No. 821,591. PATENTED MAY 22, 1906.

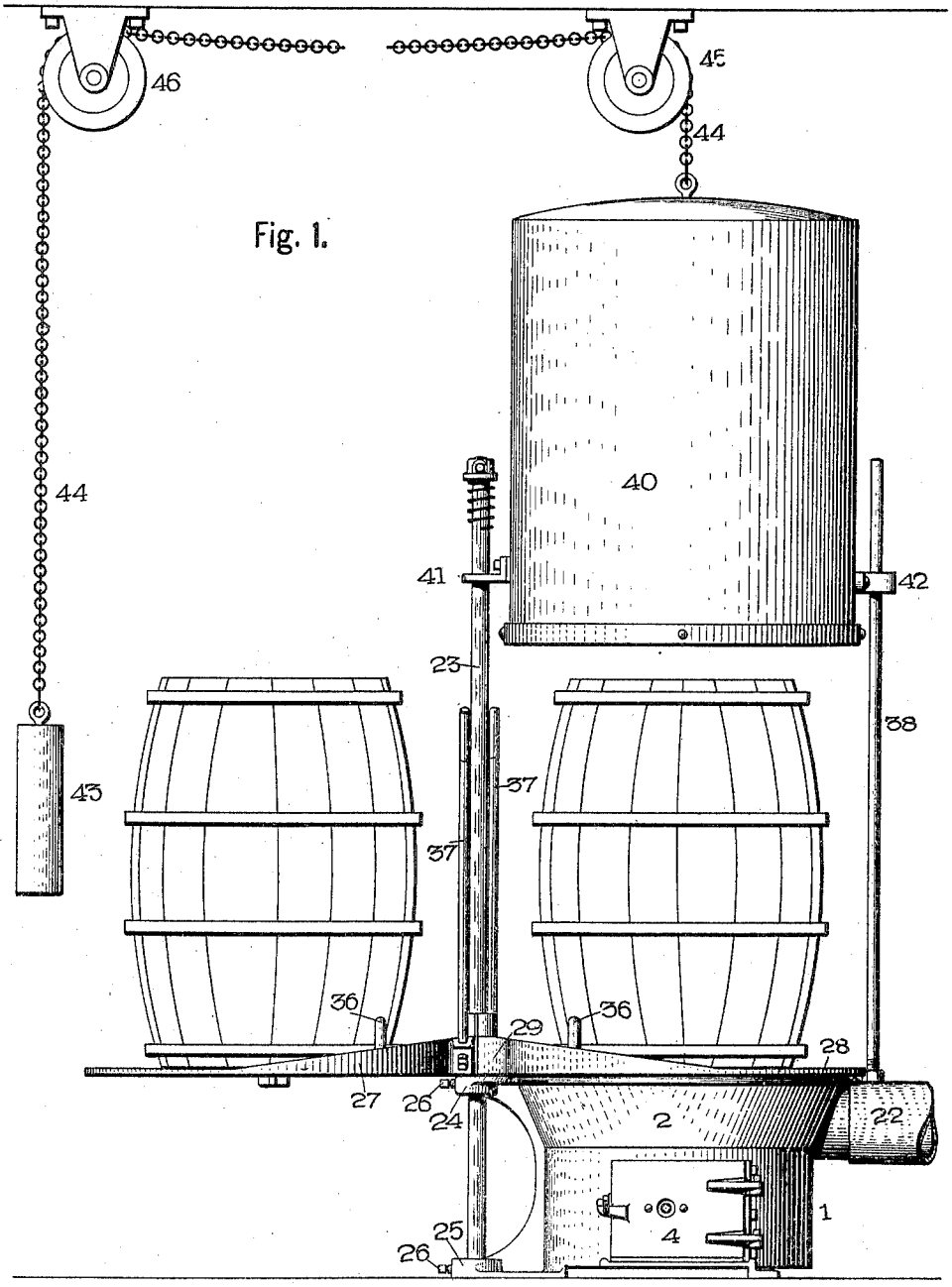
B. HOLMES & E. F. BEUGLER.

