

(No Model.)

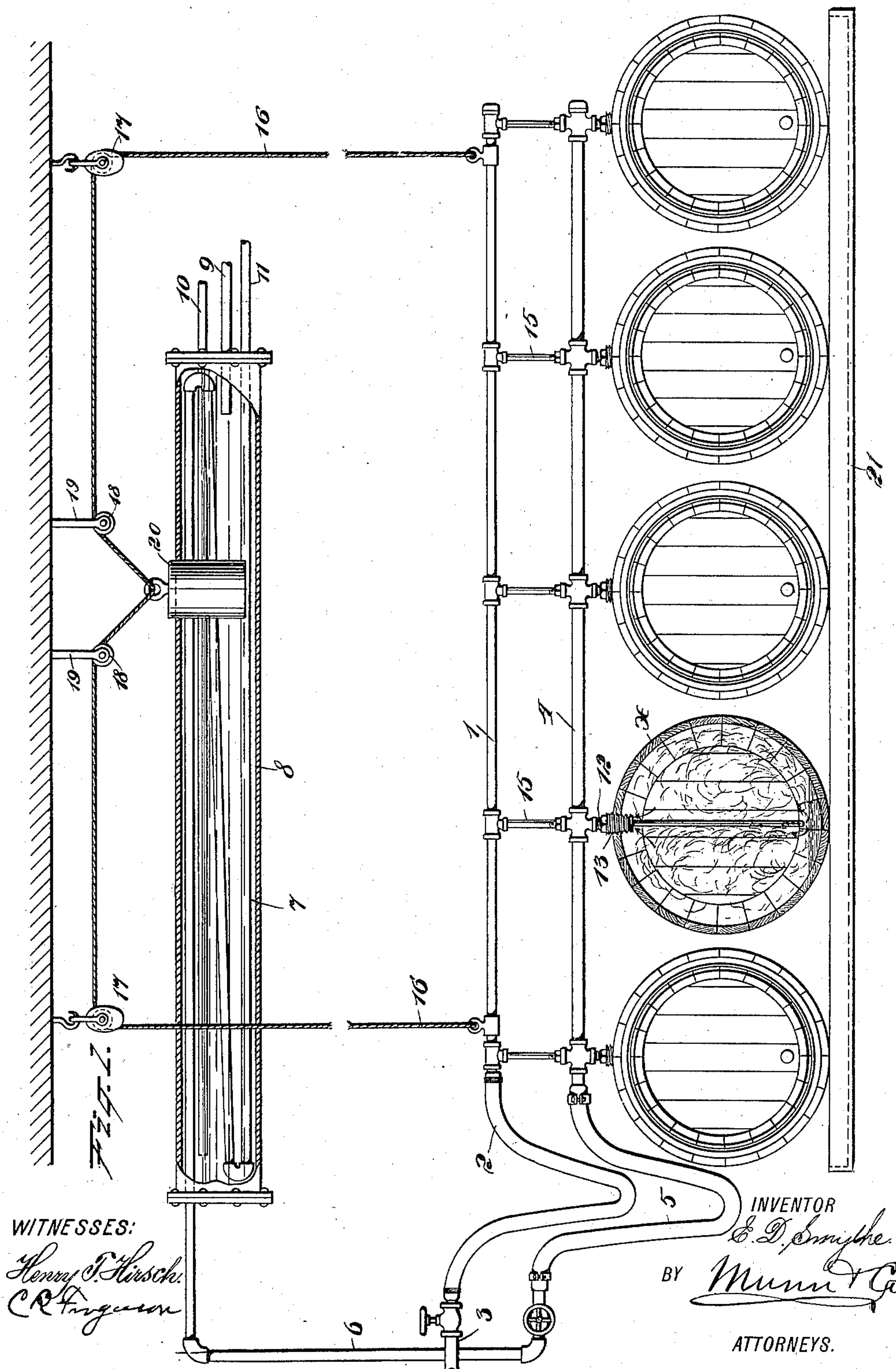
2 Sheets—Sheet 1.

E. D. SMYTHE.

APPARATUS FOR RECLAIMING CRYSTALLIZED SYRUP.

No. 579,021.

Patented Mar. 16, 1897.



