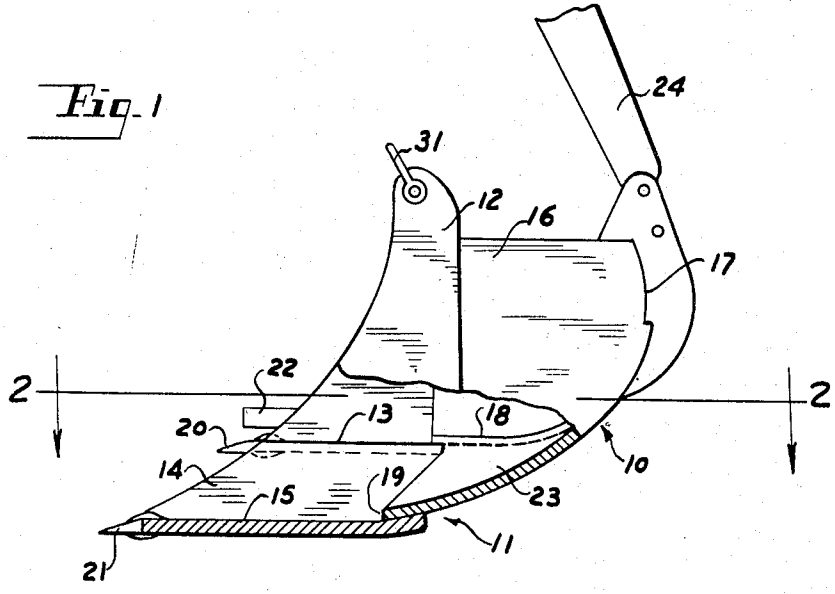
Nov. 24, 1953 J. J. CARLESIMO 2,660,323

EXCAVATING BUCKET

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Fig. 1



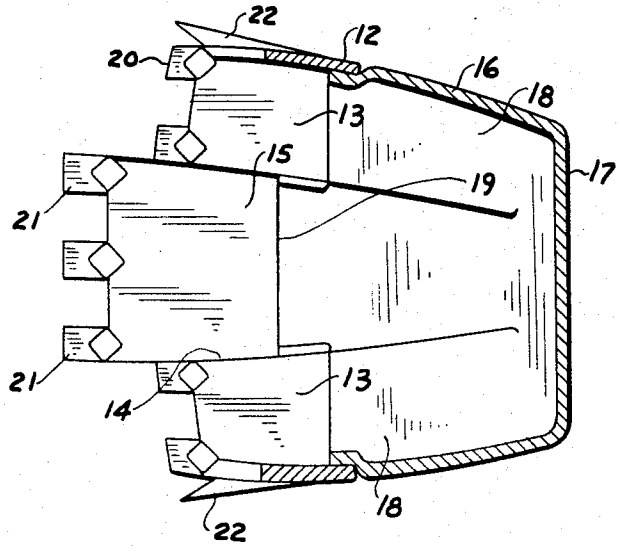


Fig. 2

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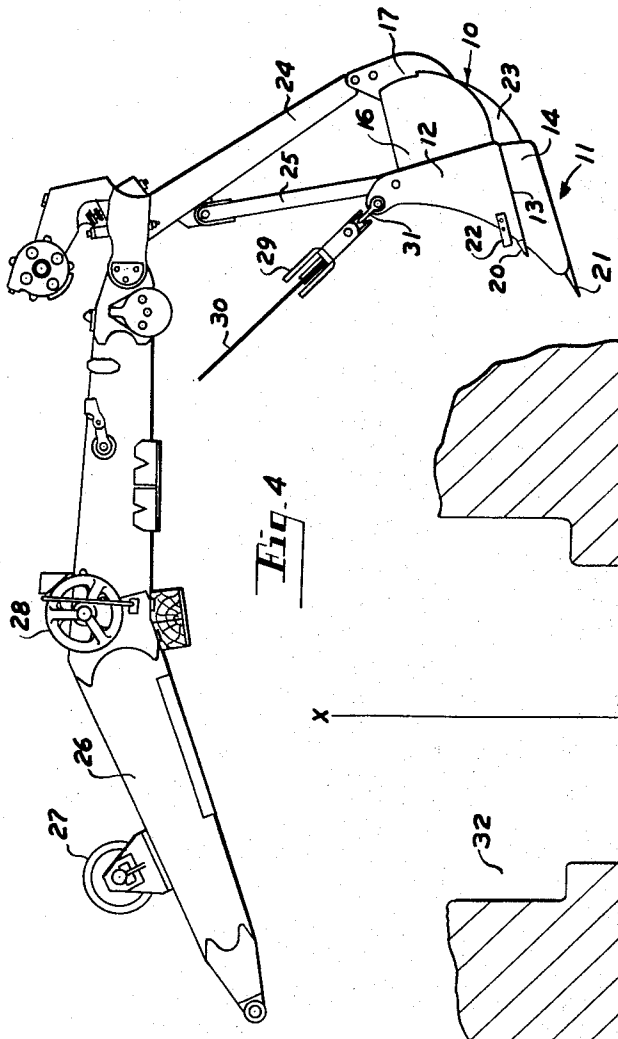


