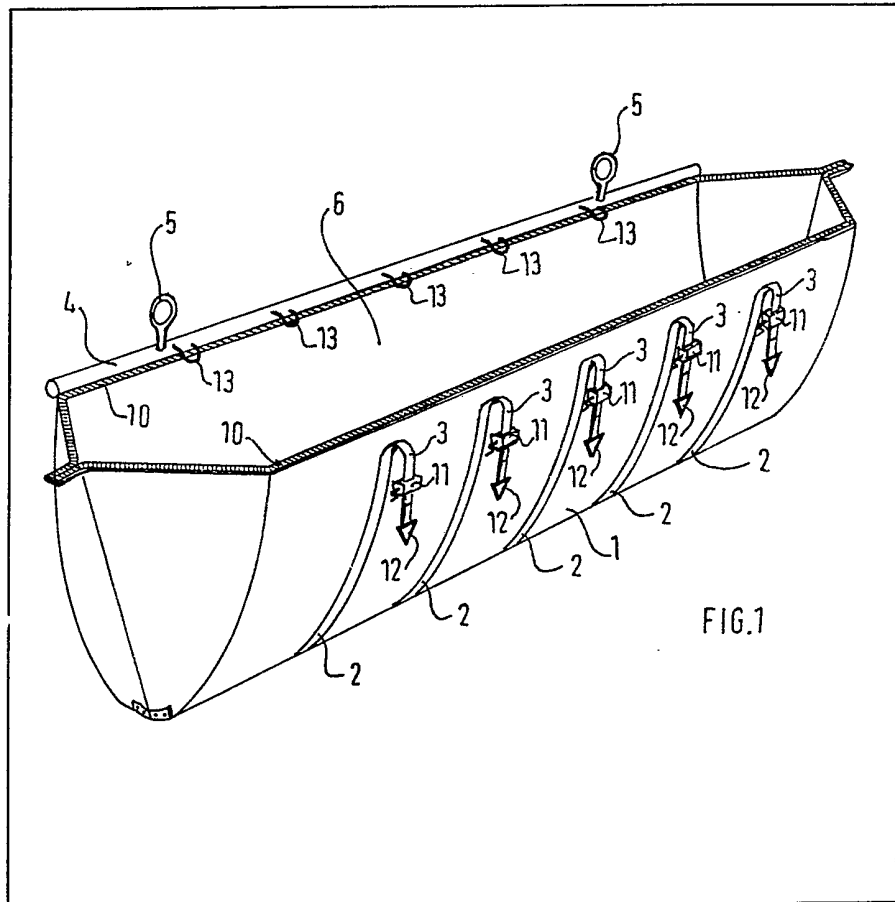


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(54) **Disposal means**

(57) A disposal process particularly suitable for the removal of detritus and oil spillage from beaches, comprises positioning a container 1 of

flexible material in a hole in the beach, placing waste material in the container and closing and removing the container. The container preferably has reinforcing straps 2, is of an elastomer-coated fabric, and is liftable by a rigid bar 4 and hooks 5.



