

Aug. 25, 1936.

W. H. STIRES

2,052,521

DREDGE BUCKET

Filed Dec. 18, 1934

Fig. 1.

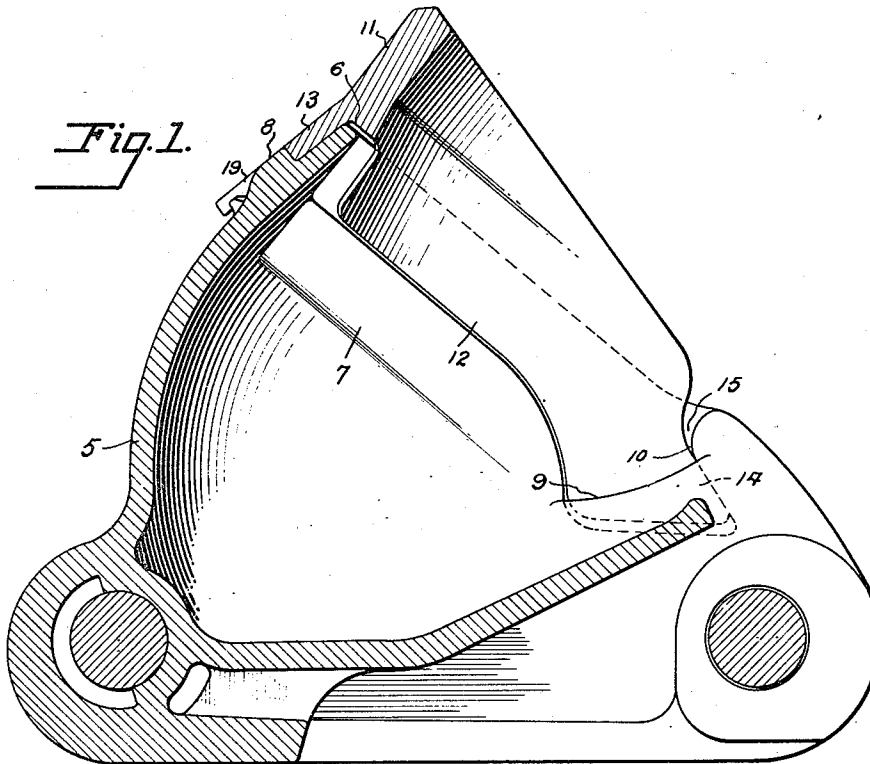


Fig. 3.

Fig. 2.

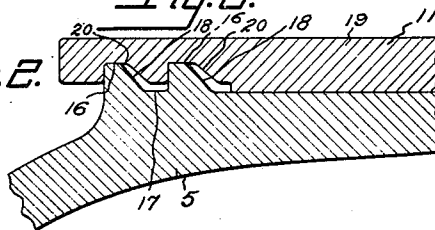
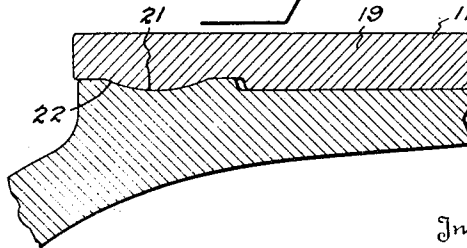


Fig. 5.



Inventor

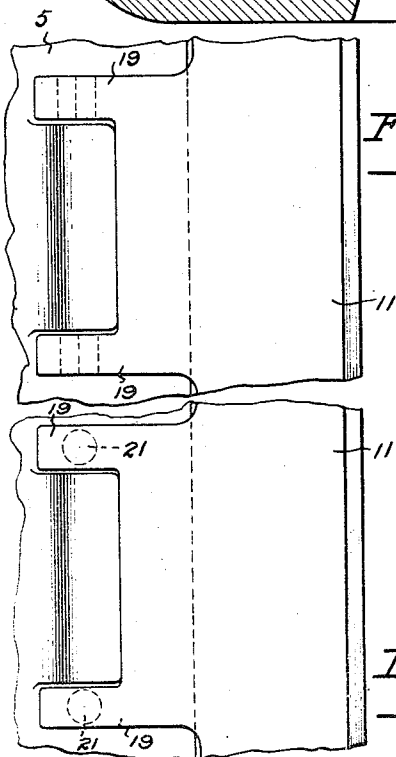
William H. Stires

Fig. 4.

By

Jack R. Rummel

Attorney



UNITED STATES PATENT OFFICE

2,052,521

DREDGE BUCKET

William H. Stires, High Bridge, N. J., assignor to
Taylor-Wharton Iron & Steel Company, High
Bridge, N. J., a corporation of New Jersey

Application December 18, 1934, Serial No. 758,116

6 Claims. (Cl. 37—141)

My invention relates to chain dredge buckets of the type in which the wear lip is served with inside and outside lapping portions or aprons, and more particularly to so-called rivetless lips of the type original with me and of which an embodiment is disclosed in Letters Patent No. 1,984,322, December 11, 1934.

