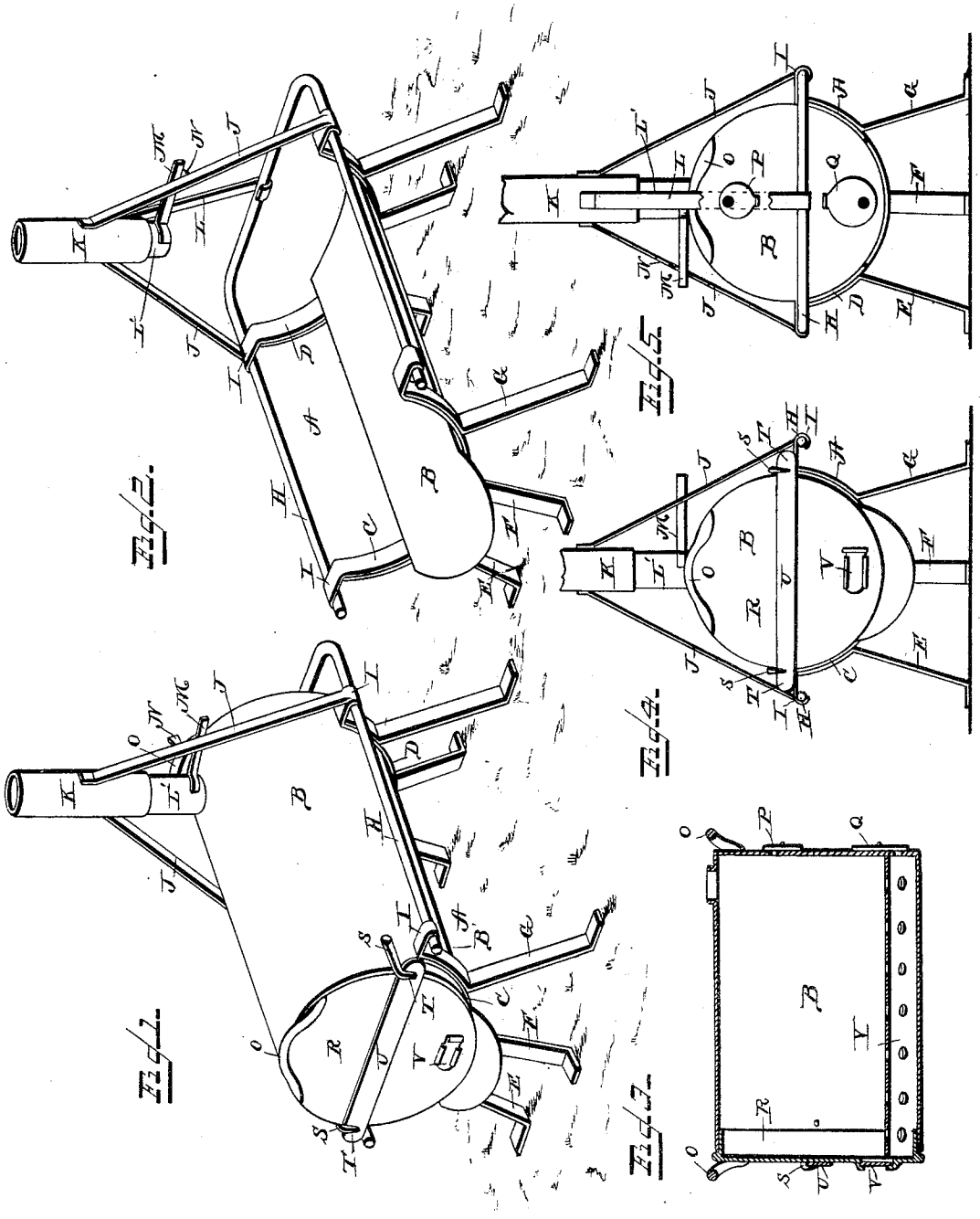
(No Model.)

W. H. & G. W. HARRIS.

HAY OR STRAW BURNER.

No. 407,203. Patented July 16, 1889.



WITNESSES

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UNITED STATES PATENT OFFICE.

WILLIAM HENRY HARRIS AND GEORGE WASHINGTON HARRIS, OF STEELE CITY, NEBRASKA.

HAY OR STRAW BURNER.

SPECIFICATION forming part of Letters Patent No. 407,203, dated July 16, 1889.

Application filed March 9, 1889. Serial No. 302,613. (No model.)

To all whom it may concern:

Be it known that we, WILLIAM HENRY HARRIS and GEORGE WASHINGTON HARRIS, both residents of Steele City, in the county of Jefferson and State of Nebraska, have invented certain new and useful Improvements in Hay or Straw Burners; and we do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same.

