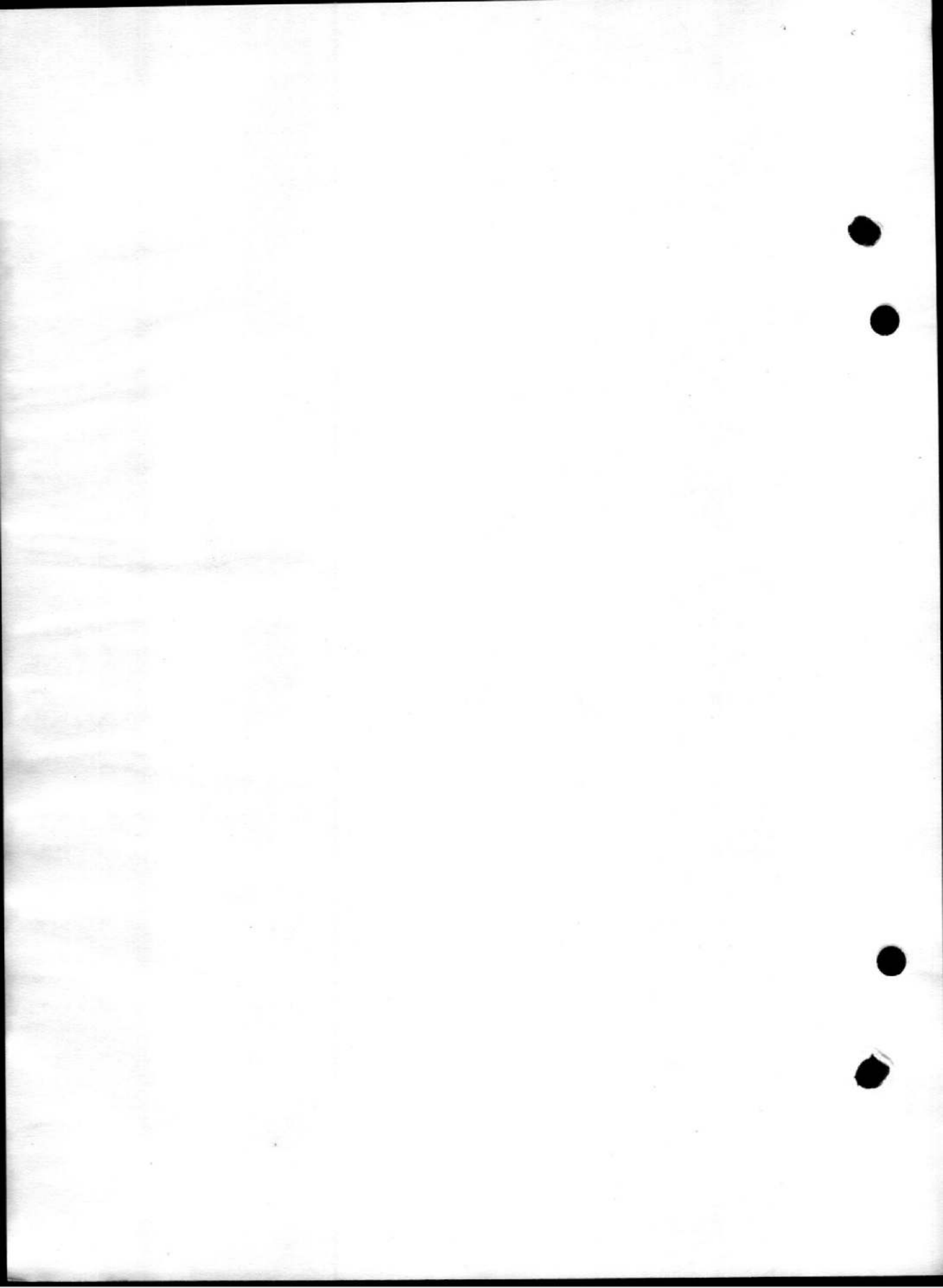


SECTION 7

GENERAL GROUND SERVICING EQUIPMENT

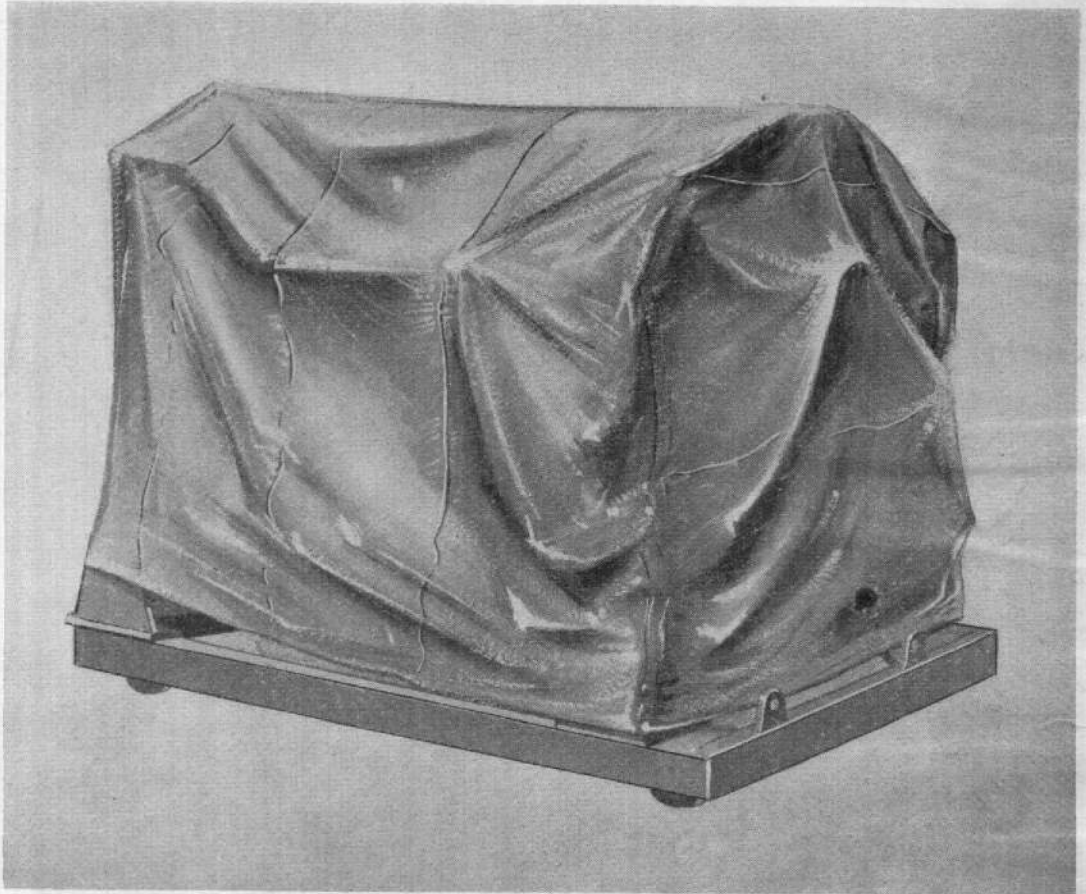
LIST OF ITEMS

	Now AP	119A-1000-	
	Book	Sect	Item
6 Sweeper, mechanical, Type D	1D	1	2
10 Pump, semi-rotary, No. 4, Type A	1A	6	23
11 Cart, hand, Type B	1B	1	21
23 Sweeper, mechanical, Type G	1D	1	4
26 Cabinet, test, flying clothing, Mk 1	1B	1	18
27 Airfield arrester barrier, Mk 5	1D	2	1
28 Fuel pumping unit, portable (Zwicky "Portapak")	1A	6	24
30 Fuel hand pump, lightweight, portable ("Rellumit" Type AS.2)	1A	6	15
31 Runway de-icer	1D	1	6
33 Deleted			
34 Sweeper, mechanical, Type J	1D	1	5
35 Plant, steam cleaning, mobile (Wickham)	1D	3	8
36 Trolleys, mobile fuel blending, Mk 2 and M3	1A	6	13
37 Plant, steam cleaning, heavy duty, Type C	1B	1	22
38 Fuel pumping unit, lightweight, portable, Mk 3 (Kelston)	1A	6	14
39 Handler, mechanical, Mk 1 (Mini-Horse)	1C	1	3
40 Lubricator, high pressure, Type 8639UR	1A	6	25
41 Lubricator, high pressure, Type 5000	1A	6	26
42 Unit, foam dispenser	1D	2	5
43 Tanker, water/foam liquid	1D	2	6
44 Pedestrian operated rotary blower (Snowbird S 263)	1D	1	1
45 Fuel hand pump, lightweight portable (Patay Mk 3 TA/F)	1A	6	18
46 Foam dispenser, small, aircraft washing, Mk 3B	1D	3	7
47 Plant, aircraft washing	1D	3	6
48 Trolley, hydrant unit	1A	6	17
49 Meter, runway friction continuous reading Mk 1	1D	1	7
50 Mechanical handler, Mk 2	1C	1	4



ITEM 1

COVER, WATERPROOF, POWER PLANT



A.P. Reference

Stores Ref. 4K/2469

Classification 2

Overall dimensions (folded)

Length 2 ft. 0 in.

Width 2 ft. 0 in.

Depth 4 in.

