Nov. 12, 1957 W. W. SCHOFIELD 2,812,596

MUD SCOOP

Filed March 29, 1954

FIG. 1

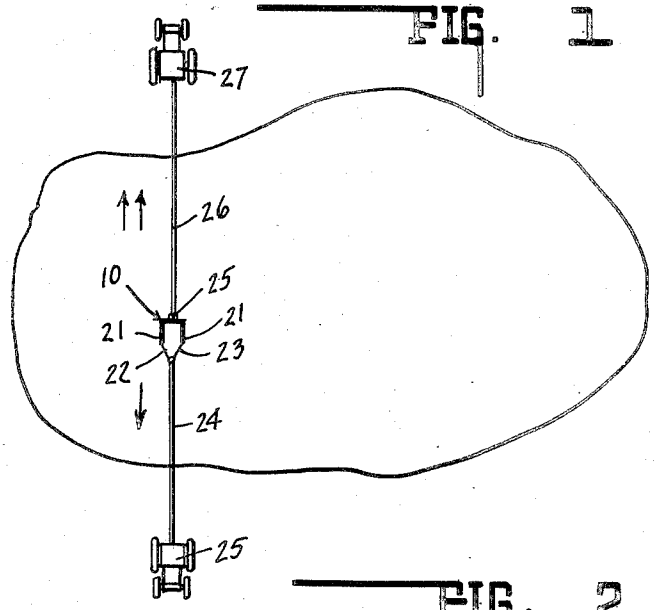


FIG. 2

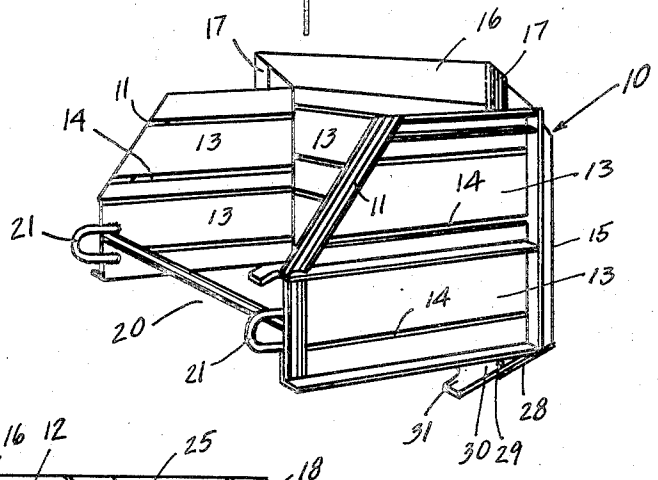
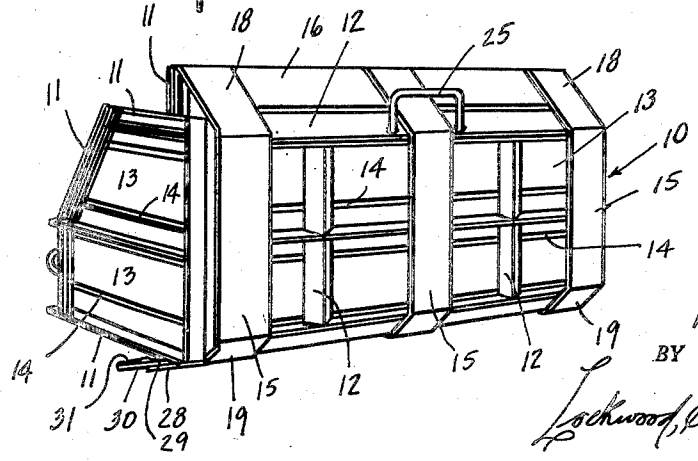


FIG. 3



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MUD SCOOP

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1 Claim. (Cl. 37—147)

This invention relates to a dredging and excavating apparatus, and more particularly to a scoop for use either in forming a water hole or removing mud and silt that has accumulated therein.

It is the primary object of this invention to provide an apparatus which is relatively small but sturdy in construction, and which may be used for its intended purposes in an easy, facile and efficient manner.

As is well known, every farmer needs adequate watering facilities for his livestock. Generally speaking he will excavate a "hole" on his land and more times than not will rely upon rainfall to fill it. This type of watering facility popularly known as the water hole is found throughout the world. There presently is available to the farmer no nominally priced piece of machinery or equipment that may be used for such purposes. Bulldozers are effective in excavating the hole but invariably drain most of the water out of the hole when used to remove the mud or silt therefrom. This is an intolerable situation, particularly in those sections of the country where rainfall is at a minimum, for the farmer cannot afford to lose any of the water he has so painstakingly accumulated. It is, therefore, a further object of the present invention to provide a relatively inexpensive piece of equipment which may be used effectively not only to dig a water hole but as well to remove the mud therefrom without wasting any of the water therein.

It is a still further object of the present invention to provide a scoop with means which prevent it from burying itself in the mud or silt as it is moved along the bed of the water hole. This means comprises an inclined baffle plate which is connected to the scoop in such manner that once the scoop is full of mud its forward end will be caused to rock upwardly out of digging or scooping position.

It is a still further object of the present invention to provide an apparatus of the character described which will automatically load and unload itself. Heretofore, various scoops and the like have been devised which have been characterized by a cumbersome mechanism for dumping or unloading the contents thereof. The present invention on the other hand is so constructed and arranged that while being pulled in one direction it will automatically load itself, but when pulled in the opposite direction will automatically unload itself.

