

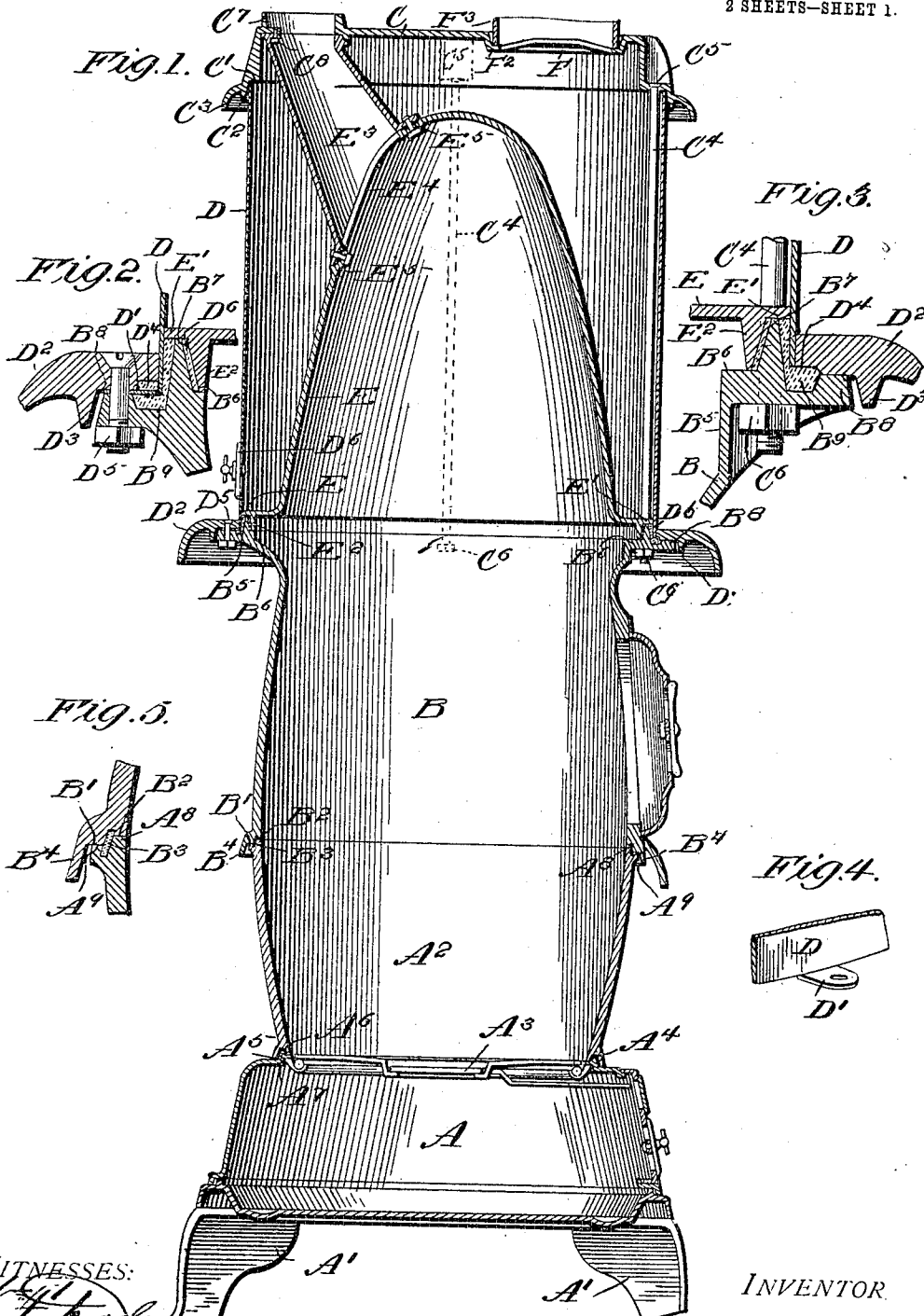
No. 812,079.

PATENTED FEB. 6, 1906.

A. T. NYE.
HEATING STOVE.

APPLICATION FILED MAR. 20, 1905.

2 SHEETS—SHEET 1.



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2 SHEETS—SHEET 2.

Fig. 6.