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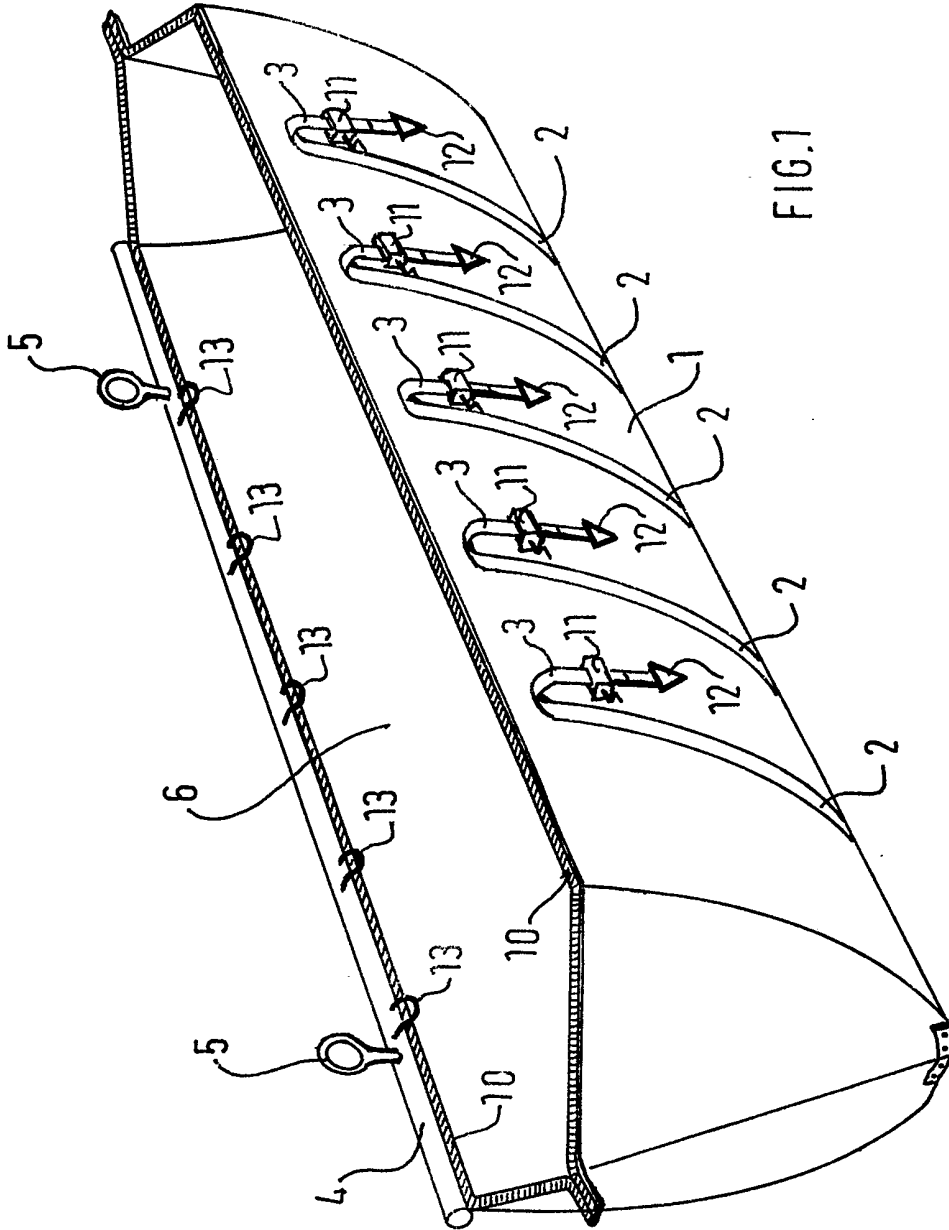


