

## Title (en)

Tap hole plugging gun for metallurgical ovens

## Title (de)

Stichlochstopfkanone für metallurgische Öfen

## Title (fr)

Machine pour boucher le trou de coulée de fours métallurgiques

## Publication

**EP 2264391 A1 20101222 (DE)**

## Application

**EP 09008106 A 20090620**

## Priority

EP 09008106 A 20090620

## Abstract (en)

The taphole plug gun for metallurgical furnace, comprises a pressure cylinder (2), which is suited for the reception of clay masses and has a lockable filling opening (3) for the mass and a compaction ram for pressing out the clay mass from a mouthpiece of the pressure cylinder pressed against the taphole of the furnace, and a pivotable safety flap (4) for locking the filling opening of the pressure cylinder for the clay mass. The safety flap comprises a stop (8) for the compaction ram, where the stop is swiveled during opening the flap for braking unintentional forward stroke of the ram. The taphole plug gun for metallurgical furnace, comprises a pressure cylinder (2), which is suited for the reception of clay masses and has a lockable filling opening (3) for the clay mass and a compaction ram for pressing out the clay mass from a mouthpiece of the pressure cylinder pressed against the taphole of the furnace, and a pivotable safety flap (4) for locking the filling opening of the pressure cylinder for the clay mass. The safety flap comprises a stop (8) for the compaction ram, where the stop is swiveled during opening the flap for braking an unintentional forward stroke of the compaction ram for pre-compacting and ejection of the clay mass in the cylinder chamber (9) of the pressure cylinder and is swung out during closing the flap from the cylinder chamber. A roller segment is directed towards outside in the locking position of the safety flap towards outside on one of the long sides of the safety flap that is arched corresponding to the cover of the pressure cylinder and that interferes in the locking position in the filling opening of the pressure cylinder for the clay mass in positive-locking manner. The roller segment is pivoted in open position of the safety flap in the cylinder chamber of the pressure cylinder and forms the stop for the compaction ram. The roller segment comprises a bearing bore for the swiveling axis of the safety flap parallel to middle axis of the pressure cylinder directed for the clay mass. The bearing bore is arranged in clevis at the cover of the pressure cylinder. A handle is arranged in the area of the other long side of the safety flap directed parallel to the middle axis of the pressure cylinder and a hook gripping to the handle is arranged for locking the safety flap in its locking position.

## Abstract (de)

Die Erfindung betrifft eine Stichlochstopfkanone (1) für metallurgische Öfen, mit einem Druckzylinder (2) zur Aufnahme der Stopfmasse, der eine verschließbare Einfüllöffnung (3) für die Stopfmasse aufweist, sowie mit einem Stopfkolben zum Herauspressen der Stopfmasse aus einem gegen das Stichloch eines Ofens angepressten Mundstück (6) des Druckzylinders (2). Die schwenkbare Sicherheitsklappe (4) zum Verschließen der Einfüllöffnung (3) des Druckzylinders (2) für die Stopfmasse ist mit einem Anschlag (8) ausgestattet, der beim Öffnen der Klappe (4) zum Abbremsen eines unbeabsichtigten Vorwärtshubes des Stopfkolbens zum Vorverdichten und zum Ausstoßen der Stopfmasse in die Zylinderkammer (9) des Druckzylinders (2) eingeschwenkt und beim Schließen der Sicherheitsklappe (4) aus der Zylinderkammer (9) ausgeschwenkt wird.

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- DE 3007072 C2 19870924
- US 3682456 A 19720808 - BERCZYNSKI FRANK A
- KR 20040001760 A 20040107 - POSCO

## Citation (search report)

- [X] US 3682456 A 19720808 - BERCZYNSKI FRANK A
- [X] KR 20040001760 A 20040107 - POSCO
- [A] JP 2004263261 A 20040924 - JFE STEEL KK

## Cited by

CN107470909A; CN113574186A; US8968640B2; WO2011089054A1; WO2020182304A1

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