

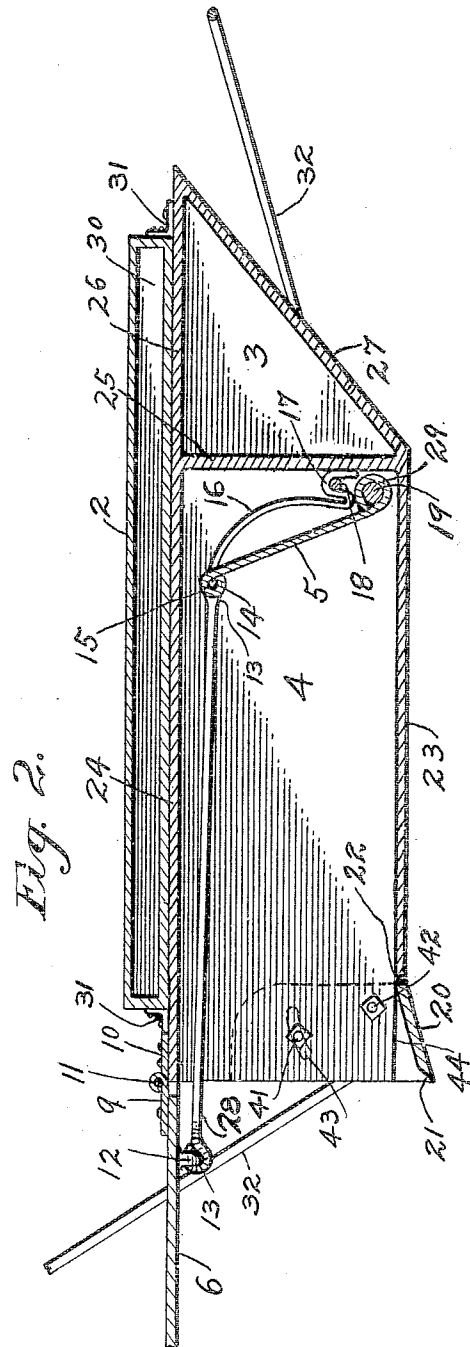
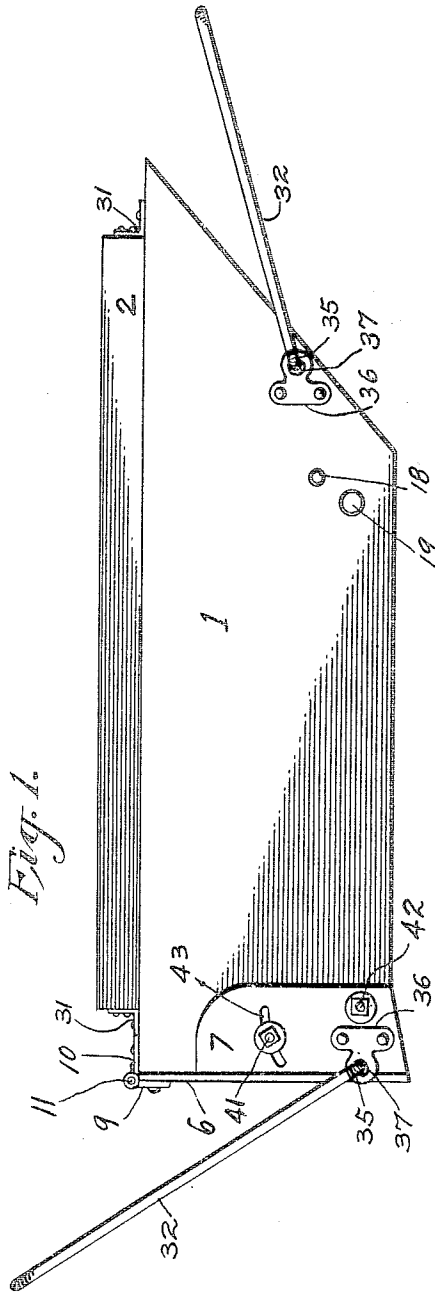
H. KENDLE.
SCRAPER.

APPLICATION FILED MAR. 11, 1909.

953,624.

Patented Mar. 29, 1910.

