HakoMinuteman
AMERICAN CLEANING EQUIPMENT CORPORATION HAKO NORTH AMERICAN CORPORATION
111 South Route 53, Addison, Illinois 60101 • Phone (312) 627-6900

PLAINTIFF'S EXHIBIT
FD-1493

- MINUTEMAN ASBESTOS-VAC -

OPERATING AND FILTER CARE INSTRUCTIONS

The MINUTEMAN Asbestos Vac has been specifically designed and developed to clean up fibrous asbestos and asbestos dust of all types and incorporates special filters that help reduce the incidence of airborne dust that would be created by any other method of cleaning while at the same time removing from the area most of the material being cleaned up.

During any operation that generates and requires the cleaning of asbestos dust, do not sweep, scoop, shovel or in any manner other than by vacuuming, attempt to remove that dust.

Do not at any time attempt to bypass, remove, substitute or by any other means, change the filters used in this vacuum. Only use approved MINUTEMAN Asbestos Vac filters and filter bags.

Before attempting to set up for use or before cleaning this vacuum, be sure that you fully understand the instructions given for the setting-up or cleaning/(changing of filters) of this vacuum.

Since each shop has its own individual and unique cleaning problems, it is suggested that you use the following guidelines in determining the times between filter changes.

(1) Try not to allow the contaminated dirt retention bag to contain more than 10 to 15 pounds of material or to become more than 1/4 full.

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(2) Under very light cleaning of dust created during the cleaning of brake drums and the truing of brake shoes in most medium size shops, it would be wise to change the filters once a day unless you have determined by checking, that a shorter or longer period of time would be necessary to meet the requirement of 10 to 15 pounds or 1/4 full bag (mentioned in Item #1 above).

Whenever you are using this vacuum cleaner for the removal of asbestos dust and dirt, or any other potentially toxic particulate matter, you should always follow the following suggestions:

1. Always use all of the filters provided and use them as directed in the instructions.

2. Always follow the instructions given in the care and maintenance of the unit.

3. Whenever using or cleaning the machine, wear the protective face mask provided.

4. Please keep in mind that "what you don't see can harm you." The ill effects of asbestos dust may not show up until 20 or 30 years after exposure.

5. Do not use this vacuum to clean up or remove liquids or slurrys of any kind as serious electrical shock could occur.

6. Do not use this vacuum in an area that contains potentially explosive liquids, vapors or dust, i.e. gasoline, cleaning fluids, flour dust, etc.

7. This vacuum is to be used on 110 to 120V AC/DC only.

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"Tank/Filter Set-Up Procedure"

1. Fully open the plastic bag and place it down into the tank; place one side under the intake tube and pull the rest up to the top of the tank and fit over the lip of the tank.

2. Take the paper bag that has the cardboard collar attached and open it up by gently pulling the folds apart.

3. You will notice two creases on the top side of the collar; carefully bend the ends down (toward) the bag.

4. Insert this bag into the tank and push it to the bottom, taking care not to snag the plastic bag.

5. Locate the cardboard collar around the intake tube and gently work it up past the raised ring that runs around the tube.

6. Push the plastic bag down past the paper bag; position it about 1/2 to 2/3 down past the top of the bag.

7. Take the paper filter protector bag and insert it into the tank and snap the elastic band around the rim of the tank. (About 2 inches of the bag should be outside of the tank).

8. Place the cloth filter bag onto and into the tank, using the formed rubber gasket as a guide and press down firmly onto the tank rim.

9. Place the formed wire basket into the cloth bag with wire ring towards the bottom of the tank.

10. Position the lid onto the tank, making sure that the gasket of the lid is seated onto the rubber ring of the cloth bag frame completely around the tank.

11. Snap the lid latches into place.

For proper cleaning of tank and removal/changing of filters, see "Procedure for Removing Contaminated Filters and for Cleaning of Contaminated Tank."

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"Procedure for Removing Contaminated Filters and for Cleaning of Contaminated Tank"

For the benefit of your health, you should always wear a face mask approved for use with asbestos, any time you are using or cleaning this vacuum cleaner. You should also wear gloves.