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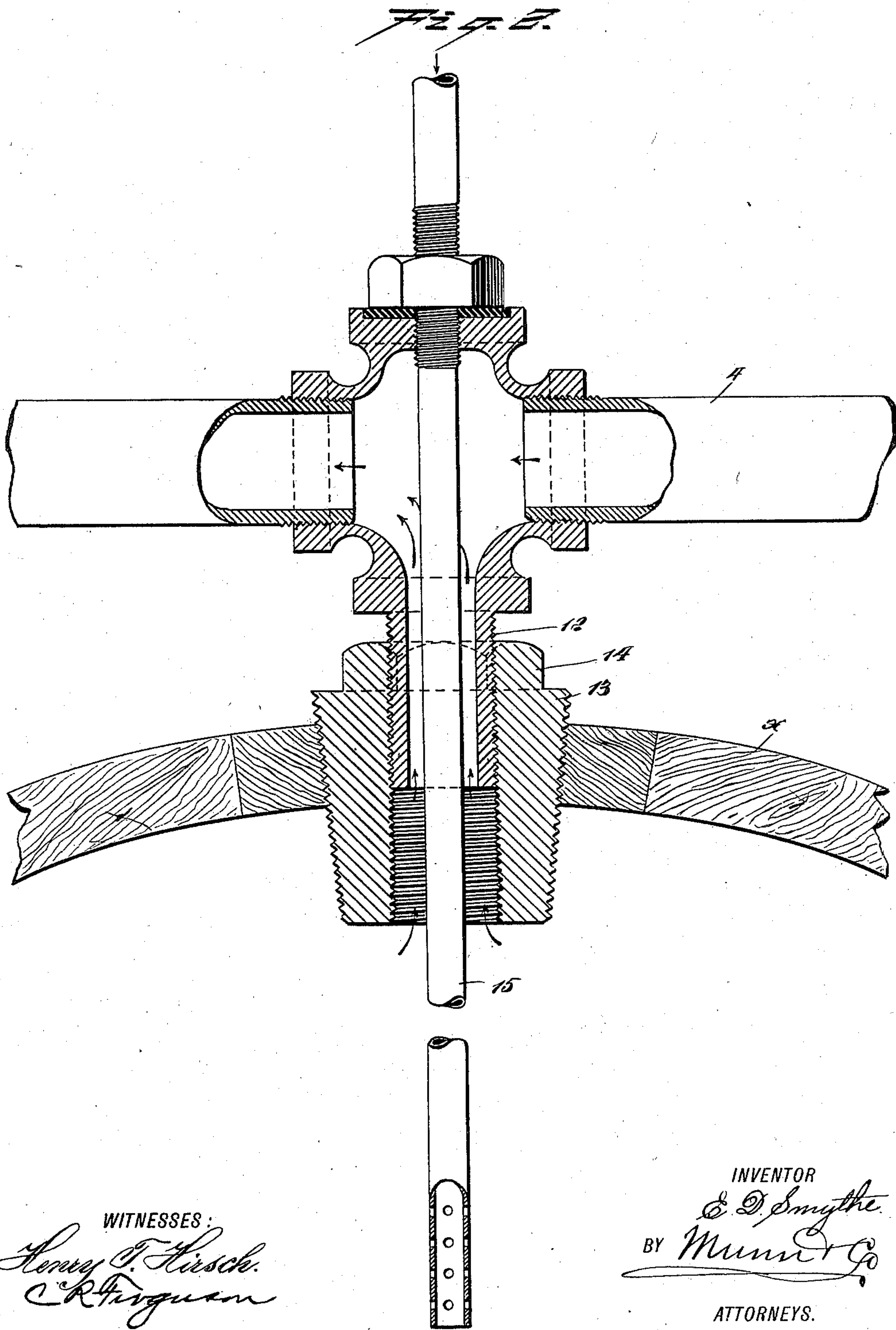
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WITNESSES:

Henry T. Hirsch.
C. R. Argueman

INVENTOR

E. D. Smythe.

BY

Munn & Co.

ATTORNEYS.

UNITED STATES PATENT OFFICE.

EDWARD D. SMYTHE, OF NEW YORK, N. Y.

APPARATUS FOR RECLAIMING CRYSTALLIZED SYRUP.

SPECIFICATION forming part of Letters Patent No. 579,021, dated March 16, 1897.

Application filed December 11, 1896. Serial No. 615,263. (No model.)

To all whom it may concern:

Be it known that I, EDWARD D. SMYTHE, of New York city, in the county and State of New York, have invented a new and Improved
5 Apparatus for Reclaiming Crystallized Syrup, of which the following is a full, clear, and exact description.

This invention relates more particularly to an apparatus for reclaiming rock-candy syrup
10 crystallized in barrels. It is found that after drawing off the syrup of rock-candy or similar syrups from a barrel a considerable amount thereof has been absorbed by the wood or become crystallized on the interior
15 surface of the barrel, and this, where the syrup is used in large quantities for manufacturing purposes, entails a considerable loss.

The object of my invention is to provide a
20 simple means whereby this material may be quickly and wholly reclaimed from the barrels or original packages.

