

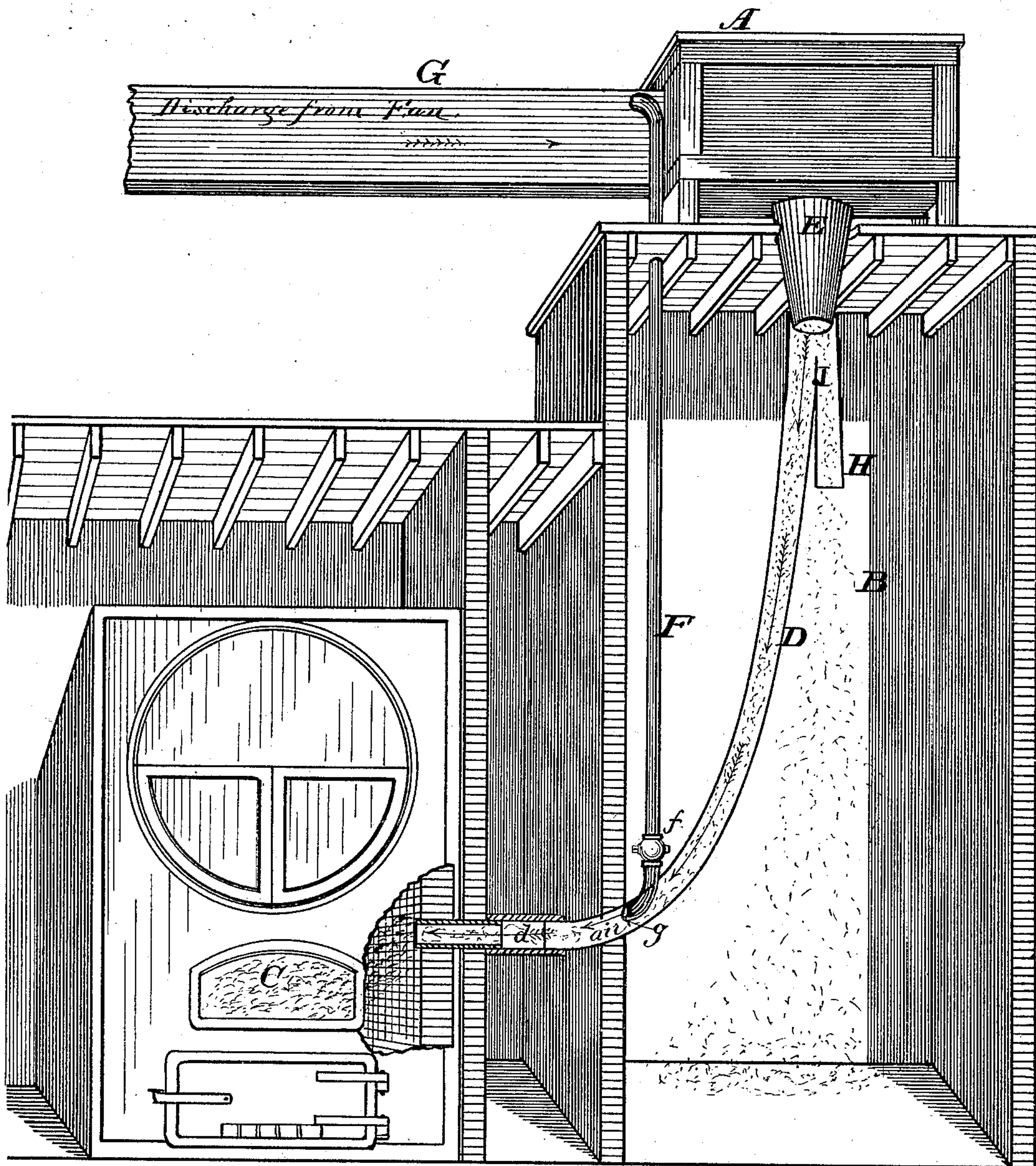
(No Model.)

