

No. 752,904.

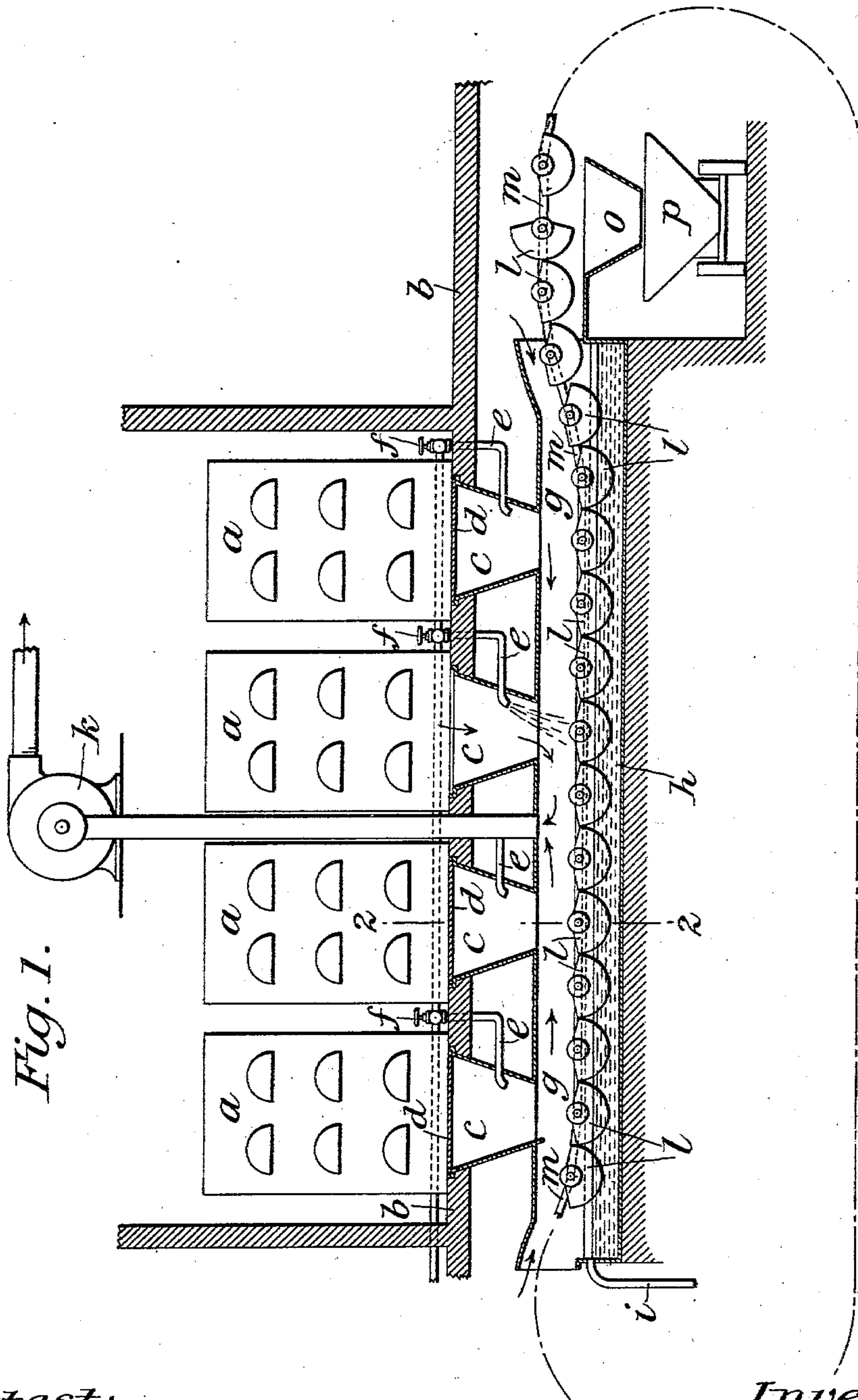
PATENTED FEB. 23, 1904.

C. W. HUNT.  
APPARATUS FOR HANDLING COKE.

APPLICATION FILED JUNE 17, 1903.

NO MODEL.

