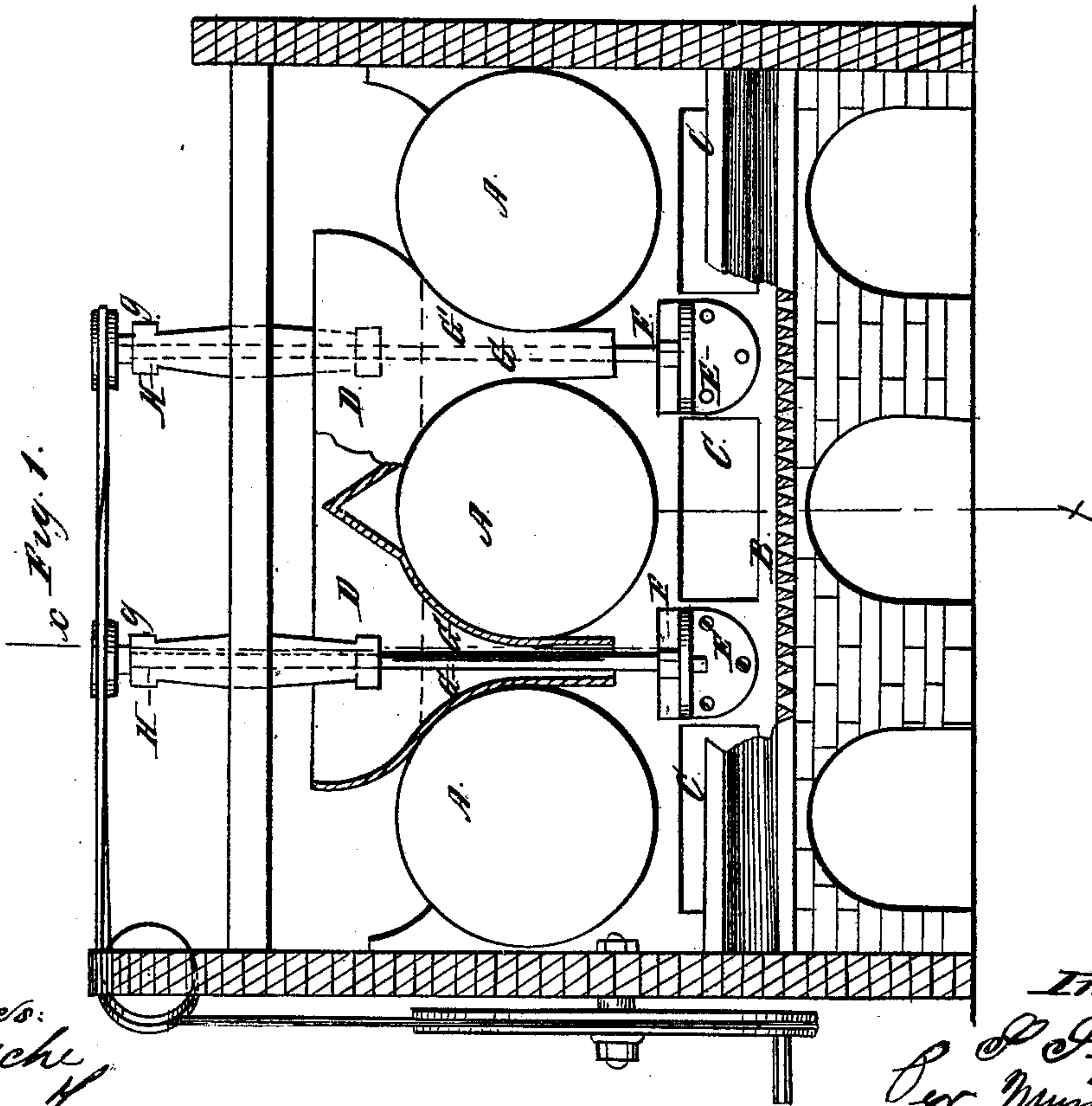
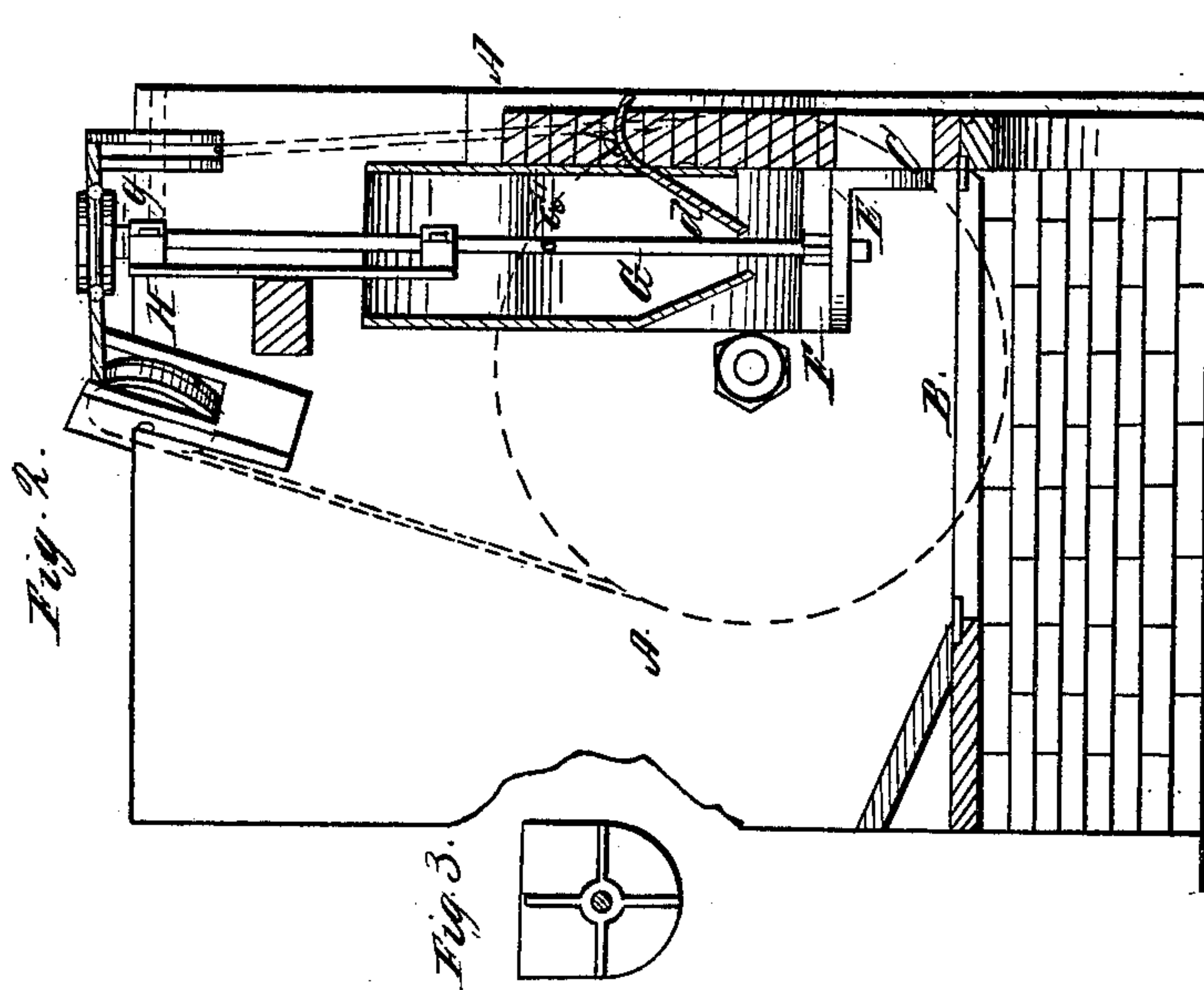