FIG.1

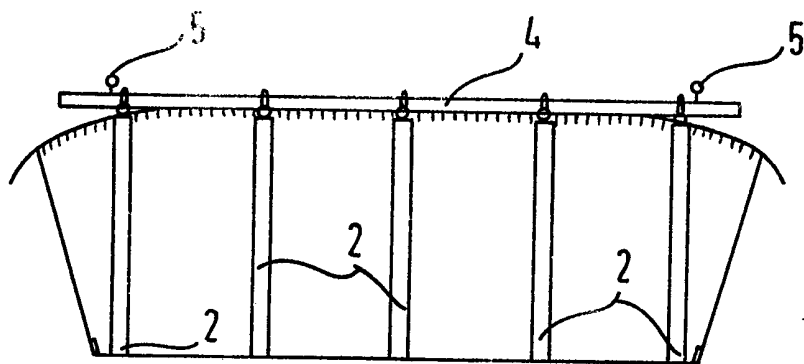


FIG. 4

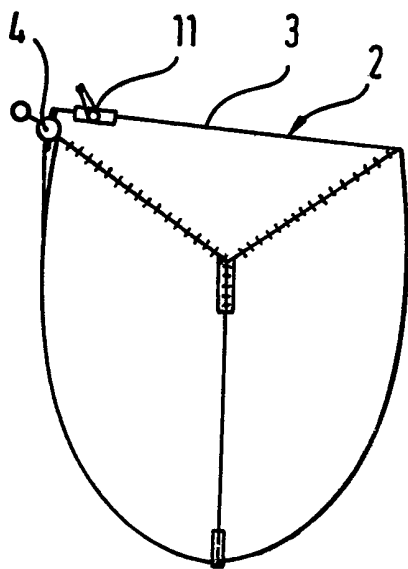


FIG. 2

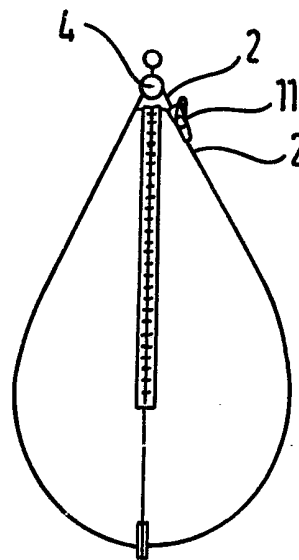


FIG. 3

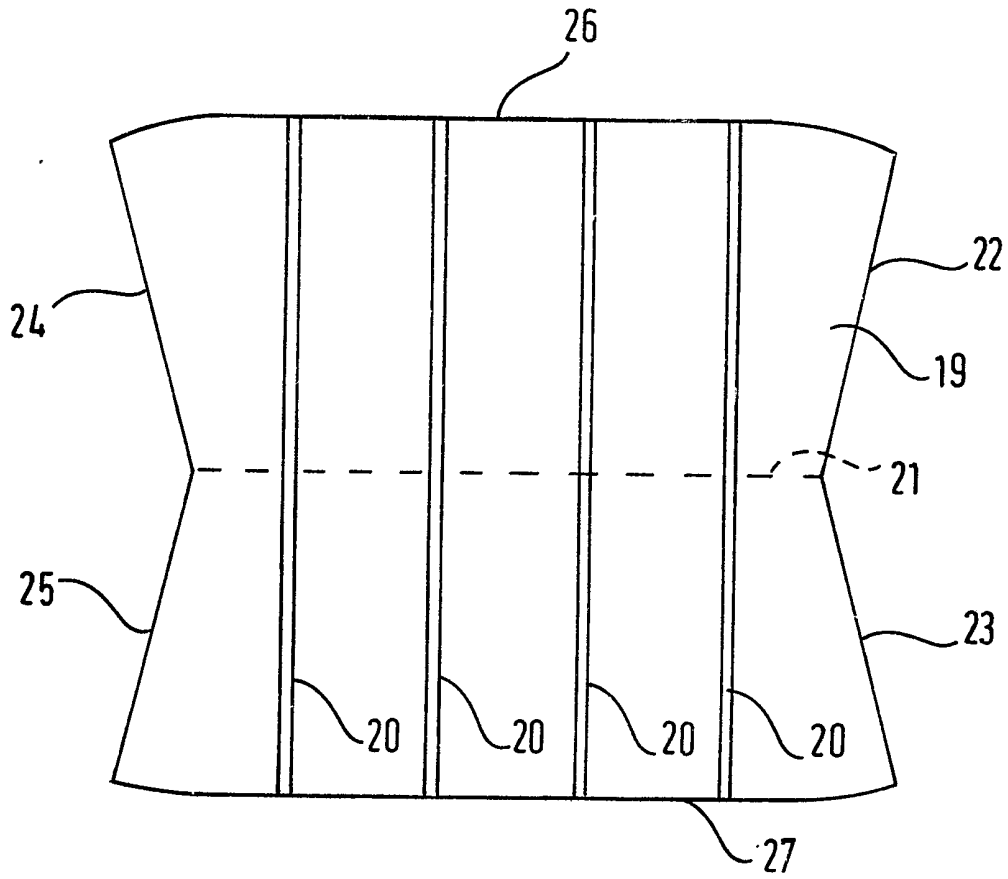


FIG. 5

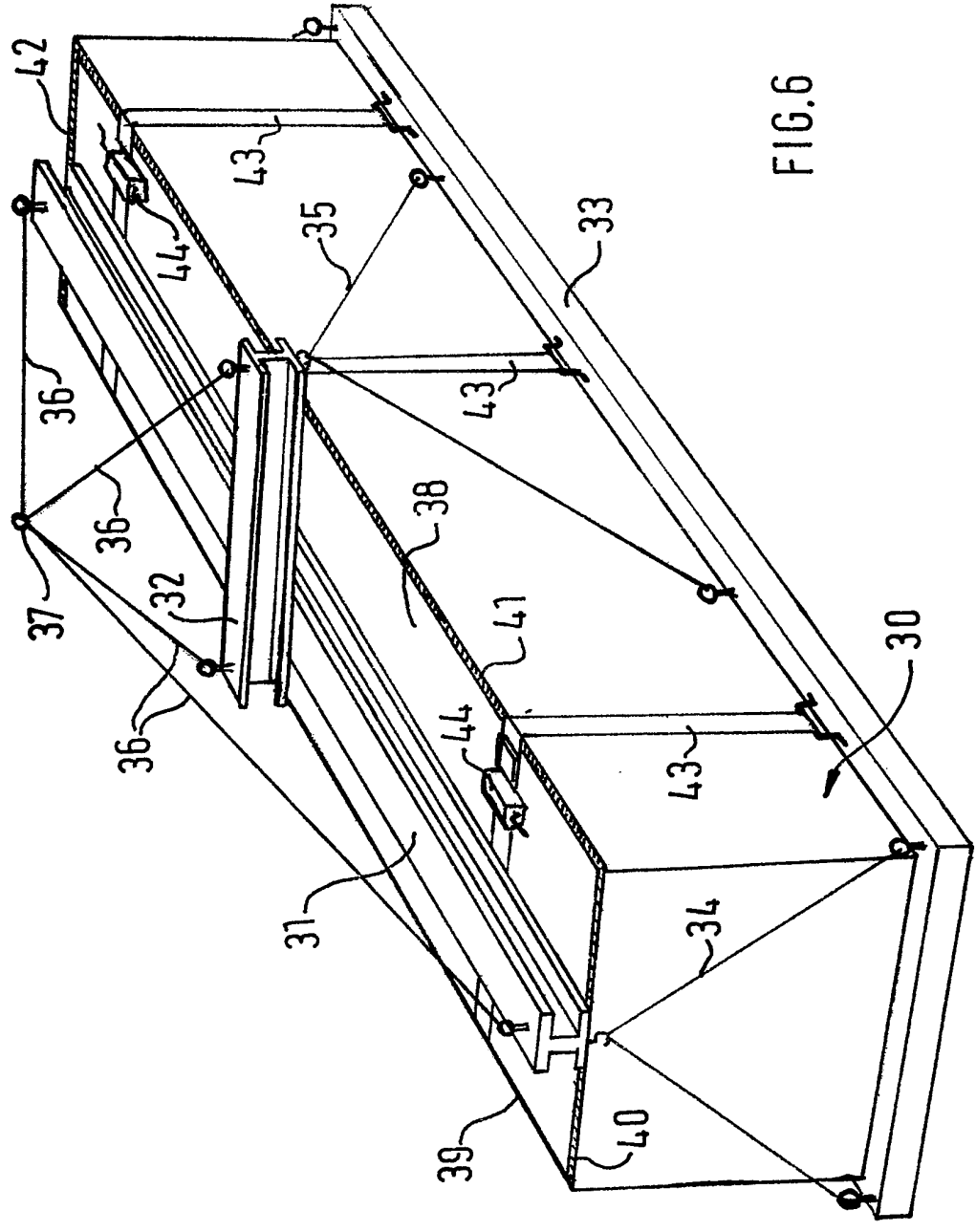


FIG.6

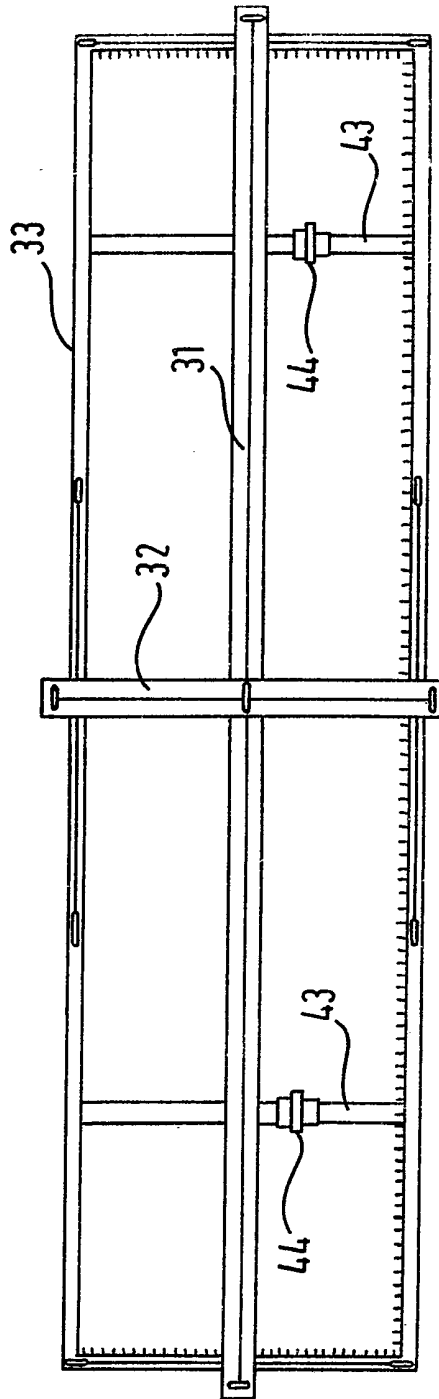


FIG. 7

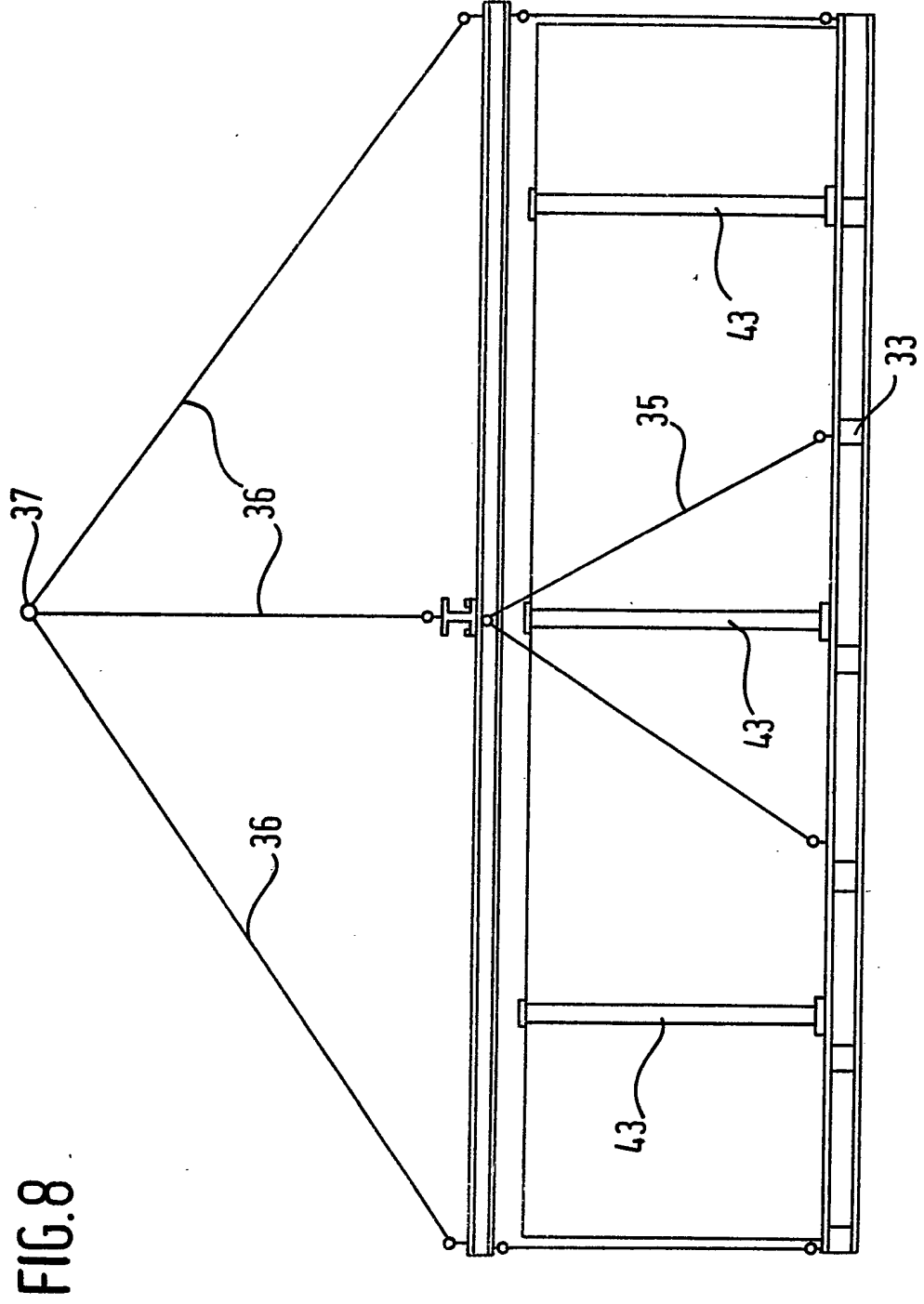


FIG. 8

SPECIFICATION

Disposal means

This invention relates to a means of disposal for waste matter and in particular to the removal of
5 detritus, oil spillage, litter and the like from beaches.

Accordingly, the invention provides a disposal process including the steps of positioning a flexible, elastomer-coated fabric container in a
10 hole of suitable dimensions in the beach or other ground, placing waste material in the container, closing the container and removing it to a suitable disposal station.

The invention also provides a container suitable
