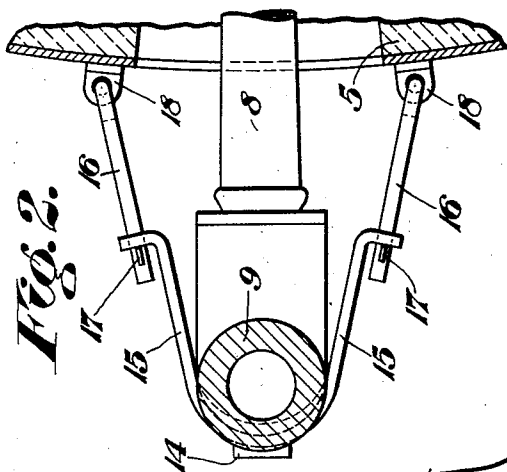
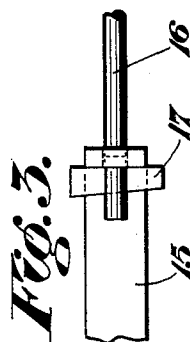
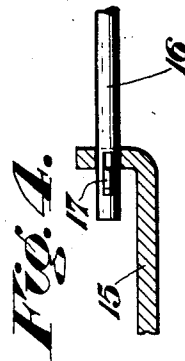
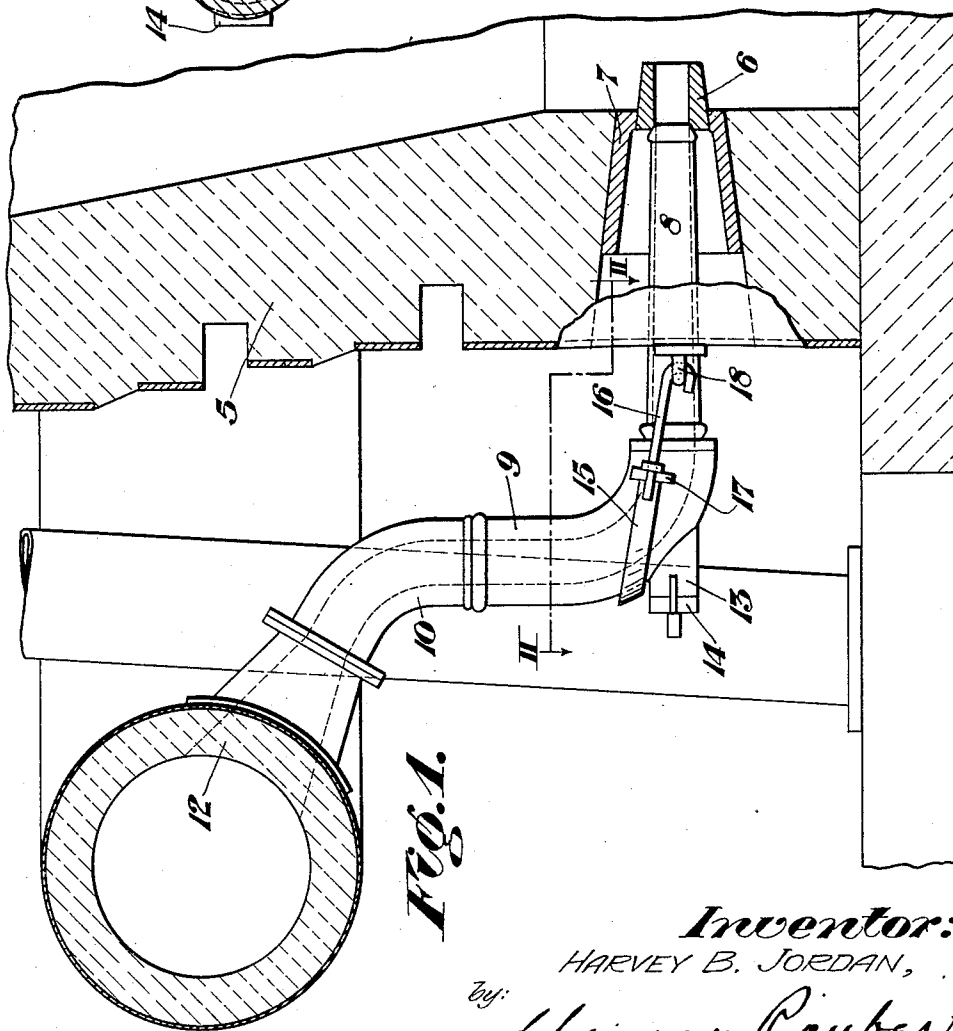


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H. B. JORDAN
TUYÈRE STOCK BRIDLE

1,847,835

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UNITED STATES PATENT OFFICE

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TUYÈRE STOCK BRIDLE

Application filed June 9, 1930. Serial No. 459,904.