1. Unplug machine from power source.

2. Carefully and slowly remove lid only (be sure you have not accidentally lifted the cloth filter bag at the same time). Set the lid/filter assembly aside.

Changing the "Pink Impaction Prefilter"

The pink impaction filter should be changed, using all of the precautions previously mentioned.

The impaction filter should be changed when any of the following takes place:

1. Anytime there is an indication of a filter tear during normal operation of the unit. This tear could be in any of the filters used.

   (a) paper dust containment bag
   (b) paper bag protector
   (c) cloth filter bag

These tears would show up during the tank clean-out procedure, or . . . .

2. Every other tank clean-out period.

To change the impaction filter, do the following before you do Step #3 of the normal clean-out procedure.

2a Wipe down all of the exposed surfaces on the underside of the removed lid, using the dampened wiping cloth. (See Step #6).

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Changing the "Pink Impaction Prefilter", Cont.

2b Carefully unhook one of the two small springs that hold the green painted filter retainer, from the side of the filter. Set the retainer aside.

2c Remove the impact filter from the high efficiency filter. Be careful so as not to damage or puncture the paper media used in the final filter. Do not attempt to clean the pink impact filter in any way; dispose of by placing it into the tank you are now in the process of cleaning.
-DO NOT USE ANY TOOLS TO REMOVE THE IMPACT FILTER-

2d Before proceeding any further in cleaning the tank, first place a new impact filter (one only) onto the H.E.P.A. filter. Replace the impact retainer and spring and lock it into place by re-hooking the spring you disconnected previously.

2e You may now proceed with Step #3.

3. Gently tap the inside of the cloth bag to loosen any particles that may be on the opposite surface. Do this all around the inside surface of the bag.

4. Gently remove the cloth bag and set aside.

5. Carefully undo the elastic band from around the tank and push the entire bag "slowly" into the tank. Do not allow the elastic band to snap the bag closed.

6. Using a wiping cloth, dampened with water (not soaking wet), wipe down all of the exposed surfaces inside of the tank; put the cloth aside -- do not discard.

7. Carefully and "very" slowly, push the paper bag down and off of the intake tube, using the attached cardboard collar. After the collar is removed from the intake tube, take the damp cloth and wipe off any surfaces that were not previously wiped; at this time, re-wipe the entire inside of the tank and drop the wiping cloth into the tank.

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Changing the "Pink Impaction Prefilter", Cont.

8. Now reach in and gently pull up and around the paper bag, the plastic bag that had been previously inserted. When you have the plastic bag fully extended, "gently" and "slowly" squeeze the bag closed as close to the filled bag as possible in order to avoid trapping excessive air.

9. Gently remove the bag from the tank. Twist the unfilled portion closed and tie it into a knot.

10. Dispose of according to your company's procedure.

11. For proper assembly of new filters, see "Tank/Filter Set-Up Procedure."

REPLACEMENT FILTERS

C/N	76059-80	Asbestos Vac Paper Disposable Bags (pkg. 10)
C/N	76059-90	Asbestos Pink Impaction Filter Replacement (pkg. 12) (Used on Asbestos Vacs with Serial No. 221789 or lower).
C/N	76104-20	Imprinted Plastic Container Bags (pkg. 50)
C/N	76059-60	J-Type High-Efficiency Filter Replacement (Square shape used on Asbestos Vacs with Serial No. 221789 or lower.
C/N	70503-80	Disposable Filter Bag Protector (pkg. 12)
C/N	80501-50	Primary Standard Dynel Filter Bag
C/N	11012-10	Pink Impaction Filter Replacement (pkg. 12) (6" round - used on Asbestos Vacs with Serial No. 221790 or higher.
C/N	11001-00	H.E.P.A. Filter Replacement (round shape-used on Asbestos Vacs with Serial No. 221790 or higher.