*S. Sykes,*

*Sawdust Feeder for Furnaces,*

*No 91,384,*

*Patented June 15, 1869.*



*Witnesses:*  
*Pho Tische*  
*J. Klein Maser*

*Inventor:*  
*S. Sykes*  
*Per Munroe*  
*Attorney*

# UNITED STATES PATENT OFFICE.

SAMUEL SYKES, OF CHIPPEWA FALLS, WISCONSIN, ASSIGNOR TO HIMSELF  
AND MICHAEL GORLAND, OF SAME PLACE.

## IMPROVEMENT IN SAWDUST-FEEDER FOR FURNACES.

Specification forming part of Letters Patent No. 91,384, dated June 15, 1869.

*To all whom it may concern:*

Be it known that I, SAMUEL SYKES, of Chippewa Falls, in the county of Chippewa and State of Wisconsin, have invented a new and Improved Sawdust-Firing Device; and I do hereby declare that the following is a full, clear, and exact description thereof, which will enable those skilled in the art to make and use the same, reference being had to the accompanying drawings, forming part of this specification.

This invention relates to a device for feeding sawdust to a furnace without opening the dampers or furnace-doors.

In the accompanying drawing, Figure 1 is a back view of my improved device, and Fig. 2 a transverse section thereof at lines *xx*. Fig. 3, a detail plan view, to be hereinafter more fully referred to.

Similar letters of reference indicate corresponding parts.

A A A are the boilers; B, the furnace-bars; C, the furnace-doors. D is the hopper, through which the sawdust is fed to the shelf E, and distributed by the fly F upon the furnace-bars B. The fly F is carried at the foot of the upright shaft G, which rests by its throat *g* upon the upright bearing H, so as keep the weight and friction off the shelf E.

The sawdust being fed to the hoppers D, a rotary motion is given to the upright shaft G, the agitators G' preventing the dust from choking the hoppers.

The feed is regulated, as desired, by the doors *d*, which form one side of the lower portion of the hoppers.

The hoppers D are placed within the furnace above the grate B, and have their discharge-orifices between the boilers. By this arrangement the sawdust is thoroughly dried before it is discharged upon the grate.

I claim as new, and desire to secure by Letters Patent—

1. The hoppers D, constructed as described, and arranged within the furnace above the grate B, with their discharge-orifices between the boilers A, as herein described, for the purpose specified.

2. The hoppers D, arranged within the furnace above the grates, having their discharge-orifices between the boilers, in combination with the flies F upon the vertical shaft G, resting upon the shelves E above the grate, as herein described, for the purpose specified.

SAMUEL SYKES.

Witnesses:

C. J. WILTSE,  
ELLEN M. WILTSE.