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BACKFILL TAMPER

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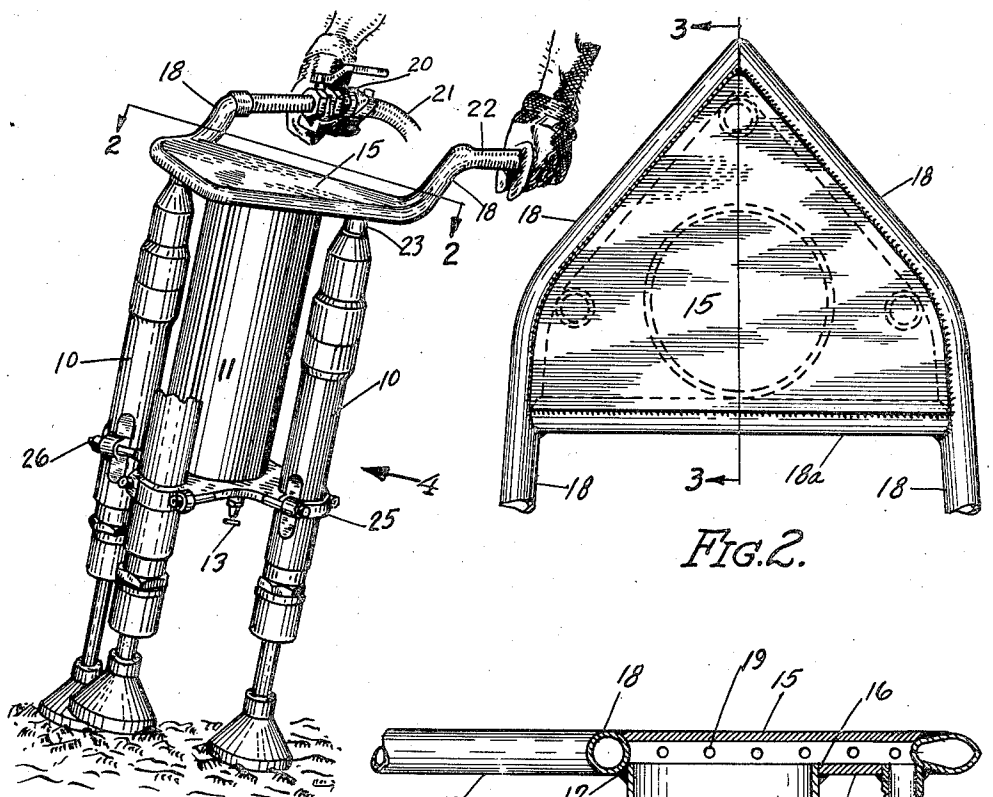


FIG. 1.

FIG. 2.

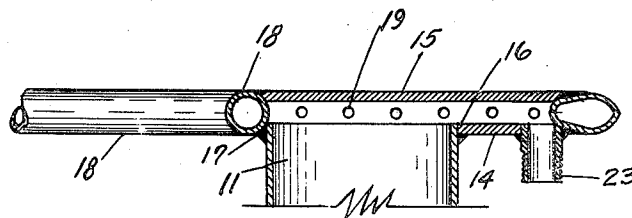


FIG. 3.

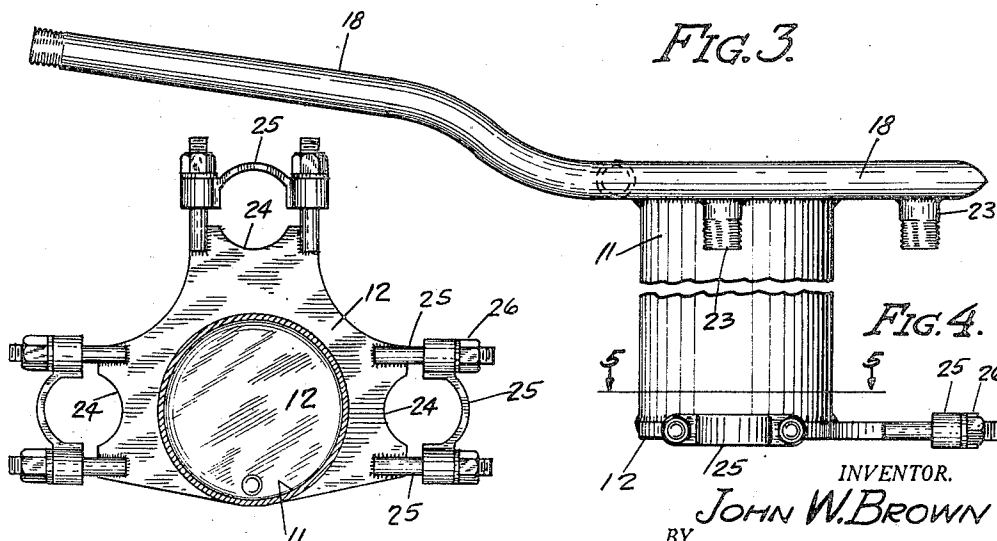


FIG. 5.

FIG. 4.

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BACKFILL TAMPER

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3 Claims. (Cl. 121-1)

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This invention relates to improvements in tamping devices of the type usually referred to as backfill tampers.