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ASBESTOS VACUUM

CONVERSION TO WET AND BULK PICKUP OPERATIONS

In some instances where the application is the removal of asbestos coatings or surfaces in large volumes, it is required to use our Asbestos Vacuum as a power pack in series with a separate collector drum with a special adaptor lid assembly.

On the attached drawings, we show five different configurations our Asbestos Vacuum can be used in.

Page 1. Describes the conventional asbestos unit as used in normal clean up operations. Dry pickup only.

Page 2. Shows the Asbestos Vacuum lid as adapted to a 30 or 55 gal. drum for bulk wet material pickup.

Page 3. Shows the Asbestos Vacuum lid as adapted to a 30 or 55 gal. drum for bulk dry pickup only.

Page 4. Shows the Asbestos Vacuum unit used as a power pack for wet or dry pickup with the asbestos picked up going into a "closed head" 30 or 55 gal. drum. This drum can be capped after filling and disposed of intact.

Page 5. Shows the 15 gal. Asbestos Vacuum with 1:1 adaptor and ball float assembly for wet pickup operation.

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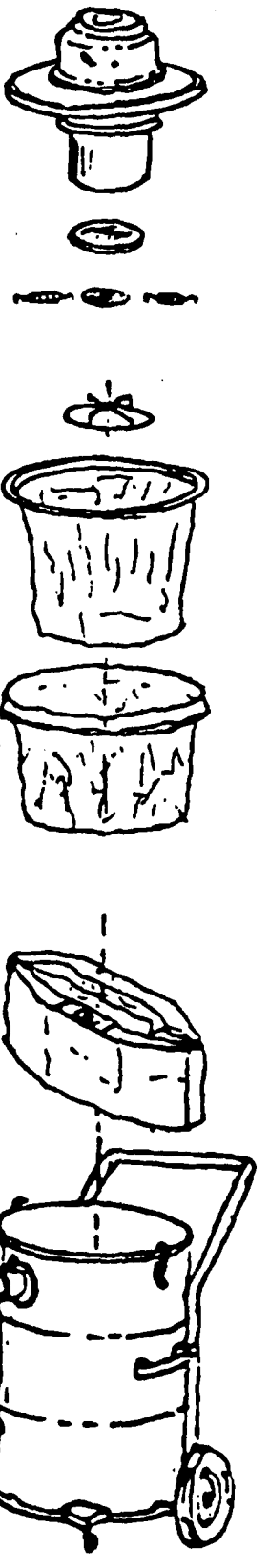

Lid Assy. w/ H.E.P.A. filter.

Impact filter

Impact filter Retainer & Springs.

Bag frame

Cloth filter Bag

Paper filter Protector

Inside Collector Bag.

15 gal Tank. w/ inside down-tube.

Standard Asbestos Vacuum.

