(No Model.)

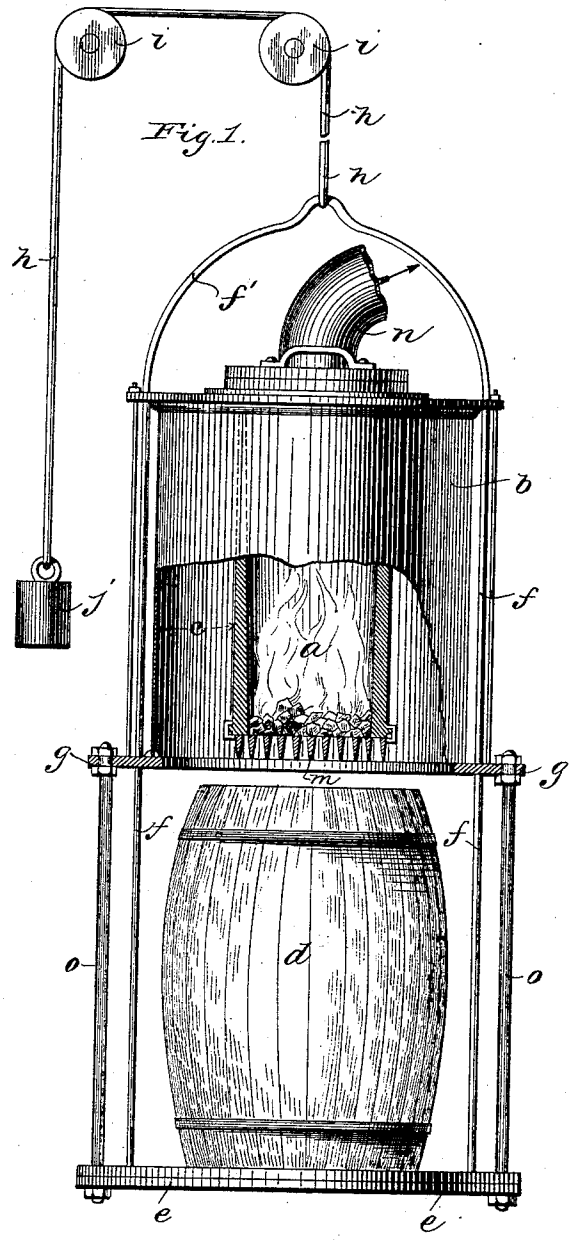
2 Sheets—Sheet 1.

J. M. CHAMBERS.

APPARATUS FOR HEATING AND DRYING BARRELS.

No. 348,888. Patented Sept. 7, 1886.

Fig. 1.



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(No Model.) 2 Sheets—Sheet 2.

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Fig. 2.

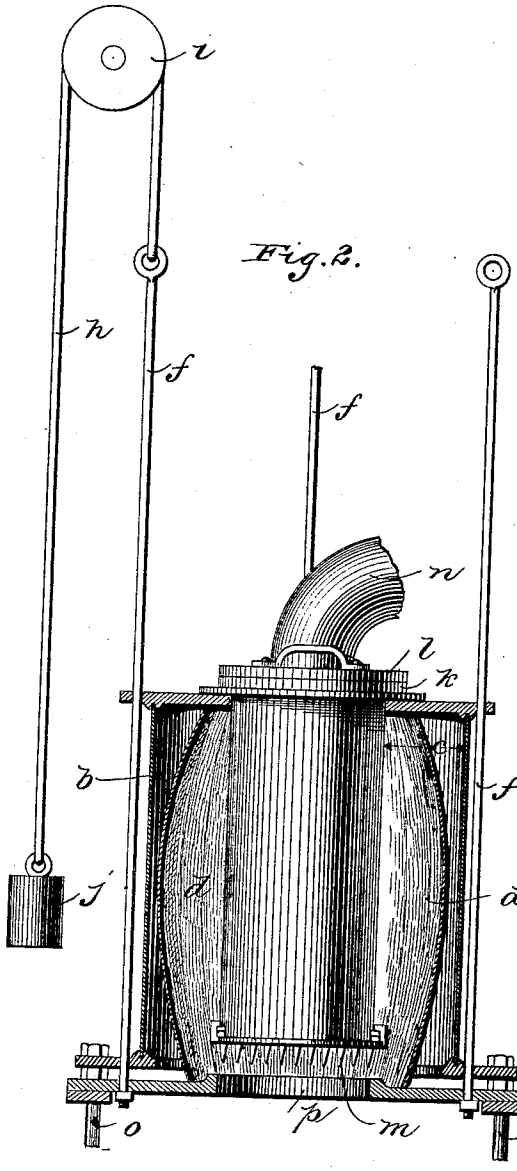
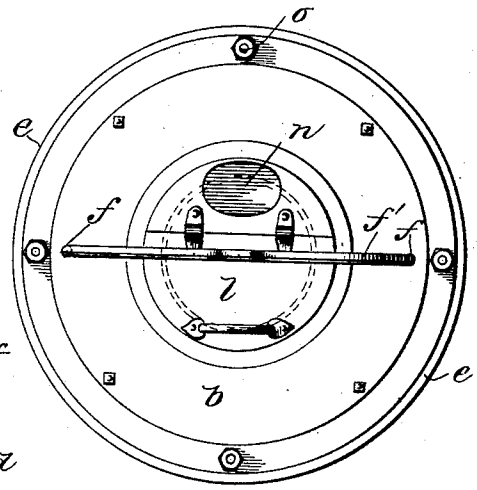


Fig. 3.



