

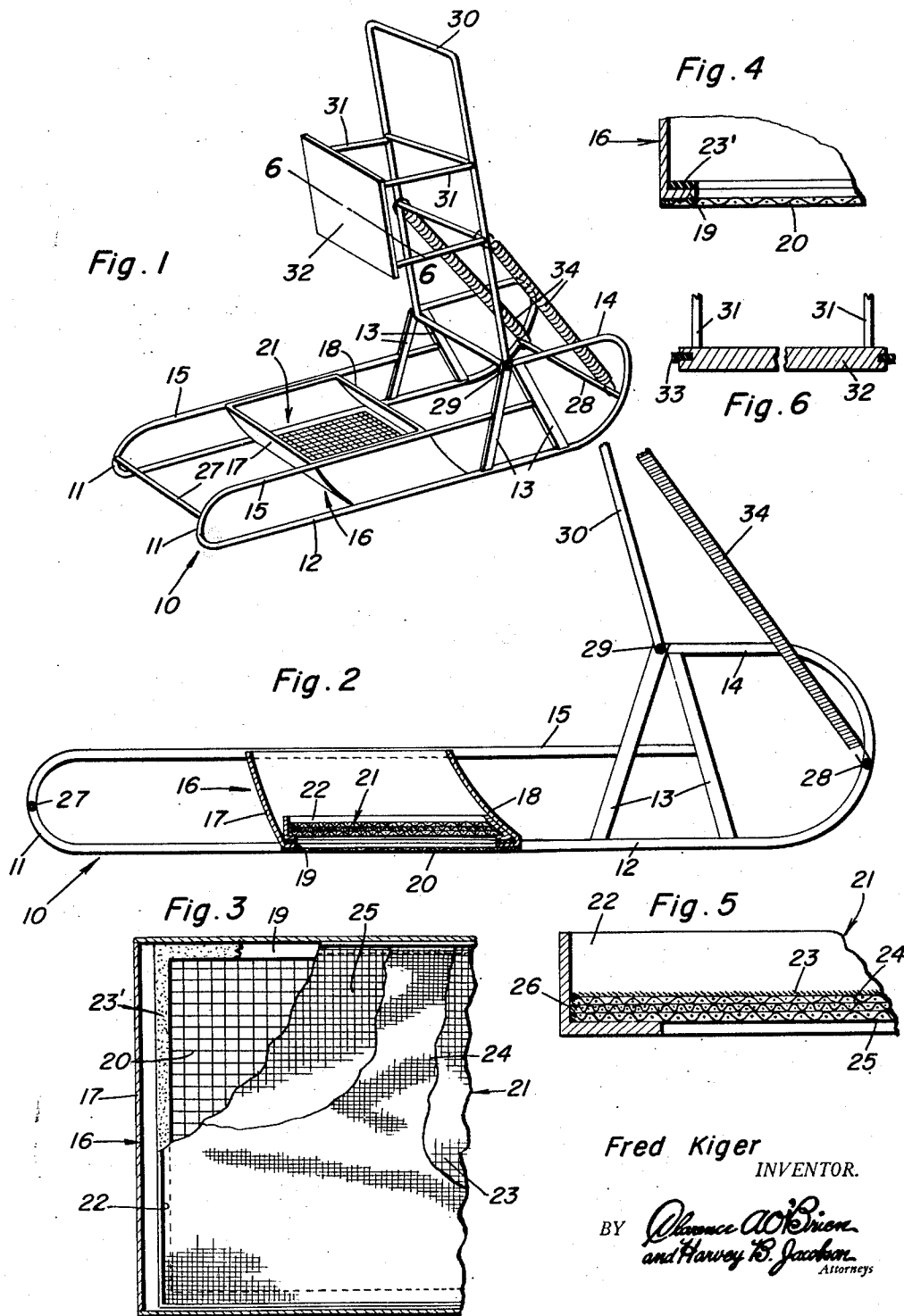
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LIME SIFTER

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LIME SIFTER

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2 Claims. (Cl. 209—262)

The present invention relates to new and useful improvements in sifters particularly for slacked lime and has for its primary object to provide, in a manner as hereinafter set forth, a device of this character which will completely eliminate all unslacked particles in the lime while at the same time speeding up the screening process.

Other objects of the invention are to provide a readily movable lime sifter or screen of the aforementioned character which will be comparatively simple in construction, strong, durable, compact, of light weight and which may be manufactured at low cost.