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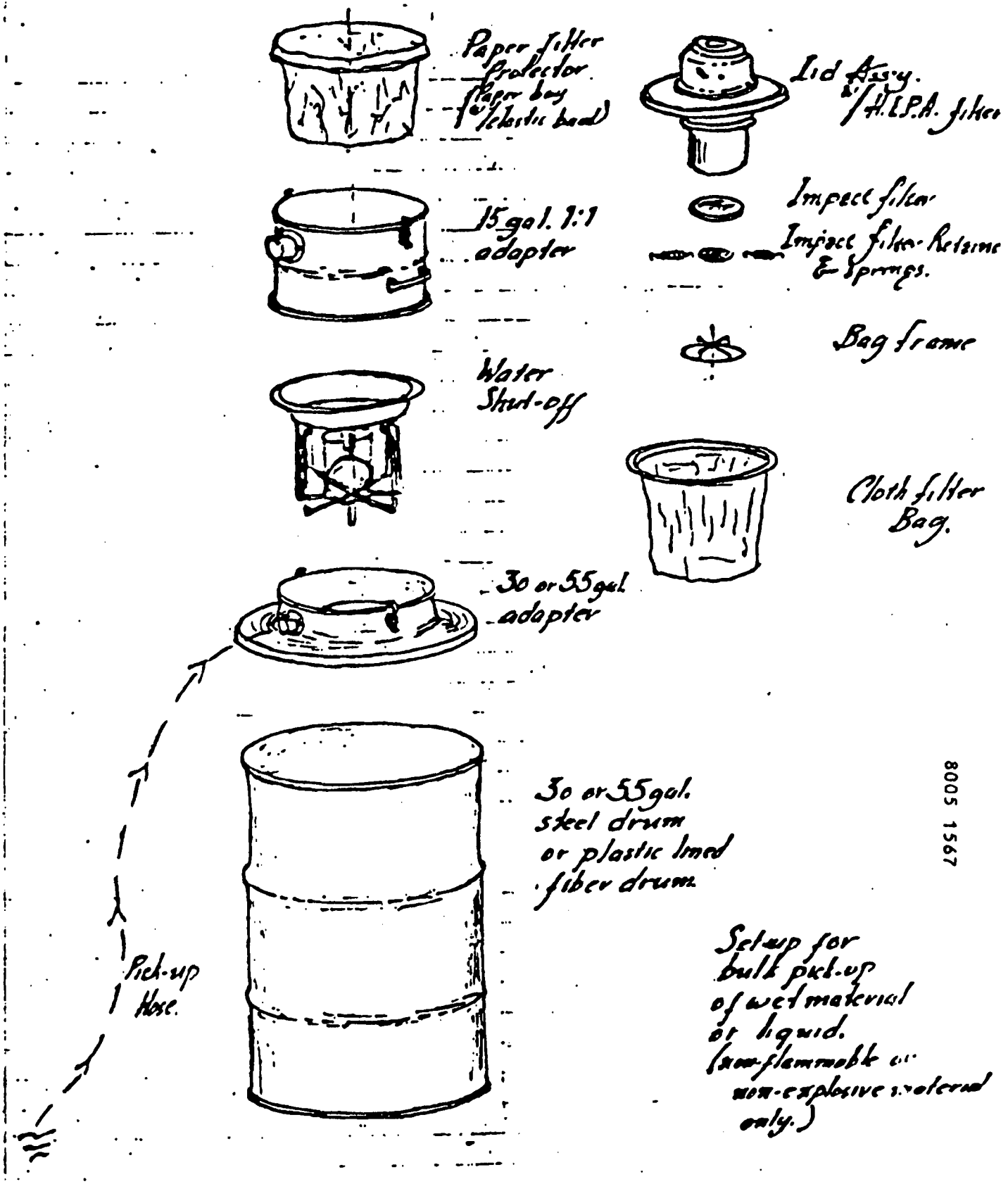

