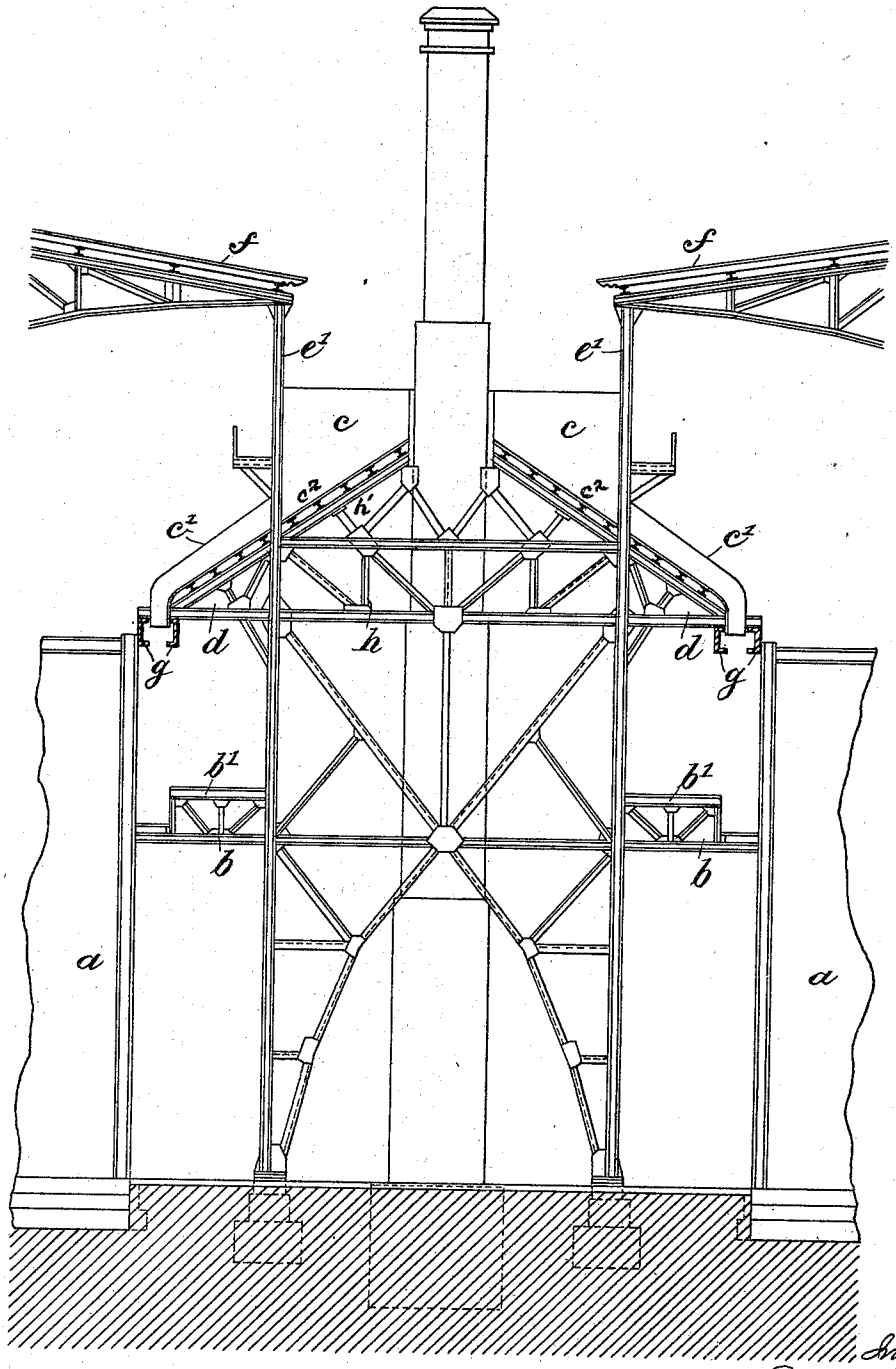
No. 705,656. Patented July 29, 1902.

E. DRORY.

MEANS FOR CHARGING GAS RETORTS.

(Application filed May 3, 1902.)

(No Model.)



Witnesses:
C. Tober.
R. Sommers

Inventor:
Edward Drory,
By Munn & Co
Attys.

UNITED STATES PATENT OFFICE.