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UNITED STATES PATENT OFFICE.

JAMES M. CHAMBERS, OF ST. LOUIS, MISSOURI, ASSIGNOR OF ONE-HALF TO THE ST. LOUIS COOPERAGE COMPANY.

APPARATUS FOR HEATING AND DRYING BARRELS.

SPECIFICATION forming part of Letters Patent No. 348,888, dated September 7, 1886.

Application filed January 18, 1886. Serial No. 188,872. (No model.)

To all whom it may concern:

Be it known that I. JAMES M. CHAMBERS, a citizen of the United States, residing in the city of St. Louis and State of Missouri, have invented a certain new and useful Improved Apparatus for Heating and Drying Barrels or Casks, of which the following is a full, clear, and exact description.

My invention relates to the heating and drying of casks or barrels preparatory to the hooping and finishing of same, and has for its object to heat the barrel or cask externally as well as internally, to obviate the necessity and inconvenience of lifting the barrel by hand for placing it around the heater, as at present, and to insure a more thorough and rapid drying of the barrel than by the ordinary means.

It consists in a combination and arrangement of apparatus, whereby the barrel or cask is raised into position around the heater, from which the heat is caused to circulate externally and internally around the barrel or cask, the latter descending freely, when dried, from the heater without interfering with the firing and operation thereof.

On the accompanying sheets of drawings, Figure 1, Sheet 1, is a sectional elevation, partly broken away, of my invention, showing the barrel or cask in its lowest position away from the heater; Fig. 2, a similar view thereof with the barrel or cask in position for being heated and dried; and Fig. 3, Sheet 2, a plan of the apparatus.

Like letters of reference indicate like parts in all the figures.

In carrying out my invention I inclose the ordinary cylindrical fire-box or heater, *a*, used for drying the inside of barrels or casks within a fixed overhead cylinder or drum, *b*, which is open at its lower end and closed at the top, except through its central portion, around which is attached the upper and open end of the fire-box or heater *a*, an annular cylindrical space, *c*, being left between the heater *a* and surrounding cylinder or drum *b*, as shown.

Beneath the annular space *c* the barrel or cask *d* to be dried is placed in an upright position on a platform, *e*, to each side of which is secured the lower end of a rod, *f*, which passes through the overhead ring or framing *g*, supporting the outer cylinder or drum, *b*, the two rods *f* being united above the latter by a curved portion or yoke, *f'*, to which is attached a rope or chain, *h*, passing over pulleys *i*, and terminating in a counterbalance-weight, *j*; or, if desired, in lieu of uniting the rods *f* they may be separated and each provided with rope, pulley, and counter-weight; or more than two rods may be employed, if found more suitable, as shown in Fig. 2. On the upper open end of the heater *a* is a cap or hood, *k*, provided with a door, *l*, through the opening of which fuel is fed to the heater *a* and grate *m*, and with a flue, *n*, through which the waste products of combustion from the heater *a* are carried off in any desired direction.

O O are rods secured at their upper ends to the ring or framing *g*, and passing through holes in the platform *e*, so as to serve as guides for preserving the plaform *e* with the cask *d* in the proper position beneath the heater *a*.

Assuming the fire to be lighted in the heater *a*, and the barrel or cask *d*, with the platform *e* and other parts of the apparatus, in the position shown by Fig. 1, on pulling down the counterbalance-weight *j* and rope or chain *h* the platform *e*, with the barrel or cask *d*, will be raised by the rods *f f'*, and the barrel or cask *d*, entering and occupying the annular space *c*, will surround the heater *a*, the heat from which, circulating in the annular space *c*, acts upon the outside as well as the inside of the barrel or cask *d*, and the latter is thereby thoroughly dried. The ashes from the heater *a* fall through a hole, *p*, in the platform *e*. On the completion of the operation the platform *e*, with the barrel or cask *d*, is caused to descend from the heater *a* into its normal position, as in Fig. 1, by raising the counterbalance-weight *j*.

By this invention the barrels or casks are dried with ease, rapidity, and economy without interfering with the firing or arrangement of the heating apparatus.

I claim as my invention—

1. In apparatus for heating and drying barrels, the combination of the heater *a*, chamber *b*, and a lift, *e*, situate below the chamber *b*, and arranged to raise the barrel or cask to a position within the chamber, substantially as and for the purpose specified.

2. The combination of the lift for carrying the barrel or cask *d*, rods *f f'*, rope or chain *h*, pulleys *i*, counterbalance-weight *j*, and the heater *a*, substantially as and for the purpose specified.

3. In apparatus for heating and drying barrels or casks, the combination and arrangement of the heater *a* and outer cylinder or drum, *b*, forming an annular space, *c*, with the platform *e*, for carrying the barrel or cask *d*, rods *f f'*, rope or chain *h*, pulleys *i*, and counterbalance-weight *j*, substantially as shown, and for the purpose set forth.

In testimony whereof I have affixed my signature, in presence of two witnesses, this 12th day of January, 1886.

JAMES M. CHAMBERS.

Witnesses.

JOSEPH W. CROOKES,

PAUL BAKEWELL.