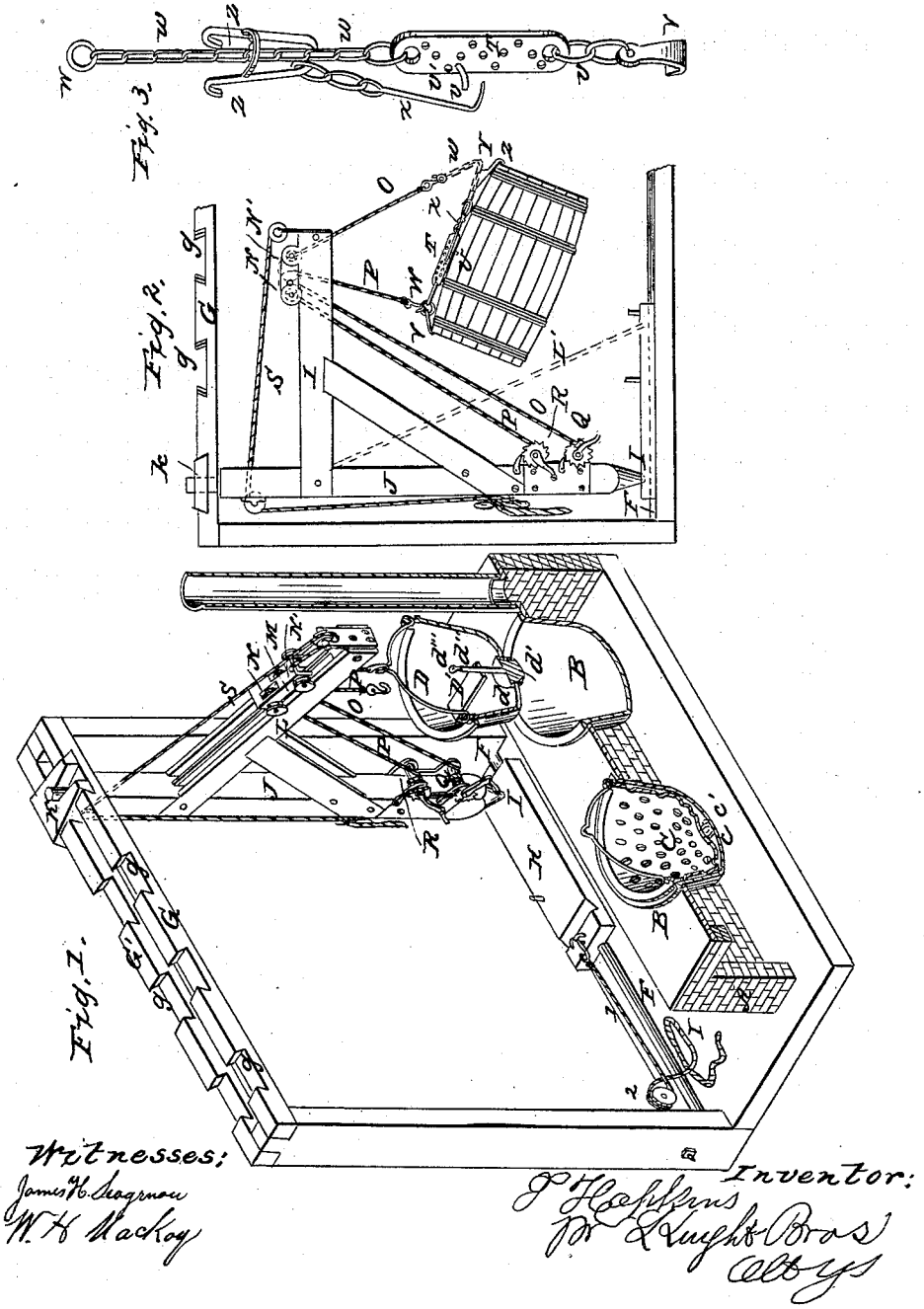
T. HOPKINS.

Rendering Apparatus.

No. 45,960. Patented Jan. 17, 1865.



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UNITED STATES PATENT OFFICE.

THOMAS HOPKINS, OF CINCINNATI, OHIO.

IMPROVED APPARATUS FOR RENDERING LARD, &c.

Specification forming part of Letters Patent No. **45,960**, dated January 17, 1865.

To all whom it may concern:

Be it known that I, THOMAS HOPKINS, of Cincinnati, Hamilton county, Ohio, have invented a new and Improved Rendering Apparatus; and I do hereby declare the following to be a full, clear, and exact description thereof, reference being had to the accompanying drawings, making a part of this specification.

My invention relates to devices for facilitating the rendering or cooking of fatty and other substances.

Figure 1 is a perspective view of an apparatus embodying my improvements. Fig. 2 is a side elevation of the same. Fig. 3 represents the grapple.