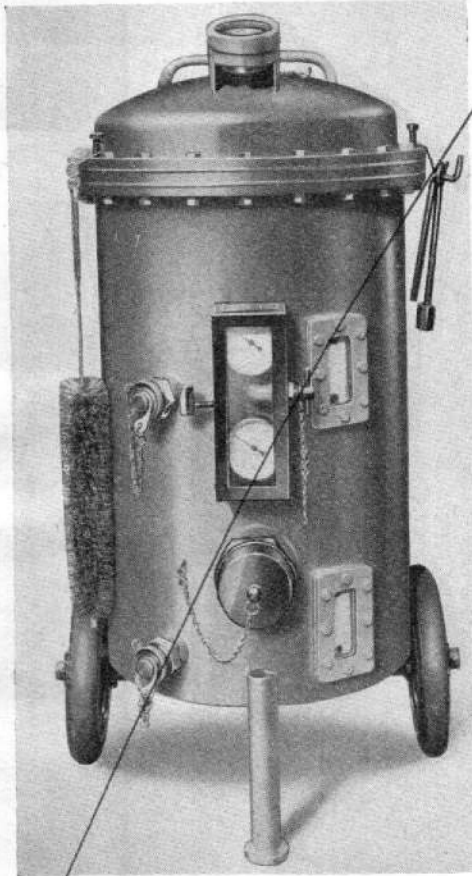
Weight 32 lb.

Brief description This cover is of canvas and is used to protect power plants, mounted on Type D and Type F stands, against moisture, dust, and other foreign matter.

RESTRICTED

ITEM 2

FILTER, FUEL, TYPE P.M. 55A



A.P. Reference 1464G, Vol. 1, Part 2, Sect. 3, Chap. 9

Stores Ref. 4K/2371

Classification 2

Overall dimensions

Height 3 ft. 3 in.

Diameter 1 ft. 10 in.

Weight 1 cwt. 2 qr.

Brief description This portable Stream-line-type fuel filter is used in conjunction with refuelling equipment to prevent water, dirt, or other foreign matter from entering aircraft fuel tanks. It consists of a cylindrical container, mounted on two wheels, and a dual filter assembly, and can be connected to the suction side or the delivery side of the fuel pump. The filter is capable of filtering up to 30 gallons of gasoline or kerosine per minute.

~~RESTRICTED~~

ITEM 3

HUT, SECTIONAL, TRANSPORTABLE, TWO BAY



A.P. Reference

Stores Ref. 4K/2373

Classification 2

Overall dimensions (packed)

Length 6 ft. 3 in.

Width 3 ft. 0 in.

Height 1 ft. 6 in.

Weight 5 cwt.

Brief description This hut consists of a wooden framework covered with canvas and is used as a portable workshop etc. at dispersals. It is 15 ft. wide, 7 ft. 6 in. high and 11 ft. 6 in. long, but can be extended in length by the addition of extra bays 6 ft. in length. The hut can be easily erected or dismantled.

ITEM 4

OFFICE, AIRCRAFT SERVICING, PORTABLE, TYPE B



A.P. Reference

Stores Ref. 4K/2506

Classification 2

Overall dimensions

Assembled: Length 6 ft. 2 in. **Height** 6 ft. 8 in. **Width** 5 ft. 3 in.

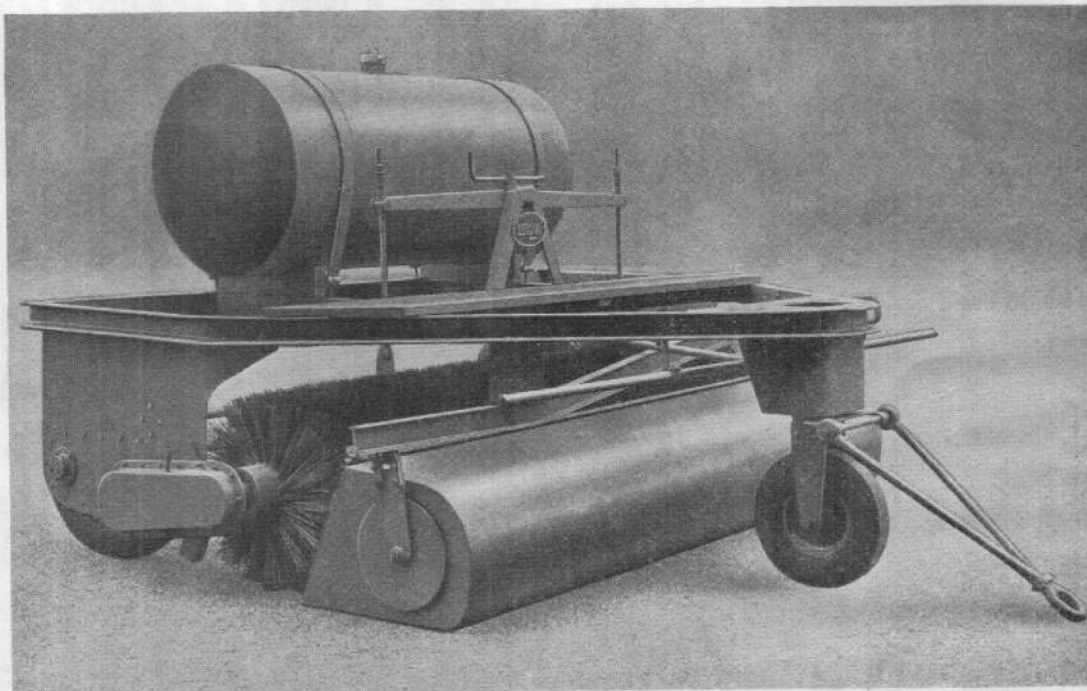
Packed for transport: Length 9 ft. 7½ in. **Height** 3 ft. 11 in. **Width** 4 ft. 9½ in.

Weight 6 cwt. 2 qr. 6 lb.

Brief description This is a portable office for N.C.O. i/c Aircraft Servicing, enabling close supervision of work on aircraft to be maintained. It is a wooden structure mounted on four castoring wheels and is fitted with blackboards, a cupboard and drawer, and a shelf on which inspection forms etc. can be signed. The office can be dismantled into its component parts for transport by air.

ITEM 5

SWEeper, MECHANICAL, TYPE C



A.P. Reference 1464G, Vol. 1, Part 2, Sect. 2, Chap. 4

Stores Ref. 4C/2304

Classification I

Overall dimensions

Length 9 ft.

Width 8 ft. 6 in.

Height 5 ft. 6 in.

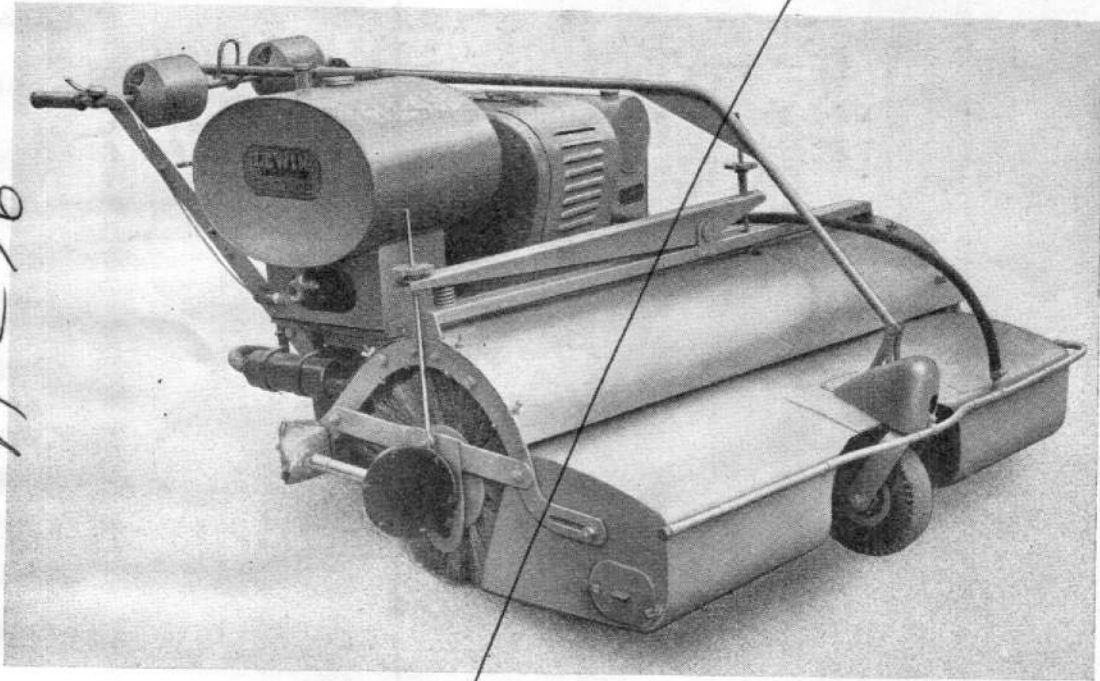
Weight 65 cwt.

Brief description This heavy duty sweeper is used for clearing stones, dirt, and grit from runways, hard standings and perimeter taxiing tracks. The 7 ft. 6 in. wide rotary brush is operated through a chain drive and road wheel gearing. The sweeper incorporates a dirt collector box and a water sprinkler, which is fed from a 120 gall. tank through a wheel regulated valve. A draw-bar is coupled to the swivelling fork of the front wheel.

~~RESTRICTED~~

ITEM 6

SWEEPER, MECHANICAL, TYPE D



A.P. Reference 4307A

Stores Ref. 4C/2455

Classification I

Overall dimensions

Length 7 ft. 2 in.

