

1,285,582.

Fig. 1.

Fig. 2.

Fig. 3.

Fig. 4.

Fig. 5.

Fig. 6.

Fig. 7.

Fig. 8.

Fig. 9.

Fig. 10.

Fig. 11.

Fig. 12.

Fig. 13.

Fig. 14.

Fig. 15.

Fig. 16.

Fig. 17.

Fig. 18.

Fig. 19.

Fig. 20.

Fig. 21.

Fig. 22.

Fig. 23.

Fig. 24.

Fig. 25.

Fig. 26.

Fig. 27.

Fig. 28.

Fig. 29.

Fig. 30.

Fig. 31.

Fig. 32.

Fig. 33.

Fig. 34.

Fig. 35.

Fig. 36.

Fig. 37.

Fig. 38.

Fig. 39.

Fig. 40.

Fig. 41.

Fig. 42.

Fig. 43.

Fig. 44.

Fig. 45.

Fig. 46.

Fig. 47.

Fig. 48.

Fig. 49.

Fig. 50.

Fig. 51.

Fig. 52.

Fig. 53.

Fig. 54.

Fig. 55.

Fig. 56.

Fig. 57.

Fig. 58.

Fig. 59.

Fig. 60.

Fig. 61.

Fig. 62.

Fig. 63.

Fig. 64.

Fig. 65.

Fig. 66.

Fig. 67.

Fig. 68.

Fig. 69.

Fig. 70.

Fig. 71.

Fig. 72.

Fig. 73.

Fig. 74.

Fig. 75.

Fig. 76.

Fig. 77.

Fig. 78.

Fig. 79.

Fig. 80.

Fig. 81.

Fig. 82.

Fig. 83.

Fig. 84.

Fig. 85.

Fig. 86.

Fig. 87.

Fig. 88.

Fig. 89.

Fig. 90.

Fig. 91.

Fig. 92.

Fig. 93.

Fig. 94.

Fig. 95.

Fig. 96.

Fig. 97.

Fig. 98.

Fig. 99.

Fig. 100.

Fig. 101.

Fig. 102.

Fig. 103.

Fig. 104.

Fig. 105.

Fig. 106.

Fig. 107.

Fig. 108.

Fig. 109.

Fig. 110.

Fig. 111.

Fig. 112.

Fig. 113.

Fig. 114.

Fig. 115.

Fig. 116.

Fig. 117.

Fig. 118.

Fig. 119.

Fig. 120.

Fig. 121.

Fig. 122.

Fig. 123.

Fig. 124.

Fig. 125.

Fig. 126.

Fig. 127.

Fig. 128.

Fig. 129.

Fig. 130.

Fig. 131.

Fig. 132.

Fig. 133.

Fig. 134.

Fig. 135.

Fig. 136.

Fig. 137.

Fig. 138.

Fig. 139.

Fig. 140.

Fig. 141.

Fig. 142.

Fig. 143.

Fig. 144.

Fig. 145.

Fig. 146.

Fig. 147.

Fig. 148.

Fig. 149.

Fig. 150.

Fig. 151.

Fig. 152.

Fig. 153.

Fig. 154.

Fig. 155.

Fig. 156.

Fig. 157.

Fig. 158.

Fig. 159.

Fig. 160.

Fig. 161.

Fig. 162.

Fig. 163.

Fig. 164.

Fig. 165.

Fig. 166.

Fig. 167.

Fig. 168.

Fig. 169.

Fig. 170.

Fig. 171.

Fig. 172.

Fig. 173.

Fig. 174.

Fig. 175.

Fig. 176.

Fig. 177.

Fig. 178.

Fig. 179.

Fig. 180.

Fig. 181.

Fig. 182.

Fig. 183.

Fig. 184.

Fig. 185.

Fig. 186.

Fig. 187.

Fig. 188.

Fig. 189.

Fig. 190.

Fig. 191.

Fig. 192.

Fig. 193.

Fig. 194.

Fig. 195.

Fig. 196.

Fig. 197.

Fig. 198.

Fig. 199.

Fig. 200.

Fig. 201.

Fig. 202.

Fig. 203.

Fig. 204.

Fig. 205.

Fig. 206.

Fig. 207.

Fig. 208.

Fig. 209.

Fig. 210.

Fig. 211.

Fig. 212.

Fig. 213.

Fig. 214.

Fig. 215.

Fig. 216.

Fig. 217.

Fig. 218.

Fig. 219.

Fig. 220.

Fig. 221.

Fig. 222.

Fig. 223.

Fig. 224.

Fig. 225.

Fig. 226.

Fig. 227.

Fig. 228.

Fig. 229.

Fig. 230.

Fig. 231.

Fig. 232.

Fig. 233.

Fig. 234.

Fig. 235.

Fig. 236.

Fig. 237.

Fig. 238.