BARREL HEATER.

APPLICATION FILED OCT. 26, 1904.

3 SHEETS—SHEET 1.

Fig. 1.



Witnesses.

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3 SHEETS—SHEET 2.

Fig. 2.

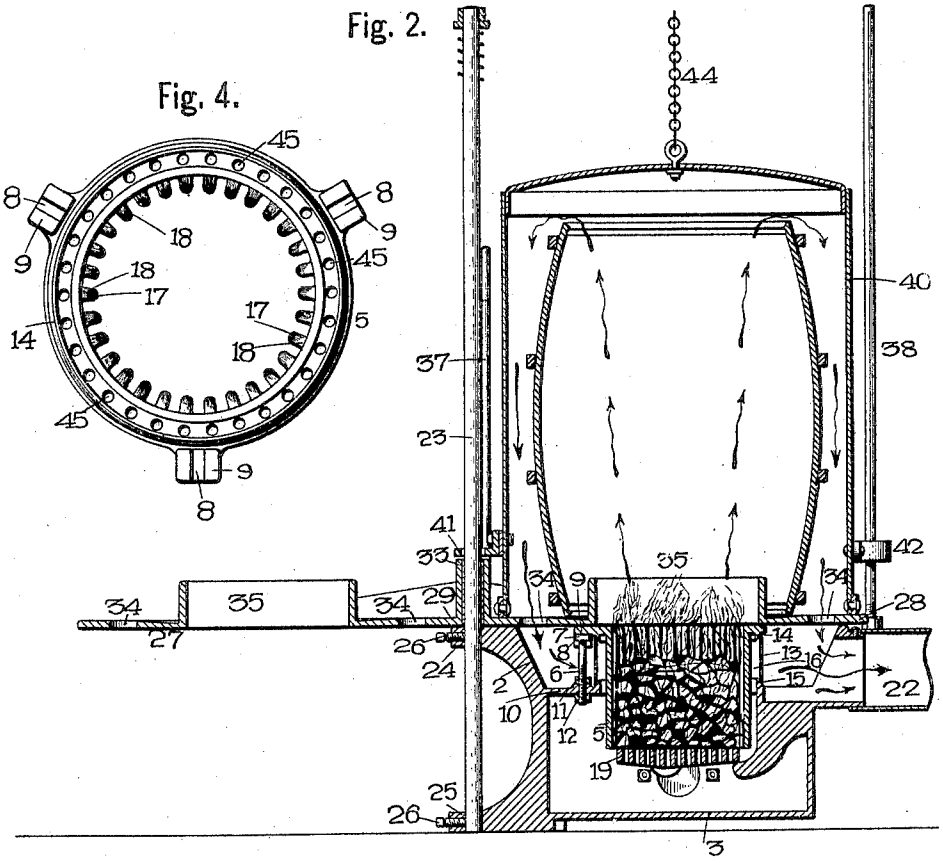
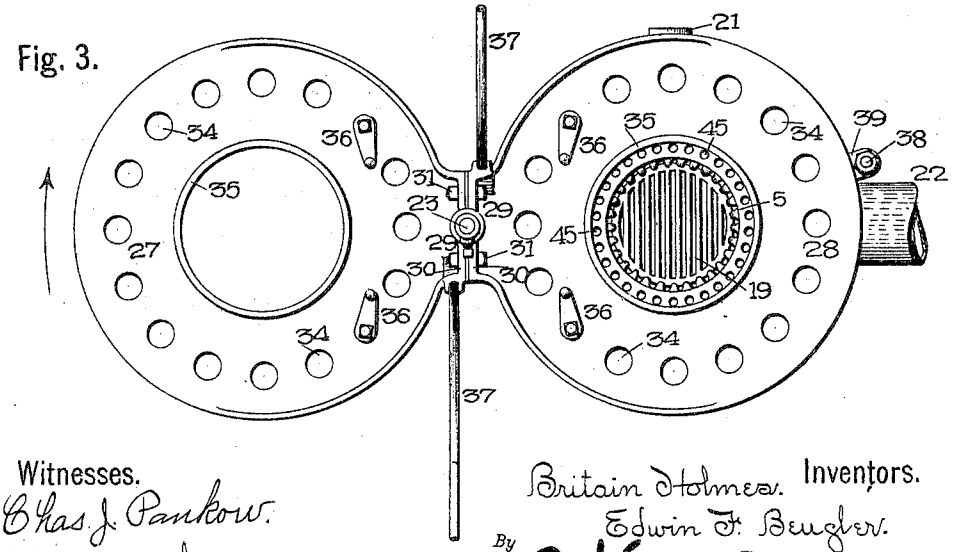