L. Y. COCHRAN & W. I. LINDSAY.

FURNACE FUEL FEEDER.

No. 368,813.

Patented Aug. 23, 1887.



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UNITED STATES PATENT OFFICE.

LOYAL Y. COCHRAN, OF ALLEGHENY CITY, PENNSYLVANIA, AND WILLIAM I. LINDSAY, OF CLEVELAND, OHIO.

FURNACE FUEL-FEEDER.

SPECIFICATION forming part of Letters Patent No. 368,813, dated August 23, 1887.

Application filed June 6, 1887. Serial No. 240,492. (No model.)

To all whom it may concern:

Be it known that we, LOYAL Y. COCHRAN, of Allegheny City, Allegheny county, Pennsylvania, and WILLIAM I. LINDSAY, of Cleveland, Cuyahoga county, Ohio, have invented certain new and useful Improvements in Furnace Fuel-Feeders, of which the following is a specification.

This invention relates to a device for feeding sawdust or shavings into steam-boiler or other furnaces; and it consists of the peculiar construction and combination of parts, as hereinafter described, and pointed out in the claim.

To accomplish the above-mentioned results we construct the device substantially in the manner hereinafter described, and pointed out in the claim.

In the accompanying drawing is represented a steam-boiler furnace and a dust-and-shavings collector, showing our device attached for conveying the dust and shavings from the collector into the furnace.

A is a dust-and-shavings collector located on the top of a receiving-room, B.

C is a boiler-furnace and boiler located in a room adjacent to said receiving-room, but sufficiently separated therefrom to insure safety from fire communicating with the said receiving-room.

D is a pipe or conductor connected with and leading downward from the discharge-spout E of the collector A, and through the side walls of the receiving-room and of the boiler-room, and also through the side-wall setting of the boiler-furnace, through which the dust and shavings are conveyed from the collector to the furnace. That portion of the pipe which enters the furnace-wall is made of cast-iron capable of resisting the heat, and the portion of the pipe between the two walls of the receiving-room and the boiler-room is made separable by means of a sleeve, *d*, fitted to slide onto the projecting portion of the cast-iron pipe. It may be slid back onto end of pipe D to separate it from the cast-iron portion, and a cap, cover, or valve placed on the said cast-iron portion, if desired.

To insure a forcible discharge of the dust

and shavings from the pipe or conductor D and their distribution over the fire in the furnace a branch pipe, F, is provided, leading down from the discharge-pipe G from the fan and into the lower portion of the pipe D, and having an elbow, *g*, turned toward the discharge end of said pipe D, for the purpose of producing a current of air therein, for drawing the dust and shavings downward and forcibly discharging them into the fire-place; also, keeps the feed-pipe from heating. Pipe F has a cock, *f*, for regulating or shutting off the blast in said pipe.

H is a branch pipe for conducting the dust and shavings into the room B, and there is provided a valve or gate, I, at the junction of pipes D and H, whereby the direction of the dust and shavings may be changed or controlled to pass either into pipe D or pipe H, as may be required, or part either way at same time.

The construction of the dust-and-shavings collector is such that the blast of air from the fan is spent therein and escapes out at a top opening, (not shown,) while the dust and shavings fall gently through the spout E and are taken therefrom and conveyed to the furnace.

The great advantages of this invention are that the dust and shavings are fed uniformly and steadily direct from the collector to the furnace, and at a great saving of the labor and expense of men for performing such work.

Having described our invention, we claim—

In fuel feeders for furnaces, the combination, with the collector A, having discharge-pipe E, of conductor-pipe D, having branch H and regulating-valve I and connecting the collector with the furnace, and the air-pipe F, provided with regulating-cock *f*, connected with said conductor D, and with means for forcing air into the conductor for discharging the shavings into the furnace, substantially as and for the purpose specified.

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