Width 5 ft. 8 in.

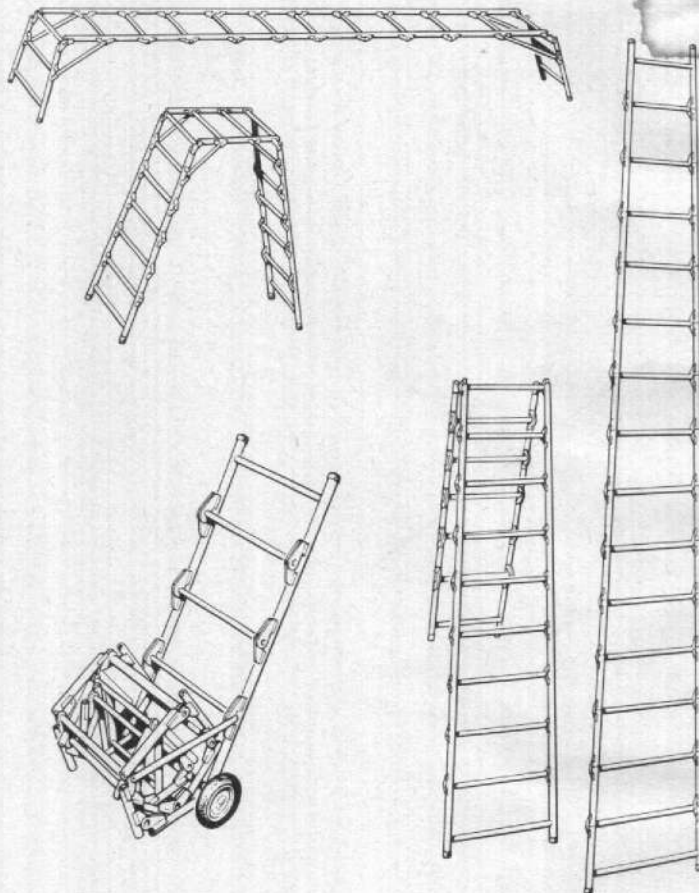
Height 3 ft. 2 in.

Weight (dry) 5 cwt. 3 qr. 26 lb.

Brief description This mechanical sweeper is propelled by an I.C. engine, and is designed for sweeping the floors of hangars and similar buildings. The brushes are rotated through the road-wheel axle shaft and a bevel-gear countershaft. The sweeper incorporates a dust collector box, a front swivelling wheel, and a water tank and spray tube.

~~RESTRICTED~~

ITEM 7

LADDER, SERVICING, "LADDA-ROLL" TYPE**A.P. Reference**

Ref. No. 4K/3136

Classification 2

Overall dimensions

Length 12 ft. 6 in.

Width (base) 1 ft. 9 in.

Width (top) 1 ft. 0 in.

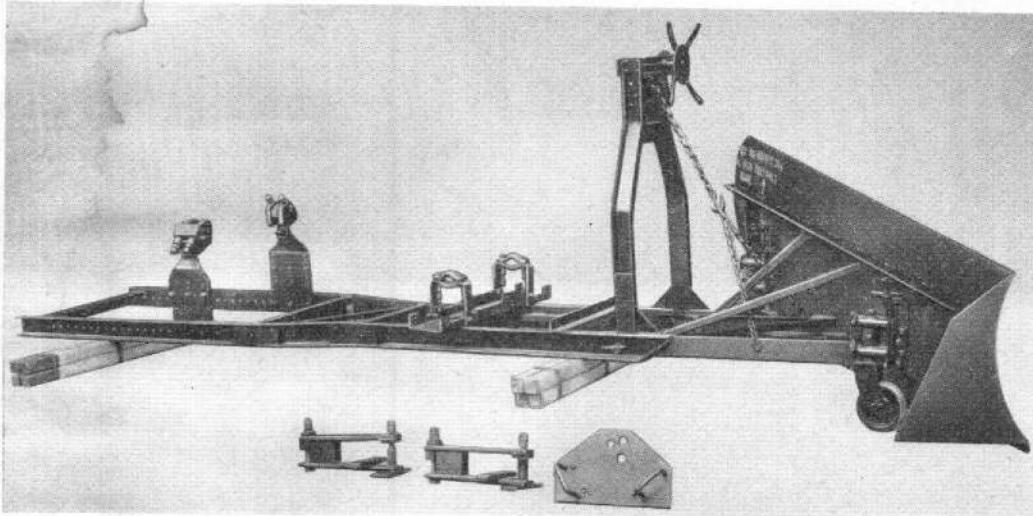
Weight 44 lb.

Brief description This easily transportable aircraft servicing ladder can be carried in a helicopter for use during field operations, or in route flying aircraft, and used when the conventional type of access equipment is either unsuitable or not available. The ladder is of all steel tubular construction with a fully extended length of 12 ft. 6 in., and can be folded or rolled into a 2 ft. dia. bundle. It is provided with self-locking joints so that it can be rapidly converted into various sizes of trestles, platform ladders, ramps, etc., and is provided with two wheels (4K/3395) and a securing band (4K/3396) to facilitate its movement.

RESTRICTED

ITEM 8

PLOUGH, SNOW, TYPE B



A.P. Reference 2496B

Ref. No. 4C/1858

Classification 3

Overall dimensions

Length 20 ft. 6 in.

Width 9 ft. 0 in.

Height 5 ft. 3 in.

Weight

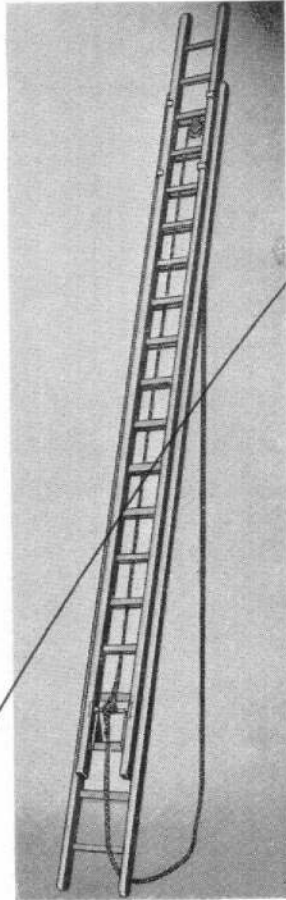
Brief description This snow plough is intended for cleaning snow, slush, and mud from runways, hard standings, and perimeter and taxiing tracks. The plough is readily attached to the driving vehicle after the preliminary mounting of certain fittings on the front axle of the vehicle. The width of the cleared track is 7 ft. approximately.

RESTRICTED

ITEM 9

LADDER, EXTENDING

AC 26



A.P. Reference

Stores Ref. 4K/1333

Classification 2

Overall dimensions

Height (min.) 20 ft. (max.) 37 ft.

Width 1 ft. 4 in.

Weight 3 qr. 20 lb.

Brief description This general purpose ladder is extended by rope-pull action, and can be adjusted for varying heights from 20 ft. to 37 ft.

(A.L.29, Sep. 56)

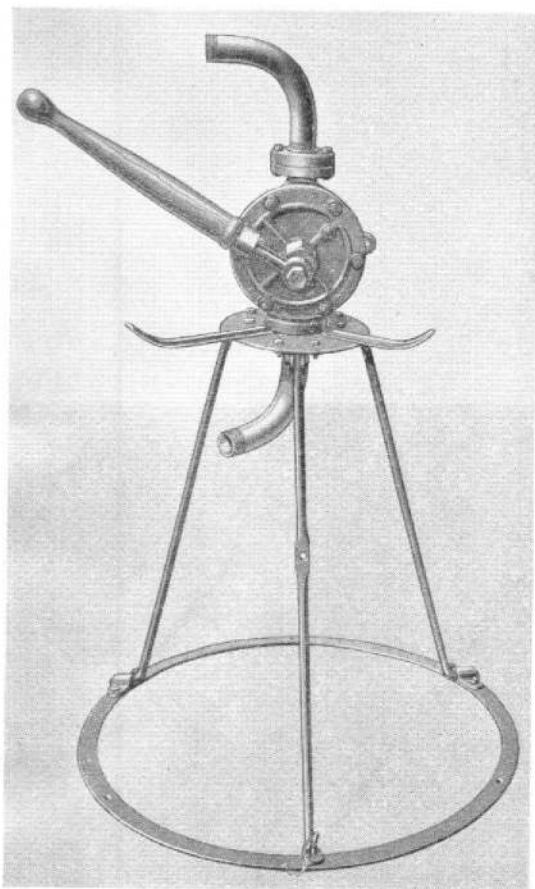
F.S./6

C (AL29)

RESTRICTED

ITEM 10

PUMP, SEMI-ROTARY No. 4, TYPE A



A.P. Reference

Stores Ref. 4K/1303

Classification 2

Overall dimensions (with stand)

Diameter of base 2 ft. 8 in.

Height 4 ft.

Weight 1 qr. 7 lb.