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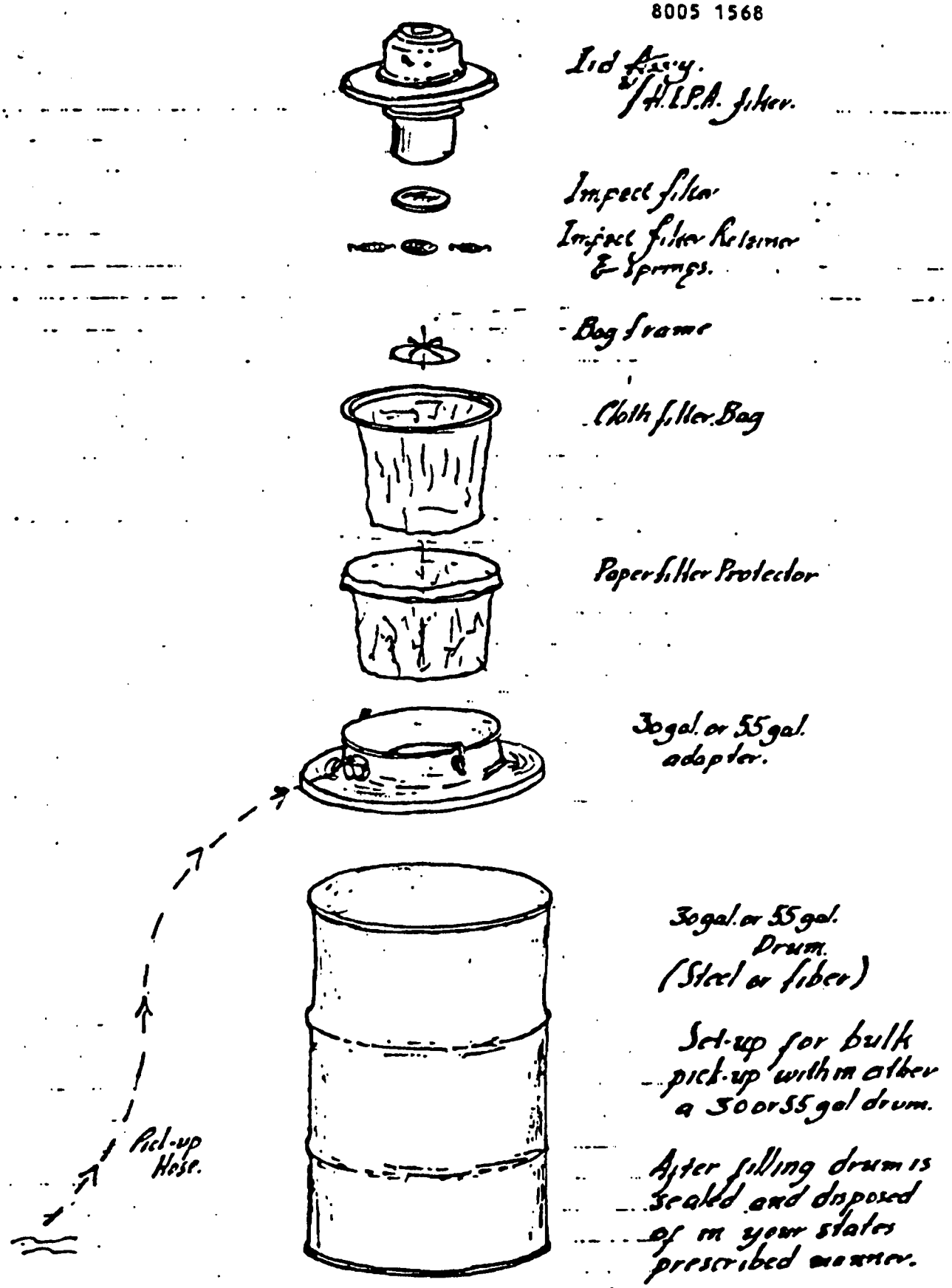

