

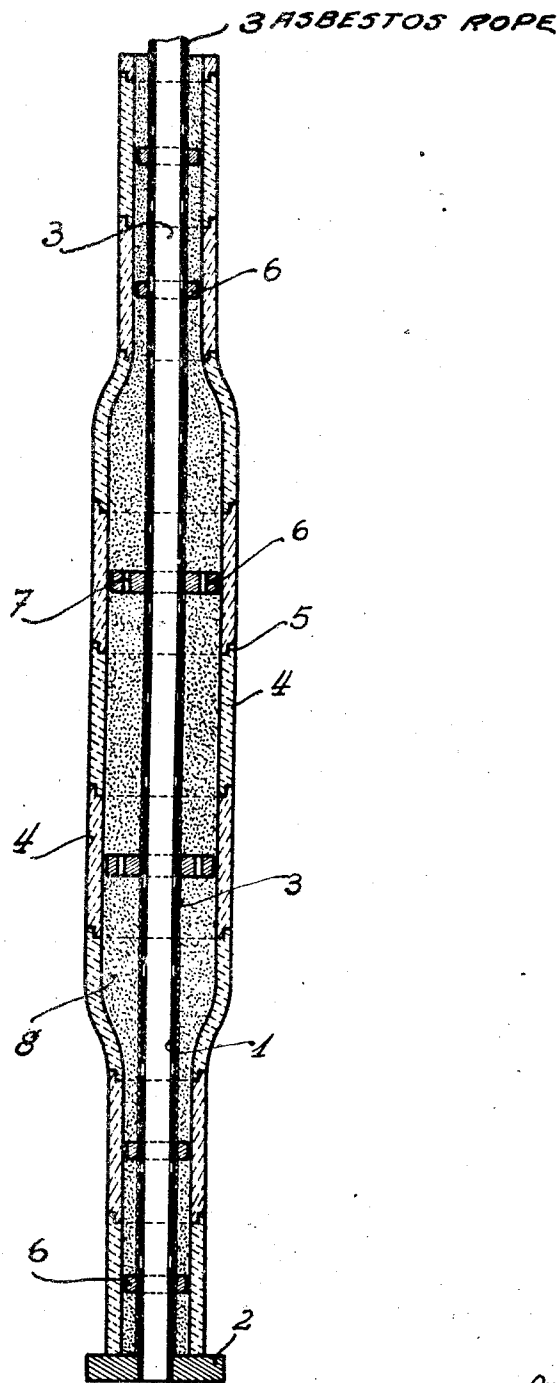
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CORE

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CORE

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The present invention relates to the casting of steel, more particularly the casting of hollow rollers and other hollow bodies from steel, and also to the cores and moulds used herefor.

One object of this invention is to provide a core which is not burned by the liquid steel. A further object of the invention is to provide a core which is very porous and which readily allows the gases becoming liberated from the liquid steel to escape.

The cores from core material hitherto used for the casting of hollow rollers and other hollow bodies are easily burned by the said hollow bodies, since, in consequence of the great size and the correspondingly slow cooling of these hollow bodies, the cores remain for a very long time in contact with the liquid steel. The ejection of the core causes therefore, with such rollers considerable work and high trimming and cleaning costs.

According to the present invention this disadvantage is removed by this, that the cores are built up of members made of porous brick material, preferably of light fire clay brick material. This is not burned by the steel, and, in consequence of its high porosity, permits a ready escape of the gases liberated during the casting.

The accompanying drawing shows in section, one example of a core constructed according to the invention. The core is built up about a tube 1 which has a perforated wall and the foot of which is embedded in the usual manner in a tamped mass 2 within the chill or the mould box. The tube is wrapped round with asbestos rope 3 and the wall of the core is built up about the latter with tubular members 4, which are made of brick material as permeable to gas as possible. The said members are preferably made of light fire-clay brick material, which members in consequence of the burning out of carbonaceous material during their preparation contain numerous fine air passages penetrating throughout the whole mass. The tubular members prepared from this substance are graduated in correspondence with the different diameters of the hollow interior of the roller. The building up of the tubular mem-

bers 4 may be facilitated by the arrangement of rabbets 5.

By means of the spacing discs 6, which are inserted between the tube 1 and the brick tubular members 4, the latter are accurately centered with respect to the tube. The spacing rings which are advantageously made of the same substance as members 4, are provided with holes 7. The remaining space in the interior of the core is filled with moulding sand 8 which is stamped down. The complete erected core is finally finished on the exterior and, if necessary, also coated with a bituminous solution.

The brick tubular members are not burned by the steel mass and they do not become coated with steel and therefore, they are easily ejected, whereby trimming and cleaning costs are considerably saved. Their mechanical resistance towards the shrinking steel, also, is greater than that of ordinary core material. The interior of the roller is, therefore, perfectly smooth. Moreover, the porous fire-clay brick material in combination with the holes in the interior of the core render possible a very good withdrawal of the gases liberated during the casting.

What I claim is:—

1. A core for moulds for casting hollow bodies from steel, comprising in combination a central tube, exterior tubular members of porous brick material surrounding said central tube, a filling of sand between said central tube and exterior tubular members and spacing discs between said central tube and exterior tubular members imbedded in said filling of sand for centering the tubular members with respect to the central tube.

2. A core for moulds for casting hollow bodies from steel, comprising in combination a central tube, exterior tubular members of light fire clay brick material surrounding said central tube, a filling of sand between said central tube and exterior tubular members and spacing discs between said central tube and exterior tubular members imbedded in said filling of sand for centering the tubular members with respect to the central tube.

3. A core for moulds for casting hollow bodies from steel, comprising in combination

a central tube, exterior tubular members of light fire clay brick material surrounding said central tube, a filling of sand between said central tube and exterior tubular members and spacing discs of light fire clay brick material between said central tube and exterior tubular members imbedded in said filling of sand for centering the tubular members with respect to the central tube.

4. A core for moulds for casting hollow bodies from steel, comprising in combination a central tube, asbestos rope wrapped round said central tube, exterior tubular members of porous brick material surrounding said central tube, a filling of sand between said central tube and exterior tubular members and spacing discs between said central tube and exterior tubular members imbedded in said filling of sand for centering the tubular members with respect to the central tube.

Dated this 23rd day of May 1929.

In testimony whereof I have signed my name to this specification.

ROBERT LÜNGEN.

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