two bearing members 51, 52, the supporting member 53 arranged centrally between said bearing members, and in lieu of having the connecting parts extending centrally from the supporting member, as in the preceding figures, these connecting parts are increased in number and 110 extend from opposite edges of the supporting member, as at 54, said connecting members being designated by the numeral 55.

In the preferred construction and the 115 modifications thus far described, a support is arranged centrally between two flat bearing members at the top and bottom of the chaplet, and by means of suitable connecting parts or members formed integral with 120 the support and the bearing members, the support is connected centrally between its ends with the edges of the bearing members, preferably with corresponding edges thereof. The bearing members, in each instance, 125 rest against the ends of the support but are unfastened from the support except through the medium of the connecting parts or members.

In the modification shown in Figs. 16 130

to 19, I have shown a chaplet constructed according to my invention embodying only a single bearing member and a lengthened support or stem, this chaplet being used by inserting the support or stem into the sand in the drag portion of the mold, and in some cases into the cope portion of the mold. In this construction the bearing member designated by the numeral 56 is supported by and connected to the support or stem 57 in the same manner as provided for in Fig. 8, there being, however, only a single connecting member 58. The stem is of channel shape in cross section and has one wall thereof severed along its point of connection with the remaining walls thereof, said wall being extended beyond the adjacent ends of the remaining walls so as to provide the necessary length of metal for bending the connecting portion 58 into ogee formation so as to bring the bearing member 56 centrally against the upper end of the stem.

The opposite end of the wall having the connecting member 58 bent therefrom is made slightly longer than the two remaining walls of the stem, and the end of said wall is bent upon itself, as at 59, while the ends of the two remaining walls are bent upon themselves and over the bent portion 59, as at 60, thus closing the lower end of the stem.

While I have shown the bearing members of the preferred construction and the modifications thereof flat, it is apparent that these may be made concavo-convex, or may be otherwise formed, and that although I have shown such bearing members of square outline they may be circular or given any other desired outline without departing from my invention. I am aware that a chaplet having two bearing members and a supporting member is not broadly new, but in each instance so far as known, the supporting member is not centrally positioned between the bearing members and certain portions of the bearing members overhang the supporting member considerably more at one point than another, with the result that considerably heavier gauge metal is required than with a construction such as I provide and in which the bearing members are positioned centrally with respect to the supporting member. This feature of my invention in addition to the novel construction thereof is believed to be new and novel and permits the use of comparatively light gauge metal while possessing considerable strength and rigidity, which is only possible to acquire by the use of considerably heavier material when constructed as now known.

Having thus described my invention, what I claim is:—

1. As an article of manufacture, a chaplet comprising two spaced imperforate bear-

ing members, and a supporting member integral therewith and arranged centrally between said bearing members, said supporting member being spaced from all edges of said bearing member.

2. As an article of manufacture, a chaplet composed of two spaced bearing members, a supporting member centrally between said bearing members and having its ends in contact with the inner faces of said bearing members, and non-supporting connecting members connecting said bearing members and supporting member.

3. As an article of manufacture, an integral chaplet having an imperforate bearing member, a support in contact at one end thereof with said bearing member, and connecting means having free longitudinal edges and its opposite ends connected with said bearing member and said support, respectively.

4. As an article of manufacture, a chaplet having a bearing member, a support engaged centrally by said bearing member, and connecting means connecting said bearing member with said support a distance from the end thereof engaged by said bearing member.

5. As an article of manufacture, a chaplet having a bearing member, a support engaging said bearing member centrally, and connecting means joined to said support between its ends only and having connection with said bearing member at one edge thereof.

6. As an article of manufacture, a chaplet having a bearing member, a support engaged centrally by said bearing member, and connecting means connecting said support at a point a distance from the end thereof engaged by said bearing member with one edge of said bearing member.

7. As an article of manufacture, a chaplet comprising two spaced bearing members, a support having its ends engaging the inner faces of said bearing members, connecting means extending from a point spaced from the ends of said support to said bearing members.

8. As an article of manufacture, an integral chaplet formed of sheet metal and comprising two spaced bearing members, a support arranged centrally between said bearing members, and connecting members extending from said support at a point between its ends to corresponding edges of said bearing members.

9. As an article of manufacture, a chaplet constructed from sheet metal having two spaced bearing members, a substantially channel-shaped support, and connecting members extending from one of the walls of said channel-shaped support between the ends thereof and corresponding edges of said bearing members.

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10. As an article of manufacture, a chap-  
let formed from a single piece of sheet metal  
and comprising substantially flat top and  
bottom bearing members, a supporting mem-  
ber having two spaced side portions with  
5 opposite ends of each side portion in contact  
with said bearing members, and connecting

members bent outwardly from a point be-  
tween said side portions midway between  
said bearing members, each connecting mem- 10  
ber having connection with one of the edges  
of each of said bearing members.

In testimony whereof I affix my signature.  
JOHN W. BRADLEY.