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T. P. ANTHONY
CORE FOR CENTRIFUGAL PIPE MOLDS

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2 Sheets-Sheet 2

Fig. 4.

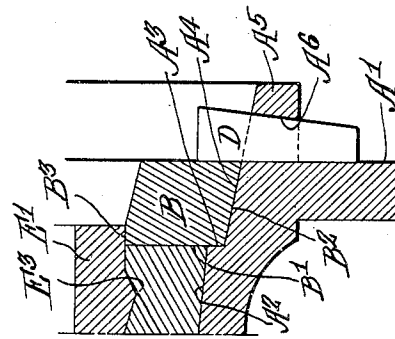
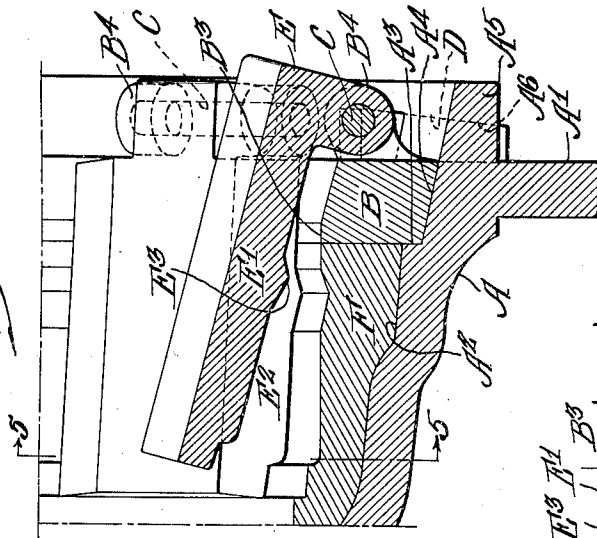
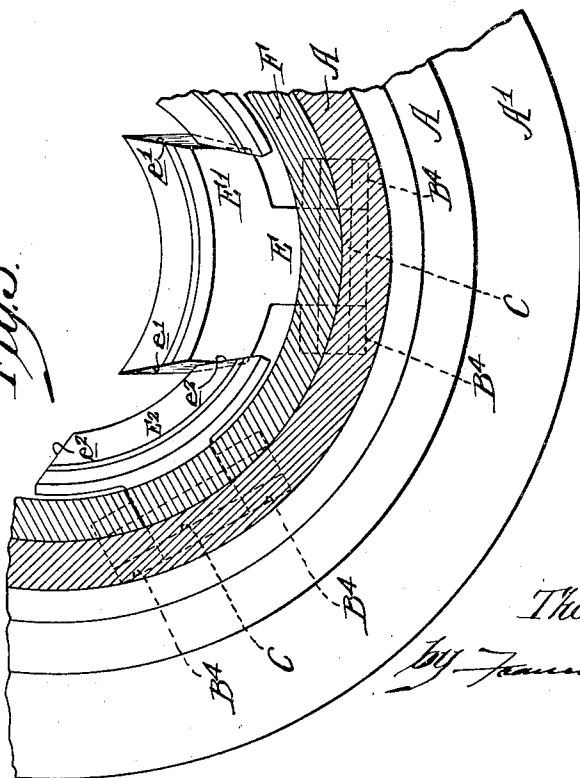


Fig. 3.

Fig. 5.



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UNITED STATES PATENT OFFICE.

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CORE FOR CENTRIFUGAL PIPE MOLDS.

Application filed September 9, 1924. Serial No. 736,688.

To all whom it may concern:

Be it known that I, THOMAS PEACOCK ANTHONY, a citizen of the United States of America, and resident of Edgewater Park, Burlington County, State of New Jersey, have invented a certain new and useful Improvement in Cores for Centrifugal Pipe Molds, of which the following is a true and exact description, reference being had to the accompanying drawings, which form part of the application.

My invention relates to centrifugal pipe molds and has for its object to provide a segmental removable core for forming the bell ends of pipes which can be removed from the casting without destroying the core and is therefore capable of re-use. The nature of my invention will be best understood as described in connection with the drawings in which I have illustrated a core device constructed in accordance with my invention and in which

Figure 1 is an end view of a centrifugal pipe mold with my segmental core device secured to the end of the mold and with its parts in the position they occupy when a casting is made.