Brief description This semi-rotary pump can be used for general purposes. The Stores Ref. of the stand is 4K/118. The pump can be used for refuelling from 50 gall. containers, for which purpose the following accessories are necessary:—

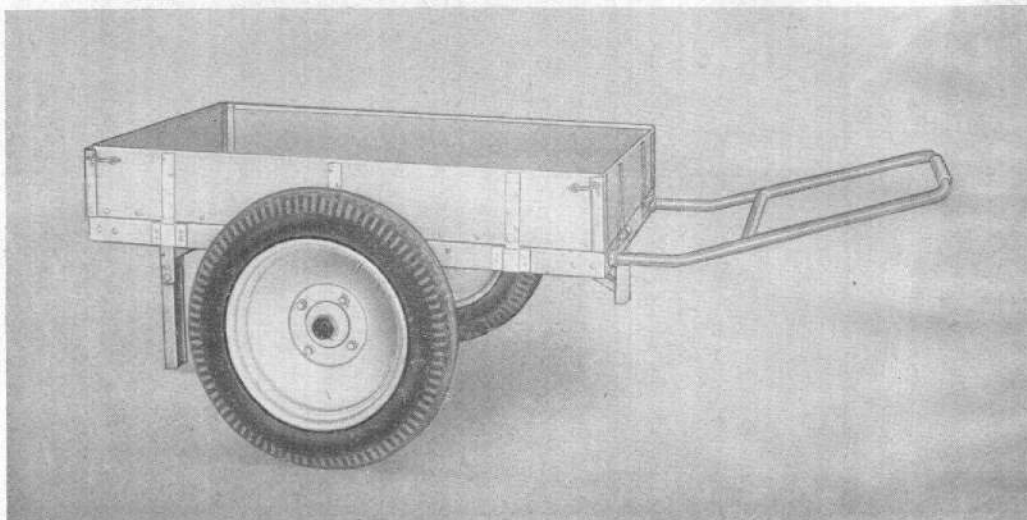
4K/2472
4K/1338
4K/2378
4K/1187

Hose, fuel, 5 ft. 3 in.
Hose, fuel, 12 ft.
Hose, fuel, 30 ft.
Nozzle, delivery, Type F

(for suction end of pump)
(for delivery end of pump)

RESTRICTED

ITEM 11

CART, HAND, TYPE B**A.P. Reference**

Ref. No. 4K/1550

Classification 3

Overall dimensions

Length 8 ft. 0 in.

Width 4 ft. 3 in.

Height (less wheels)
2 ft. 10 in.

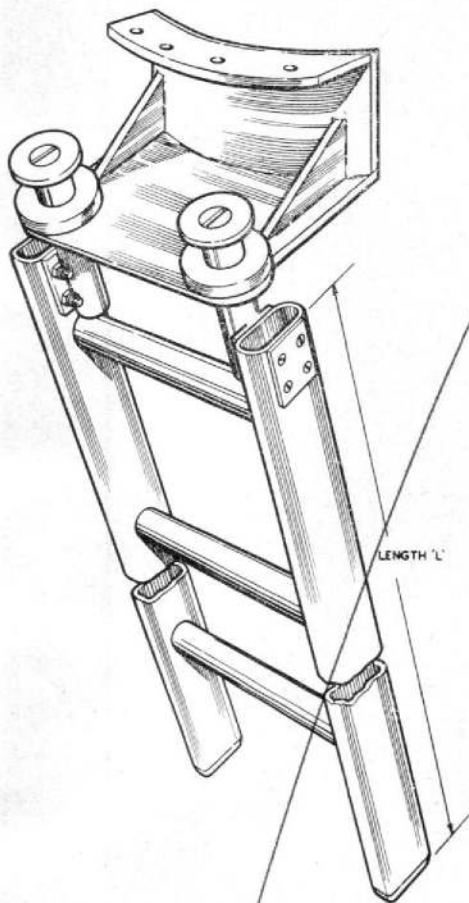
Weight 3 cwt. 2 qr.

Brief description This metal hand cart is a flight shed utility vehicle. It is fitted with fore-and-aft collapsible supporting legs, removal sides and hinged ends. The handcart may be fitted with either pneumatic-tyred or steel wheels.

RESTRICTED

ITEM 12

LADDERS, SERVICING, REFUELLER TANK



A 676

A.P. Reference

Ref. No. 4K/3283-5

Classification 3

Overall dimensions

Length 'L' (4K/3283) 5 ft. 1 in.
(4K/3284) 3 ft. 4 in.
(4K/3285) 4 ft. 2 in.

Width 1 ft. 0 in.

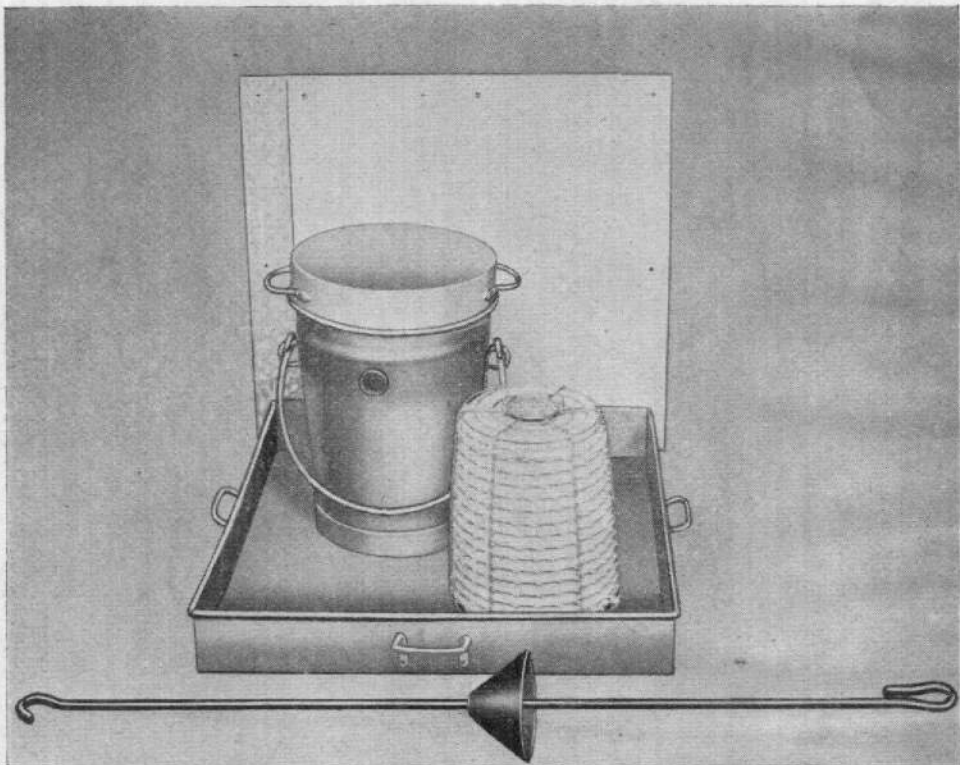
Weight

Brief description These ladders are used to provide improved access to the interior of aircraft refueller tanks for personnel engaged in tank inspection or servicing. Each ladder is of lightweight tubular construction with a bracket at the top which is shaped and drilled for bolting it to the flange around the tank manhole. The ladders are of similar construction and vary only in their lengths. Ladder (4K/3283) is used for the 2000 and 2500 gallon dual-purpose refuellers, Mk. 1, 1A and 2. Ladder (4K/3284) is used for the 950 gallon Bedford dual-purpose refueller. Ladder (4K/3285) is used for the 2500 gallon Mk. 3 air transportable refueller.

RESTRICTED

ITEM 13

FLARE, KEROSENE, TYPE A



A.P. Reference 3024, Sect. 4, Para. 23

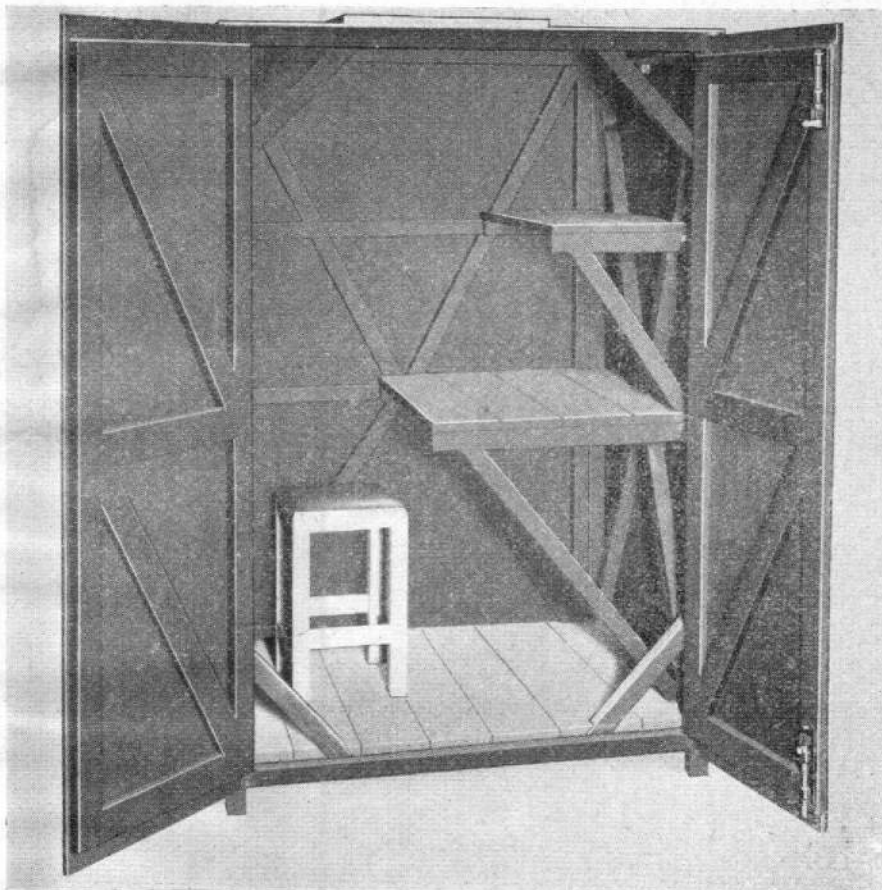
Stores Ref.	Item	Length	Width	Height	Weight
4C/197	Hook	4 ft. 1 in.	5½ in. dia.		3 lb.
4C/244	Bucket and lid	1 ft. 4 in. dia.	1 ft. 5 in.	1 ft. 5 in.	14 lb.
4C/245	Flare	1 ft. 2 in. dia.		1 ft. 3 in.	8½ lb.
4C/380	Tray and linings	2 ft. 3 in.	2 ft. 3 in.	4½ in.	45 lb.