Fig. 4.

Fig. 3.



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3 SHEETS—SHEET 3.

Fig. 5.

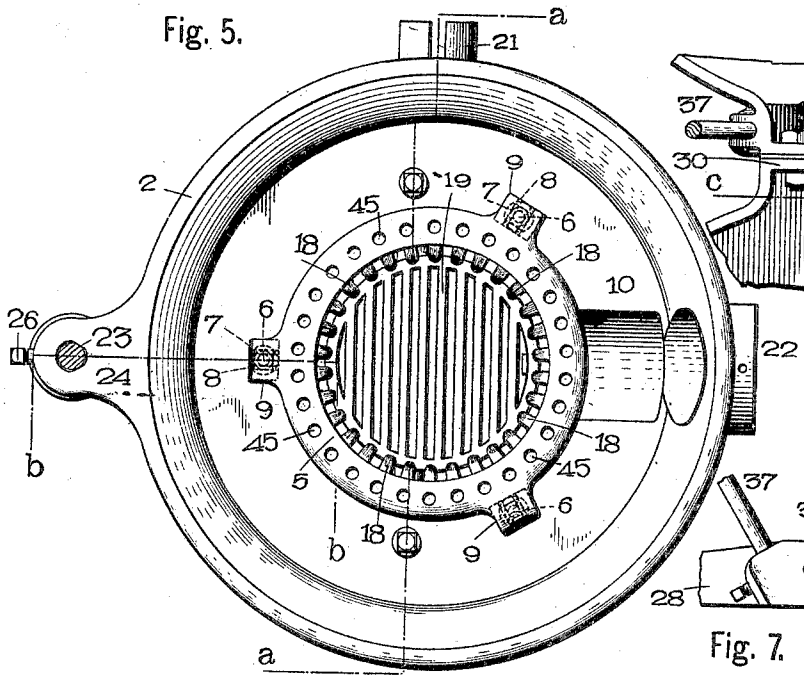


Fig. 8.

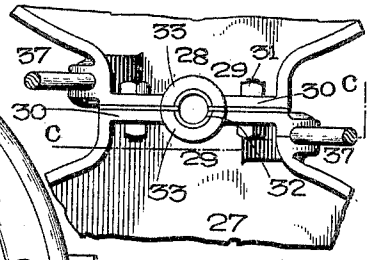


Fig. 9.

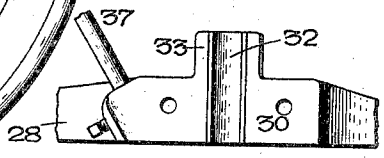


Fig. 7.

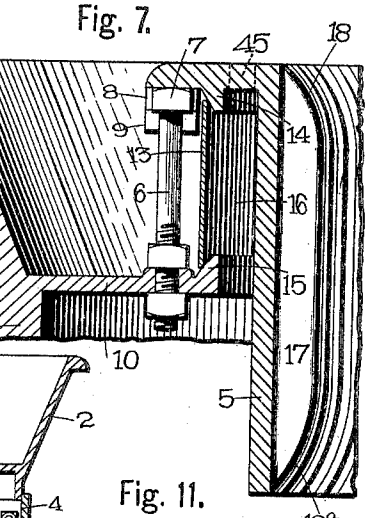


Fig. 10.