Fig. 239.

Fig. 240.

Fig. 241.

Fig. 242.

Fig. 243.

Fig. 244.

Fig. 245.

Fig. 246.

Fig. 247.

Fig. 248.

Fig. 249.

Fig. 250.

Fig. 251.

Fig. 252.

Fig. 253.

Fig. 254.

Fig. 255.

Fig. 256.

Fig. 257.

Fig. 258.

Fig. 259.

Fig. 260.

Fig. 261.

Fig. 262.

Fig. 263.

Fig. 264.

Fig. 265.

Fig. 266.

Fig. 267.

Fig. 268.

Fig. 269.

Fig. 270.

Fig. 271.

Fig. 272.

Fig. 273.

Fig. 274.

Fig. 275.

Fig. 276.

Fig. 277.

Fig. 278.

Fig. 279.

Fig. 280.

Fig. 281.

Fig. 282.

Fig. 283.

Fig. 284.

Fig. 285.

Fig. 286.

Fig. 287.

Fig. 288.

Fig. 289.

Fig. 290.

Fig. 291.

Fig. 292.

Fig. 293.

Fig. 294.

Fig. 295.

Fig. 296.

Fig. 297.

Fig. 298.

Fig. 299.

Fig. 300.

Fig. 301.

Fig. 302.

Fig. 303.

Fig. 304.

Fig. 305.

Fig. 306.

Fig. 307.

Fig. 308.

Fig. 309.

Fig. 310.

Fig. 311.

Fig. 312.

Fig. 313.

Fig. 314.

Fig. 315.

Fig. 316.

Fig. 317.

Fig. 318.

Fig. 319.

Fig. 320.

Fig. 321.

Fig. 322.

Fig. 323.

Fig. 324.

Fig. 325.

Fig. 326.

Fig. 327.

Fig. 328.

Fig. 329.

Fig. 330.

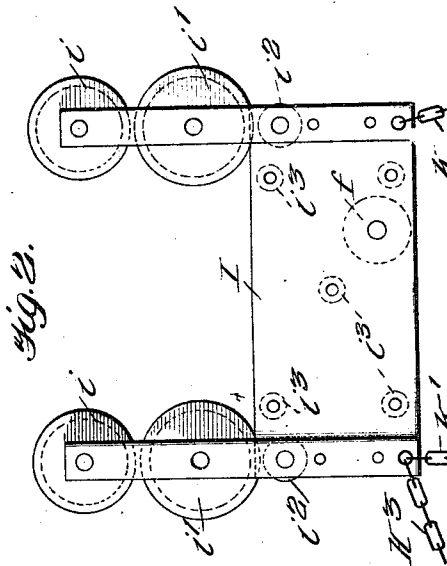
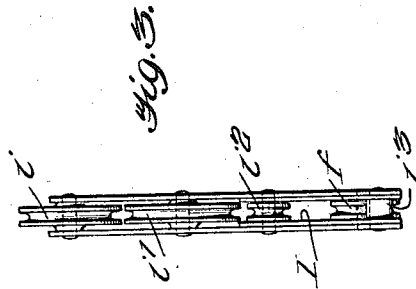
Fig. 331.

Fig. 332.

Fig. 333.

Fig. 334.

Fig. 335.

