S. C. SHIPMAN.

FURNACE CASING RING.

APPLICATION FILED MAY 14, 1915.

1,260,722. Patented Mar. 26, 1918.

Fig. 1.

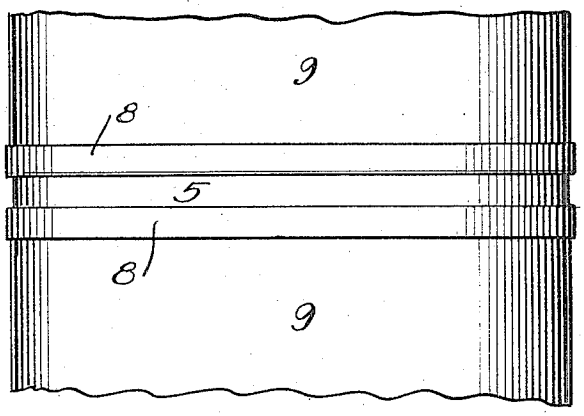


Fig. 2.

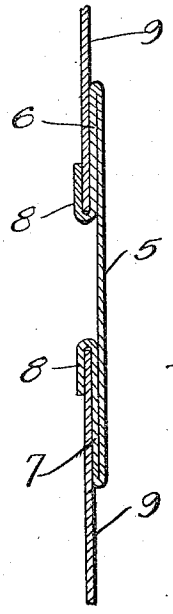
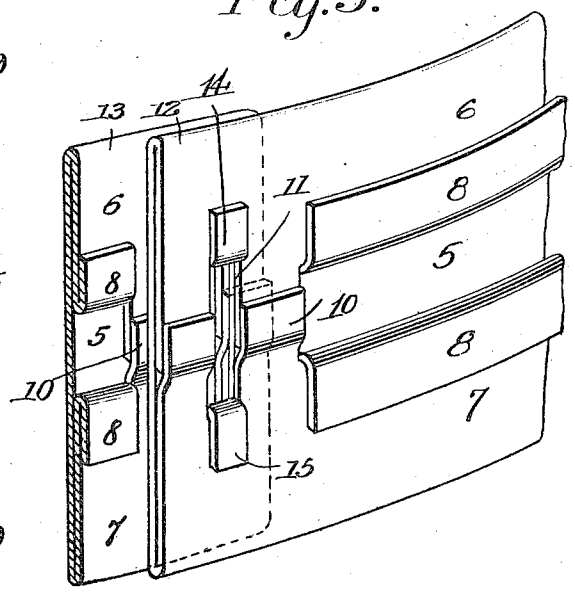


Fig. 3.



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UNITED STATES PATENT OFFICE.

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FURNACE-CASING RING.

1,260,722. Specification of Letters Patent. Patented Mar. 26, 1918.

Application filed May 14, 1915. Serial No. 28,174.

To all whom it may concern:

Be it known that I, SAMUEL C. SHIPMAN, a citizen of the United States, residing at York, in the county of York and State of Nebraska, have invented certain new and useful Improvements in Furnace-Casing Rings, of which the following is a specification.

This invention relates to furnace casing rings and contemplates as its principal object the provision of a casing ring which shall be adapted to form a secure joint or coupling between alined casing sections, and to provide a joint which may be simply and easily formed entirely of sheet metal and which will be durable in operation.

More specifically it is an object of this invention to provide a casing ring consisting of an annular strip of sheet metal, the upper and lower ends of which may be doubled upon the body of the strip and subsequently flanged outwardly therefrom in spaced relation and oppositely to contact with the edges to be coupled of a pair of alined casing sections.

The above and additional objects which will become apparent as this explanatory description proceeds, are accomplished by such means as are illustrated in the accompanying drawings, described in the following specification and then more particularly pointed out in the claim which is appended hereto and forms a part of this specification.

With reference to the drawings, wherein there is illustrated the preferred embodiment of this invention, as it is reduced to practice, and throughout the several views of which like characters of reference designate similar parts:

Figure 1 is an elevational view of the casing ring of this invention as employed to couple a pair of furnace sections;

Fig. 2 is a sectional view through the structure shown in Fig. 1; and

Fig. 3 is an enlarged detailed perspective view showing the two ends of the ring in their engaging position.

The casing ring of this invention is adapted to be formed from a single strip of sheet metal, the median portion of which is designated 5 and the upper and lower portions of which are folded back upon the body portion in the manner indicated by the respective numerals 6 and 7. The edge portion of each of these folded portions is again bent and reversely to the folded portions to provide flanges 8 which are spaced from the respective folded portions 6 and 7 a distance sufficient to permit of the entrance of the adjacent ends of furnace casing sections.

The portions 6 and 7 of the sheet metal strip are not struck up to form the spaced flanges 8 at the extreme ends of said strip but instead they are overlapped as indicated at 10. Through one end 12 an elongated aperture or slot 11 is formed extending crosswise of the ring and preferably at the center thereof. The opposite end 13 of the ring strip has a tongue cut from one and preferably both of the portions 6 and 7, which, as indicated at 14 and 15, project through the slot 11 and are turned upwardly and downwardly against the outer face of the end 12, thereby securing the two overlapping ends of the ring strips together. This construction, it is thought, will be sufficiently secure to maintain the ends of the ring strip connected.

In use, when it is desired to aline a pair of furnace casing sections 9, the coupling ring constructed in accordance with this invention is adjusted first upon the lowermost furnace casing section in such manner that the edge of such section is embraced between the folded portion 7 and the reverse flange 8 in the manner best illustrated in Fig. 2, while the opposite edge of the ring engages in a similar manner with the lower edge of the uppermost furnace casing section. By this means a secure and leak-tight joint is provided between the casing sections, while at the same time the interior of the joint presents the straight surface of the median portion 5. It is moreover, apparent that a tight joint is provided between the sections which at the same time is readily removable. The pressure of the upper section 9 on its flange 8 will serve only to tighten the engagement therewith and will similarly serve to tighten the engagement of the lower flange 8 with its sections. While the median portion 5 of the sheet metal plate forming the basis of this invention is shown to be of sufficient width to space the sections, it is to be understood that the width shown is not an essential of this invention and that the bent edges of the opposite flanges 8 may be very readily adapted to contact with each other, as would be permitted by commensurate shortening of the body portion 5. While this invention has been particularly directed to the provision of a casing ring adapted to

join alined sections of a furnace, it will be readily observed that rings similarly constructed as provided hereby may be used for coupling pipe sections of every character.

While in the foregoing however, there has thus been illustrated in the drawings and described in the specification such combination and arrangement of elements as constitute the preferred embodiment of this invention, it is desired to emphasize the fact that such minor changes in the matters of proportion and degree may be made in later adaptations of this device as shall not alter the spirit of the invention as defined in the appended claim.

What is claimed is:—

A casing ring composed of a single length of sheet metal folded into contact upon itself so that at its ends, the folds overlap the portion intermediate the overlap portions at the ends being slit inwardly from the free edges and the metal lying between said slits being recurved to lie spaced from the folded over portion, to receive the flanges of furnace casing sections, a transverse slot formed in the ring adjacent one end, while the other end of the ring has spaced tongues formed thereon in longitudinal alinement, one end of said ring being adapted to overlap the other end, the tongues being adapted to enter and coöperate with the slot and to detachably retain the ends of the ring against movement.

In testimony whereof I affix my signature in presence of two witnesses.

SAMUEL C. SHIPMAN.

Witnesses:
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RASMUS G. WANY.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents. Washington, D. C."