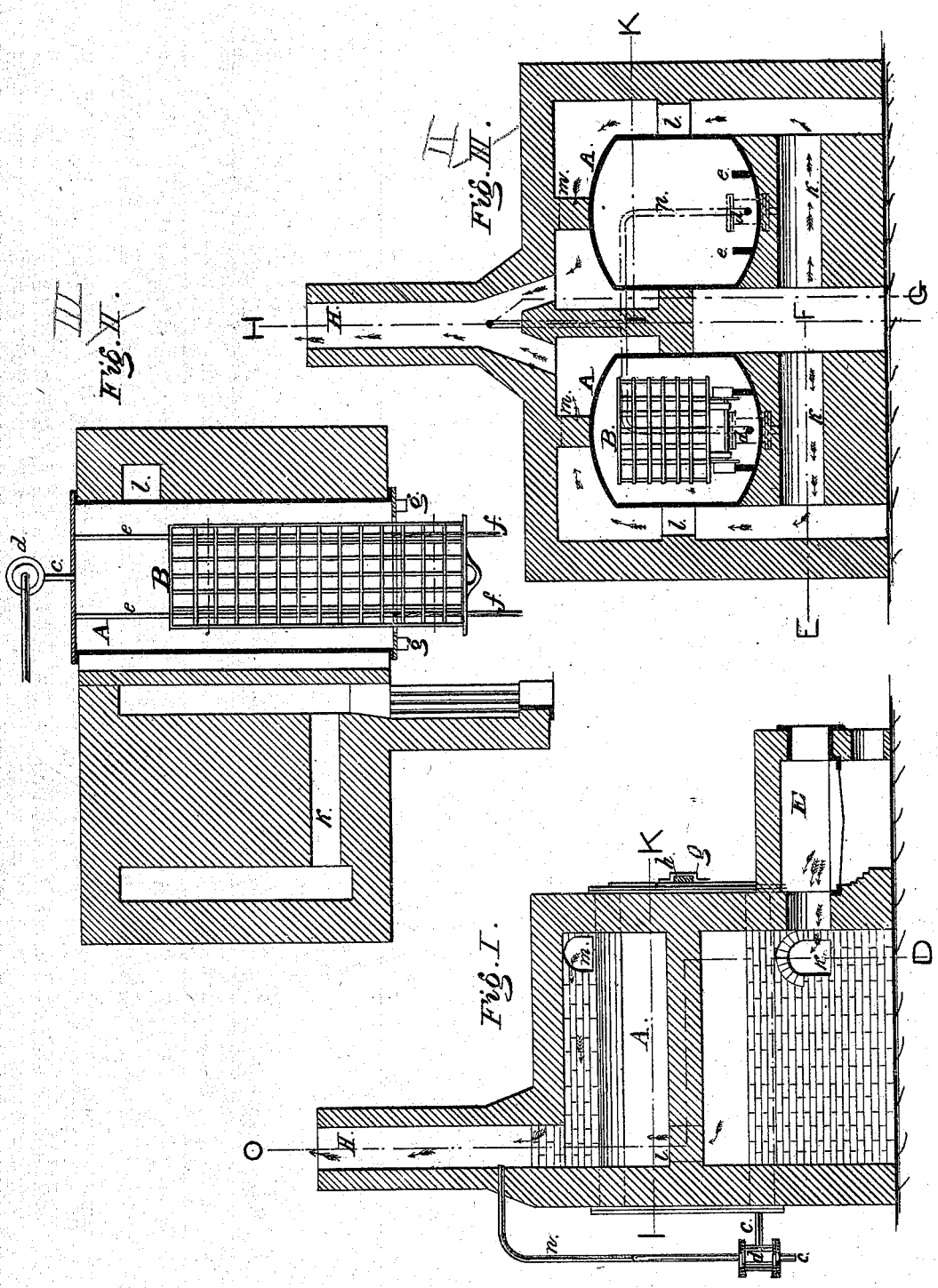
JAMES D. STANLEY.

Improvement in Apparatus for Extracting Tar, &c., from Pine-Wood.

No. 115,378. Patented May 30, 1871.



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UNITED STATES PATENT OFFICE.

JAMES D. STANLEY, OF BALTIMORE, MARYLAND.

IMPROVEMENT IN APPARATUS FOR EXTRACTING TAR &c., FROM PINE WOOD.

Specification forming part of Letters Patent No. 115,378, dated May 30, 1871.

I, JAMES D. STANLEY, of the city and county of Baltimore and State of Maryland, have invented a new and approved Mode of Extracting Tar from Pine Wood, leaving a residuum charcoal, of which the following is a specification:

Nature and Objects of the Invention.

My invention relates to the extracting of tar from pine wood placed within car-wagons in the interior of retorts by the action of heat upon the tops and sides of the retorts, causing the tar to drop through the open bottoms of the cars upon the cold surface of the retorts beneath, the tar passing therefrom uninterruptedly through suitable discharge-passages, all superfluous gases and vapors finding egress through vapor-pipes rising from air-vessels forming connections with the said discharge-pipes.

Description of the Drawing.

Figure I is a longitudinal section upon line G H of Fig. II of the combination embodying my invention. Fig. II is a vertical transverse section, showing those parts of the same which, upon Fig. I, are cut by the perpendicular and horizontal lines C D. Fig. III represents halves of a sectional plan of the same upon the lines E F I K of Fig. II.

General Description.

A A are two retorts, which may be of cast or wrought iron, or any other suitable material. They are built in masonry, that part which is directly under them being intended by its solidity to protect the bottom of the retorts from heat that they may present the cool surface required. The retorts are simultaneously heated by fire in the furnace E, common to both. A track is represented by *e e*, upon which the cars B B are made to travel. That part of the track marked *f f* is separated from the retorts, and may extend to any distance or direction. The cars are of skeleton construction, to allow thereby a circulation of heat among the wood placed within them and a free fall of the tar extracted. The front ends of the cars form air-tight covers to the openings in the retorts, and are fastened thereto by means of the brackets *g g* and the bar *h*.

Fire having been applied to the furnace E, the bars B B charged or filled with pine-wood sticks standing perpendicularly therein, and the retorts closed by the means before described, the fire and heat follow the courses indicated by the arrows through flues *k l m* to stack H. The resinous matter in the wood thus affected by heat is extracted, falls upon the cool bottoms of the retorts, and runs off, without stoppage, through the discharge-pipes *c c*. Air-chambers are represented by *d d*, from which vapor-pipes *n n* rise, joining to a single pipe leading to the stack H.

By this process yellow tar is produced, as distinguished from the ordinary black tar made by the usual method.

I claim as my invention—

1. The combination of two retorts, A A, set in masonry, with one furnace, E, common to both, substantially as and for the purposes hereinbefore set forth.

2. The combination of the said two retorts A A with skeleton cars B B upon tracks, substantially as and for the purposes hereinbefore set forth.

3. The combination of the free discharge-pipes *c c* and vapor-pipes *n n*, substantially as and for the purposes hereinbefore set forth.

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