Dredge bucket lips are ponderous constructions and a merit of the patented disclosure is that the lip may be supported on end and eased to its seat thereby simplifying the problem of replacement under conditions where it is not desirable to disconnect adjacent buckets for purposes of replacement or repair. After the lip is seated its inside lapping portions are automatically locked and its outer lapping portion may be locked as by means of wedge or taper bolt or in any other conventional way.

My present invention was devised with the view of further simplification of the assembly and it provides a front or outside lock which is self-acting in the sense that it functions in the seating of the lip and has the merit that it obviates the necessity of extraneous or portable fastening devices which may break or become fugitive with perhaps loss of or damage to the lip.

The nature, characteristic features and scope of the invention more readily will be understood from the following detailed description taken in connection with the accompanying drawing, forming a part hereof, wherein,—

Figure 1 is a central vertical sectional view of a dredge bucket and lip assembly embodying features of the invention.

Fig. 2 is an elevational view of one form of lock.

Fig. 3 is a section thereof.

Fig. 4 is an elevational view of another form of lock.

Fig. 5 is a section thereof.

Dredge bucket 5 has a rim seat 6, a pair of inside abutments 7 to take the thrust of the inside aprons, and an external abutment 8 to take the thrust of the outside apron. Abutments or shoulders 7 extend for a distance rearwardly parallel with the rim seat and then dip downwardly to provide a passway to cored underslung pockets 9 having a substantially reinforced overhang or top wall 10.

Lip 11 is formed in coincidence with the rim seat of the bucket and has inside bucket lapping members or aprons 12 flush fitted with the abutments 7 to obviate choking, and an outside apron 13 whose thrust is solicited by the abutment 8. Aprons 12 have terminal feet 14 of such form as

to be wider than the mouths of the pockets and insertable in and removable therefrom only when the lip is uplifted from its seat, there being clearance, as at 15, between the lip and the overhang 10 to admit of such engagement or disengagement. Evidentially, when the lip is properly seated, its pocketed ends will be firmly locked or anchored.

Flanking the outside abutment 8, and with reference to Figs. 1, 2 and 3, the bucket is formed 10 with vertically spaced latching provisions designed mutually to engage correspondingly formed latching provisions on the lip in the seating of the lip. In this particular embodiment the latches on the bucket are lugs or projections having more or less flat crowns 16, flat bottom walls 17 and sloping trailing walls 18. Outside apron 13 has resilient portions in the guise of depending straps or panels 19 flanking the abutment 8 in lapping relation with the latching devices of the bucket and formed with latching devices 20 in coincidence therewith, said mated latching devices being mutually engageable to function as an interlock in the seating of the lip.

In the front lock construction, Figs. 4 and 5, 25 the lip panels are formed or provided with lozenge-like humps 21 and the lapped area of the bucket is provided with coincidently shaped depressions 22 adapted and arranged for interlocking engagement with the humps in the seating of the lip.

The depending straps or panels, being more or less resilient, will provide for automatic engagement of the complementary members of the interlock in the seating of the lip, and disengagement may be effected by prizing the straps away from the bucket.

Having described the invention, I claim:

1. A self-acting lock for dredge bucket and lip assemblies of the type in which the lip is swung 40 from a pivotal position to a seating position on the bucket, comprising latching devices on the bucket, and latching devices on the lip mutually engageable in the seating of the lip and effective automatically to lock the assembly.

2. An outside lock for a dredge bucket and lip 45 assembly, comprising one member of an interlock fixed on the bucket, and a lip having a resilient portion in lapping relation with said member and constituting the other member of the interlock.

3. A dredge bucket having a lip seat and inside and outside abutments for lip aprons, a lip 50 having inside and outside aprons and having terminals engageable with the bucket initially as fulcrums and thereafter as locks for the lip, and 55

an auxiliary lock comprising cog devices on an area of the bucket lapped by the outside apron and constituting one member of an interlock, and mated cog devices on the outside apron constituting the other member of the interlock, one of said devices forming a spring latch.

5 4. In a dredge bucket and lip assembly of the type in which the lip terminals are slidably interlocked with the bucket, a front lock whereof one member is formed on the bucket and where-
10 of the other member is formed on a resilient lapping extension of the lip.

5. In a dredge bucket and lip assembly of the type in which the lip terminals are slidably in-

terlocked with the bucket, a front lock comprising relatively acting spring latching devices whereof one is located on the outside of the bucket and whereof the other is located on the lapping under face of the lip.

6. A dredge bucket having a seat for a straddling lip, a lip having terminals slidably interlocked with the bucket, a resilient extension on the lip lapping the front wall of the bucket, and co-mated lugs and recesses formed, respectively, on the bucket and on said lapping extension of the lip and constituting a spring latch to hold the lip to its seat.

WILLIAM H. STIRES.