B. L. CORNELIUS.

OIL BURNER TIP.

APPLICATION FILED MAR. 20, 1913.

1,133,711.

Patented Mar. 30, 1915.

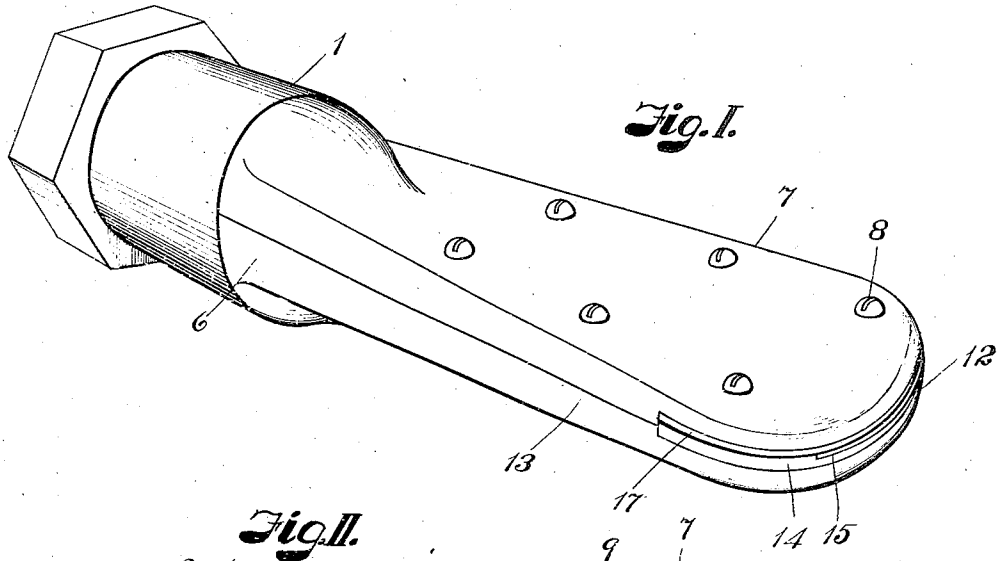


Fig. I.

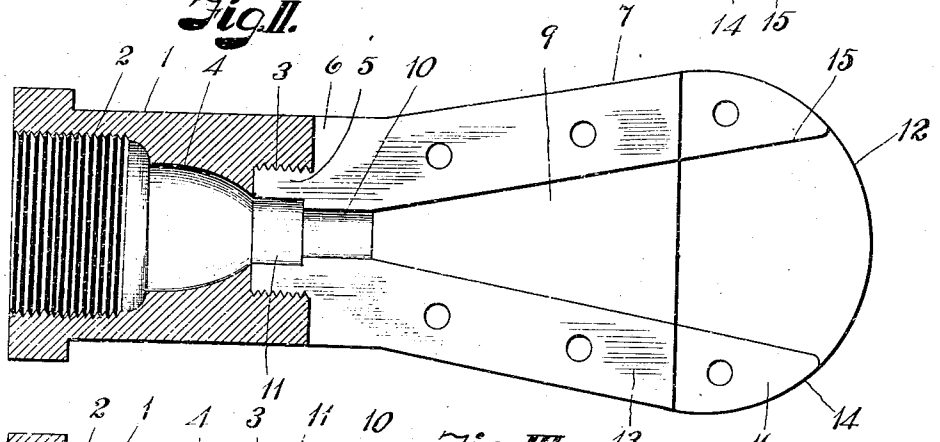


Fig. II.

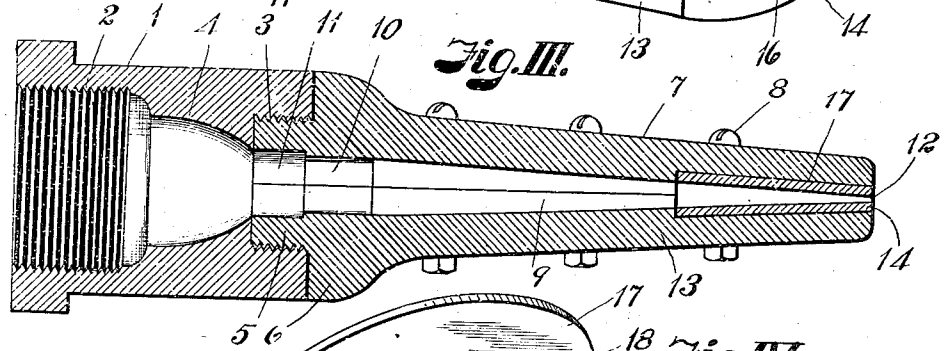


Fig. III.