EDWARD DRORY, OF BERLIN, GERMANY.

MEANS FOR CHARGING GAS-RETORTS.

SPECIFICATION forming part of Letters Patent No. 705,656, dated July 29, 1902.

Application filed May 3, 1902. Serial No. 105,815. (No model.)

To all whom it may concern:

Be it known that I, EDWARD DRORY, a subject of the King of Great Britain, residing at Berlin, Germany, have invented certain new and useful Improvements in Means for Charging Gas-Retorts; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawing, and to letters of reference marked thereon, which forms a part of this specification.

My invention relates to charging gas-retorts, and more particularly to the coal-bins and the means to support them independent of the retort-furnaces to prevent deleterious strains in the structure supporting the roof-sections of the retort-sheds. In the arrangement shown in my United States Patent No. 682,793 I have described and shown independent roof-sections connected together by a bearer-frame or built-up structure and independent of the lines of furnaces, whereby a free space is left intermediate two rows of retort-furnaces, so as to allow the escape of steam and other gases during the quenching of the coke when the retorts are drawn.

It will be observed that in this patent, I have shown coal-bins supported on cantalivers projecting under the roof-sections from the framing supporting the roof structures or sections of the retort-house. I have found that the strains set up by the weight supported by the brackets or cantalivers are excessive, that the bending moments produced in the posts are excessive and not obviated by the tension members connected to the simple beam located between the posts of adjacent roof-sections and these posts. The object of the present invention is to do away with these bending moments and support the load on simple beams fixed at their ends to the posts supporting the roof-sections, thereby enabling said posts to take the weight as a direct compression instead of a bending moment counteracted by the tension members, thereby enabling the use of a much lighter built-up structure.

Referring to the drawing, *a a* represent a part of two adjacent rows of furnaces, *f f* the roof-sections over these furnaces supported by a general framework or structure of iron or steel, in which *e' e'* are the posts; *h* a simple built-up beam connecting them. The coal-bins *c* are formed with inclined bottoms c^2, supported on suitable iron framing *h'* on the beam *h* intermediate the posts *e' e'* and the roof-sections *f*—that is, within the free space between the rows of retorts. The bottoms of these bins are prolonged into the interior of the building to form inclined coal-chutes *c'*, supported on cantalivers or brackets *d*, projecting approximate the line of the retorts, said brackets *d* having below them a suitable track *g*, on which the charging-hopper (not shown) is adapted to run and to receive coal from the chute *c'* and to deliver it to any one of the retorts of the furnaces *a*. Below the brackets *d* are cantalivers *b*, projecting from the framing approximately the furnace-fronts and carrying a platform *b'*, from which workmen move the charging-hopper from one retort to another to fill them with coal.

It will be observed that in the structure here shown the cantalivers *d* support little or no weight, while the bulk of the weight is supported by the simple beam *h*, and all of the weight of the coal-bins *c* is taken up by the posts *e'* as compression, thereby maintaining their upper ends free from bending moments and producing no strain whatever on the roof structure.

Having thus described my said invention, what I claim as new therein, and desire to secure by Letters Patent, is—

1. The combination with furnaces arranged to have a clear space between them, independent roof structures, posts to support the roof structures, beams connecting the posts supporting the independent roof structures and coal-bins supported on said beams within the free space between the roof structures, substantially as described.

2. The combination with rows of furnaces arranged to have a clear space between them, independent roof structures, posts to support the roof structures, simple beams connecting the posts supporting the roof structures, coal-bins supported on said beams between the posts of adjacent roof structures and within the clear space and having inclined bottoms, coal-chutes forming a continuation of the inclined bottoms projecting within the build-

ing and cantalivers to support said coal-chutes, substantially as described.

3. The combination with furnaces arranged to have a clear space between them, independent roof structures, posts to support the roof structures independent of the furnaces, simple built-up beams connecting posts supporting opposite roof structures, coal-bins supported on said beams between posts and within the clear space and having inclined bottoms, coal-chutes forming continuations of the inclined bottoms projecting within the building, cantalivers to support said chutes and a track supported on the under side of the cantalivers and below the ends of said chutes, substantially as described.

In testimony that I claim the foregoing as my invention I have signed my name in presence of two subscribing witnesses.

EDWARD DRORY.

Witnesses:
JOHANNES HEIN,
WOLDEMAR HAUPT.