2 SHEETS—SHEET 1.



Inventor

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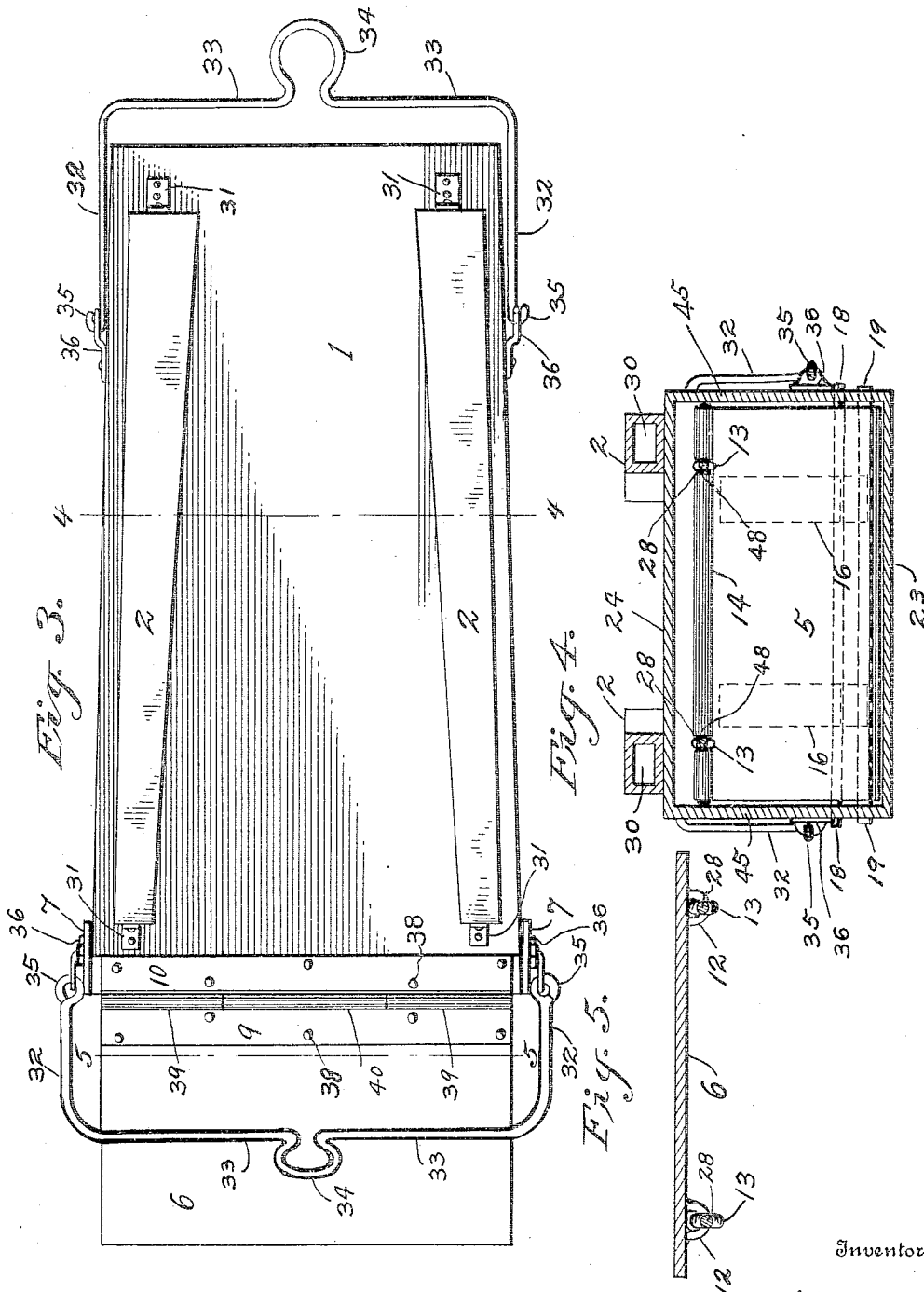
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Witnesses

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SCRAPER.

953,624.

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To all whom it may concern:

Be it known that I, HERMANN KENDLE, a citizen of the United States, residing at Eatonville, in the county of Pierce and State of Washington, have invented certain new and useful Improvements in Scrapers; and I do hereby 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.

My invention relates to automatic shut-off scrapers, and has for an object to provide a scraper to be used in water and operated against the action of the water, tides, surf, or heavy seas, and principally adapted for use in placer and beach mining.

A further object of the invention is to provide an excavating implement for dredging and other purposes, which will automatically close when filled and open when empty.

To this end my invention comprises a box-shaped body, with handles at the front and back. To these handles are attached cables for the purpose of pulling the scraper into and out of the water. The rear end will be fastened by a cable to an anchor or stationary block, located in the water any distance from the shore and pulled to land by a cable attached to any approved power mechanism. When returning to the anchor the scraper is pulled backward, and an air-tight compartment located at the rear and sufficient in size to float the scraper, when in motion, prevents the device from sinking. Other air-tight compartments located on the top of the scraper will keep the scraper level and right side up under all conditions.

These and various other contrivances are illustrated and referred to in the accompanying drawings and specifications, and are hereinafter more fully described and claimed.

In the drawings:—Figure 1 is a side elevation of my improved scraper. Fig. 2 is a longitudinal view in section. Fig. 3 is a top plan view. Fig. 4 is a transverse section on line 4—4 of Fig. 3. Fig. 5 is a sectional view taken on line 5—5 of the lid shown in Fig. 3.

Referring to the drawings, the body portion 1 is preferably made of cast metal, but may be formed of any suitable material. The air-tight compartments 2 are located on top of the body portion 1 and are tapered to

the front to allow the forward end to sink ahead of the rear end when it is desired to sink the scraper by pulling it forward in the water. The air-tight chambers or compartments 2 are secured to the top wall 24 of the scraper 1 by means of brackets 31, which are fastened by suitable rivets or bolts. The walls, 25, 26 and 27 surrounding the air-tight chamber 3 are preferably cast integral.

