

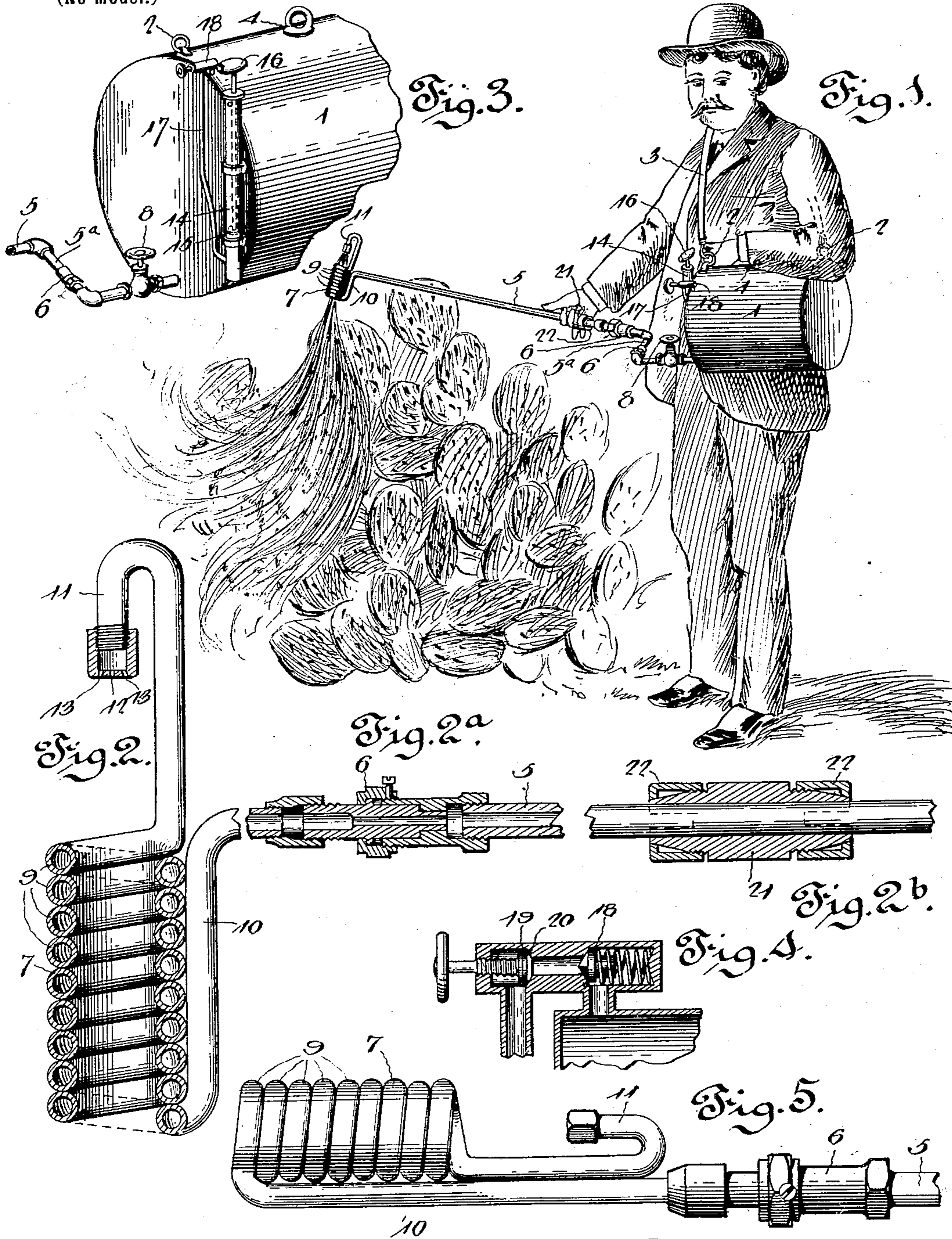
No. 630,823.

Patented Aug. 8, 1899.