Brief description These Type A (Money) flares are used for emergency flarepath lighting when no glim lamps or permanent, electrically controlled, installations are available. They are used also during bad weather conditions, to mark additional runway lengths, and to mark positions of obstructions. The flare consists of a wire-contained asbestos block, which is immersed in kerosine in the bucket. When in use, the bucket rests in the tray which is fitted with asbestos and sheet metal linings. A long handled hook is provisioned for moving the equipment when it is in use or for lifting out the flare, whilst hot, for fuel replenishment purposes.

RESTRICTED

ITEM 14

CABIN, W/T OPERATOR'S



A.P. Reference

Stores Ref. 4K/1360

Classification 2

Overall dimensions

Length 4 ft. 2 in.

Width 3 ft. 0 in.

Height 6 ft. 0 in.

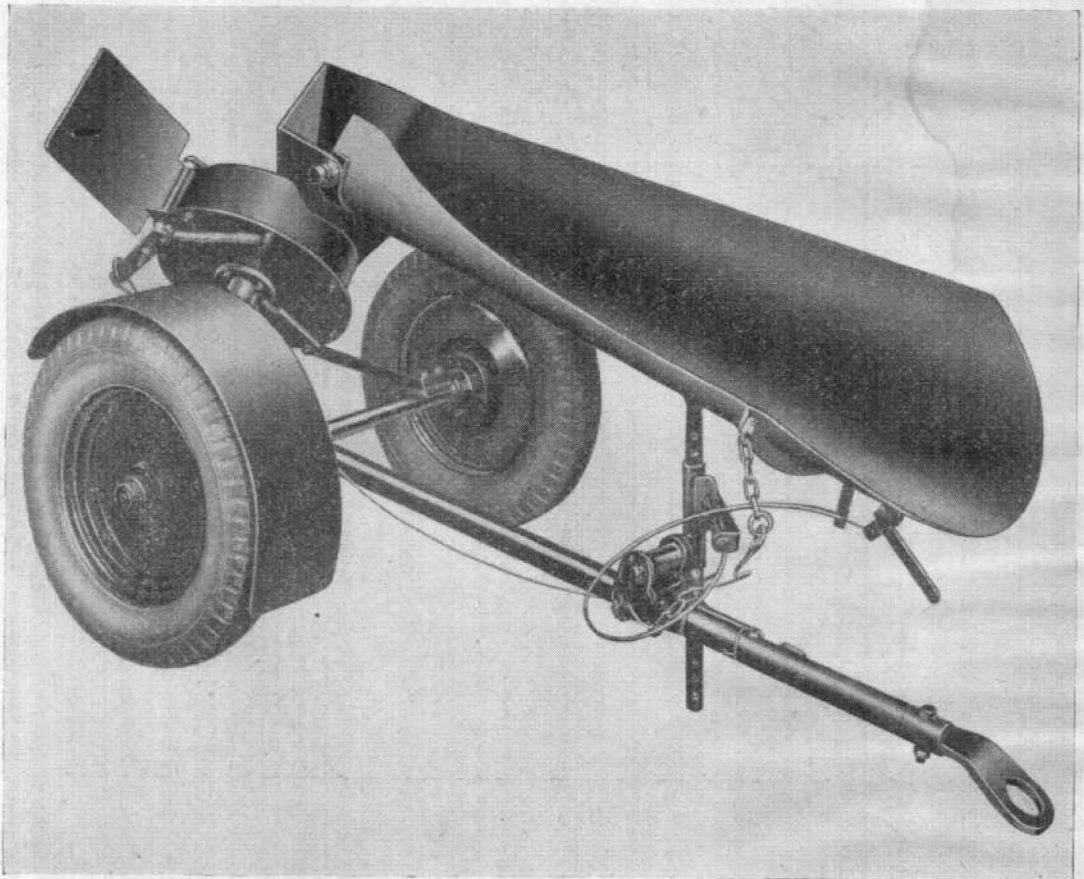
Weight 2 cwt. 20 lb.

Brief description This portable W/T operator's cabin is provisioned for use by wireless schools and operational units. The cabin is fitted with a fixed table and shelf to support the wireless equipment and accessories. A stool is also supplied. The interior surfaces are painted matt black.

RESTRICTED

ITEM 15

GRITTER



A.P. Reference 1464G, Vol. 1, Part 2, Sect. 2, Chap. 3

Classification 2

Stores Ref. 4C/1857

Overall dimensions

Length 5 ft. 0 in.

Width 2 ft. 9 in.

Height 2 ft. 9 in.

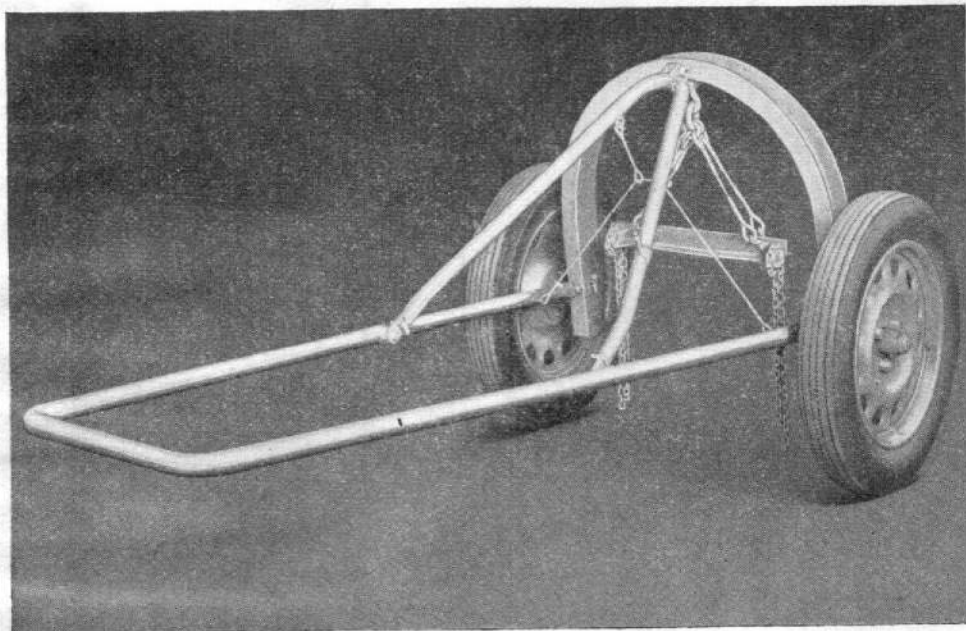
Weight 2 cwt.

Brief description This mechanical gritter is used to scatter sand, grit, granite chips, salt, or anti-freezing mixture over runways, hard standings, and perimeter tracks. The gritter consists of an adjustable tapered chute, an impeller, and a "flyer" box with a controlled flap door. The impeller is driven by a bevel wheel attached to one of the road wheels, which rotates a bevel pinion at the lower end of the impeller spindle. The width of the spread is adjustable, from 3 ft. to 30 ft.

~~RESTRICTED~~

ITEM 16

TROLLEY, BARREL



A.P. Reference

Stores Ref. 4K/1124

Classification 2

Overall dimensions

Length 7 ft. 0 in.

Width 2 ft. 10 in.

Height 2 ft. 8 in.

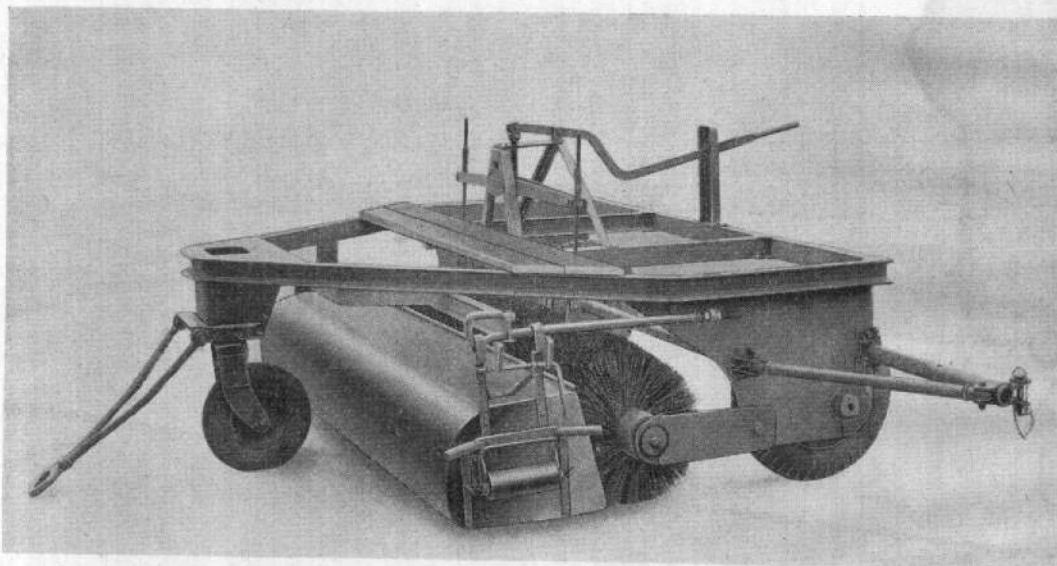
Weight 2 cwt. 1 qr.