Our invention has relation to stoves for burning hay, straw, wood, cornstalks, or trash of any kind; and it consists in the construction and novel combination of parts, as will be hereinafter fully described, and particularly pointed out in the claim.

In the drawings, Figure 1 is a view in perspective of a hay or straw burner, showing the drum in position on the skeleton supporting-frame. Fig. 2 is a view in perspective of the skeleton supporting-frame detached, showing the smoke-pipe and the sliding pipe-joint provided with the locking-arm supported between the upwardly and inwardly inclined braces, said locking-arm being in engagement with a keeper on one of the braces. Fig. 3 is a vertical longitudinal section of the drum. Fig. 4 is a front elevation of the stove complete, and Fig. 5 is a rear elevation showing the rear draft-dampers open.

Referring by letter to the accompanying drawings, A designates the supporting-frame for the drum B or drums, the latter being similar in construction, which comprises the concave bottom B′, preferably of sheet-iron, supported and secured to concave yokes C D at the front and rear ends, said yokes C D being provided with three legs each—viz. E, F, and G—and connected at their upper ends to a nearly-U-shaped horizontal guard-rail H, of round iron, by horizontal laterally-projecting hook-arms I, which are bent around said guard-rail H. From the rear hook-arms I are provided inwardly-inclined upwardly-extending braces J, which are secured to the sides of the lower joint K of pipe, a rear brace L being secured to the rear portion of the guard-rail H at its middle and connected at its upper end with the lower pipe section or joint K. Within the lower pipe-section K, which is all that is herein illustrated of the pipe, is a sliding pipe-joint L′, which is provided near its lower end with a laterally-projecting arm M, which normally engages a keeper N on one of the side braces J, and prevents the pipe-joint L from leaving its seat in the pipe when the drum B is removed from its support to be emptied of ashes and refilled with fuel.

The drum B is provided at its front and rear ends at the tops of the same with handles or ears O, by which to remove the same from its supporting-frame to empty it of the ashes and to replace it again after it has been filled with fuel.

At its rear end the drum B is provided with an upper damper P and a lower damper Q, both of which are pivoted, so as to permit them to be turned to open and close them when necessary. The front head R of the drum is flanged to fit the mouth of the drum and is removable, being held in place by pivot-hooks S S, pivoted to the sides of the drum near its mouth, and then turned down when the head of the drum is in place. Said hooks engage the projecting ends T T of a transverse bar U, secured to the front of the removable head R of the drum. This head R is also provided with a sliding damper V, which may be opened and closed at pleasure.

Within the drum B is provided a gate Y, which may be used when burning sawdust or chaff; but as it is not a material feature of the invention it may be used or dispensed with, as the attendant may elect, when burning this latter class of fuel.

In practice the fire is started at the rear end of the drum, the dampers in said rear end being both opened until the fire is thoroughly started and has burned forward, when they may be closed, and the damper in the head of the drum is opened and the fuel is permitted to burn out. As soon as one drum has been burned empty it is removed and a second filled drum is placed on the support and its contents lighted at the rear end of the drum, as before. More than two drums may be employed with one supporting-frame, if desired; but two are usually all that are needed. The

drums may be made of either cast metal or sheet metal; but the latter is preferable on account of cheapness and lightness, and because the heat is more quickly radiated from it.

The cylinders are placed in the horizontal position and quite near to the floor of the room, in order that persons' feet may be kept warm and that infants and small children who are permitted to play upon the floor of the room may be kept warm and comfortable. The fuel is lighted at the upper draft-opening in the pipe end of the cylinder and burns down to the lower draft-opening in said end, after which it burns slowly forward to the draft-opening in the cover or head, after which the damper in the head or front end is closed and the dampers in the rear end partially closed, being left open enough to carry off the smoke, while permitting the heat to remain in the drum to heat the room.

Having thus fully described our invention, what we claim, and desire to secure by Letters Patent, is—

The herein-described hay or straw-burner, consisting of the cylindrical drum, the concave plate on which said drum is seated, the concave yokes supporting said concave plate, the guard-rail connected to the yokes, the inclined arms rising from the yoke at one end, the pipe supported by said yoke, the pipe-section in said pipe having an arm, and the keeper on one of the inclined supports for engaging the arm on the sliding pipe-section, all of said parts being arranged substantially as shown, and for the purpose described.

In testimony that we claim the foregoing as our own we have hereunto affixed our signatures in presence of two witnesses.

WILLIAM HENRY HARRIS.
GEORGE WASHINGTON HARRIS.

Witnesses:
J. T. AUKRUM,
N. D. T. WILLEY.