2 SHEETS—SHEET 1.



Attest:  
*A. H. Jesbera*  
*J. M. Scoble*

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Charles Wallace Hunt  
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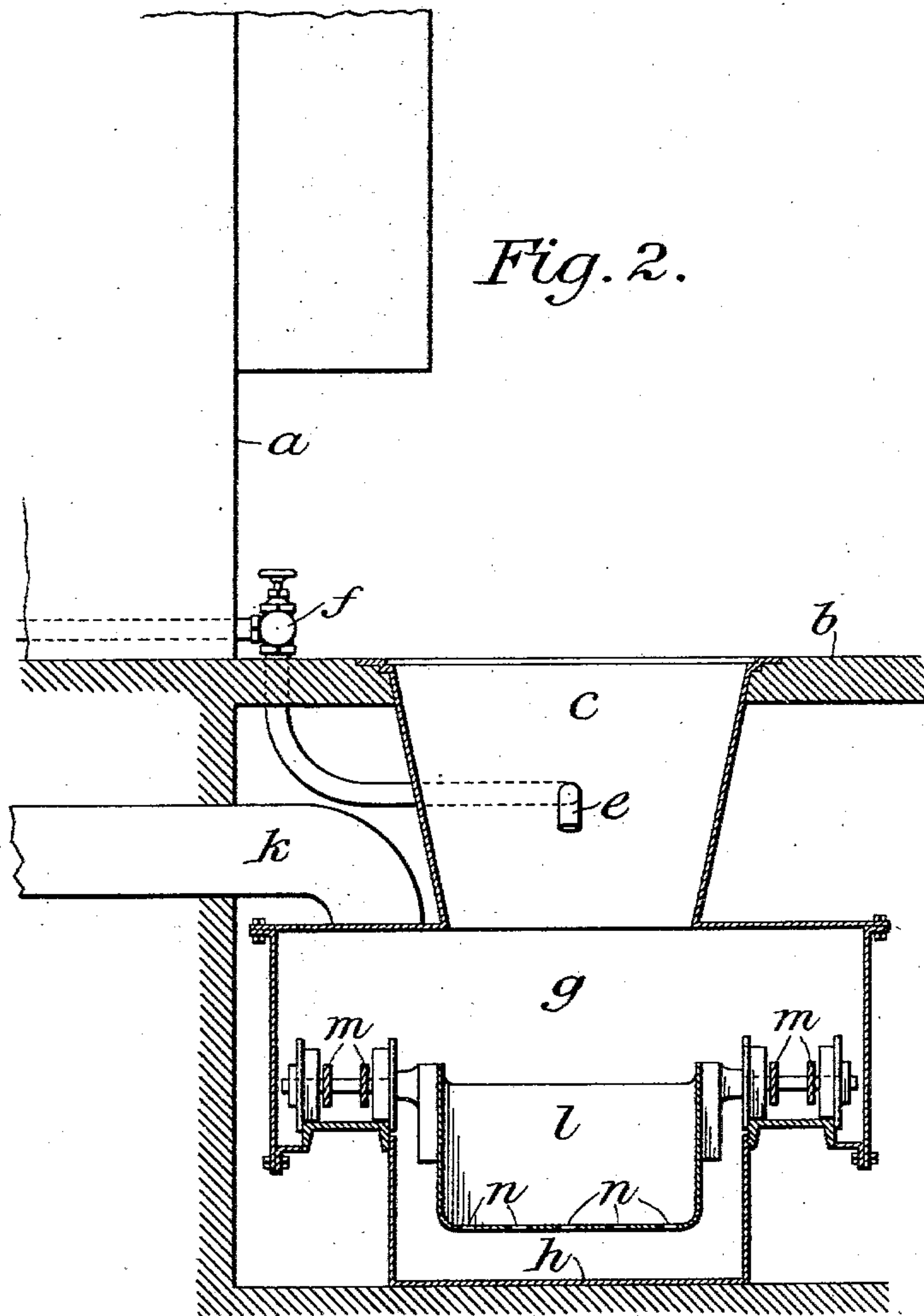
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# UNITED STATES PATENT OFFICE.

CHARLES WALLACE HUNT, OF WEST NEW BRIGHTON, NEW YORK.

## APPARATUS FOR HANDLING COKE.

SPECIFICATION forming part of Letters Patent No. 752,904, dated February 23, 1904.

Application filed June 17, 1903. Serial No. 161,785. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES WALLACE HUNT, a citizen of the United States, residing in West New Brighton, borough of Richmond, city of New York, State of New York, have invented certain new and useful Improvements in Apparatus for Handling Coke, &c., of which the following is a specification, reference being had to the accompanying drawings, forming a part hereof.

When coke is withdrawn from the retorts in gas plants, it is usually allowed to fall upon the floor in front of the bench of retorts and is there quenched with water before being shoveled into barrels or carts for removal. The quenching of the glowing coke fills the retort-house with steam, which is laden with minute particles of coke, thereby delaying the progress of the work and causing great discomfort to the workmen. The pile of hot coke upon the floor is moreover a source of danger and a cause of great inconvenience.

It is accordingly the object of the present invention to provide means for the disposal of the coke as it is withdrawn from the retorts, which will accomplish its immediate removal without suffering its accumulation upon the floor, and at the same time provide for its quenching without permitting the retort-house to be filled with steam.