Figure 2 is a cross section on the line 2—2 of Fig. 1.

Figure 3, a fragmentary section on the line 3—3 of Fig. 1.

Figure 4 is a sectional view similar to that of Fig. 2, but showing the core segments turned inward into the position they occupy or may occupy when the core is withdrawn from the casting, and

Figure 5 is an end view of the mold and core device in the position of the parts shown in Fig. 4.

A is the mold, here shown as a metal mold, and provided with a flanged outer face indicated at A'. The expanded bell portion of the mold is indicated at A² and the mold is formed on the seating surface indicated at A³ and A⁴ in which the ring, to be described, fits. Extending outward from the flanged end A' of the mold is an annular ring indicated at A⁵ in which, at convenient points, are formed wedge openings indicated at A⁶. B is an annular ring having a shoulder B' which fits on the seating surface A³ and extends inward in the mold to form the end of the mold against which the

bell end of the pipe is cast. The ring also has a seating surface B² which fits against the tapered seat A⁴ of the mold and its inner periphery B³ forms a shoulder against which the segments of the segmental core rest when they are in operative position in the mold. On its outer face the ring B carries lugs B⁴ which support hinged pins C. Pivoted on the pins C are the hinged arms E, E', of the core segments proper, indicated at E' and E². These segments, when the ring is secured in the end of the mold and the segments abut through their surface E⁴ with the abutting shoulder B³ of the ring, form the core of the mold with their end surfaces e' and e² abutting against each other, as shown in Fig. 1, and to enable the segments to return inward into the mold so that their projecting lugs, indicated at E', will hold the casting, the segments are made of wedge shape with the segments E' having the edges of the wedge diverging toward the center of the mold and the adjoining segments E² having their abutting edges abutting toward the center of the mold as indicated at e' and e².

As shown, the ring B is secured in its seat at the end of the mold by means of the wedges D fitting in the wedge holes A⁶ of the projecting lug A⁵.

In operation, the ring B is secured in the end of the mold with the segments E, E', extending into the mold. The mold is rotated at considerable speed with the result that the centrifugal force naturally brings the segments into contact with the shoulder B³ of the ring, into the position illustrated in Figs. 1 and 2. Metal is poured into the rotating mold and thrust into the space between the bell mouth A² of the mold and the core made up of the segments E' and E² forming the bell casting indicated at F. Fastening devices securing the ring to the mold are then removed and the ring is drawn away from the end of the mold and from the end of the casting which abuts against it. As the mold segments, owing to their wedged shaped contacting ends, can be turned inward toward the center of the mold, they are so turned as they are withdrawn from the mold, assuming positions through withdrawal shown on a somewhat exaggerated scale in Figs 4 and 5. The cast-

ings can then be withdrawn from the mold and my core devices are inserted for a fresh casting.

Of course, the ring B and the attached core segments can be withdrawn from the mold together with the casting and separated from the casting after withdrawal.

The core segments may, and ordinarily, will be made of metal but obviously any refractory and fairly strong material can be used in place of metal.

My invention is in the nature of an improvement on the collapsible core invention of Edward Hering described and claimed in his application filed September 6, 1924, Serial No. 736,221.

Having now described my invention, what I claim as new and desire to secure by Letters Patent, is:

1. A segmental removable core for a centrifugal pipe mold comprising in combination a ring adapted to be removably secured to the end of a mold and a series of core segments separately hinged to the ring

adapted to fit together in the mold to form a core and to be turned inwardly in the mold to clear the casting.

2. A segmental removable core for a centrifugal pipe mold comprising in combination a ring adapted to be removably secured to the end of a mold and a series of core segments separately hinged to the ring adapted to fit together in the mold to form a core and formed with wedge shaped contacting ends which in alternate segments diverge and converge towards the inside of the core.

3. A segmental removable core for a centrifugal pipe mold comprising in combination a ring adapted to be removably secured to the end of a mold and having an aligning shoulder with which the core segments contact when in operative position and a series of core segments hinged to the ring adapted to fit together in the mold to form a core and to be turned inwardly in the mold to clear the casting.

THOMAS PEACOCK ANTHONY.