15 for use in the above disposal process, the container being made of flexible, elastomer-coated fabric and having a closable opening along substantially the whole of the length of that surface to be uppermost when the container is
20 positioned in a hole, a rigid lifting bar being attached or attachable to the fabric, the bar being centrally and longitudinally disposed over said upper surface when the container is closed, whereby the container can be winched or
25 otherwise lifted out of its hole.

Preferably support straps are provided around the container in directions substantially normal to its longitudinal axis.

The containers may, for example, have a load-
30 carrying capacity of from 1 to 5 tons, although smaller or larger containers may be used if required. A container of 5 ton capacity typically has nominal unfilled dimensions of 17 feet (5.18 m) maximum length, and 3 feet (0.91 m)
35 maximum width and 7 feet (2.13 m) maximum height, although it will be appreciated that these dimensions are for general guidance only.

Two embodiments of the invention will now be described with reference to the accompanying
40 drawings, in which:—

Figure 1 is a diagrammatic perspective view of a flexible container in accordance with the invention;

Figures 2 and 3 are end views of the container
45 shown in Figure 1, in the open and closed positions respectively;

Figure 4 is a side view of the container;

Figure 5 is a plan view of a sheet of fabric used to build a container of the general kind shown in
50 Figures 1—4;

Figure 6 is a diagrammatic perspective view of an alternative container in accordance with the invention;

Figure 7 is a plan view of the container of
55 Figure 6, and

Figure 8 is a side view of the container of Figure 6.

The container may be rectangular in both transverse and longitudinal cross-section but it is
60 preferred to use a container 1 having a shape such as is shown in Figures 1 to 4 of the accompanying drawings, i.e. a generally U-shaped transverse cross-section when the container is empty.

In typical use a hole of appropriate size is dug in

65 the sand of a beach and an empty container placed in it. The container is filled as and when required, e.g. with oil-contaminated sand, and when full is closed and lifted out of the hole and transported away to a suitable disposal station,
70 e.g. where the sand can be cleaned of the oil. The filled container may be winched out of its hole by a suitable hoist, even if necessary by helicopter. More normally, however, it will be hoisted onto the back of a lorry. The container may of course be
75 closed after each filling operation if it is not completely filled at one time and left in position until further filling or removal is required.

The material of the bag may be, for example, of nylon with an elastomer-coating especially suited
80 for the contaminants likely to be encountered. Thus for oil-contaminated sand a nylon fabric coated on the inside with a nitrile rubber and on the outside with a neoprene rubber would be particularly useful. The nylon fabric may be for
85 example of 2-ply, 5.75 oz (163 g) construction.