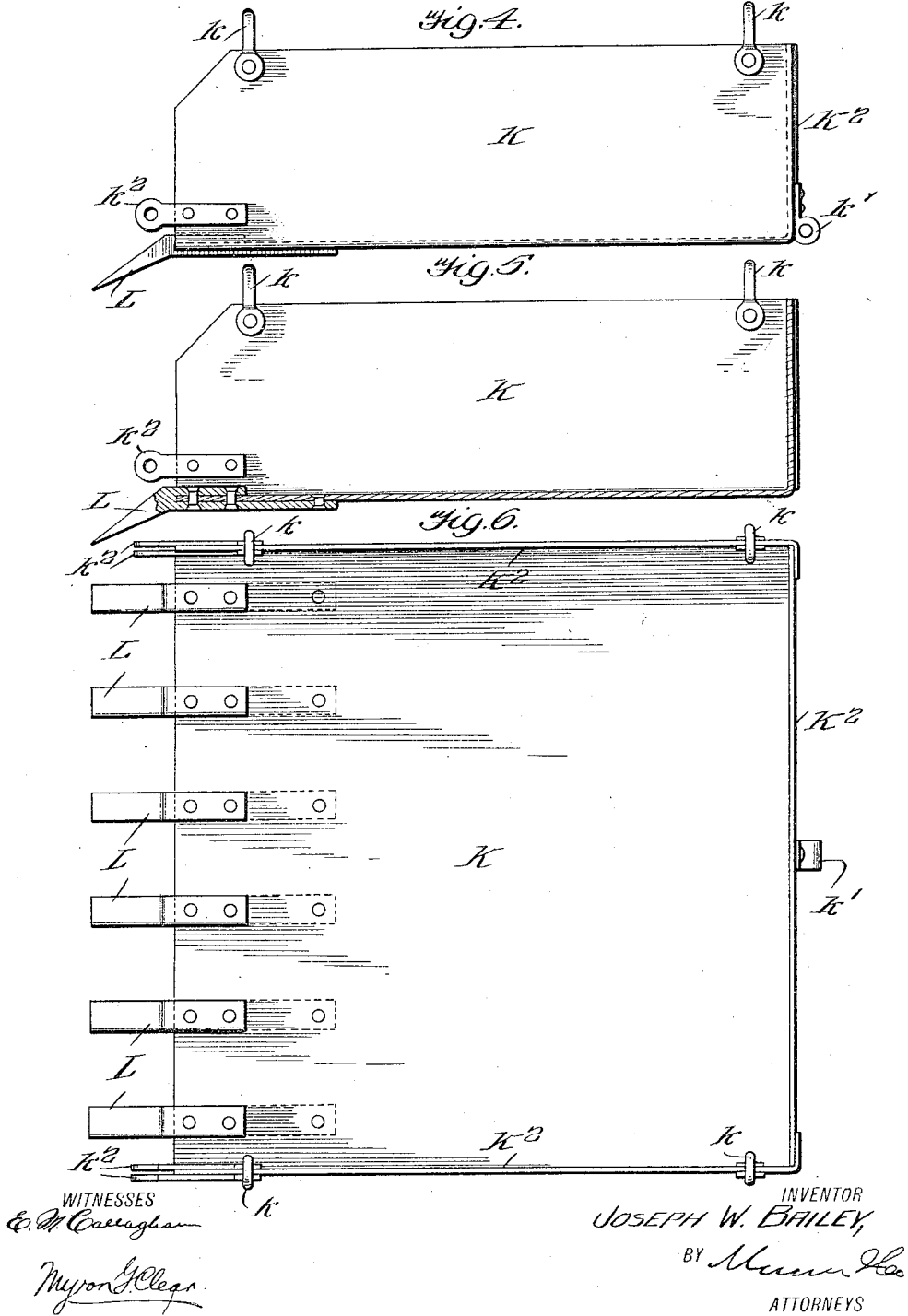


INVENTOR
JOSEPH W. BAILEY,
BY *Mum Lee*
ATTORNEYS

1,285,582.

J. W. BAILEY.
DREDGING DEVICE.
APPLICATION FILED JULY 20, 1914.

Patented Nov. 26, 1918.
2 SHEETS—SHEET 2.



UNITED STATES PATENT OFFICE.

JOSEPH WALTER BAILEY, OF LANGLEY, SOUTH CAROLINA, ASSIGNOR OF ONE-HALF TO
HARRY W. SMITH, OF WEST CHESTER, PENNSYLVANIA.

DREDGING DEVICE.

1,285,582.

Specification of Letters Patent.

Patented Nov. 26, 1918.

Application filed July 20, 1914. Serial No. 851,916.

To all whom it may concern:

Be it known that I, JOSEPH W. BAILEY, a citizen of the United States, and a resident of Langley, in the county of Aiken and State of South Carolina, have invented an Improvement in Dredging Devices, of which the following is a specification.

My present invention relates generally to devices including a dredging or scraper bucket and scooping, hoisting, carrying and dumping means for the bucket, my object generally being to provide an arrangement in which the bucket travels upon a carrier line adapted to be flexibly slackened and tautened to raise and lower the bucket and in which the bucket may be dumped at any point throughout the entire span of the carrier line while traveling at full speed in either direction and can be brought to a stand-still and dumped to a pile or into cars also at any desired point.

In carrying out the objects of my invention I provide an arrangement such as shown in the accompanying drawings, which form a part of this specification, and in which—
Figure 1 is a side elevation of the complete mechanism.

Fig. 1^a is a plan view of the mast, its supports and the adjacent parts.

Fig. 2 is a side elevation of the bucket carriage.

Fig. 3 is a front elevation thereof.

Fig. 4 is a side elevation of the dumping bucket.

Fig. 5 is a vertical longitudinal section taken therethrough, and

Fig. 6 is a plan view thereof.

Referring now to these figures it will be noted that the mast A is stepped upon a roller mounted frame A' supported upon a track B and is provided at its upper end with side pulleys *a* over which a traveling guy line C' is extended, the rear end of this line being provided with a sheave *c* and the forward end thereof carrying the block C having separate wheels for the back line and the carrier lines as best shown in Fig. 1^a.

A guy line A² is also extended rearwardly from the mast A and provided with a sheave *a'*, and through this sheave and the rear sheave *c* of the traveling guy line C' extends the anchor line A³, the ends of which are attached to dead men *a*² whereby to effectively support the mast as well as the car-

rier and back lines, as also best shown in Fig. 1^a.

