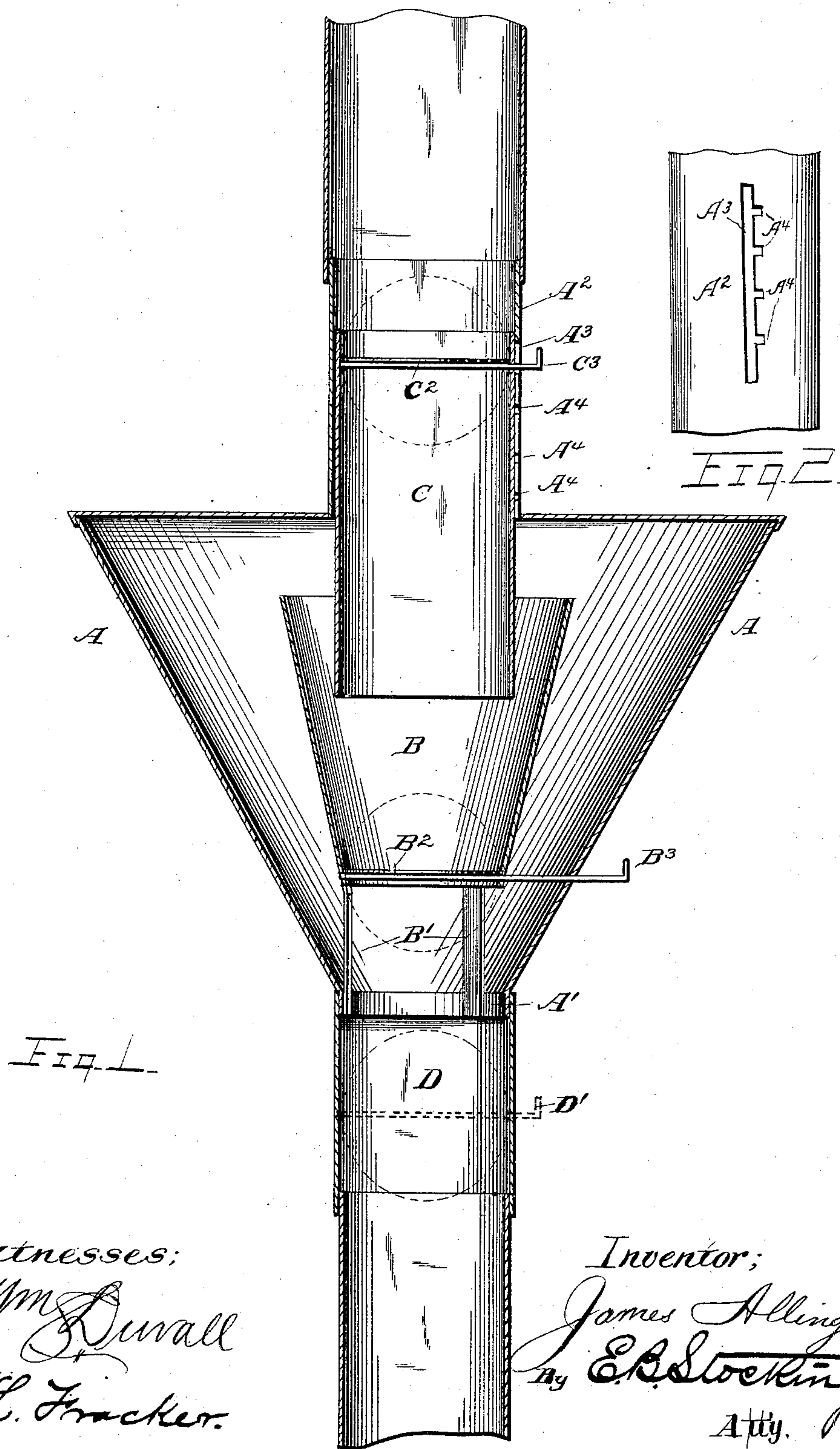


(No Model.)

J. ALLINGHAM.
STOVE PIPE SHELF AND DRUM.

No. 314,413.

Patented Mar. 24, 1885.



Witnesses;
Wm Duvall
J. L. Fracker.

Inventor;
James Allingham,
By E. B. Stocking
Atty.

UNITED STATES PATENT OFFICE.

JAMES ALLINGHAM, OF MITCHELL, DAKOTA TERRITORY.

STOVE-PIPE SHELF AND DRUM.

SPECIFICATION forming part of Letters Patent No. 314,413, dated March 24, 1885.

Application filed September 25, 1884. (No model.)