A represents a furnace.

B B are caldrons or kettles.

C is a copper or other metallic colander, adapted to fit inside of either caldron, its office being to hold the pieces of fat, or meat, or pickle or other articles to be boiled, and keep them from scorching, and to enable them to be lifted bodily out of the caldron when sufficiently cooked.

In order to facilitate the emptying of the colander, I provide a ring, *c*, on its under side, which ring occupies a depression, *c'*, in the bottom of the colander, so as not to oppose the sinking of the latter to the bottom of the caldron.

D is an emptying-vessel, which I call the "dipper." The dipper D is a peculiarly-formed kettle, adapted to fit snugly within the caldron, and having an aperture, *d*, at bottom, closed automatically by a gravitating valve, *d'*, which valve has a stem, *d''*, guided in a bridge, D', which extends athwart the kettle. The bridge D' may be replaced by a bracket extending from one side only. An eye, *d'''*, in the valve-stem enables the valve to be lifted by the cook. The valve *d'* extends far enough below the bottom of the dipper to be opened by the contact of the dipper with the bottom of the caldron, so as of itself to open the aperture *d*, and thus enable the contents of the caldron and dipper to freely intermingle during the period of cooking, if desired. When it is desired to cook without direct contact with the fire, the dipper D is so suspended in the caldron as to enable the valve *d'* to close, and thus to shut off the connection between the dipper and the interior of the caldron, which is by this means converted into a water-jacket, acting to temper the heat of the interior of the dipper. The contents of the dipper D, having been cooked a while in direct contact with the fire, may, in order to avoid the risk of scorching, be simmered more gently in the dipper by slightly elevating the latter, as above, so as to close the connection with the water-jacket, into which sufficient hot water is then poured to preserve the contents of the jacket from burning. The cooking or rendering being now completed the dipper is lifted, with its contents, out of the caldron and its contents discharged into any suitable receptacle by simply elevating the valve *d'*.

The above is a great improvement over the common way of emptying such caldrons by the tedious process of bailing, which consumes much time and labor, and is not unfrequently accompanied by the burning of the contents before they can be entirely removed.

A feature of my above improvements is to enable the cooking or rendering of large volumes at one time, necessitating special appliances for lifting of the vessels, those employed by me being as follows:

F is a rail running parallel with the furnace. Parallel to and directly over said rail is a pair of notched beams, G G'.

H is a base board or plate grooved on its under side to fit the rail F, and having in its upper side a socket or step, I, for the foot of a post, J, which forms the main axis of a crane. The upper end of the said post J journals in a wedge, K, adapted to enter either of the dovetailed notches *g* in the beams.

L is the boom of the crane, its upper edge forming a way for a truck, M, which carries the sheaves N, around which and sheaves N' the hoisting and tipping ropes or chains O P traverse.

Q R are windlasses for operating the said ropes O P.

S is a rope for drawing forward the truck upon the boom.

L' (see dotted lines) is a temporary brace, which is inserted when it is desired to shift the crane.

To facilitate the handling of barrels and like vessels having one end open, I provide a peculiar grapple, constructed as follows:

T is a perforated plate, from opposite sides of which project fingers, U U', bent into the

arc of a circle so as to fit the bulge of a barrel. From one end of the plate T proceeds a short chain, *v*, which terminates in a hook, V, which is passed around the lower chine of the barrel. From the other end of the plate T proceeds a long chain, *w*, which terminates in a ring, W. The upper chine of the barrel is grasped by two hooks, Z Z′, of an A-formed piece of iron or steel, whose apex is provided with a hook, X.

In using the above grapple, the long chain *w* is drawn under the cross-bar Y, the same having an arched form for that purpose, while the hooks Z, Z′, and V grasp the upper and lower chines, respectively, as above explained. The heavier the barrel is the more tightly are the said hooks drawn toward each other. The grapple thus applied will securely grasp and lift a barrel of any weight. When, however, it is desired to tip the barrel in order to discharge its contents, as in Fig. 2, the hook X is engaged in one of the perforations of the plate T, and the auxiliary tackle being engaged in a ring, W′, of the grapple, the auxiliary tackle is wound up until the lower end of the barrel has the desired elevation.

1 is a cord, and 2 a sheave, to enable the crane to be drawn bodily from one position to another.

I claim herein as new and of my invention—

1. The colander C *c c′*, formed and adapted to operate as set forth.

2. The dipper D D′ *d d′ d″*, formed and adapted to operate as set forth.

3. In the described combination, the devices F, G, G′, *g′*, H, K, and L′, or their equivalents, for enabling a crane to be shifted from place to place.

4. The grapple T U U′ *v* V *w* W X Y Z Z′, formed and operating substantially as set forth.

In testimony of which invention I hereunto set my hand.

THOMAS HOPKINS.

Witnesses:

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