C. H. BEEVER & W. A. MCCOY.  
CACTUS BURNER.

(Application filed Mar. 1, 1899.)

(No Model.)



Witnesses  
J. Frankfurterwee.  
*[Signature]*

C. H. Beever and W. A. McCoy, Inventors.  
By their Attorneys, William A. McCoy,  
*Chas. H. Beever*

# UNITED STATES PATENT OFFICE.

CHARLES H. BEEVER, OF PEARSALL, AND WILLIAM A. MCCOY, OF CAMPBELLTON, TEXAS, ASSIGNORS, BY DIRECT AND MESNE ASSIGNMENTS, OF TWO-THIRDS TO GEORGE F. HINDES AND STEVE M. FOSTER, OF PEARSALL, TEXAS.

## CACTUS-BURNER.

SPECIFICATION forming part of Letters Patent No. 630,823, dated August 8, 1899.

Application filed March 1, 1899. Serial No. 707,309. (No model.)

*To all whom it may concern:*

Be it known that we, CHARLES H. BEEVER, of Pearsall, in the county of Frio, and WILLIAM A. MCCOY, of Campbellton, in the county of Atascosa, State of Texas, citizens of the United States, have invented a new and useful Cactus-Burner, of which the following is a specification.

Our invention relates to a cactus-burner consisting in an apparatus for removing thorns from cactus or prickly-pears or similar plants or growths of a fleshy or succulent nature provided with spines, the removal of these spines adapting the plants to be fed to stock without incurring the risk to which the stock would be exposed by reason of the natural or normal condition of the plants.

The particular object of the present invention, which consists of an improvement upon the construction shown and described in a patent to Edmunds, No. 613,798, granted November 8, 1898, is to provide an improved construction of burner and means for controlling the position thereof in connection with a tank or reservoir of portable construction, of which the contents may be subjected to the desired pressure.

Further objects and advantages of this invention will appear in the following description, and the novel features thereof will be particularly pointed out in the appended claims.

In the drawings, Figure 1 is a perspective view of an apparatus constructed in accordance with our invention. Fig. 2 is a sectional view of the burner. Figs. 2<sup>a</sup> and 2<sup>b</sup> are respectively longitudinal sections of one of the swivels and the grip of the delivery-tube. Fig. 3 is a detail view of the pump or pressure-applying device. Fig. 4 is a detail section of the feed-valve of the pump mechanism. Fig. 5 is a detail view of a slightly-modified construction of burner wherein the axis of the coils is parallel with the inlet-terminal of the burner.

Similar reference characters indicate corresponding parts in all the figures of the drawings.

The tank or reservoir 1 is of portable size and weight and is preferably provided with rings or keepers 2, with which are engaged the extremities of a shoulder-strap 3 to adapt the apparatus to be slung over the shoulder of the operator, said tank also being provided with a filling-opening fitted with a cap 4.

Communicating with the tank at one end is a delivery-pipe 5, consisting of a metallic tube having one or more swivels 6, by which the proper position of the burner 7 at the extremity of the tube may be attained. In the construction illustrated this delivery-tube is provided adjacent to its point of communication with the tank with a cut-off valve 8, and beyond this valve and at an intermediate point of the length of the delivery-tube is arranged a transverse portion 5<sup>a</sup>, forming an elbow, in which one of the said swivels 6 is located to adapt the free end of the tube or the burner to be raised and lowered in the operation of the apparatus. Also adjacent to the elbow we preferably locate another swivel, as indicated, to allow the burner to be turned about the delivery-pipe as a center.

The burner consists of a single tube of the proper dimensions folded upon itself to form a helical coil 9, one terminal of which is bent to lie against the exterior of the coil and parallel with the axis thereof and extending throughout the length of the coil, as indicated at 10, and is then connected with the delivery-pipe. The other terminal of the coil is extended parallel with the axis thereof and is doubled upon itself to form a burner-tip 11, lying in axial alinement with the coil. This burner-tip is provided with a central orifice 12 and with a plurality, as two or more, lateral obliquely-disposed orifices 13, which are adapted to project vaporized fuel directly upon the adjacent terminal convolution of the coil to maintain a proper vaporizing temperature thereof. The burner-tip is preferably spaced from the adjacent terminal of the coil to insure the proper admixture of air with the gas before it reaches the coils, whereby a perfect combustion of the fuel may be attained.