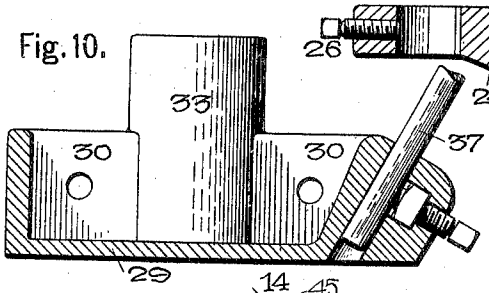


Fig. 6.

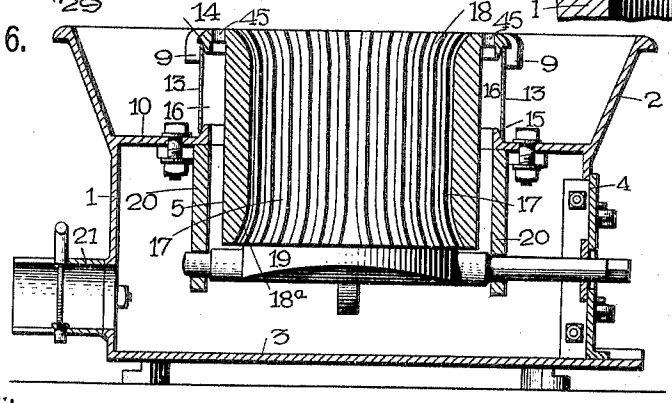
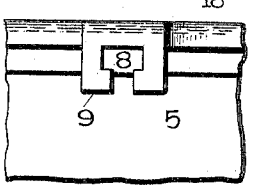


Fig. 11.



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UNITED STATES PATENT OFFICE.

BRITAIN HOLMES AND EDWIN F. BEUGLER, OF BUFFALO, NEW YORK, ASSIGNORS TO E. & B. HOLMES MACHINERY COMPANY, OF BUFFALO, NEW YORK.

BARREL-HEATER.

No. 821,591. Specification of Letters Patent. Patented May 22, 1906.

Application filed October 26, 1904. Serial No. 230,153.

To all whom it may concern

Be it known that we, BRITAIN HOLMES and EDWIN F. BEUGLER, citizens of the United States, residing at Buffalo, in the county of Erie and State of New York, have invented certain new and useful Improvements in Barrel-Heaters, of which the following is a specification.

This invention relates to an improved barrel-heater.

The principal feature of this invention resides in a revoluble support for a plurality of barrels which is rotatably mounted in proximity to the heating mechanism and is turned to move a barrel above or in heating proximity thereto and at the same time move a heated barrel to one side, so that it may be readily removed from the machine.

Other features consist of an improved fire-box and a counterbalanced hood or casing for covering the barrel.

Among the objects of the invention are to increase the capacity of machines of this character and to obviate the necessity of the operator lifting a heated barrel from directly over the fire.

The invention will be fully and clearly hereinafter described and claimed, reference being had to the accompanying drawings, in which—

Figure 1 is a side elevation of the improved barrel-heater. Fig. 2 is a vertical central section through the barrel-heater, the counterweight being omitted. Fig. 3 is a top plan view, the housing and counterweight being omitted. Fig. 4 is an enlarged detached top view of the fire-box. Fig. 5 is an enlarged top view of the base with a section through the standard on which the barrel-support is mounted. Fig. 6 is a central vertical section through the base on line *a a*, Fig. 5. Fig. 7 is an enlarged fragmentary section on line *b b*, Fig. 5. Fig. 8 is an enlarged fragment of the barrel-support to show the manner of fastening the two members thereof together. Fig. 9 is an enlarged fragmentary edge view of the flat fastening portion of one of the members. Fig. 10 is an enlarged section through the barrel-support on line *c c*, Fig. 8. Fig. 11 is a side elevation of a fragment of the fire-box to illustrate the T-slot.