The rear end of the scraper 1 is made to taper upwardly from the bottom wall 23, for the purpose of more readily resisting the action of the water when the scraper is pulled therethrough. If the scraper 1 is made of cast metal, the chambers 2 and 3 will have suitable apertures for removing the core of the pattern, and the apertures will afterward be plugged up to make the chambers air-tight.

To the front end of the side walls 45 of the chamber 4 is attached an up-standing adjustable bracket 7. The two up-standing portions of the bracket 7 are connected at the bottom by a plate 20, which is provided with a knife edge 21. The plate 20 abuts against the front end of the bottom wall 23 of the scraper 1, for the purpose of transmitting the strain caused by the cutting action of the knife 20, directly to the body of the scraper. When it is desired to change the angle of the knife 20 to make it cut more or less of the class of material desired, the bolt 41 within the slot 43 of the bracket 7 is loosened and the bracket 7 moved forward or backward on the bolt 42, thereby raising or lowering the knife 20. The side walls 45 of the scraper 1 have their lower front end portions cut away as at 44 to allow the blade 20 to be set flush with the bottom wall 23 when so desired. To the adjustable bracket 7 at the front and at the rear ends of the side walls 45 are attached brackets 36, having eyelet portions 37, to which are secured handles 32. The handles 32 are provided with loop portions 35, which engage the eyelet portions 37 of the brackets 36. The handles 32 are formed with angle portions 33, which terminate in a loop portion 34, to which a cable may be attached.

Within the chamber 4 and at the rear thereof is located a pressure plate 5, supported by a shaft 19, passing through the cylindrical sleeve 29 on the lower end of the pressure plate 5. The shaft 19 is supported by being journaled in the side walls 45 of the scraper 1. At the upper end of the

pressure plate 5 is formed a cylindrical sleeve 14 and a bolt 15 is located within the sleeve. The sleeve 14 is cut away at the points 48 to allow for the insertion of eye-
 5 let portions 13 formed on the ends of rod 28. The rods 28 are pivotally connected to the pressure plate 5 at the opening points 48 by means of the bolt 15. The rods 28 are also pivotally connected to a lid 6 by means
 10 of projections 12 secured to the latter. The rods 28 are formed with loop portions 13 at each end, and at the front end of the rods the loop portions 13 pivotally engage the projections 12. The lid 6 is secured to the
 15 top wall 24 of the scraper 1 by means of hinged plates 9 and 10, which carry sleeve projections 39 and 40 respectively. The hinged plates 9 and 10 are secured together by means of a bolt 11, and are secured to the
 20 lid 6 and the wall 24 by means of rivets 38. At the rear ends of the chamber 4 and at the rear of the pressure plate 5 is located a spring 16, formed at its bottom with a neck portion 17 bearing against the vertical
 25 wall 25, and supported by a shaft 19 journaled within the side walls 45 of the scraper 1. The top of the spring 16 presses against the top of the rear of the pressure plate 5, and normally holds the pressure plate at
 30 such an angle as to keep the lid 6, through the rod 28, in a horizontal position.

When the scraper is being filled with gravel or other material the force of the same acts on the pressure plate 5, and over-
 35 comes the outward action of the spring 16, and thereby gradually and automatically allows the lid 6 to close the scraper. When the chamber 4 is approximately filled the lid 6 is entirely closed, and the contents of the
 40 scraper is held therein, and is prevented from being washed away by the action of a rough sea, tides or surf.

What I claim is:—

1. In a scraper, the combination of a
 45 buoyant housing and an adjustable knife blade for engaging earth.

2. In a scraper, the combination of a buoyant housing, an adjustable knife blade for engaging earth, and means for automat-
 50 ically closing the said housing when filled.

3. In a scraper, the combination of a

buoyant housing, and means located within the same for automatically closing the said housing when filled with earth.

4. In a scraper, the combination of a 55 buoyant housing, an adjustable knife blade for engaging earth, means located within the housing for automatically closing the same when filled with earth.

5. In a scraper, the combination of a 60 buoyant housing formed with an opening at one end and an air-tight chamber at the opposite end.

6. In a scraper, the combination of a housing formed with an air-tight chamber 65 on top of the said housing.

7. In a scraper, the combination of a housing formed with buoyant chambers on top and at the end of said housing.

8. In a scraper, the combination of a 70 buoyant housing, a knife blade for engaging earth, a lid adapted to close the housing, and means within the housing for automatically operating the said lid.

9. In a scraper, the combination of a 75 buoyant housing, an adjustable knife for cutting earth, and means attached to the said housing for the purpose of pulling the housing either forward or backward.

10. In a scraper, the combination of a 80 housing formed with an air-tight chamber at one end thereof, a lid at the opposite end thereof, and means within the housing for automatically operating the said lid.

11. In a scraper, the combination of a 85 buoyant housing formed with a tapering end for the purpose of allowing the housing to be operated in water with the least resistance possible.

12. In a scraper, the combination of a 90 buoyant housing, an adjustable knife blade for engaging earth, a lid, means within said housing for automatically operating said lid, and a buoyant chamber formed adjacent
 95 to the said housing.

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

HERMANN KENDLE.

Witnesses:

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