W. GIBSON.

PATTERN FOR MAKING MOLDS IN WHICH METALS ARE CAST.

APPLICATION FILED MAR. 19, 1920.

1,349,829. Patented Aug. 17, 1920.

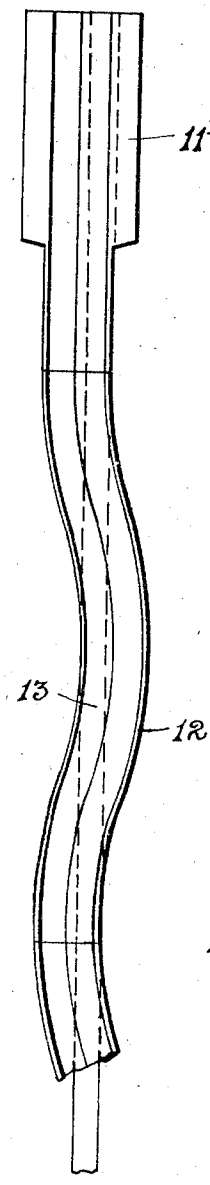


Fig. 1.

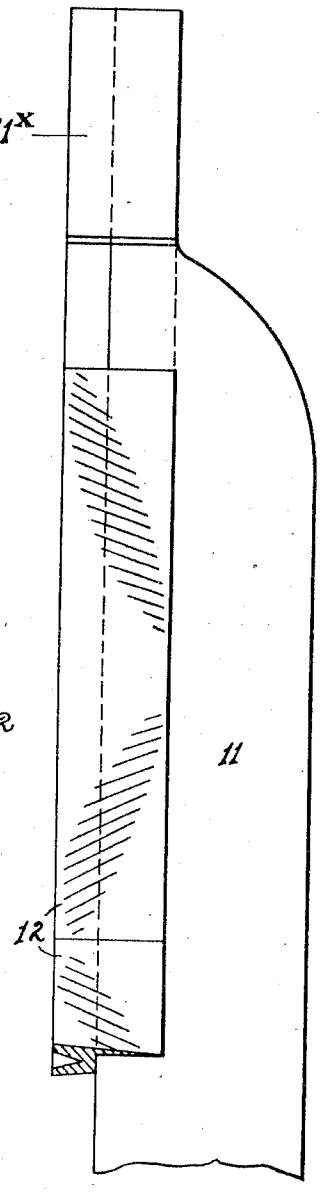


Fig. 2.

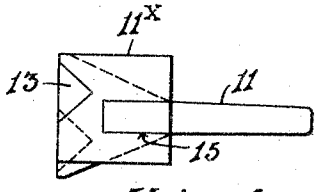


Fig. 4.

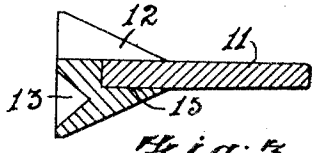


Fig. 3.

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UNITED STATES PATENT OFFICE.

WILLIAM GIBSON, OF LIVERPOOL, ENGLAND.

PATTERN FOR MAKING MOLDS IN WHICH METALS ARE CAST.

1,349,829. Specification of Letters Patent. Patented Aug. 17, 1920.

Application filed March 19, 1920. Serial No. 367,219.

To all whom it may concern:

Be it known that I, WILLIAM GIBSON, a subject of the King of Great Britain and Ireland, and resident of Liverpool, in the county of Lancaster, England, have invented certain Improvements in Patterns for Making Molds in which Metals are Cast, of which the following is a specification.

This invention relates to improvements in patterns for making the molds for firebars and the like of steam generators and furnaces, the object being to provide a main pattern element for forming the longitudinally-supporting medium of the actual bar, and removable sectional elements of different patterns to constitute the actual fire surface of the bar.

With the aforesaid object in view and according to the present invention fire-bars or the like are cast in molds made from patterns built up of several parts held together by steady pins or otherwise, and so made that the shape of the pattern may be readily changed, those parts of the pattern subject to wear being easily removed.

In the accompanying drawing:—

Figure 1, is a plan of part of the pattern from which the bar is cast.

Fig. 2, side elevation,

Fig. 3, cross section, and

Fig. 4, an end view.

Referring to this drawing, one part of the pattern consists of a depending web 11 which has a head 11^x at each end projecting upward from the top of the web 11, this part forming the main unit or element of the pattern. This web 11 follows a straight line from end to end of the bar. The other parts consist of a plurality of interchangeable sections or lengths 12 to form the upper face of the pattern each cast from a master pattern, and each having a longitudinal straight groove 15 at the underside adapted to embrace the top portion of the depending web 11, and be interposed between the heads 11^x so as to form with the latter and the web 11, a complete pattern from which the molds are made, the said sections or lengths 12 being held on the web 11 by means of steady pins. The upper portions of these interchangeable sections or lengths 12 are made to the shape required, according to whether the groove 13 for the dust is to be a straight one, or whether it extends in wave-like lines from end to end of the bar, or whether the grooves and air spaces are staggered, and so on.

In the drawing they are shown with the groove 13 for the dust extending in a wave like line from end to end of the bar as more particularly described in the specification of my application for patent filed March 19, 1920, Serial Number 367,220. In consequence of these sections 12 being removable, they can at any time be replaced by other sections of a different shape, and each section can be cast from a master pattern, so that all the sections are precisely alike, and they collectively produce when assembled end to end upon the web, an accurate pattern for making a sand mold in which a fire bar can be cast.

What I claim and desire to secure by Letters Patent is:

1. A pattern for making the molds in which fire bars or the like are cast, comprising a straight web having a head at each end projecting upward from the top of the web this part forming one of the units or elements of the pattern, and a plurality of interchangeable sections or lengths each having a straight groove at the underside adapted to embrace the top portion of the depending web and a continuous straight groove on the upper face.

2. A pattern for making the molds in which fire bars or the like are cast, comprising a straight web having a head at each end projecting upward from the top of the web this part forming one of the units or elements of the pattern, and a plurality of interchangeable sections or lengths each having a straight groove at the underside adapted to embrace the top portion of the depending web and a wave-like groove on the upper face.

3. A pattern for making the molds in which fire bars or the like are cast, comprising a straight web having a head at each end projecting upward from the top of the web this part forming one of the units or elements of the pattern, and a plurality of interchangeable sections or lengths each having a straight groove at the underside adapted to embrace the top portion of the depending web, and a continuous staggered groove in the upper face

In testimony whereof I have hereunto set my hand in the presence of two witnesses.

WILLIAM GIBSON.

Witnesses:

EDGAR PICKARD,

THOS. HAROLD JONES.