Fig. 3

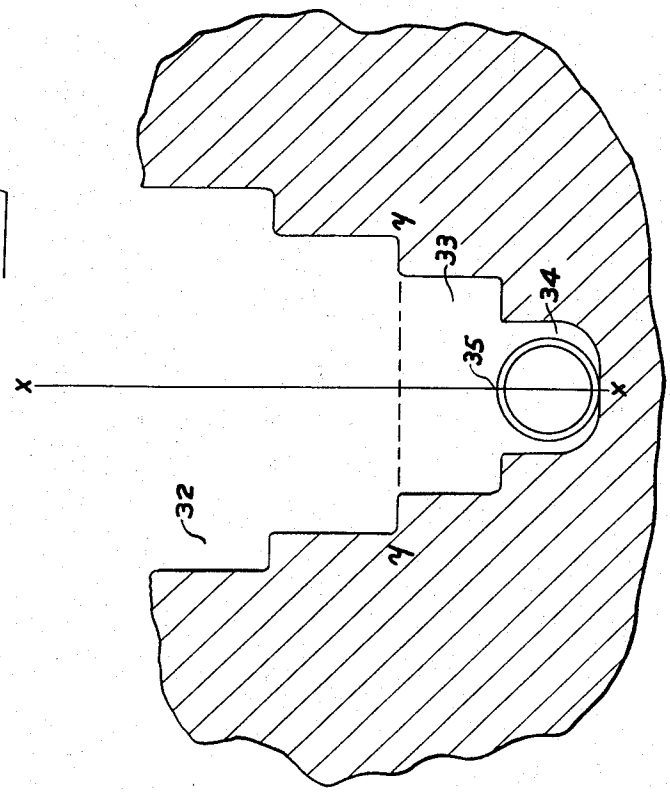


Fig. 4

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2,660,323

EXCAVATING BUCKET

John J. Carlesimo, Detroit, Mich.

Application June 2, 1951, Serial No. 229,631

3 Claims. (Cl. 214—145)

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My invention pertains to a bucket which comprises a main body member of standard width and capacity and an auxiliary scoop of a restricted width, the auxiliary scoop being adapted to reach to a considerably lower depth in the operation of said bucket as a whole. A bucket of this type is especially desirable where the width of a ditch at its bottom portion has to be quite narrow and where because of the considerable depth of said ditch its upper portion has to be much wider than its said bottom. While a ditch of this sort could be made by a bucket substantially no wider than the width of the ditch at its bottom, the work would, of necessity, be slowed down because of the limited load capacity of said bucket. It is to overcome said disadvantage and to combine the ability of excavating a ditch which is narrow at its bottom with a large load capacity of the bucket as a whole that I have made my improvement in the standard bucket now generally used in ditch excavations.

My other purpose is to provide a bucket of a design which is simple and practical and yet not too remote from that of the present-day buckets.

I shall now describe my improvement with reference to the accompanying drawings in which:

Fig. 1 is a side elevational view, partly in section, of my improved bucket;

Fig. 2 is a sectional view on line 2—2 of Fig. 1;

Fig. 3 is a transverse view of a ditch excavated by means of my improved bucket;

Fig. 4 is a side elevational view of a part of an excavating machine including a bucket as improved by me.

Similar numerals refer to similar parts throughout the several views.