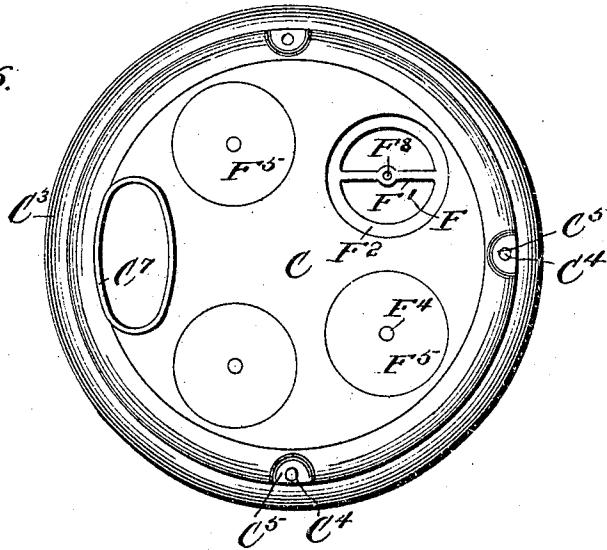


Fig. 7.

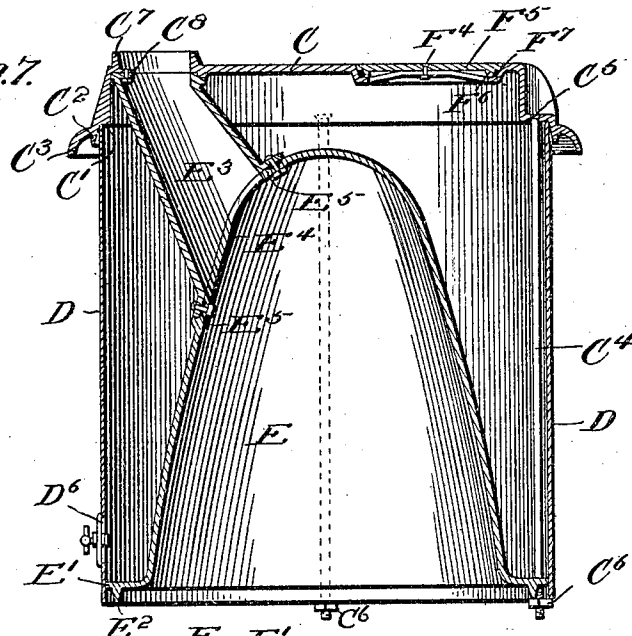
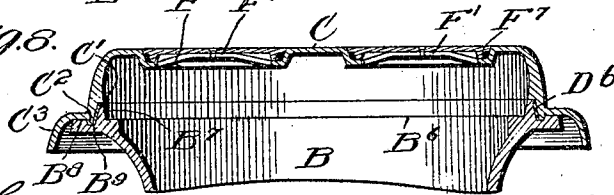


Fig. 8.



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UNITED STATES PATENT OFFICE.

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HEATING-STOVE.

No. 812,079.

Specification of Letters Patent.

Patented Feb. 6, 1906.

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To all whom it may concern:

Be it known that I, ANSELM T. NYE, a citizen of the United States, residing at Marietta, in the county of Washington, State of Ohio, have invented certain new and useful Improvements in Heating-Stoves, of which the following is a specification, reference being had therein to the accompanying drawings.

This invention relates to a heating-stove, and particularly to a knockdown structure adapted to be shipped in sections for more convenient and economical transportation.

The invention has for an object to provide an improved construction and arrangement of the joints between these sections by means of which an air-tight stove may be provided and a heating-drum and dome applied thereto when found convenient for use.

A further object of the invention is to provide a construction of this heating-drum and dome by which the parts may be shipped in their assembled relation and an air-tight packed joint provided between the same and the top of the stove-body when they are assembled for use.

Another object of the invention is to provide an improved joint between the body-sections wherein a diagonally-disposed packing-groove lies between the faces of the adjoining sections, which are disposed in different horizontal planes at each side of the joint, so as to permit the necessary lateral expansion and contraction of the stove-sections upon each other without breaking the joint-packing.

Other and further objects and advantages of the invention will be hereinafter set forth and the novel features thereof defined by the appended claims.

In the drawings, Figure 1 is a central vertical section through the stove with the heating-drum applied thereto; Fig. 2, a detail enlarged section of the joint between the drum and stove-top; Fig. 3, a similar view of this joint at the point of application for the tie-rod securing the parts together; Fig. 4, a detail perspective of the lug carried by the heating-drum and shown in section in Fig. 2; Fig. 5, an enlarged section of the obliquely-disposed packing between the stove-sections; Fig. 6, a top plan of the stove; Fig. 7, a vertical section showing the drum and dome assembled for transportation, and Fig. 8 a similar view showing the cover-plate for the

drum disposed upon the body portion of the stove when the drum is omitted.