Brief description This trolley is used for transporting 40 or 50 gall. barrels. The barrel is supported by two chain straps, two shaped angle iron spreaders, and a four-in-one bridle which has a single ring and hook suspension.

~~RESTRICTED~~

ITEM 19

SWEEPER, MECHANICAL, TYPE E



A.P. Reference 4307A

Stores Ref. 4C/2499

Classification I

Overall dimensions

Length (with drawbar)	11 ft. 0 in.	Width	9 ft. 0 in.	Height	4 ft. 8 in.
(less drawbar)	8 ft. 4 in.				

Weight 14 cwt.

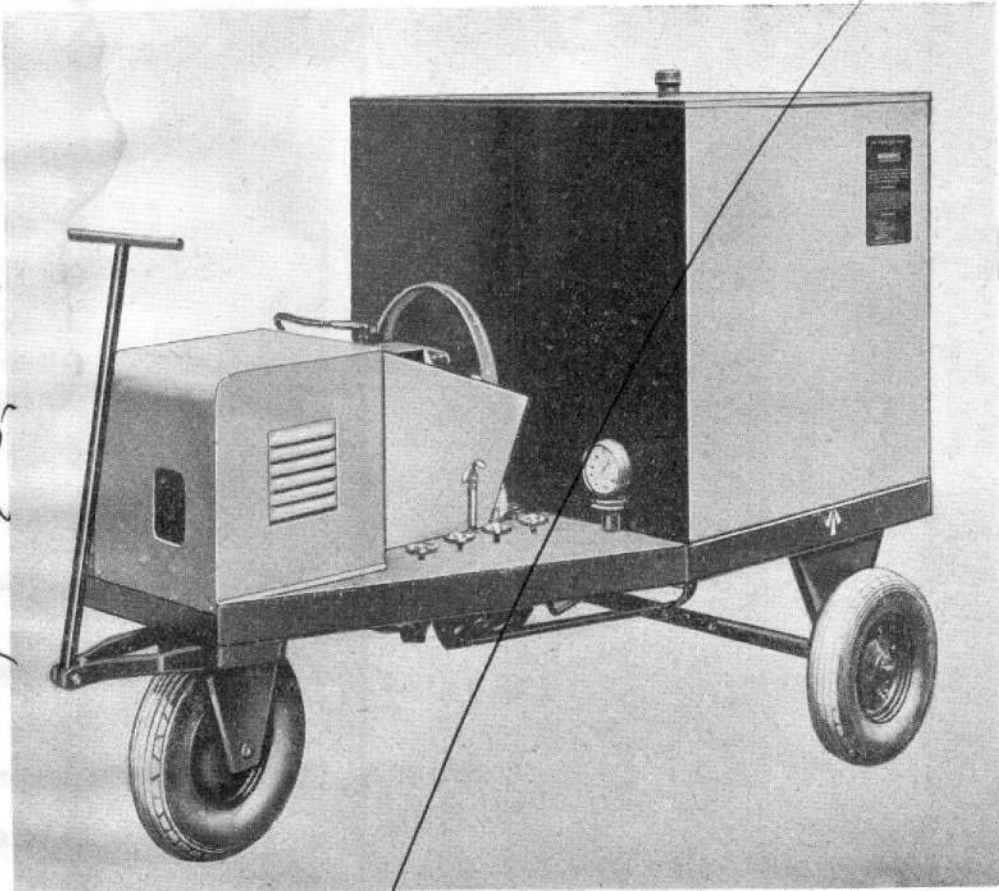
Brief description The sweeper is used for clearing stones, dirt, grit, etc., from airfield runways, hard standings, and perimeter and taxiing tracks. The brush is rotated by a chain drive from the rear wheels and sweeps the litter into a dust box which can be withdrawn for emptying. The sweeper is towed by a tractor and sweeps a path 7 ft. 6 in. wide. A path 20 ft. wide can be swept when three sweepers are ganged; the leading sweeper being fitted with towing attachments to which the drawbars of the two rear sweepers are connected. The speed for sweeping is 3 to 5 m.p.h.

RESTRICTED

ITEM 20

PLANT, CLEANING, STEAM, HEAVY DUTY, TYPE A

AC26



A.P. Reference 4323A

Stores Ref. 4K/2531

Classification I

Overall dimensions

Length 6 ft. 10 in.

Width 4 ft. 4 in.

Height 5 ft. 7 in.

Weight Empty: 9 cwt. 3 qtr. Full: 1 ton 2 cwt.

Brief description The plant provides a jet of steam at high pressure for removing dirt, oil, grease, paint, etc., from metal surfaces. It is mounted on a three-wheeled chassis for manual towing and is suitable for cleaning M.T. vehicles, heavy machinery, engine parts, and marine craft bilges. The plant embodies an electrically driven pump which supplies a mixture of water and degreasing solution to a steam coil, heated by kerosine, where a wet stream at about 100 lb. per sq. in. pressure is generated. The steam is then passed through flexible hoses to two cleaning guns. A standard 230-250 volt, a.c., single phase, electric motor is fitted.

RESTRICTED

ITEM 21

TROLLEY, CRASH, 5 TON



A.P. Reference

Stores Ref. 4K/2522

Classification 2

Overall dimensions

Length 5 ft. 0 in.

Width 5 ft. 0 in.

Height 2 ft. 0 in.

length of towing arm 6 ft. 0 in.

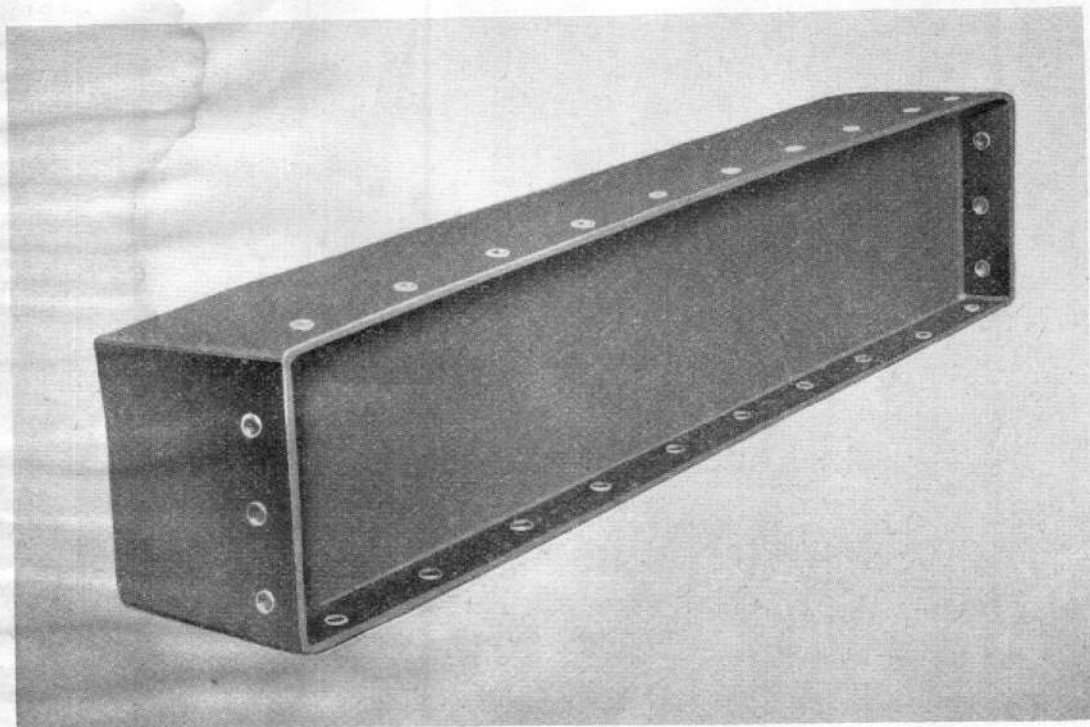
Weight 5 cwt. (approx.)

Brief description This trolley is issued to Naval Aviation only, and is used for removing crashed aircraft. The trolley has four pairs of pneumatic-tired wheels which can be swivelled to effect steering in any direction in conjunction with a detachable towing arm, which can be fitted to any side of the trolley according to the direction of towing. Two trolleys are normally used for moving an aircraft, which is supported on rubber cushions (Item 22) mounted on the trolley platform, one trolley being positioned under each main plane. The towing arms of the two trolleys are connected to a front towing frame, Mk. 2 (Stores Ref. 4G/4244) to facilitate the removal of the aircraft by one tractor.

~~RESTRICTED~~

ITEM 22

CUSHION, RUBBER



A.P. Reference

Stores Ref. 4K/

Classification 2

Overall Dimensions

Length 5 ft. 0 in.

Width 10 in.