Applied to the front end of the tank or reservoir, on that end from which extends the delivery-pipe, is a pump mechanism having a barrel or cylinder 14 and a piston 15, of which the stem or rod terminates in a suitable handhold 16 within convenient reach of the operator. This cylinder or barrel is in communication with the interior of the tank by means of an air-conducting tube 17, having a check-valve 18 opening into the tank to allow air to be forced from the barrel or cylinder of the pump thereinto. To prevent subsequent leakage from the tank into the pump-barrel, we also preferably employ a cut-off valve 19, arranged in operative relation with a seat 20, located near the check-valve seat and adapted to be closed after the desired pressure has been attained in the tank.

In operation the burner, of which the length or axis of the coil is arranged transverse to the delivery-pipe, as shown in Figs. 1 and 2, is so disposed that the burner-tip discharges downwardly, and by passing the burner over a heap of cactus or prickly-pear plants the flame will be forced downward through the heap and will consume the objectionable spines, the desired position of the burner being possible by reason of the swivels with which the discharge-pipe is provided, and the latter being provided with a grip 21, by which the operator may readily control the motions of the same. We may, however, arrange the burner with the axis of its coil parallel with the delivery-pipe, as shown in Fig. 4, in which case the flame is discharged in a direction approximately parallel with the delivery-pipe, and the manipulation of the latter will be correspondingly varied.

The grip which we have illustrated preferably consists of a sleeve adjustably fitted upon the delivery-pipe and provided with terminal clamping-nuts 22, by which it may be secured at any desired adjustment to suit the length of arm and convenience of the operator. By grasping the grip the operator is enabled to elevate or depress the burner end of the delivery-tube and also to turn the latter to direct the flame from the burner as may be desired to accomplish the required result.

It will be understood that in practice various changes in the form, proportion, and the minor details of construction within the scope of the appended claims may be resorted

to without departing from the spirit or sacrificing any of the advantages of the invention.

Having described our invention, what we claim is—

1. In an apparatus of the class described, the combination with a tank or reservoir, of a burner comprising a helical coil, one terminal being extended to form an inlet-tube of which the extremity is arranged perpendicular to the axis of the coil, and of which the other terminal is extended and doubled upon itself to form a burner-tip alined with the axis of the coil and having central and lateral orifices, substantially as specified.

2. In an apparatus of the class described, the combination with a tank or reservoir, of a delivery-pipe in communication therewith, a burner comprising a helical coil, the axis of which is arranged transverse to the adjacent portion of the delivery-pipe, one terminal of the coil being extended at right angles to the axis of the coil to form an inlet-tube, and the other terminal being extended and bent upon itself to form a burner-tip alined with the axis of the coil, and a swivel connection between the burner and the delivery-pipe, whereby the burner-tip may be caused to discharge through the coil radially of the delivery-pipe and at different degrees of its rotation with respect to the tank.

3. In an apparatus of the class described, the combination with a tank or reservoir, of a delivery-pipe having a transverse elbow portion pivotally swiveled whereby the free end of said pipe is adapted for rotation, a burner having a helical coil one terminal of which is extended to form an inlet-tube terminally arranged at right angles to the axis of said coil and connected by a swivel to the free end of said delivery-pipe, and the other terminal of the coil being extended and bent upon itself to form a burner-tip in alinement with the axis of the coil, whereby the burner-tip may be caused to discharge through the coil at every angle with respect to the tank.

In testimony that we claim the foregoing as our own we have hereto affixed our signatures in the presence of two witnesses.

CHARLES H. BEEVER.  
WILLIAM A. MCCOY.

Witnesses:

H. L. JOHNSON,  
HENRY MANGHAM.