Like letters of reference refer to like parts in the several figures of the drawings.

The stove-body may be of any desired construction and configuration and, preferably, as here shown, is composed of the ash-box A at the base supported upon legs A' and carrying at its top a fire-pot A², provided with any desired form of grate A³ and connected to the ash-box A by means of the overlapping packed joint A⁴, as shown in Fig. 1. This joint consists of the bifurcated flanges A⁵ of different lengths separated by the groove A⁶, in which the packing is disposed and into which the flange A⁷ from the base extends. Upon the fire-pot A² the feeder-section B is mounted by means of the joint shown in detail in Fig. 5, which comprises the contact-faces A⁸ and A⁹ upon the fire-pot disposed in different horizontal planes and separated by the packing-groove which is disposed diagonally to the plane of its contact-faces. The feeder-section is provided with corresponding contact-faces B' and B², resting upon those before-mentioned and separated by a similarly-disposed packing-groove adapted to receive the packing B³, which may be of any desired material, preferably stove-cement, putty, or asbestos, while the feeder-section is also provided with a depending flange B⁴, covering this line of jointure.

It has been found that when the packing is disposed at a right angle to the line of jointure the lateral expansion and contraction of the section of the stove due to the different temperatures maintained in the fire-pot and feeder-sections causes a cracking or breaking of the packing, which permits the leakage of gases from the stove and the entrance of air therein, tending to affect the draft of the stove. This is prevented by the diagonally-disposed packing, which, it will be seen, permits the expansion and contraction of the parts without breakage, as there is a movement of the packing or the stove-sections relative to each other and not a direct lateral strain across the line of jointure. This strain is also relieved by disposing the contact-faces of the stove-sections in different horizontal planes, so that they do not at any time coincide, and the pressure at one line of jointure is taken by the opposite solid wall, while a proper movement of the sections relative to the packing is permitted. The

feeder-section B is also provided with the usual door and at its upper portion with a flange B⁵, disposed in a horizontal plane and provided at its inner edge with a seat B⁶, disposed adjacent to a vertically-extending rib B⁷, while beyond this rib a bolting lug or flange B⁸ is provided. Between this lug or flange B⁸ and rib B⁷ a packing-groove B⁹ is formed, as shown in detail in Figs. 2 and 3.

10 This construction of the flange B⁵ at the top of the stove is adapted to receive the cover or cap plate C when the stove is used without the heating-drum, as shown in Fig. 8, or to receive the lower edge of this drum D and also of the dome E within the same when the latter parts are used, as shown in Fig. 1.

15 In the last-mentioned arrangement of the parts the lower edge of the drum D is provided with a bolting-lug D', extending laterally therefrom and resting upon the flange B⁸, to which it is secured by means of the ring or annulus D², provided with the depending lug D³ and at its inner portion with a packing-groove D⁴. The parts are secured together by means of the retaining-bolt D⁵, as shown in Fig. 2, and the packing D⁶ applied to form an air-tight joint between the drum and the top of the stove. At the upper portion of this drum the cap-plate C is provided and rests upon the top edge thereof, and this plate is provided with a shoulder C', disposed at one side of the packing-flange C², and a depending ring C³ at the opposite side thereof, these parts being adapted to cooperate with the top of the stove-body when the drum is removed, as shown in Fig. 8. This cover-plate C is secured in position in any desired manner, preferably by means of tie-rods C⁴, as shown at the right of Fig. 1 and in Fig. 3, these rods being seated at their upper end in a recessed portion C⁵ of the cover-plate and extend at their lower portion through the horizontal flange B⁵ of the stove-body, beneath which the usual nut C⁶ is applied, by means of which the parts are drawn together and held in proper position upon the top of the stove when applied there. Within the drum D the dome E is supported by means of a horizontal flange E', resting upon the rib B⁷ of the base, and a depending rib E², resting upon the seat or shoulder B⁶ thereof, this dome being provided with a discharge-pipe E³, secured at an opening E⁴ therein by means of the overlapping joint E⁵, provided with suitable recesses to receive a cement packing between the parts to effect an air-tight connection. The upper end of this discharge-pipe E³ is secured to the smoke-pipe collar C' of the cover-plate C in any desired manner—for instance, by means of bolts C⁸. This construction provides for the drum and dome being secured together and supported by the top of the stove when applied for use. When removed therefrom for shipment, the securing-

nuts C⁶ are threaded upward upon the rods C⁴ to engage the lower edge of both the drum and dome, as shown in Fig. 7, thus preventing relative movement to these parts upon each other.