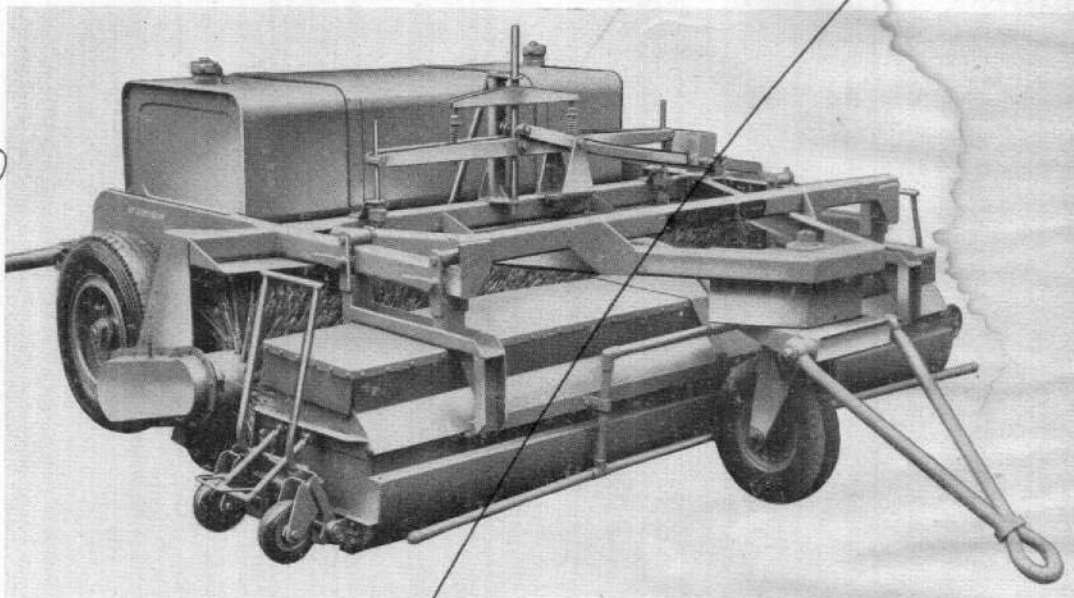
Height 9 in.

Weight 72 lb.
102 lb. (with wooden base attached)

Brief description This cushion is used to support crashed Naval aircraft on the 5 ton crash removal trolley (Stores Ref. 4K/2522) (Item 21), and is provisioned on the basis of two cushions per trolley. The cushion consists of layers of sponge rubber filling enclosed in an outer rubber cover. The cushion is attached to a wooden base which is fitted with spigots on its underside for locating the cushion on the trolley platform. The illustration above is of the bottom of the cushion showing the eyelet holes for attachment to the wooden base.

RESTRICTED

ITEM 23

SWEEPER, MECHANICAL, TYPE G**A.P. Reference** 4307A**Stores Ref.** 4C/2531**Classification** I**Overall dimensions****Length** 11 ft. 10 in.**Width** 9 ft. 8 in.**Height** 4 ft. 4 in.**Weight** (tank empty) 16 cwt. 3 qr.

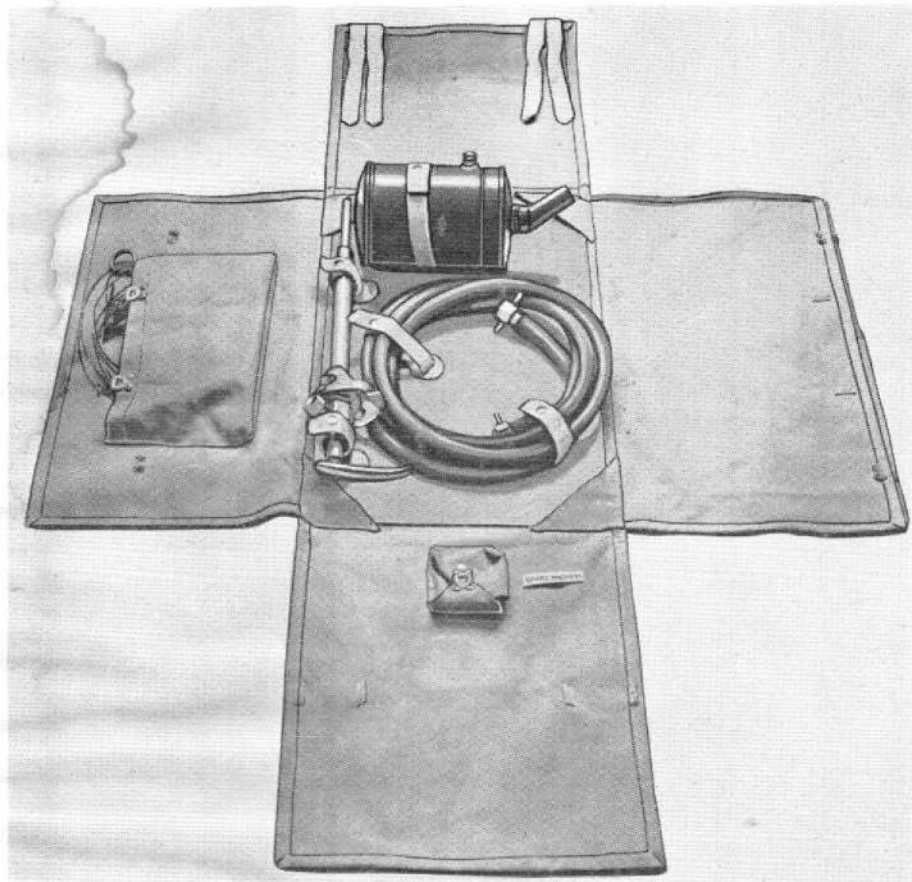
Brief description This heavy duty sweeper is used for clearing stones, dirt, grit, and small litter from airfield runways, hard standings, and perimeter and taxiing tracks. The brush is rotated by a chain drive from the rear wheels and sweeps litter into a dust box which can be withdrawn for emptying. A water sprinkler is mounted at the front of the sweeper and is fed from a 120 gallon tank. The sweeper is towed by a tractor and sweeps a path 7 ft. 6 in. wide. A path 20 ft. wide can be swept when three sweepers are ganged, the leading sweeper then being fitted with side-towing attachments to which the drawbars of the two rear sweepers are connected. The speed for sweeping is 3 to 5 m.p.h.

(A.L.21, Apr. 54)

RESTRICTED

ITEM 24

KIT, REFUELLING, LIGHTWEIGHT



A.P. Reference 1464G, Vol. 1, Part 2, Sect. 3, Chap. 5

Stores Ref. 4K/2597

Classification 2

Overall dimensions (packed in holdall)

Length 1 ft. 10½ in.

Width 1 ft. 2½ in.

Height 5½ in.

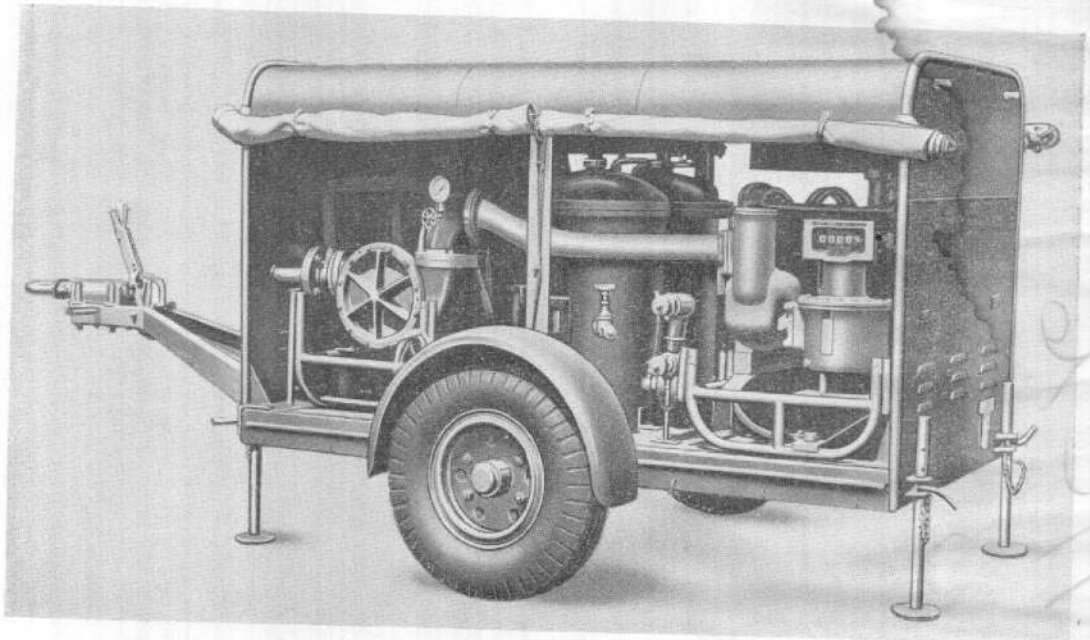
Weight 10 lb.

Brief description This equipment is provided for refuelling A.O.P. squadron aircraft from standard R.A.F. jerricans or barrelled stocks when operating in the field or from temporary air strips. The equipment, which is carried in the aircraft, comprises a green canvas holdall containing a hand pump, a funnel incorporating a filter, a length of hose, and a bonding and earthing cable. When in use, the pump is clipped into the fuel container, the hose connected between the pump and the funnel, and the funnel inserted in the aircraft fuel tank ; before pumping is commenced, the components must be bonded and earthed. The pumping rate is one gallon per minute.