The invention consists of a base, a fire-box in said base, a standard extending from the base, a support for a plurality of barrels rotatably mounted on the standard, and an inclosing hood above the base. The base 1 is of cylindrical form with a flaring top portion 2, a closed bottom 3, and a door 4. A cylindrical fire-box 5 is mounted in the base, being supported therein by three bolts 6, which have their heads 7 fitted in the T-slots 8 of radial lugs 9, as shown in Fig. 7. The T shape of the slots 8 is shown in Fig. 11. The lower ends of the bolts 6 extend through openings in an annular flange 10, extending horizontally inward from the base, and they are secured thereto by lock-nuts 11 and 12, which screw upon the lower ends of the bolts and clamp against opposite sides of the flange 10, as shown in Fig. 7. A cylindrical drum 13 is clamped in place around the fire-box 5 by having its opposite circular edges seated against the opposed annular tapering surfaces of vertical flanges 14 and 15, which extend, respectively, from the fire-box 5 and the annular flange 10 and wedged firmly around the inner tapering walls of said flanges by the tightening of the lower lock-nuts 11 upon the ends of the bolts 6. This serves not only to retain the drum firmly in place, but also to supplement the support of the fire-box by the bolts, and thus strongly and rigidly secure all parts to the base. The purpose of the drum is to provide an inclosed annular space 16 around the upper portion of the fire-box for the circulation of air.

It will be noted by referring to Figs. 2, 3, 4, 5, 6, and 7 that the fire-box 5 is provided with a series of inwardly-extending ribs 17, arranged at regular intervals around the interior of the same. These ribs serve to prevent the fire from actually contacting with the shell of the fire-box, and thereby burning or warping the shell, and are spaced apart and of sufficient depth to provide a plurality of spaces around the fire which serve to circulate air on the sides of the fire, and thus assist and promote the combustion. The ribs 17 are tapered or beveled off at the top and bottom, as shown at 18 and 18ª in Figs. 6 and 7. A grate 19 is hung in depending bearing-lugs 20 beneath the fire-box, and the burner portion of the base beneath the grate constitutes an ash-pit. An inlet or

draft pipe 21, which can be connected to a blower of any ordinary style, extends laterally from one side of the base, and an outlet-pipe 22 for the products of combustion also extends laterally out from the base. A vertical standard 23 has its lower end fitted through and secured in openings in lateral extensions 24 and 25 of the base, being locked in place by set screws or bolts 26. A rotatable barrel-support is mounted on the standard and is composed of two substantially annular members 27 and 28. Each of these members is provided with a short lateral projecting portion 29, having a flat outer edge and a vertical flange 30, through which bolts 31 are passed to secure the two members together. The lateral portion 29 is also provided with a semicircular recess 32, and the flange 30 is correspondingly curved to register with the recess and is lengthened out at the curved part to constitute one-half of a collar 33, which when the two members are bolted together surrounds the standard 23. Each of the annular members has an annular series of openings 34 and a vertical circular flange 35 extending up from the inner circular margin thereof. The outer margin of said members is likewise partially provided with a flange, as shown in Fig. 3. Barrel-centering devices or stops 36 are arranged on each member. (See Fig. 3.) A diagonally outward and upward extending handle 37 is attached to each member for the convenient rotation of the two members on the standard. These handles extend from opposite sides and at angles to each other, as shown in Fig. 3. A second standard 38 has its lower end attached to a lug 39 on the side opposite the standard 23, and a housing 40 is provided with laterally-extending collars 41 and 42, through which the standards extend. The housing is balanced in its position by a counterweight 43, hung from a chain 44, which passes over pulleys 45 and 46 and is fastened at its opposite end to the housing. (See Fig. 1.) The upper end of the fire-box 5 is flanged outwardly and has an annular series of openings 45, which permit the heated air in the chamber 16 to pass up into the barrel. (See Figs. 3, 4, 5, 6, and 7.)