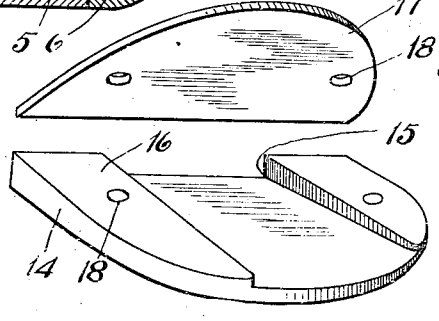


Fig. IV.

WITNESSES:

Arthur W. Capps.

Lewis L. Miller.

INVENTOR

B. L. Cornelius.

BY

Arthur W. Brown

ATTORNEY

UNITED STATES PATENT OFFICE.

BENJAMIN L. CORNELIUS, OF HUTCHINSON, KANSAS.

OIL-BURNER TIP.

1,133,711. Specification of Letters Patent. Patented Mar. 30, 1915.

Application filed March 20, 1913. Serial No. 755,793.

To all whom it may concern:

Be it known that I, BENJAMIN L. CORNELIUS, a citizen of the United States, residing at Hutchinson, in the county of Reno and State of Kansas, have invented certain new and useful Improvements in Oil-Burner Tips; and I do declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to an oil burner tip, and has for its principal object to provide a tip, having a discharge mouth lined with removable wear plates, so that when the mouth has been enlarged by the grinding action of sand, or other solid material, in the oil flowing therethrough, new plates may be inserted to reduce the opening to the proper dimensions.

In accomplishing this object I have provided the improved details of structure hereinafter described and illustrated in the accompanying drawings, wherein:—

Figure I is a perspective view of a burner tip constructed according to my invention. Fig. II is a plan view of same, one of the tip members being removed and the socket piece in section. Fig. III is a central, vertical section of the complete tip. Fig. IV is a detail perspective of the separate mouth plates.

Referring more in detail to the parts: 1 designates a socket member having a socket 2 at one end adapted for application to the threaded end of a supply pipe and a socket 3 at the opposite end for receiving the shoulder and threaded shank of a burner tip, the inner surface 4 of the socket member between the inner ends of the sockets 2 and 3 being concaved and reduced toward the outer socket 3.

The tip here shown, and which I prefer to use, is of a "duck bill" type and comprises separate members or halves adapted for application to each other to complete the shank 5 which is adapted to thread into the socket 3, the annular shoulder 6 which is adapted to lie against the end of the socket member, and the spreading body members 7 which are adapted to be rigidly secured together by the screws 8.

On the inner face of one of the members 7 is a groove 9 which opens from a neck portion 10 that communicates with the mouth 11 in the shank 5, and diverges toward a mouth 12 at the free end of the tip, the other member being preferably flat or ungrooved, although having neck and mouth portions 10 and 11 for coöperating with like portions in the first body member to form a channel for the passage of oil. At the outer end of the tip the flanges 13, at the sides of the groove 9, are downcut to receive an insert plate 14 having a central, diverging groove 15 adapted for forming a continuation of the groove 9 in the body and having edge flanges 16 forming continuations of the flanges 13. The opposite body member 7 is incut to receive a flat wear plate 17 of the same size and shape as the plate 14, but ungrooved so that its inner surface is coextensive with the inner flat surface of the body member. Both plates 14 and 17 have apertures 18 through which the outer screws 7 may project to anchor the plates in their seats.

With the parts constructed and assembled as described, and having wear plates within the seats at the mouth of the tip, the groove is used in the ordinary manner.

Should the mouth area be unduly enlarged by grinding due to the passage of sand through the mouth with the flow of oil, the plates 14 and 17 may be removed and new plates inserted, thereby renewing the tip while saving all but the small wearing plates.

It is apparent that by forming the tip in separate pieces the interior of the tip is accessible by unthreading the body members from the socket and removing the screws 7, thereby permitting the body members to be separated and the interior of the tip completely disclosed.

Having thus described my invention, what I claim as new therein and desire to secure by Letters-Patent, is:—

1. A burner tip comprising separate body members, having grooved inner faces, a transverse mouth intersecting the face grooves, a grooved wearing-plate seated in the jaw of one of said body members and projecting slightly into the jaw of the other body member, a flat wearing-plate seated in the jaw of said last named body member and adapted for coöperation with said grooved wearing plate, and fastening de-

vices projecting through the body members and wearing plates, on opposite sides of said grooves.

2. In an oil burner tip, the combination with a threaded socket member, of a pair of grooved body members having threaded members adapted for coöperation to form a shank for seating said threaded socket member, a transverse mouth opening from the grooved portion of the body member, a grooved wearing plate seated in the jaw of one of said body members and projecting slightly into the jaw of the last named member and adapted for coöperation with the grooved wearing plate, and fastening devices projecting through the body members and wearing plates, on opposite sides of said grooves.

In testimony whereof I affix my signature in presence of two witnesses.

BENJAMIN L. CORNELIUS.

Witnesses:

IRA A. DAVIES,

J. M. STEWART.