The support webbing is preferably a series of straps of Terylene or nylon and for a load capacity of, say, 5 tons, five equi-spaced straps 2 of
90 5,000 lbs (2268 kg) capacity each could be used to incorporate an adequate safety factor. The straps 2 are allowed to slide in suitable pouches or loops on the outside of the container or may be sewn to the fabric except of course for the length
95 3 of each strap that is to be stretched across the open mouth of the container, as shown in Figure 2, prior to closure. Alternatively the straps could be used as a separate harness but this might entail the risk of slipping during lifting.

A metal lifting bar 4 is conveniently provided
100 with eyes 5 for attachment to a hoist and is attached to the container along one edge of the longitudinal opening 6. It may be permanently attached to the container, as shown in Figure 1 or, for example, may be located within suitable
105 pouches or loops.

The container is closed by means of a mechanical slide fastener 10 and a metal or nylon-toothed zip in a neoprene-coated fabric is particularly advantageous. A waterproof fastening will help to ensure that, for example, oil does not
110 ooze out of the container during closing and transportation.

A ratchet means 11 (omitted for clarity from Figure 4) is provided on each strap 2 to close the container. In this embodiment the lifting bar 4 is fixed along one edge of the opening 6 and the container is closed by fixing shackles 12 to hooks
115 13 attached to the bar 4, pulling the lengths 3 of support straps 2 tightly across the mouth of the opening by means of the ratchet mechanisms 11 which are of conventional form, operating to wind the straps 2 on to reels effectively to shorten the straps. When the two edges of the opening are thereby drawn together, the fastener 10 may be
120 closed as shown in Figure 3.

Figure 5 shows a sheet 19 of fabric prior to manufacture into a container of the general kind shown in Figure 1, incorporating pockets 20 for five supporting straps. The sheet 19 is folded

along the dotted line 21 to make the container, and the ends 22, 23 and 24, 25 are bonded together, respectively, by beam curing. Fastener elements are bonded to the longitudinal edges 26, 27.

Figures 6—8 show a container 30 of alternative construction having a more elaborate supporting framework incorporating a longitudinal beam 31, a transverse beam 32, and a rigid pallet 33 suspended beneath the beams 31 and 32 by cables 34, 35. The beams 31 and 32 are themselves arranged to be lifted by cables 36 from a common suspension shackle 37. The container 30 is of box-shape, formed from similar material and in a similar manner to that of the embodiment illustrated in Figures 1—4, and incorporates a fabric cover panel 38 which is integral with the remainder of the container structure along one side 39 and is provided with mechanical slide fasteners 40, 41, and 42 along the other three sides. Three straps 43, incorporating ratchet mechanisms 44, are provided to secure the container in its closed state as shown in Figure 6.

25 CLAIMS

1. A disposal process including the steps of positioning a flexible elastomer-coated fabric container in a hole of suitable dimensions in a beach or other ground, placing waste material in the container, closing the container and removing it to a suitable disposal station.

2. A container for use in a disposal process in accordance with claim 1, the container being

35 made of flexible elastomer-coated fabric and having a closable opening along substantially the whole of the length of that surface to be uppermost when the container is positioned in a hole, a rigid lifting bar being attached or attachable to the fabric and being centrally and longitudinally disposed over said uppermost surface when the container is closed, whereby the container can be winched or otherwise lifted out of its hole.

3. A container according to claim 2 wherein support straps are provided around the container in directions substantially normal to its longitudinal axis.

4. A container according to claim 3 wherein the straps are provided with ratchet mechanisms to assist in closing the container.

5. A container according to any of claims 2—4 wherein the container has an opening which is closable by a mechanical slide fastening device thereon.

55 6. A container according to any of claims 2—5 which is of generally U-shaped cross-section when empty.

7. A container according to any of claims 2—5 wherein the container is of box-shape when empty and is arranged to be supported on a rigid pallet suspended beneath supporting beams.

8. A container constructed and arranged substantially as described herein and illustrated in Figures 1—4 of the accompanying drawings.

65 9. A container constructed and arranged substantially as described herein and illustrated in Figures 5—8 of the accompanying drawings.