To all whom it may concern:

Be it known that I, JAMES ALLINGHAM, a citizen of the United States, residing at Mitchell, in the county of Davison and Territory of Dakota, have invented certain new and useful Improvements in Stove-Pipe Shelves and Drums, of which the following is a specification, reference being had therein to the accompanying drawings.

10 This invention relates to an apparatus of that class which is adapted to be made a part of a stove-pipe or series of stove-pipe lengths when connected to any stove or heating apparatus, and which forces the products of combustion to take a tortuous, winding, or indirect course, and while taking such course to be subjected to the heat produced thereby, in order that the gases of the products of combustion may be wholly consumed, and which is of such form as to be capable of use as a stove-pipe shelf.

My invention consists in certain features of construction hereinafter described, and specifically pointed out in the claims.

25 Referring to the drawings, Figure 1 is a central vertical section of a stove-pipe shelf and drum constructed in accordance with my invention. Fig. 2 is a side elevation of the section A².

30 A represents the main cylinder or cone, which is inverted, and provided at its apex with an integral collar, A', and at its top or base with a section, A², the purpose of which will be hereinafter described.

35 Within the cone A, upon standards B', is supported a truncated cone, B, which is also inverted, but open at its top or base.

40 The section A² is provided with a sliding section, C, which is provided near its top with a damper, C², having a damper-operating rod, C³, said rod extending outwardly through a slot, A³, in the section A², the edge of said slot being provided with notches A⁴, whereby said section may be moved vertically within the section A² and held, by reason of the damper-rod being thrown into one of the notches, at a desired height.

45 The truncated cone B is provided with a damper, B², at its lower end, said damper being provided with an operating-handle, B³.

50 To the collar A' of the cone A is connected the stove-section D, which may be provided

with a damper, D', although it is not essential to the successful operation of my invention; nor is it essential that the part A shall be of cone shape, as it is apparent that a cylindrical compartment could be used with equal advantage.

This being the construction, the operation of my invention is as follows: When building a fire, of course a direct draft is essential, and in order to obtain the proper draft it is only necessary to lower the section C, by means of the damper-rod C³, to its lowest position and throw open the dampers, as shown by dotted lines, when the whole apparatus can be used as an ordinary stove-pipe and the draft regulated by either of the dampers. To transform the same into a heated stove-pipe shelf, where dishes, &c., may be kept warm, it is only necessary to close the damper B² by means of the handle B³ and raise the sliding section to a suitable height and secure the same, when a more or less indirect draft is produced and the products of combustion will pass up into the main cone A, warming the top thereof, where they are detained and consumed, passing down into the truncated cone B, and thence up through the section C.

The degree of heat in the cone A may be regulated by lowering or raising the sliding section C—that is to say, by lowering said section the products of combustion are the longer retained within the heating cylinder or cone by reason of a smaller space through which to escape, and on the other hand it can be kept moderately cool by raising the section. It is also apparent that the temperature can be regulated to a certain degree by the damper C.

Now, it is apparent that by causing the products of combustion to take the course described not only are they caused to give off greater heat, which is radiated into the apartment and serves an economical purpose in that respect, but the gases that would naturally escape by the chimney are made to perform their part of that function, and are thoroughly consumed by reason of the indirect course taken by the products and by reason of the check thereby given to the escape of the gases from the stove before their entire consumption therein—in other words, instead of escaping directly from the chimney, the gase-

ous products of combustion are consumed in the stove, increasing the heat radiated from the stove and further increasing the heat by means of the retention and abstraction of the draft within the apparatus. Furthermore, by means of the slotted sleeve and its projecting within the truncated cone a forced draft, something after the nature of the function and operation of an injector, is produced.

10 I am aware that a cone not inverted has been arranged within a drum; but the sliding section was not capable of being extended within the cone to produce a more or less indirect draft.

15 Having described my invention and its operation, what I claim is—

1. As a new article of manufacture, a stove-pipe shelf consisting of an inverted conical main or heating drum, A, a truncated inverted

conesupported centrally within the main drum 20 and provided with a damper at its lower end, and a slotted section projecting above the main drum, and a sliding section adjustably mounted to move therein and within the inner cone, substantially as specified.

25 2. The combination of a main drum, A, central inverted truncated cone, B, having damper B², the section A², having slot A³ and notches A⁴, and the sliding section C, having dampers B² C², and adapted to be adjustably 30 supported with its lower end within the cone B, substantially as shown and described.

In testimony whereof I affix my signature in presence of two witnesses.

JAMES ALLINGHAM.

Witnesses:

FRANK H. WINSOR,
F. A. HUGGINS.