

No. 895,138.

PATENTED AUG. 4, 1908.

B. A. ANDERSON.
CUTTER HEAD FOR SUCTION DREDGES.
APPLICATION FILED MAY 6, 1908.

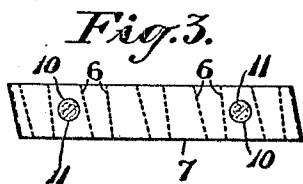
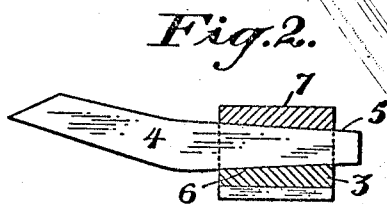
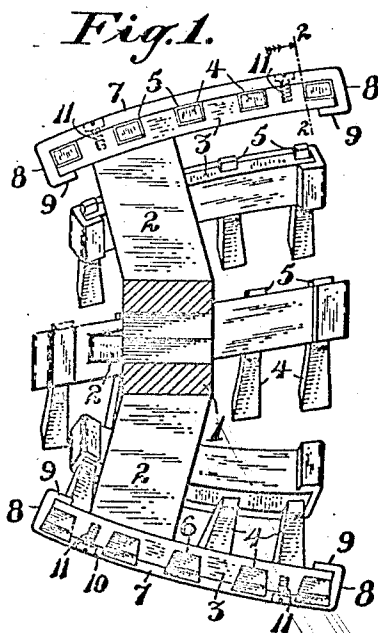
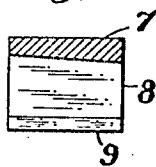


Fig. 5.



WITNESSES:

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CUTTER-HEAD FOR SUCTION-DREDGES.

No. 895,138.

Specification of Letters Patent.

Patented Aug. 4, 1908.

Application filed May 6, 1908. Serial No. 431,268.

To all whom it may concern:

Be it known that I, BIRGER A. ANDERSON, a citizen of Sweden, residing at San Francisco, in the county of San Francisco and State of California, have invented new and useful Improvements in Cutter-Heads for Suction-Dredges, of which the following is a specification.

The object of the present invention is to provide an improved form of cutter head for suction dredges of such construction as to reduce the cost of repairs and replacement.

In the accompanying drawing, Figure 1 is an axial section of my improved cutter head; Fig. 2 is an enlarged section on the line 2—2 of Fig. 1; Fig. 3 is a top plan view of one of the protector plates; Fig. 4 is a perspective view of the same; Fig. 5 is an enlarged sectional view on the line 5—5 of Fig. 4.

Referring to the drawing, 1 indicates the hub of the cutter adapted to be secured in the usual manner upon a rotary stem, and from which extend radial arms 2. Upon the ends of these arms are formed oblique cutter holders 3 for securing therein the teeth 4. Said teeth are formed with tapering shanks 5 which are driven into correspondingly tapering sockets 6 in the cutter holders.

Heretofore, so far as my knowledge extends, the practice has been to provide these sockets in the form of perforations through the holders, that is, with their walls extending entirely around the sockets, integral with the cutter holder. The ends of said holders, especially those at the narrow or advancing end of the cutter head, undergo great wear, so that, by use, said ends, in front of the sockets of the foremost teeth, become completely worn away. When this occurs, the cutter head is wholly useless, and must be discarded.

The object of the present invention is to save this waste of material and labor.

In my invention, said sockets are recessed in the outer sides of said holders, and the outer walls of the sockets are formed for each holder, by a protector plate 7. Said protector plate is formed with terminal portions 8 which are bent inwards, or at right angles to the general direction of the protector plate to form the end walls of the outermost sockets, and are then bent back again towards each other, or into a plane parallel with the general direction of the protector plate, as shown at 9, to engage the inner or under side of the holder. Each

protector plate is also formed with screw holes 10 through which screws 11 can be screwed into the outer side of the holder between two of said sockets.

As shown in Fig. 5, the space between the main portion of the protector plate and the inwardly bent portion 9 thereof is tapering or wedge shaped; hence the side of said protector plate at the wide ends of said spaces is first passed over the side of the holder, and the plate is then wedged sidewise firmly on the holder. It is then secured in place by means of the screws 11.

The sockets for the teeth are thus formed with precisely the same tapering configuration as in the old style of cutter head, but my improved cutter head has the advantage that the wear takes place entirely upon the ends of the protector plates, so that, when said protector plates are worn out, they can be replaced by new ones, and the cutter head is then as good as new, thereby effecting a great saving in the expense of maintenance.

I claim:—

1. A cutter head having cutter holders formed with sockets, teeth in said sockets, and protector plates secured over the ends of said cutter holders, substantially as described.

2. A cutter head, the holders of which are recessed on their outer sides to form sockets for teeth, teeth in said sockets and protector plates covering said recesses on their outer sides, and also extending around the ends of the holders to protect said ends, substantially as described.

3. A cutter head having holders formed with recesses in their outer sides to provide sockets for cutter teeth, teeth in said sockets, and a protector plate for each holder, closing the outer sides of said recesses, their terminal portions being bent inwards, at right angles to the general direction of the protector plate, and then bent back again towards each other but at a greater distance from said protector plate at one side than at the other, to form tapering spaces between said protector plate and its inwardly bent ends, substantially as described.

In testimony whereof I have hereunto set my hand in the presence of two subscribing witnesses.

BIRGER A. ANDERSON.

Witnesses:

FRANCIS M. WRIGHT,
D. B. RICHARDS.