The bucket as a whole is open at the top and at the front, and includes a main body portion generally indicated by numeral 10 and a scoop generally indicated by numeral 11 and disposed centrally under said main body portion 10. Following the standard practice of construction, the bucket includes a heavy front portion or lip made of cast metal, such as manganese steel, and a rear, load-receiving portion made of heavy sheet metal or plates.

The front portion includes two sides 12 which are component elements of main body 10, two bottom members 13 spaced from each other, two side walls 14 of the scoop 11, and a bottom plate 15 for said scoop. The rear or load-receiving portion of the bucket includes two sides 16 and a rear wall 17 connecting said sides. Two bottom strips 18 of the load-carrying portion of the bucket and a bottom 19 of the scoop 11 rearwardly

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of said plate 15 may be integrally connected to said back, as shown in Fig. 1. The front ends of said strips 18 and of the bottom 19, respectively, are preferably welded to said bottom plates 13 and 15, respectively, of the heavy cast front portion of the bucket. The bottom plate 13 is provided with heavy teeth 20. Similar teeth 21 are mounted at the front edge of plate 15 of the scoop. Additionally, the front part of the bucket is provided with corner-side teeth 22. Numeral 23 indicates supplementary side walls of the scoop rearwardly of said walls 14.

For the purpose of identifying the relative position of the bucket with respect to the elements by which the bucket is operated, I shall refer to a dipper or bucket handle 24 and a bucket brace 25. Numeral 26 indicates a boom, while numerals 27, 28, and 29, respectively, indicate sheaves for employment of cables 30 to control the operation of the bucket. Numeral 31 indicates eyes mounted on the sides 12 of the bucket and connected to sheaves 29.

For the purpose of illustrating the real size of the main body portion of the bucket and the scoop, a scoop two feet wide would best fit a main body 10 twice that width. Where the depth of the main body on the line of the pivotal connection of eye 31, as shown in Fig. 1, is approximately four feet, the spacing of the bottoms 13 and 15 would be about two feet. This would also be the distance to which the front teeth 21 would project forwardly of teeth 20 on the bottom plate 13 of the main body portion 10 of the scoop. These dimensions are only suggestive and may be varied as desired.

In the operational use of the bucket where a trench is to be dug and where the bottom of the trench need be only of the width of the scoop, the bucket as a whole is used to excavate the upper portion of the trench, as shown at 32 in Fig. 3. As the excavation is made downwardly the width of the trench is reduced by steps. At this stage the shovel as a whole will have to be used, first to one side of the vertical line x—x bisecting the trench, then to the other side of said line. This, however, does not become necessary when the excavation has proceeded below the slotted horizontal line y—y. From this line downwardly the upper portion of the bucket, that is the main body thereof, will excavate ground to its own width, as shown by numeral 33, while the lowest portion of the excavation 34 will be dug out by the scoop. Numeral 35 shows a pipe laid in the bottom of the excavation.

It will be understood that some changes may

be made in the construction of my bucket without departing from the inventive principle disclosed herein.

What I, therefore, wish to claim is as follows:

1. A bucket for a power-operated excavating machine, the bucket consisting of a main body open at the top and front and comprising two sides, a back member joining the sides, and a bottom plate running along each side on the inner side thereof, the plates being spaced from each other laterally and being provided at the front end with teeth adapted for digging and a scoop disposed centrally under the main body, the scoop opening at the top into said main body and having two vertical sides and a bottom joining said sides, the bottom being provided with teeth at its front end, the back portion of the bottom being joined to the back member of said main body.

2. A bucket for a power-operated excavating machine, the bucket consisting of a main load-receiving body open at the top and front and having two sides, a back, and a bottom provided with digging teeth at the front, the bottom having a cut-out central portion extending from the front rearwardly and being provided with a scoop disposed below said central cut-out portion, the scoop being approximately of the width of said cut-out portion and having two vertical sides, an open front, and a bottom provided with teeth at its front end, said front end extending forwardly of the bottom of the main body.

3. A bucket comprising a main, load-receiving body open at top and front, said body having a back, two sides, and an oblong plate forming a bottom member along the inner surface of each side, each plate being provided with a plurality of digging teeth at the front of said body, and a scoop depending from the inner edges of said bottom members, said scoop opening at the top into said main body, and comprising two vertical sides and a bottom plate provided with digging teeth at the front, and extending at the back rearwardly to the back of the main body.

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