J. W. SACKETT.

OSCILLATORY GRATING DRAG.

APPLICATION FILED AUG. 30, 1912.

1,068,934.

Patented July 29, 1913.

Fig. 1.

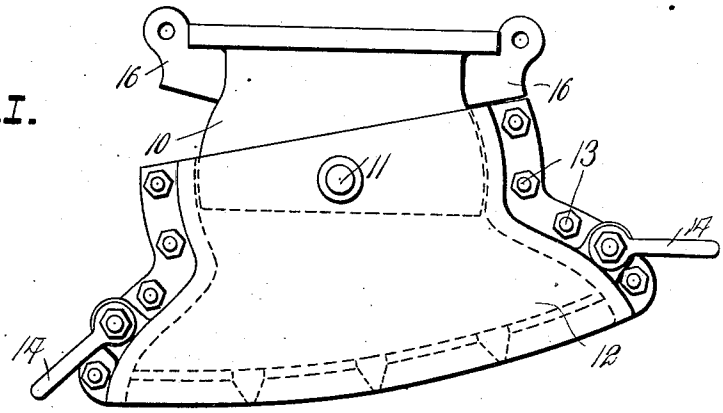


Fig. 2.

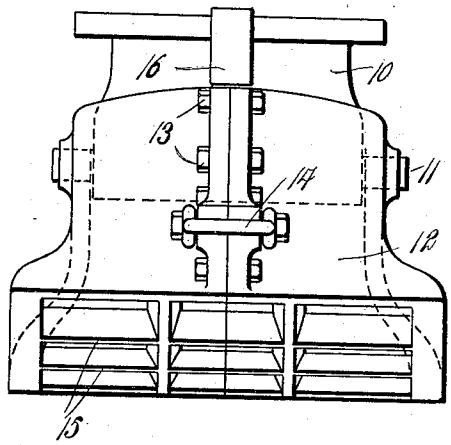
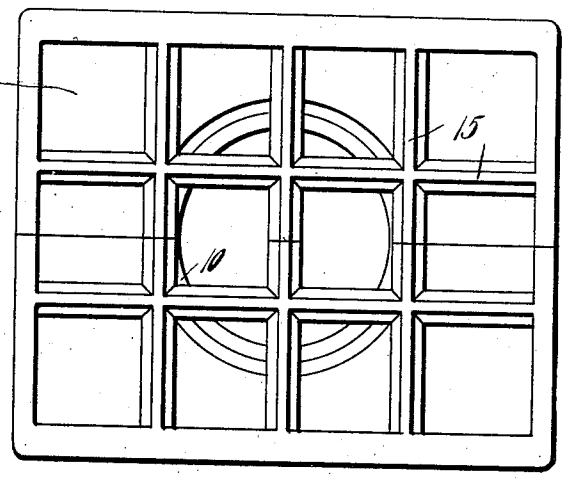


Fig. 3.



WITNESSES

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JOHN WARREN SACKETT, OF JACKSONVILLE, FLORIDA.

OSCILLATORY-GRATING DRAG.

1,068,934. Specification of Letters Patent. Patented July 29, 1913.

Application filed August 30, 1912. Serial No. 717,886.

To all whom it may concern:

Be it known that I, JOHN WARREN SACKETT, a citizen of the United States, and a resident of Jacksonville, in the county of Duval and State of Florida, have invented a new and Improved Oscillatory-Grating Drag, of which the following is a clear, full, and exact description.

This invention relates to hydraulic dredging apparatus, the said improvement being in the nature, in certain parts, of the device covered by my co-pending application, Serial No. 717,885, filed even date herewith.

The primary object of this invention is to construct a hood or mouth piece, for devices of the character indicated, which is adapted for operation especially upon certain classes of sandy material. I have found by extensive experience that mouth pieces or hoods for hydraulic dredges can be so constructed as to avoid the necessity for complicated revolving or rotary parts, which, because of the numerous bearings, are so subject to deleterious action of the abrading material operated upon thereby, and whereby, furthermore, the life of the device in this instance may be greatly lengthened.

The foregoing and other advantages of the invention are attained by the mechanism hereinafter fully described and claimed, and illustrated in the accompanying drawings forming a part of this specification, in which like characters of reference indicate corresponding parts in the figures, and in which—

Figure 1 is a side elevation of the improvement; Fig. 2 is a view of the same looking toward the left in Fig. 1; and Fig. 3 is a bottom plan view.

Referring particularly to the drawings, there is shown at 10 a head the main portion of which is spherical or curved, and pivotally mounted at 11 concentrically with the curvature of the head is a mouth piece or hood 12 made in sections, bolted together at 13 so as to be substantially connected to the said head. The general form of the mouth of the hood is cylindrical, the axis of curvature of which is parallel to but far beyond or above the axis 11. By virtue of this curved or convex form of the mouthpiece there results a more effective coöperation between it and the material being worked upon, taking into account especially the oscillation of the hood upon its pivot 11. It is to be understood that the upper portion of the head is adapted to be secured in any suitable rigid manner to the lower end of a suction pipe of a hydraulic dredge of any approved construction, and which will be operated both as to elevation and lateral dredging movements by any suitable and well known machinery.

The hood 12 has secured thereto at each end a clevis or ring 14 whereby the device may be drawn alternately in opposite directions so as to bring the lower or grating portion 15 of the hood into active engagement or contact with the mud or bottom being operated upon. Said grating comprises a series of longitudinal and transverse rigid bars made preferably integral with the half-sections of the hood. The upper portion of the end of the hood to which draft is being applied is adapted to abut against a shoulder 16 of the head, whereby the pivotal movement of the hood upon the pivot 11 is limited. The grating bars 15 serve to loosen or abrade the mud for the purpose of placing it in condition to be elevated and conveyed by the suction pipe, and they also serve as a means to prevent the introduction into said pipe of large stones, wreckage, or other material which might seriously damage or interfere with the operation of the dredge pump.

This device is of a comparatively simple nature, and is very effective for the purpose for which it is intended.

I wish it to be understood, however, that I will not be limited to the exact form of construction illustrated, reserving the right to vary therefrom within the scope of the claim hereinafter set forth.

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

In a device of the character set forth, the combination of a head, a hood pivoted upon said head on a substantially horizontal pivot, means connected to each end of the hood to draw the same alternately in opposite directions with respect to said pivot, a stop device associated with the head to limit the pivotal movement of that end of the hood to which the draft is being applied, the lower

portion of the hood being of cylindrical form, the axis of curvature of which is parallel to and above the aforesaid pivot, and angularly disposed grating bars extending across the lower portion of the hood, substantially as set forth.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

JOHN WARREN SACKETT.

Witnesses:
CHAS. F. PAGE,
GEO. S. BOURNE.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."