The complete operating and controlling means are mounted upon a frame D supported upon wheeled trucks D' movable upon tracks E. This frame D carries the drums F', G' and H' of the back line F, carrier lines G and haul lines H respectively and it is to be understood that these several drums are provided with gearing whereby they may be independently rotated and with brakes whereby they may be independently controlled to put tension upon their respective lines. The frame D is also provided with a stationary upright pulley support D² carrying a series of pulleys over which the respective lines extend.

There are two carrier lines G, as will be particularly seen by reference to Fig. 1, formed by passing a single cable around the block C from the drum G' and thence back again with its end anchored at *g* upon the frame D, the upper and lower carrier lines respectively extending between pulleys *i* and *i'* and *i'* and *i*² at the opposite sides of the bucket carriage I, it being noted from Figs. 2 and 3 that this carriage consists of side plates spaced apart by a plurality of timbles *i*³ and has a lower intermediate pulley *f* downwardly around which the outer portion of the back line F, after passage around the block C, extends.

The bucket K, which is generally rectangular in shape, as seen by reference to Figs. 4 to 6 inclusive, is provided with rings *k* at its four corners, by means of which it is flexibly suspended from the carriage I, by chains K', and being thus suspended from its four corners, is effectively prevented from accidentally overturning.

The bucket K which has upright side and rear walls K², is provided with a single ring *k'* at its rear to which the outer extremity of the back line F after passage around the carrier pulley *f* as before mentioned, is attached. The forward edge of the bucket is provided with rings *k*² extending forwardly from the forward edges of its side walls K² for the reception of chains H² to which the outer end of the haul line H is secured, other chains H³ over said forward end of the haul line being connected to the carriage I.

Thus by flexibly slackening and tightening the carrier lines G, the bucket K may

be raised and lowered and by operating the drums F' or H', the bucket may be drawn in opposite directions when in either raised or lowered position, it being understood that when the haul line H is drawn to move the bucket in one direction, all tension is removed from the back line F as long as continued movement of the bucket is desired either for the purpose of collecting material therein or transporting such material after collection.

When it is desired to dump the bucket the brake upon the back line drum F' is applied, and the back line being held thereby, the rear end of the bucket is raised to the position shown in dotted lines in Fig. 1 for dumping the material therefrom. The same operation, though reversed, is true when the bucket is being drawn by the back line, the haul line being stopped when it is desired to dump the bucket.

From this it will be seen that the bucket may be dumped without the use of a buffer or attachment to the carrier lines and may therefore be dumped at any point throughout the entire span between the operating drums and the mast, either when at a standstill or when moving fast or slow, and further without the use of any slide or frame-work.

It will be seen furthermore that when the bucket is drawn in lowered position by the haul lines H in the digging operation, more or less tension upon the back line F will cause the bucket to dig more or less at the will of the operator.

It will also be seen that the double carrier lines provide strength and, as rigged the entire arrangement provides great power with light engine duty, either the back line F or the haul line H being entirely slackened when the bucket is drawn in the desired direction.

I claim:

1. In an apparatus of the character described, a carrier, a carriage movable thereon, a bucket suspended from the carriage, and haul and back lines connected to said carriage, said haul and back lines being also connected to opposite ends of said bucket

whereby pull upon each thereof will raise one end of the bucket and dump the same when movement of the other line is checked and means for actuating said haul and back lines and checking the same at any point.

2. In an apparatus of the character described, a carrier, a carriage movable thereon, a bucket suspended from the carriage, and haul and back lines connected to relatively opposite ends of said carriage, said haul and back lines being also connected to relatively opposite ends of said bucket whereby pull upon each thereof will raise the respective end of the bucket and dump the same when movement of the other line is checked and means for actuating said haul and back lines and checking the same at any point.

3. In an apparatus of the character described, a carrier, a carriage movable thereon, a bucket suspended from the carriage, and haul and back lines connected to relatively opposite ends of the bucket, said haul and back lines also having connections with opposite ends of the carriage, and one of said connections being in the nature of a running engagement whereby pull upon each of the said lines will raise one end of the bucket and dump the same when movement of the other line is checked and means for actuating said haul and back lines and checking the same at any point.

4. In an apparatus of the character described, a carrier, a carriage movable thereon, a bucket suspended from the carriage, and haul and back lines connected to opposite ends of said bucket, one of said lines being also connected to one end of the carriage, and a pulley carried by the carriage adjacent its opposite end and over which the other of said lines is extended whereby pull upon each of the said lines will raise one end of the bucket and dump the same when movement of the other line is checked and means for actuating said haul and back lines and checking the same at any point.

JOSEPH WALTER BAILEY.

Witnesses:

ERNEST E. GIBBS,
W. S. SMITH.

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