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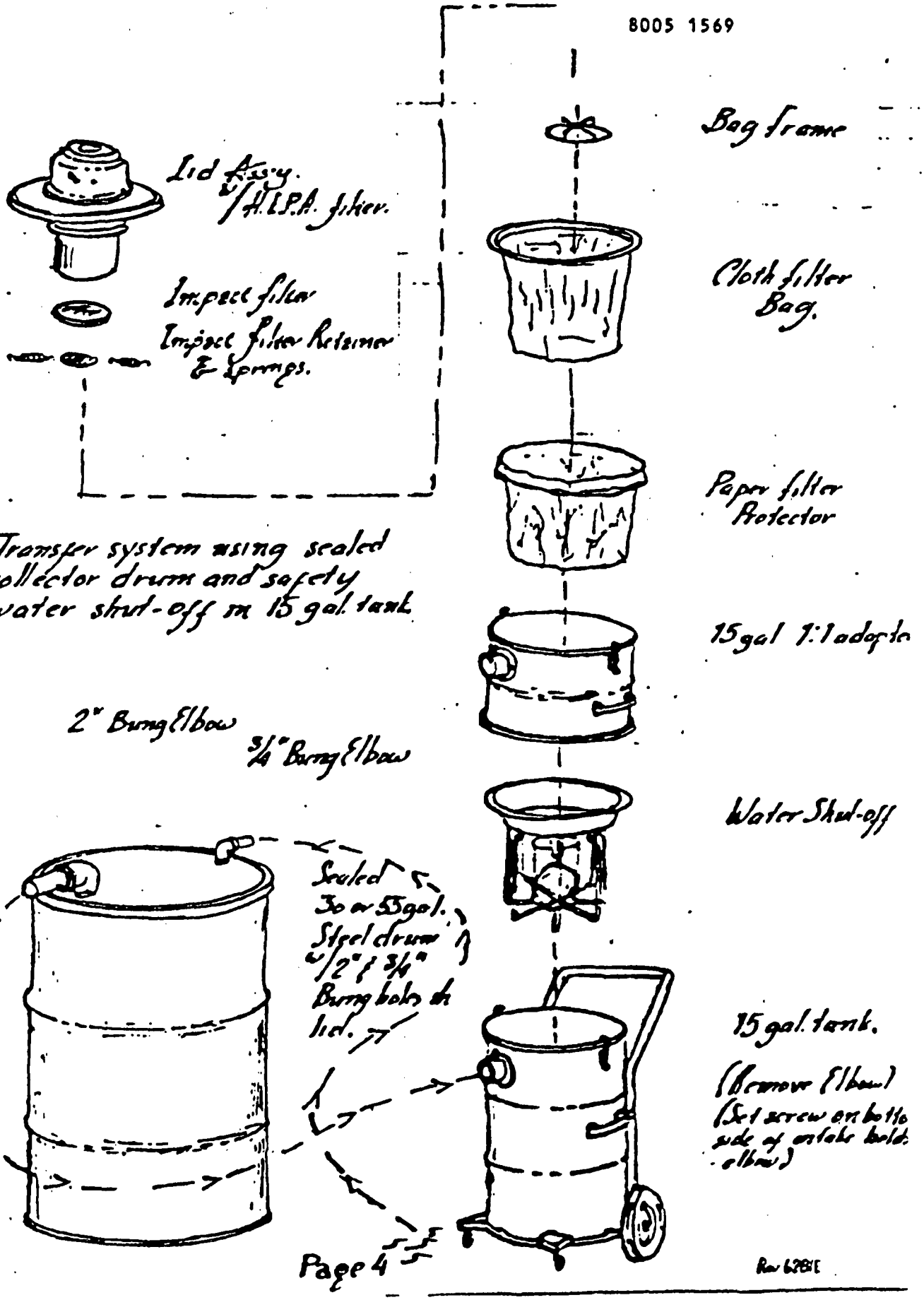

Rev 6/81

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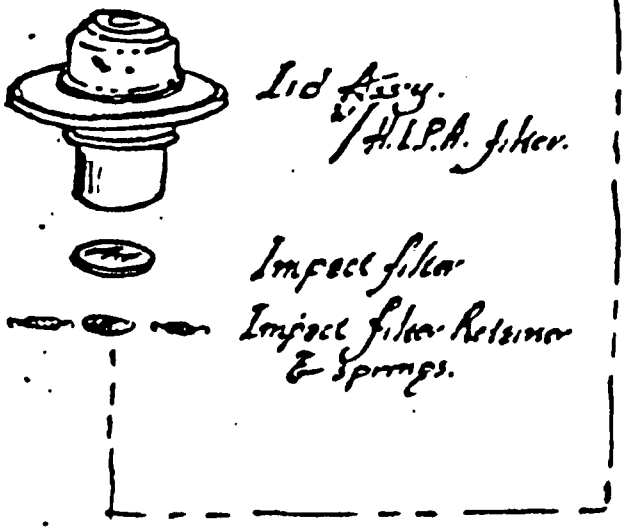

Lid Assy. & H.E.P.A. filter.

Impact filter

Impact filter Retainer & Springs.

Bag frame

Cloth filter Bag.

Paper filter Protector

15 gal 1:1 adapter

Using Asbestos Tank and 1:1 adapter to pick-up water. (do not use to pick-up any flammable or explosive material.)

Water Shut-off

15 gal. tank.

(Remove (1) hex. (Set screw on bottom side of outlet holds elbow.)

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