The full nature of the invention will be understood from the accompanying drawings and the following description and claim:

In the drawings

Fig. 1 is a schematic view showing the invention and its cable connections to a pair of tractors or the like.

Fig. 2 is a perspective view of the invention from the side and front.

Fig. 3 is a perspective view thereof from the side and rear.

In the drawings the scoop is shown generally at **10**. It comprises the side frames **11** formed of channel, angle irons or the like and the rear frame **12** formed with any

similar means. Welded or otherwise suitably secured to said respective frames are the panels **13** which are so arranged relative to each other that spaces **14** are formed therebetween. Through these spaces water is permitted to drain thereby reducing to a minimum the amount of water lost resulting from the excavating or dredging operations.

Suitably secured to the framework of the scoop and extending vertically when the scoop is in the position shown in Figs. 2 and 3 are the skids or runners **15** which facilitate the so-called return trip of the scoop as will hereinafter be described. Extending upwardly and forwardly from what is normally the rear frame is the baffle plate **16**. This plate is supported and reinforced by the angle **17** and as well by the upper portion **18** of the skids or runners. Once the mud or silt has filled the scoop the baffle plate serves to prevent the scoop from burying itself in the mud or silt of a water hole or of a lake or the like. This is true for the reason that once the scoop is filled, any additional mud, dirt or the like will push up against the plate and have a lifting effect upon the scoop. In short, the pressure of the additional mud or the like against the plate will tend to rock the scoop rearwardly about the fulcrum point **19** which is the juncture of the so-called rear frame with the side frames.

It will be observed by reference to Fig. 2 that there is no bottom to the scoop, the space **20** between the side frames being open and unbridged.

Suitably secured to the side frames adjacent their normally front ends are the hitches **21** which may be of any shape or form, provided they suitably anchor the branches **22** and **23** of the cable **24**. The opposite end of the cable is suitably connected to a tractor **25** or to any other suitable means or vehicle which is capable of pulling the scoop in the direction shown by the arrow in Fig. 1.

Secured to what is normally the rear frame intermediate the sides or ends thereof is the hitch **25**. To this hitch is secured a cable **26** which at its opposite end is suitably connected to a tractor **27** or any other means which is capable of pulling the scoop in what will be termed a rearward or reverse direction.

Secured to the bottom of the rear frame is the cutting blade **28**, which as shown, is inclined slightly downwardly and forwardly. Attached to the free end of this blade by the bolts **29** or any other suitable means is a removable blade **30** having a plurality of teeth **31** formed in its free end. When the scoop is used to dig into hard clay or hard pan, the blade having the cutting teeth will be connected to blade **28**. Once, however, the scoop is used to clean out water holes, springs, lakes or the like the blade **30** will be detached.

In operation the respective cables **24** and **26** are connected, as aforesaid, to a tractor, to a winch or any other suitable medium as a result of which the scoop may be pulled in one direction or the other, as desired. When the scoop is pulled forwardly in the direction shown by the arrow in Fig. 1 it will dig or "scoop," as the case may be, the hard clay or hard pan on the one hand or the mud or silt on the other. Once the scoop has reached the bank of the lake the pulling tractor is stopped. At this time the other tractor designated as **27** in Fig. 1 of the drawings will start pulling in the direction shown by the two arrows. By reason of the construction and arrangement of the hitch **25**, the scoop will automatically swing over on its rear frame or side so that the runners or skids engage the ground or the bed of a water hole or lake, as the case may be. As the scoop is pulled by tractor or the like **27** the mud or dirt therewith will be left behind since, as before mentioned, there is no bottom to the scoop. In short, the mud or dirt which has been trapped will pass through space or opening **20** and be left on the bank.

While the tractor or the like **27** is pulling the scoop rearwardly the cable **24** is slackened so that the reversing and "turning over" action of cable **26** may be accomplished. This slackening of cable **24** can be effected by putting the tractor or the like **25** in reverse so that cable **24** is always slack while tractor or the like **27** is pulling upon cable **26**. Once the scoop has been returned to the desired point in the water hole, spring or lake, as the case may be, tractor or the like **27** is stopped whereupon tractor or the like **26** will again be moved forwardly in the direction of the single arrow in Fig. 1. At the same time tractor or the like **27** will move rearwardly so that the cable **26** is slackened. When this is done the scoop will be turned over once again to the digging or scooping position shown in Figs. 2 and 3. This to and fro operation is repeated as many times as necessary to scoop or clean cut the water hole, spring, lake or the like, as the case may be.

While the invention has been illustrated and described in detail in the drawings and foregoing description, the same is to be considered as illustrative and not restrictive in character, it being understood that only the preferred embodiment has been shown and described and that all changes and modifications that come within the spirit of the invention and the scope of the claim are also desired to be protected.

The invention claimed is:

A scoop for use in excavating or dredging comprising a substantially U-shaped structure including a back member which serves as a bottom member when said scoop is pulled in one direction and two side members, all three of said members having openings formed therethrough for water drainage, said back member being substantially flat and having a forwardly and upwardly inclined element provided with a drainage opening extending from adjacent the upper end of said back member, a plurality of runners connected to said back member and element and extending in a direction transverse to the length of said back member and element to facilitate the travel of said scoop when it is pulled in said one direction, a pair of cable hitches carried by said side members adjacent the lower front portions thereof, and a cable hitch mounted on said back member in the upper center portion thereof.

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