

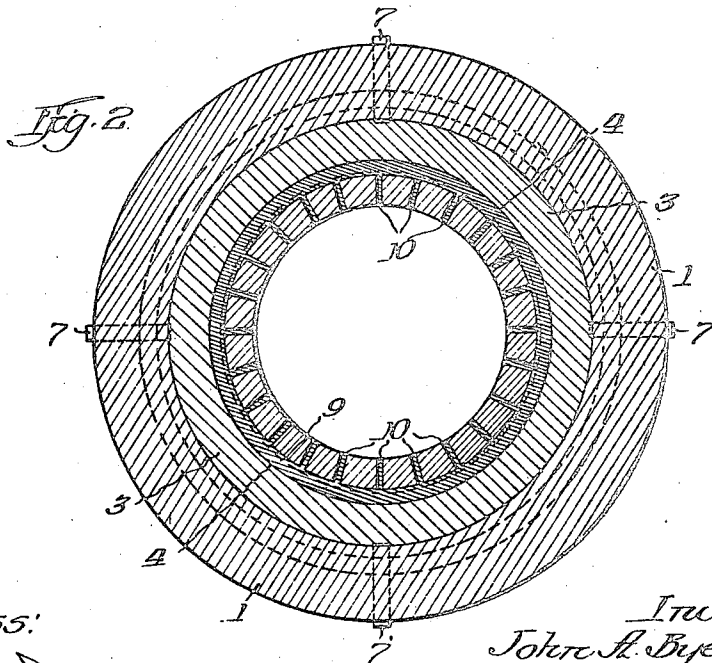
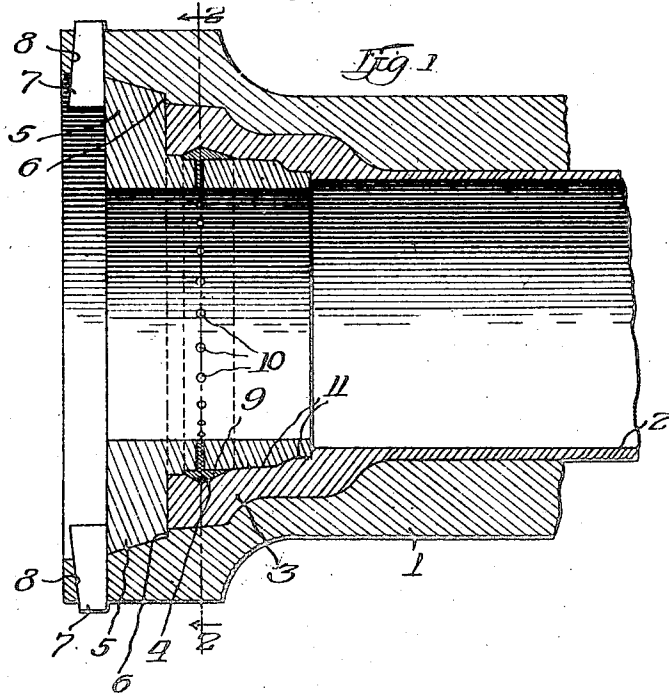
March 11, 1924.

J. A. BYERS

1,486,631

CORE

Filed July 27, 1922



Witness:

Ed. C. Larson

Inventor

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By

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UNITED STATES PATENT OFFICE.

JOHN A. BYERS, OF CHICAGO, ILLINOIS, ASSIGNOR TO JAMES B. CLOW & SONS, OF CHICAGO, ILLINOIS, A CORPORATION OF ILLINOIS.

CORE.

Application filed July 27, 1922. Serial No. 577,844.

To all whom it may concern:

Be it known that I, JOHN A. BYERS, a citizen of the United States, and resident of Chicago, in the county of Cook and State of Illinois, have invented a certain new and useful Improvement in Cores, of which the following is a full, clear, concise, and exact description, reference being had to the accompanying drawing, forming a part of this specification.

The present invention relates to molds for casting molten metal and its principal object is the provision of a core especially useful in forming the bell end of pipes cast in a centrifugal casting machine.

In the drawing,—
Figure 1 is a broken diametrical section of a mold and core embodying the invention.

Figure 2 is a section on the line 2—2 in Figure 1.

The drawing illustrates a tubular metal mold 1 which is to be suitably mounted and rotated so that upon introduction of molten metal in the preferred manner the pipe 2 will be cast by centrifugal force. The body of the pipe 2 is cast without the use of a core but the peculiar formation of the bell end 3 of the pipe requires a core for the definition of its internal surface. It is usually desirable to form the internal surface of the bell end of the pipe with an annular groove 4 to receive the lead ring used in packing the joint between contiguous pipe sections in installation. The core for forming the internal surface of the bell end of the pipe comprises a tubular metal member 5 preferably secured in position by wedges 7 driven through holes 8 in the end of the mold and wedging the member 5 against an outwardly facing shoulder 6 formed in the mold. The bell end 3 of the pipe, of course, will be cast between the internal surface of the mold and the external surface of the opposed portion of the tubular member 5. In order to form the annular depression 4 in the pipe and still to permit withdrawal of the core or tubu-

lar member 5 from the pipe a ring 9 of collapsible material having the desired con-
formation is secured on the exterior sur-
face of the metal core 5. The ring 9 may
be formed of any collapsible material, such
as sand, string or pressed paper, for ex-
ample, and the metal core 5 is formed with
a plurality of vents 10 extending inwardly
from the ring 9 to the bore of the core.
Preferably, the exterior surface of the
metal core 5 inwardly beyond the ring 9
is slightly tapered as at 11.

In use the ring 9 is secured on the metal
core 5 and the latter is then wedged in
position in the end of the mold. When the
pipe is cast the ring 9 forms the desired
depression 4 in the internal surface of the
pipe. If the ring be formed of certain
materials, such as string or pressed paper,
it will last long enough to form the de-
sired depression in the pipe but will then
be burned out. However, whether the ring
be formed of such material as will burn
out or whether it be formed, for instance, of
sand, the metal core 5 may be withdrawn
readily from the pipe and its withdrawal
will be facilitated if the inner end of the
member be tapered.

Having thus described my invention, what
I claim as new and desire to secure by Let-
ters Patent of the United States is:—

The combination of a tubular metal mold
having its internal surface formed to mold
the exterior surface of a pipe, a tubular
metal core removably secured to the mold
and having its exterior surface formed to
mold the internal surface of a pipe and
having a surface intersecting the mold sur-
faces of the mold and core and formed to
mold the end of a pipe, and a ring of com-
bustible material projecting from the exter-
ior molding surface of the core, the core
being formed with a plurality of vents ex-
tending from the ring to the bore of the
core.

In witness whereof, I hereunto subscrib
my name this 24 day of July, 1922.

JOHN A. BYERS.