The invention will be more fully described hereinafter with reference to the accompanying drawings, in which a convenient and practical embodiment thereof is illustrated, and in which—

Figure 1 is a view, partly in elevation and partly in vertical section, showing a bench of retorts and the provisions for the removal and quenching of the coke. Fig. 2 is a partial transverse section on the plane indicated by the line 2 2 of Fig. 1, but on a larger scale.

In the drawings the benches *a* of retorts are conventionally represented as arranged in the usual manner and opening above the working floor *b* of the retort-house. In front of each bench of retorts an opening *c* is formed through the floor, such opening being of such size and shape and so located as to receive

the glowing coke as it is withdrawn from the retorts. Each opening *c* is provided with a cover *d*, which is to be removed when the coke is to be withdrawn, but at other times forms a portion of the floor. Each opening *c* may also be provided with a water connection *e*, controlled by a valve *f*, by means of which a stream or spray of water may be directed upon the coke as it falls through the opening. Beneath the several openings is formed a narrow chamber *g*, the lower portion of which may be a tank *h* to receive the water from the pipes *e* and provided with an overflow *i* to regulate the depth of the water in the tank.

At a suitable point in the chamber *g* is connected a powerful exhaust-fan *k*, through which the steam generated by the glowing coke is withdrawn from the chamber, the openings *c*, except that one beneath the retorts, which at the same time are being discharged, being closed by the doors *d*, so that a sufficient current of air is drawn down through the opening which is in use to carry with it the steam and coke-dust, which would otherwise rise through such opening.

For the removal of the coke as it falls through the opening and also for its further quenching a conveyer is arranged to travel through the chamber *g*, the ends thereof being open to permit of the movement of the conveyer-buckets. Such conveyer may be of any suitable construction, but is preferably of the general character of that represented in Letters Patent of the United States, No. 683,603, dated October 1, 1901, in which the buckets *l* form the only connection between the conveyer-chains *m*, so that there is no rod across each bucket, as is usually the case, to be bent by the fall of the hot coke, and therefore to cause trouble in the movement of the conveyer. Each bucket *l*, however, has in its bottom a number of holes *n*, through which the water falling from the pipes *e* can drain off from the coke and through which, if desired, the water standing in the tank *h* can enter to further quench and cool the coke. As the conveyer leaves the chamber *g* it rises above the top of the tank *h* to



permit the water to drain out of the buckets and may then pass over a hopper *o*, through which the coke may be discharged into a car *p*. It will be obvious that the conveyer can  
 5 be arranged to move in any desired direction and to discharge the coke at any convenient point as the conditions of each particular use may dictate.

In the use of the invention it will be understood that the exhaust-fan or other device of like character and the conveyer are kept in operation while coke is being withdrawn from the retorts, water being supplied simultaneously to the quenching devices in the floor and,  
 15 if it should be found necessary, to the tank. The coke is mainly quenched as it falls through the opening in the floor, the quenching being completed in the conveyer-buckets either by the water falling thereon or by the water rising from the tank into the buckets. The coke  
 20 is thus quickly and completely quenched without danger of heating a properly-constructed conveyer to such an extent as to interfere with its proper operation. At the same time the  
 25 steam and coke-dust are kept out of the retort-room altogether and may be discharged at any desired point.

It will be understood that the details of construction and arrangement may be varied to  
 30 suit the requirements of different places of use and that the invention is not restricted to the particular construction and arrangement of parts shown and described herein.

I claim as my invention—

35 1. The combination of a bench of retorts, a floor having an opening through which the coke discharged from the retorts may fall, a cover for said opening, a chamber beneath said opening, and below the floor, and means  
 40 to withdraw the steam from said chamber as

the coke is quenched, substantially as described.

2. The combination of a bench of retorts, a floor having an opening through which the coke discharged from the retorts may fall, 45 means to quench the coke as it falls through said opening, a chamber beneath said opening, and an exhaust device connected to said chamber to withdraw the steam from said chamber as the coke is quenched, substantially 50 as described.

3. The combination of a bench of retorts, a floor having an opening through which the coke discharged from the retorts may fall, a chain conveyer having perforated buckets disposed beneath said opening, and means to 55 quench the coke as it falls through said opening, substantially as described.

4. The combination of a bench of retorts, a floor having an opening through which coke 60 discharged from said retorts may fall, a chain conveyer having perforated buckets disposed beneath said opening, and a tank through which said conveyer moves, substantially as 65 described.

5. The combination of a bench of retorts, a floor having an opening through which coke discharged from said retorts may fall, means to quench the coke as it falls through said opening, a chamber beneath said opening, an 70 exhaust device connected to said chamber, and a conveyer having perforated buckets located in said chamber, substantially as described.

This specification signed and witnessed this 10th day of June, A. D. 1903.

CHARLES WALLACE HUNT.

In presence of—

ANTHONY N. JESBERA,  
 JOHN M. SCOBLE.