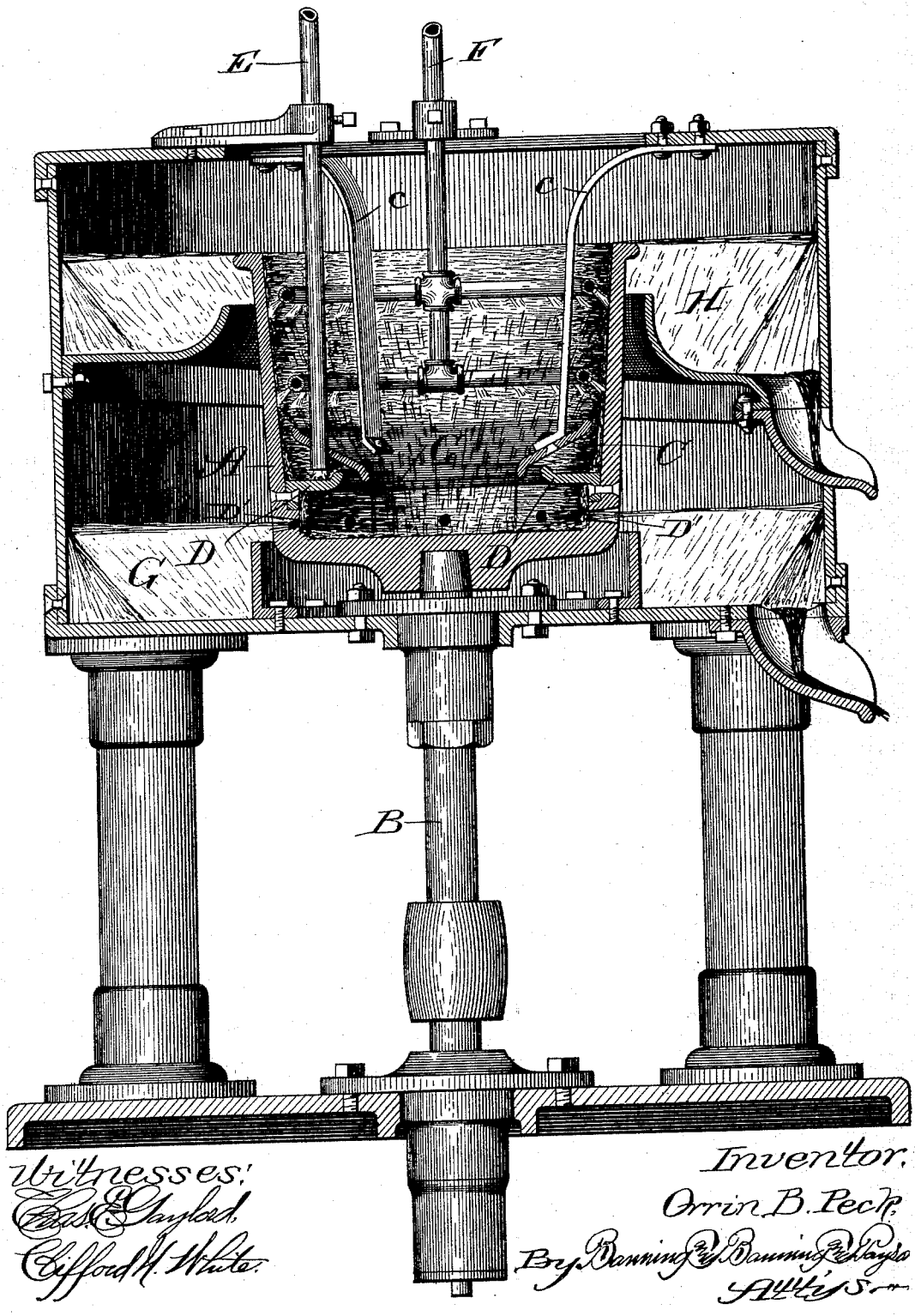
(No Model.)

O. B. PECK.

CENTRIFUGAL ORE SEPARATOR.

No. 489,205. Patented Jan. 3, 1893.



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UNITED STATES PATENT OFFICE.

ORRIN B. PECK, OF CHICAGO, ILLINOIS, ASSIGNOR TO MELINDA PECK, OF SAME PLACE.

CENTRIFUGAL ORE-SEPARATOR.

SPECIFICATION forming part of Letters Patent No. 489,205, dated January 3, 1893.

Application filed January 11, 1892. Serial No. 417,692. (No model.)

To all whom it may concern:

Be it known that I, ORRIN B. PECK, a citizen of the United States, residing at Chicago, Illinois, have invented certain new and useful Improvements in Centrifugal Ore-Separators, of which the following is a specification.

In the drawing I have represented a vertical section of my improved apparatus for separating powdered or finely divided particles containing mineral bearing substances of different degrees of specific gravity, and I make a rotatable treatment vessel A, supported upon and rotated by a shaft B, which may be rotated by any convenient motive power. Within the rotatable treatment vessel A is arranged a bowl C, open at the bottom, and supported by straps or brackets *c* from the upper portion of the apparatus, so as to hold the bowl in a fixed or non-rotatable position. Around the inner edge of the treatment vessel is arranged a plate or ledge D, preferably turned up at its inner edge beneath the bowl C. A supply pipe F introduces water to be sprayed against the inside of the treatment vessel, above the bowl C. A number of holes or perforations D′ are arranged in the lower part of the treatment vessel below the plate or ledge D. As the material is introduced through a material pipe E it falls on the ledge or plate D, and is forced by the action of centrifugal force against the sides of the treatment vessel. As it is carried up along the sides, it comes in contact with the sprays of water from the pipe F, which wash the lighter particles off into the stationary bowl C, whence they fall down below the ledge, and are thrown by the action of centrifugal force off through the holes in the lower part of the treatment vessel, into a curbing or receptacle G, whence they may be carried off. The heavier particles adhering to the walls of the treatment vessel, are carried up and are forced over its top by the action of centrifugal force, into a curbing or receptacle H, whence they may be carried to any desired place of deposit.

It will be understood that the treatment vessel is to be rotated at a speed sufficient to develop the required amount of centrifugal force, to carry out the operation above described.

What I regard as new and desire to secure by Letters Patent, is:—

In centrifugal ore separators, the combination of a rotatable treatment vessel, provided with a ledge on which the material to be treated falls or is delivered, a non-rotatable bowl or vessel arranged therein for catching the lighter particles when detached, and depositing them in the treatment vessel below the ledge, and means for rotating the treatment vessel, substantially as described.

ORRIN B. PECK.

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