In construction jobs where dirt has been disturbed and must be replaced, as for example when pipes have been laid in trenches, the soil when replaced must be carefully tamped, from the bottom up, as the trenches are filled. There are also many other places where tamping is necessary.

There are on the market today several mechanical tampers, some of which are operated by compressed air. Such tampers are so constructed that one man can operate a single tamper only. Where large areas are to be tamped, the services of many men are required in order to expedite the job.

It is the object of this invention to produce a holder to which several pneumatic tampers may be attached, preferably three, and of such construction and design that one man can operate an assembly of three tampers and thereby accomplish three times as much work in a unit of time as he could operating a single tamper.

Another object is to produce a holder of such construction that it provides an air reservoir with which all of the tampers communicate and which assures a uniform air supply and pressure to all of the tampers, thereby assuring optimum operation of all the tampers.

A further object is to produce a holder for pneumatic tamping devices of such a construction and design that a plurality of tamping devices can be readily attached thereto and/or removed therefrom.

The above and any other objects that may become apparent as the description proceeds are attained by means of a construction and arrangement of parts that will now be described in detail, for which purpose reference will be had to the accompanying drawing in which the invention is illustrated, and in which:

Figure 1 is a perspective view showing the invention fully assembled and the manner in which it is employed;

Figure 2 is a plan view looking downwardly through plane 2-2, Figure 1;

Figure 3 is a section taken on line 3-3, Figure 2;

Figure 4 is a side elevation, partly broken away, with the tampers removed, looking in the direction of arrow 4 in Figure 1; and

Figure 5 is a section taken on line 5-5, Figure 4.

Referring now to the drawing, reference nu-

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merals 10 designates a well-known type of pneumatic backfill tamper which forms no part of the invention except to the extent that it is an element in the combination comprising the holding device.

The tamper holder which forms the subject of this invention comprises a combined tamper holder and surge preventing reservoir provided with means for attaching the tampers thereto. Reference numeral 11 represents a cylindrical reservoir having a bottom 12 provided with a drain cock 13. Attached to the upper open end of the reservoir is a hollow top of substantially triangular shape (the shape may be rectangular or even round). The top is formed from two steel plates 14 and 15. Plate 14 has a central opening 16 of the proper size to receive the upper end of the reservoir to which it is secured by welding as indicated at 17. Plates 13 and 14 are of the same size and shape and are held in spaced relation by pipes 18 and 18a to which their edges are secured by welding as shown in Figure 3. Pipes 18 are provided with openings 19 to provide communication between the interiors of the pipes and the reservoir.

Pipes 18 extend beyond pipe 18a and one is provided with a valve 20 which is connected with a suitable source of compressed air by a hose 21; the other pipe 18 terminates in a handle 22 and its end is closed by a suitable cap (not shown).

In the triangular design shown, pipe nipples 23 are welded to the bottom plate 14 and are in communication with the interior of the hollow top. Bottom 12 is formed from a plate of the shape shown in Figure 5 and has three projections, the outer ends of which terminate in concave portions 24. Bolts 24 are welded to the plate, one at each end of each concave recess 24. A bowed clamp 25 is attached to each pair of bolts and is held in adjusted position by means of nuts 26.

The tamping devices are provided at their upper ends with threaded openings for the reception of the pipe nipples to which they are threaded, and are held in place by the bowed clamps 25, all as shown in Figure 1.

In operation the assembly is grasped as shown in Figure 1, and when the valve is opened air enters the reservoir through openings 19. Air from the reservoir flows to the tampers through nipples 23 and the tampers begin functioning. Since the tampers usually vary as to their exact rate of reciprocation their tamping strokes are staggered.

The device can be moved over the surface and

since each assembly has three tampers, one man can do three times as much work per unit of time. Although three tampers have been found to be satisfactory, it is evident that a greater number may be used if desired.

From the above it will be apparent that the holder that forms the subject of this invention is so constructed that pneumatic tampers now made and marketed by others can be assembled into a multiple unit which, due to the reservoir positioned adjacent the tampers, the reserve air supply thus provided assures uniform operation.

Having described the invention, what I claim as new is:

1. A holding device for a plurality of pneumatic tamping devices comprising a central airtight vessel forming a reservoir for compressed air, a plurality of clamps carried by the vessel for attaching thereto an equal number of tampers, means comprising a tubular member communicating the interior of the vessel with each tamper, a tubular air supply pipe in communication with the vessel, an air flow control valve in the pipe, and handle means for guiding the assembly.

2. A device in accordance with claim 1 in which the vessel has a top comprising two spaced plates of extended area sealed about their edges, the vessel being in communication with the space between said plates, the lower plate having tubular nipples attached thereto, in communica-

tion with the space between the plates, and in which the clamps are of the two-part bolt operated type.

3. A device in accordance with claim 1 in which the vessel is an elongated cylinder whose lower end is closed by means of a plate having a plurality of two-part bolt operated clamps and in which the top of the cylinder is closed by a cover comprising two spaced metal plates of extended area sealed about their edges forming an airtight chamber communicating with the vessel through an opening in the lower plate, the tubular members communicating with the chamber between the plates.

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