In operating this machine a barrel is placed on one member of the barrel-support and is then swung over the fire by giving the support a half-rotation on the standard 23. The housing is then lowered over the barrel. While this barrel is being heated another one is placed upon the other member of the support and is brought into heating position by a half-revolution of the support, which at the same time moves the heated barrel from the position above the fire into position at one side thereof, so that it can be conveniently removed.

We claim as our invention—

1. In a barrel-heater, a base containing a fire-box, a standard located at one side of said base and a support for a plurality of barrels revolubly mounted on said standard.

2. In a barrel-heater, a base, a fire-box in said base, a standard extending from the base, a support for a plurality of barrels rotatably mounted on said standard and a vertically-movable inclosing housing above the base.

3. In a barrel-heater, the combination with the base, of a standard at one side of said base and a rotatable barrel-support rotatably mounted on said standard and composed of a plurality of members fastened together, each of said members constituting an individual support for a barrel.

4. In a barrel-heater, the combination with the base, of a rotatable barrel-support composed of a plurality of substantially annular members fastened together, each of said members constituting an individual support for a barrel and each being adapted to be swung into and out of heating position by rotation of the barrel-support.

5. In a barrel-heater, the combination with a base having a fire-box and a vertical standard extending from one side of said base, of a barrel-support composed of a plurality of members each adapted to support a barrel; said barrel-support being adapted to be turned on the standard when the barrel on one member thereof is sufficiently heated to move said member and heated barrel out of heating proximity and bring another member and the barrel thereon into heating position, substantially as set forth.

6. In a barrel-heater, the combination with the base, of a rotatable barrel-support composed of a plurality of members fastened together, each of said members constituting an individual support for a barrel.

7. In a barrel-heater, the combination with the base, of a rotatable barrel-support composed of a plurality of substantially annular members fastened together, each of said members constituting an individual support for a barrel.

8. In a barrel-heater, the combination with the base, of a rotatable barrel-support composed of a plurality of substantially annular members each having a short projecting portion provided with a flat edge and bolts passed through said projecting portions to secure the members together.

9. In a barrel-heater, the combination with the base, and a vertical standard extending from said base, of a rotatable barrel-support composed of a plurality of substantially annular members each having a short projecting portion provided with a flat edge, a semicircular recess and a vertical extension above the recess semicircular in cross-section constituting one-half of a bearing-collar which fits around the standard and bolts passed through said projecting portions to secure the members together.

10. In a barrel-heater, the combination with the base, and a vertical standard extending from said base, of a barrel-support rotatably mounted on said standard composed of two substantially annular members each having a central opening surrounded by a flange and an annular series of small openings around said central opening.

11. In a barrel-heater, the combination with the base and a vertical standard extending from said base, of a barrel-support rotatably mounted on said standard composed of two substantially annular members each having a central opening surrounded by a flange and barrel-centering devices on each member.

12. In a barrel-heater, the combination with the base and a vertical standard extending from said base, of a barrel-support rotatably mounted on said standard composed of two substantially annular members and a diagonally upward and outward handle extending from each member.

13. In a barrel-heater, the combination with a base, of two standards, each extending vertically from the base and from opposite sides thereof, a support for a plurality of barrels rotatably mounted on one standard, and an inclosing housing slidably mounted on both standards and vertically above the base.

14. In a barrel-heater, the combination with a base, of two standards, each extending vertically from the base and from opposite sides thereof, a support for a plurality of barrels rotatably mounted on one standard, an inclosing housing slidably mounted on both standards and vertically above the base and a counterbalance-weight connected by chain to said housing.

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