It is well known that injected steam has been employed for cleaning barrels, but the
25 apparatus thereof requires much labor to connect it to the barrels, as the barrels must be lifted and placed upon the steam-injecting tubes.

My invention consists in a steam-injecting
30 apparatus and means for lifting and lowering the same with relation to a barrel or barrels.

The invention further consists in the construction and novel arrangement of parts, as will be hereinafter specified, and particularly
35 pointed out in the appended claims.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar characters of reference indicate corresponding parts in both views.

40 Figure 1 is a front elevation of an apparatus embodying my invention; and Fig. 2 is a sectional detail, drawn on an enlarged scale, showing the steam injecting and outlet devices in connection with a barrel.

45 Referring to the drawings, 1 designates the steam-inlet pipe, having a flexible-tube connection 2 with a steam-supply pipe 3. Arranged below the steam-inlet pipe 1 is a steam-outlet pipe 4, having a flexible-tube
50 connection 5 with a pipe 6, communicating with a condensing-coil 7, arranged within a condensing-cylinder 8, having a cold-water

inlet 9, a hot-water outlet 10, and a condensed-steam outlet 11, leading to any suitable discharge.

55 Connected to the steam-outlet pipe 4 is a series of exteriorly-threaded nipples 12, which engage with interiorly-threaded bushings 13, which are also exteriorly threaded to be screwed into the bung-hole of the barrel, as
60 plainly indicated in Fig. 2. The bushings 13 are provided with an angular head 14, with which a wrench or similar device may be engaged for securing the bushings to the barrels.

65 Leading from the steam-inlet pipe 1 is a series of steam-injecting tubes 15, which extend through the pipe 4, the nipples 12, and the bushings 13 and are designed to project nearly to the bottom of the barrels α . These injecting-tubes 15 are considerably smaller in di-
70 ameter than the interior diameter of the nipples 12. Therefore space is allowed for the escape of steam.

It will be seen that the pipes 1 and 4 are connected together by means of the injecting-
75 tubes 15, and I provide means whereby the pipes and injecting-tubes may be raised or lowered with relation to the barrels. As here shown, this means consists of a rope 16, con-
80 nected at its ends to the pipe 1 and rove through pulleys 17, suspended from an overhead support. This rope 16 at its central portion passes over guide-pulleys 18, supported on hangers 19, and connected to the rope 16, between the pulleys 18, is a counterbalance-
85 weight 20.

In operation a number of barrels from which the crystallized syrup is to be reclaimed are placed beneath the apparatus with the bung-holes thereof in line with the injecting-
90 tubes 15. Then the apparatus is to be lowered to place the injecting-tubes within the barrels. After this the bushings 13 are to be screwed tightly within the bung-holes of the barrels, and as the nipples 12 are provided
95 with a left-hand screw-thread it is obvious that the bushings may be moved downward without drawing the pipe 4 toward the barrel. When the apparatus is in position, high-pressure steam is admitted through the pipe
100 1 and discharged through the tubes 15 into the several barrels, and this steam will melt the crystallized syrup and force it from the pores of the wood, so that the syrup will col-

lect in the lower portion of the barrel, from which it may be discharged into a trough 21, arranged in front of the barrel. The steam will escape through the nipples 12 and the
5 pipe 4 to the condenser and discharge in a condensed form.

Having thus described my invention, I claim as new and desire to secure by Letters Patent—

- 10 1. An apparatus for reclaiming crystallized syrup from original packages, comprising a steam-inlet pipe, a steam-outlet pipe, a nipple on the outlet-pipe, a bushing adjustable on the nipple and adapted for engagement in the
15 bung-hole of a barrel, an injecting-tube extended from the steam-inlet pipe through the nipple and designed to extend nearly to the bottom of a barrel, and a counterbalancing mechanism for assisting in raising the sev-
20 eral pipes, substantially as specified.

2. An apparatus for reclaiming crystallized syrup from barrels, comprising a steam-inlet pipe and steam-outlet pipe, a flexible connection between the steam-inlet pipe and the
25 steam-supply pipe, a condenser, a flexible connection between the outlet-pipe and said condenser, steam-injecting tubes extended from the steam-inlet pipe to the steam-outlet pipe and designed to pass downward into bar-
30 rels, nipples on the outlet-pipe, bushings having screw-thread engagement with said nipples and adapted to engage in the bung-holes of barrels, a rope extended from the apparatus through pulleys secured to an overhead
35 support, and a counterbalance connected with said rope, substantially as specified.

EDWARD D. SMYTHE.

Witnesses:

JNO. M. RITTER,
C. R. FERGUSON.