Under some conditions of use it is desirable to apply a conducting-pipe to the drum for the purpose of conducting the heat radiated therein to another apartment. This may be accomplished by means of the apertures F, formed in this plate, as shown in Figs. 7 and 8, which are each provided with a bar F', extending across the diameter thereof, said apertures being provided at their peripheries with a supporting-flange F² and adapted to receive the heat-conducting pipe F³. (Shown in Fig. 1.) This cross-bar is provided with a central apertured portion F⁴, through which the securing-bolt F⁵ is passed for the purpose of retaining the cover F⁵ in position. This cover is formed with a depending flange F⁶, spaced from the wall of the aperture to permit the application of a packing F⁷ at that point, so as to secure an air-tight top to the drum when desired. This drum is also provided with the usual damper D⁶ for admitting air to the lower portion thereof, and when it is desired to discharge air into the room where the stove is located one or more of the covers may be removed for that purpose, thus creating a draft through the drum and around the extended radiating-surface of the dome.

It will be seen that the construction of this stove permits the four sections thereof to be separately packed for transportation and to be assembled without skilled labor and the use of special tools, as the joints between the sections are packed, and when the drum is used it is readily applied in position by means of the rods and bolts at the proper points thereon. These rods also provide means for retaining the drum and dome in relation to each other, so that they may be shipped in proper condition for immediate application to the stove. The stove may be used without this drum, as shown in Fig. 8, or assembled therewith, as shown in Fig. 1. As hereinbefore stated, the construction of joint between the sections of the body of the stove is important to permit the expansion and contraction of the parts relative to each other and laterally of the stove without breaking or destroying the packing at that point, while the packed joint at the upper portion of the stove is adapted to make a proper connection between either the drum and dome or the cover-plate when the latter be applied directly to the top of the stove.

It will be obvious that changes may be made in the details of construction and configuration without departing from the spirit of the invention as defined by the appended claims.

Having described my invention and set

forth its merits, what I claim, and desire to secure by Letters Patent, is—

1. In a heating-stove, abutting sections each provided with a packing-groove in alinement with the groove in the other section and disposed diagonally to the line of jointure between the sections, and a packing disposed in said grooves.

2. In a heating-stove, abutting sections each having its edges provided with portions disposed in different horizontal planes and an intermediate diagonally-disposed packing-groove in alinement with the groove of the other section, and a packing disposed in said grooves diagonally to the line of jointure.

3. In a heating-stove, a body portion provided with a packing-groove at its upper face, a drum seated at its lower end in said groove, and a cap-plate for said drum provided with a depending flange in alinement with said groove to seat therein when the drum is removed.

4. In a heating-stove, a body portion provided with a packing-groove and flange and seat at its upper face, a drum seated at its lower end in said groove, a cover-plate for said drum, a dome provided with a flange and rib at its lower portion to rest upon the flange and seat upon said body, and a discharge-pipe from said dome extending through said cover-plate.

5. In a heating-stove, a body portion having at its top a supporting-flange and packing-groove, a dome disposed upon said flange, a drum surrounding said dome and extending at the outer face of said flange, a cap-plate located upon said drum and adapted to seat in said groove when the drum and dome are removed, and a conducting-pipe extending from the dome to said cap-plate.

6. In a heating-stove, a body portion hav-

ing at its top a vertical flange and a laterally-disposed flange, a dome supported upon said vertical flange, a drum surrounding said dome and the outer face of said vertical flange, a lateral extension from said drum disposed over the lateral flange of the body portion, and means for securing said extension and lateral flange in contact.

7. In a heating-stove, a body portion having at its top a vertical supporting-flange, and a laterally-disposed flange concentric thereto, a dome having a horizontal flange to rest upon the vertically-disposed flange and a depending flange extending within said vertically-disposed flange, a drum surrounding said dome and vertically-disposed flange, means for retaining said drum to the laterally-disposed flange, a cap-plate resting upon said drum, and a conducting-pipe extending from said plate to said dome.

8. In a heating-stove, a body portion provided at its top with a shoulder, a dome having a discharge-opening and a depending flange to rest upon said shoulder, a discharge-pipe from the upper portion of said dome provided with a flange to overlap the edges of said opening, a packing-recess beneath said overlapping flange, a vertically-disposed flange upon the stove-body at the outer side of said shoulder thereon, a cap-plate connected to said discharge-pipe, and a drum extending from said cap-plate to the outer face of the vertical flange upon the stove-body.

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

ANSELM T. NYE.

Witnesses:

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JOHN E. LANSDALE.