This invention relates to bridles for blast furnace tuyère stocks and the primary object of the same is to provide a device of this class which will positively retain the tuyère stock and blow pipe in position relatively to the furnace tuyère and which at the same time is of a simplified construction and easily and quickly applied to and adjusted and released from the tuyère stock.

With the foregoing and other objects and advantages in view the invention consists in the preferred construction and arrangement of the several parts which will be more fully described and claimed.

In the drawings:

Figure 1 is a view in side elevation of a blast furnace tuyère stock and associated parts showing the improved bridle applied in position relative to said stock.

Figure 2 is a sectional plan view taken on the line II—II of Figure 1.

Figures 3 and 4 are fragmentary detail views of parts of the bridle.

The improved bridle may be used alone or as an auxiliary or safety bridle in conjunction with the bridles commonly used for tuyère stocks, its simplicity and cheapness of construction enabling such cooperative use with but slight additional cost. Experience has demonstrated that its use as a safety bridle in conjunction with a main bridle is of considerable value as in many instances parts of the main bridle break or its connections give way and serious consequences result.

Referring to the drawings, the numeral 5 designates the wall of a furnace having positioned therein in the usual manner a tuyère 6 and tuyère cooler 7, a blow pipe 8 projecting into the tuyère and connecting with the usual tuyère stock 9, goose neck 10 and bustle pipe 12. The outer curved wall of the tuyère stock is provided with the usual peep-hole neck or extension 13 formed with an opening for inspection and cleaning out the tuyère,

which opening is closed by the tuyère cap or wicket 14.

The improved bridle, in its preferred construction, comprises a yoke 15 adapted to the outer curvature or bend of the tuyère stock immediately above the neck or extension 13, the ends of said yoke being bent outwardly and formed with openings to receive the slotted ends of side rods 16 which are held in place by tapered keys 17. Lugs 18 are securely anchored or fastened to the metal shell of the furnace hearth and each rod 16 has the opposite end thereof bent into the form of a hook which is passed through an eye formed in one of said lugs. The yoke 15 is thus securely anchored to the hearth jacket, and the tuyère stock 9 and blow pipe 8 are held in position against displacement due to furnace blast pressure.

The slots in the ends of the rods 16 and the tapered keys 17 cooperate to provide a simple and effective means of tightening or adjusting the bridle assembly, and conversely, the yoke 15 may be easily and quickly released by removing said keys.

What is claimed as new is:—

1. A bridle for securing tuyère stocks to the hearth jacket of a blast furnace, said tuyère stocks having a peep-hole neck and said bridle member including a yoke adapted to be positioned in the rear of a tuyère stock above the peep-hole neck and means for removably securing the yoke to the tuyère jacket.

2. A bridle for securing tuyère stocks to the hearth jacket of a blast furnace, said tuyère stocks each having an outer curved wall, said bridle comprising a yoke member adapted to engage the outer curved wall of a tuyère stock and means for detachably securing the yoke to the hearth jacket, said means comprising connecting rods having slotted ends passing through the extremities of the yoke and adjustably keyed thereto by keys ex-

tending through the slots in the ends of said rods.

3. A bridle for securing tuyère stocks to the hearth jacket of blast furnaces, said
5 tuyère stocks each having an outer curved wall, said bridle comprising a yoke member adapted to fit around the outer curved wall of a tuyère stock and being formed with out-
wardly bent slotted extremities and means
10 for securing the yoke relative to the hearth jacket, said means comprising anchor lugs and connecting rods hooked into said lugs at one end and slotted at their opposite ends,
said slotted ends passing through the slotted
15 extremities of the yoke and being adjustably keyed thereto by keys extending through the slots in the ends of said rods.

In testimony whereof, I have hereunto set my hand.

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HARVEY B. JORDAN.

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