These together with other objects and advantages which will become subsequently apparent reside in the details of construction and operation as more fully hereinafter described and claimed, reference being had to the accompanying drawings forming a part hereof, wherein like numerals refer to like parts throughout, and in which:

Figure 1 is a perspective view of a lime sifter constructed in accordance with the present invention;

Figure 2 is a view in vertical longitudinal section through the device;

Figure 3 is a fragmentary view in horizontal section through the lower portion of the lime box, showing the several screens;

Figure 4 is a fragmentary view in vertical section through the lower portion of the lime box with the removable screens omitted;

Figure 5 is a fragmentary view in vertical section through a portion of the removable screen unit; and

Figure 6 is a cross-sectional view through the plunger, taken substantially on the line 6—6 of Figure 1.

Referring now to the drawing in detail, it will be seen that the embodiment of the invention which has been illustrated comprises a horizontally elongated, substantially sled-like frame of tubular metal which is designated generally by reference character 10. The frame 10 includes a pair of spaced, parallel, substantially U-shaped members 11 the lower legs 12 of which are engageable on a support. Rising from the lower legs 12 of the members 11 at a point remote from the bight portions of said members are pairs of upwardly converging braces 13. The frame members 12 terminate in upwardly and reversely bent end portions 14 which are affixed to the upper ends of the braces 13. The free end portions of the upper legs 15 of the members 11 are affixed to the braces 13 at intermediate points.

Mounted on the frame 10 at an intermediate point is a box 16 of suitable metal for the reception of the lime. The box 16, which is open at its top, comprises front and rear walls 17 and 18, respectively, of arcuate cross-section. The box 16 is affixed, as by welding, to the members 12 and 15 of the frame 10.

The bottom of the box 16 comprises an inturned flange 19 (see Figure 4). Permanently secured as by welding on the flange 19 is an open or large mesh screen 20.

Removably mounted in the box 16 is a screen unit 21. The removable screen unit 21 comprises a metallic frame

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22 of angular cross-section which is adapted to rest on the flange 19 of the box 16 with a gasket 23' interposed therebetween. Mounted in the frame 22 is a plurality of screens 23, 24 and 25. The intermediate element 24 is a fly screen while the outer screens 23 and 25 are of one-eighth inch mesh. The marginal edges of the screens 23, 24 and 25 are soldered or welded together, as at 26.

Transverse braces 27 and 28 extend between the end portions of the members 11 of the frame 10. Pivotaly secured, as at 29, for swinging movement in a vertical plane on the upper end portions of the braces 13 is a substantially rectangular lever or handle 30. Rigidly secured by arms or hangers 31 on the handle 30 at an intermediate point is a plunger 32 for engagement in the box 16. Sealing strips 33 (see Figure 6) are mounted on the edges of the plunger 32. Coil springs 34 have one end connected to the brace 28 of the frame 10 and their other ends connected to the handle 30 at an intermediate point for raising said handle with the plunger 32 thereon to retracted or inoperative position.

It is thought that the operation or use of the device will be readily apparent from a consideration of the foregoing. Briefly, the box 16 is filled to the desired level with the slacked or soaked lime. The handle 30 is then swung downwardly against the tension of the coil springs 34 for forcing the lime through the screens 23, 24, 25 and 20. When released, the handle 30 is returned to raised position by the springs 34 and the operation may be repeated as many times as may be necessary or desirable. After the device has been used, the unit 21 may be readily removed from the box 16 to facilitate cleaning the screens. The curvature of the box walls 17 and 18 coincides with the arc described by the swinging plunger 32.

The foregoing is considered as illustrative only of the principles of the invention. Further, since numerous modifications and changes will readily occur to those skilled in the art, it is not desired to limit the invention to the exact construction and operation shown and described, and accordingly all suitable modifications and equivalents may be resorted to, falling within the scope of the invention as claimed.

What is claimed as new is as follows:

1. A lime sifter of the character described comprising: a horizontally elongated metallic frame, a box, for the reception of lime, mounted on said frame at an intermediate point, said box including a foraminous bottom, a substantially rectangular handle pivotaly mounted for swinging movement in a vertical plane on the frame, a plunger mounted at an intermediate point on said handle and engageable in the box for forcing the lime through the foraminous bottom, and coil springs having one end connected to the frame and their other ends connected to the handle for disengaging the plunger from the box.
2. A lime sifter of the character described comprising: a frame, a box, for the reception of lime, mounted on said frame, said box being open at its top and bottom and including an internal flange on said bottom, a large mesh screen affixed to said flange, a removable screen unit mounted in the box and including a metallic frame engageable on the flange and further including a plurality of screens fixed in the second-named frame, a handle pivotaly mounted for swinging movement in a vertical plane on the first-named frame, a plunger on said handle engageable in the box for forcing the lime through the screens, and coil springs connected to the handle for disengaging the plunger from the box.

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