

## Title (en)

Apparatus to facilitate opening of molten metal casting vessel

## Title (de)

Vorrichtung zum Erleichtern des Öffnens eines Gefäßes für schmelzflüssige Metalle

## Title (fr)

Dispositif pour faciliter l'ouverture d'un récipient de coulée de métal liquide

## Publication

**EP 1329271 A1 20030723 (EN)**

## Application

**EP 02250302 A 20020116**

## Priority

- EP 02250302 A 20020116
- CA 2367586 A 20020114

## Abstract (en)

An apparatus to facilitate opening of molten metal casting vessels (12) includes a well block (26) within a discharge port of a casting vessel. The well block has a central opening through it along a longitudinal axis. At least one nozzle insert (28,30,32) is located within the central opening, and has a central opening through it that is substantially coaxial with the central opening of the well block. The insert has an outer surface complementary to and matingly engaging the central opening of the well block and at least one channel (50) extending along the outer surface of the insert. The well block includes a plenum (48) substantially surrounding the central opening of the well block and in fluid flow communication with the channel. A fluid supply line (40) communicates with the plenum and supplies a fluid under pressure to the plenum and the channel. Fluid supplied to the plenum flows through the channel and the discharge port and into the interior of the vessel. <IMAGE>

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## Citation (search report)

- [XY] US 4421257 A 19831220 - THROWER ANTHONY [GB]
- [XY] EP 0187924 A1 19860723 - COMETUS AG [CH]
- [X] US 3253307 A 19660531 - GRIFFITHS DAVID K, et al
- [Y] DE 4112836 A1 19921022 - METALLGESELLSCHAFT AG [DE]
- [X] GB 1601944 A 19811104 - GLOCAST PRODUCTS LTD
- [X] US 1832873 A 19311124 - MILNER CLYDE H
- [X] US 5335896 A 19940809 - IDSTEIN DONALD J [US], et al
- [X] US 3464598 A 19690902 - CURRY WILLIAM J JR
- [A] US 4708327 A 19871124 - WALTENSPUEHL ROLF [CH]
- [X] PATENT ABSTRACTS OF JAPAN vol. 1999, no. 13 30 November 1999 (1999-11-30)

## Cited by

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