RESTRICTED

ITEM 25

TROLLEY, FUEL PUMPING, 75-120 gall. per min.



A.P. Reference 4588A

Stores Ref. 4K/2571

Classification 1

Overall dimensions

Length 12 ft. 8 in.

Width 6 ft. 3 in.

Height 5 ft. 0 in.

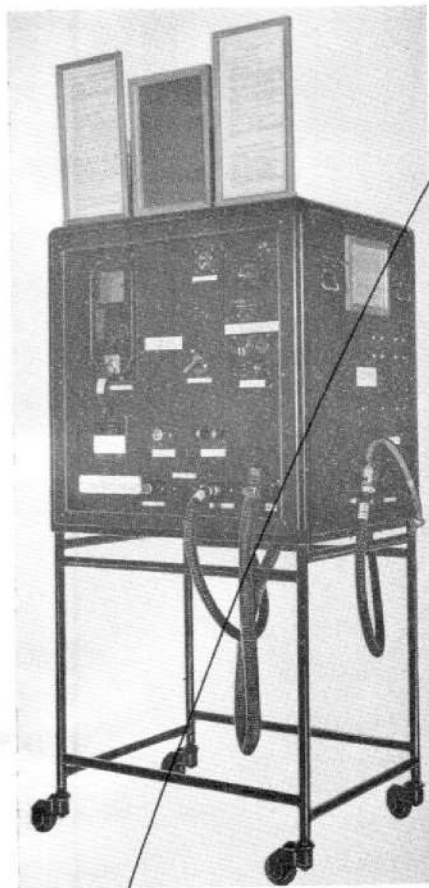
Weight 1 ton 4 cwt. 3 qr.

Brief description This trolley is used mainly for refuelling aircraft from barrelled stocks at semi-developed airfields, and is suitable for either open-line or pressure refuelling. It can be used also for pumping fuel from road or rail tankers or bulk installations into other containers, and for defuelling aircraft. The trolley consists of a two-wheeled covered chassis on which is mounted a gasoline engine-driven pump unit, two filters, a metering unit, suction and delivery hoses, and built-in stowages. The pump delivery at 1400 r.p.m. and at 20 lb. per sq. in. pressure is 80 gall. per min. through the filters and 125 gall. per min. when the filters are by-passed. The pumping and metering units can be removed from the trolley for defuelling operations in remote places inaccessible to the trolley.

RESTRICTED

ITEM 26

CABINET, TEST, FLYING CLOTHING, Mk. 1



AC 26

A.P. Reference 1182E

Stores Ref. 4C/2634

Classification 1

Overall dimensions

Length 2 ft. 8 in.

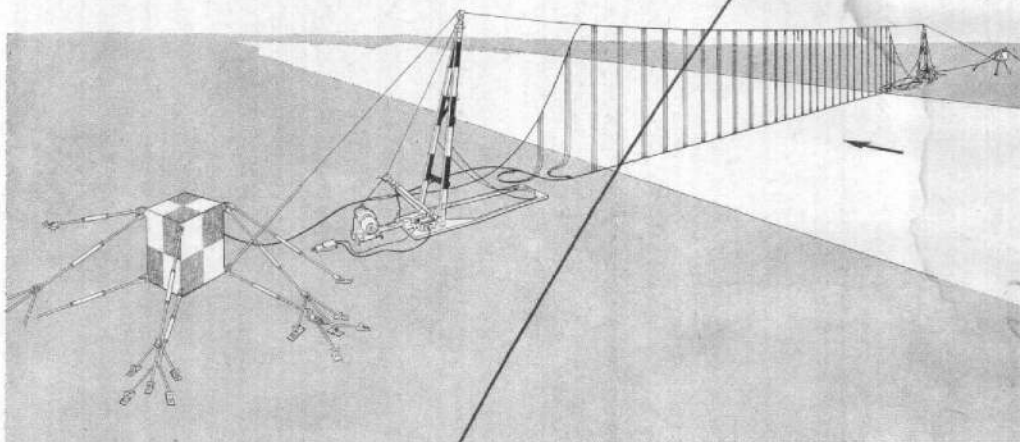
Width 2 ft. 6 in.

Height (less instruction frames)
5 ft. 0 in.

Weight 206 lb.

Brief description This cabinet is used for the functional testing and for checking the serviceability of flying clothing and associated equipment, and is intended for the use of aircrew in the crew room prior to flight. The equipment consists of a metal panelled cabinet mounted on a four-legged tubular metal stand fitted with castor wheels. Panels on three sides of the cabinet are adapted to carry test instruments and equipment, and include the oxygen test panel, anti "G" suit test panel, and the radio panel. The associated fittings, air bottles, pipelines, power switch, oxygen valve, etc., are mounted inside the cabinet and are accessible through a door in the remaining panel. Operating instructions for each test panel are mounted in frames, 1 ft. 4 in. high, on the top of the cabinet, and can be folded down for transit. An adjustable mirror also is mounted on the top of the cabinet.

~~RESTRICTED~~

AIRFIELD ARRESTER BARRIER, Mk. 5

A.P. Reference 4717A

Ref. No. 4C/2692

Classification 1

Overall dimensions

Max. height of stanchions 12 ft.

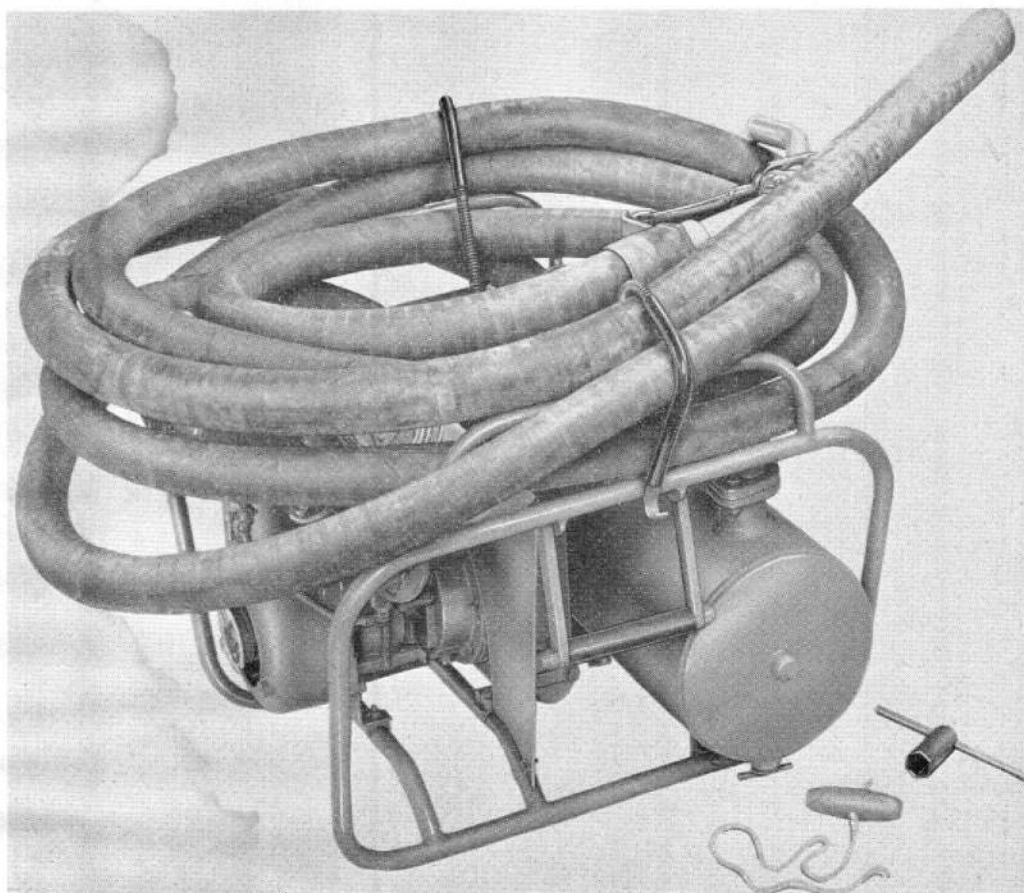
Width of barrier net 200 ft.

Weight

Brief description The "Safeland" airfield arrestor barrier is positioned at or near the end of the runway and is used in an emergency to prevent jet aircraft from overrunning the airfield. It comprises a nylon net that spans the runway and can be raised or lowered on stanchions which can be operated by a switch at the Air Traffic Control or by a switch at the barrier site. The ends of the net are attached to wires wound on brake-loaded drums that are anchored to the ground. When an aircraft enters the net, the vertical nylon ropes wrap round the leading edges of the mainplanes, and the net is carried forward. This forward travel releases the net from the stanchions and commences to pull out the brake cables. Rotation of each cable drum actuates an air valve to apply compressed air to the brake on the cable drum to retard the movement of the aircraft. Each brake cable is 690 feet long and has a working load of 4 tons.

ITEM 28

FUEL PUMPING UNIT, PORTABLE (ZWICKY "PORTAPAK")



A.P. Reference 1464G, Vol. 1, Part 2, Sect. 3, Chap. 4

Ref. No. 4K/3217

Classification 1

Overall dimensions

Length 2 ft. 1 1/2 in.

Width 1 ft. 10 1/2 in.

Height 1 ft. 6 3/4 in.

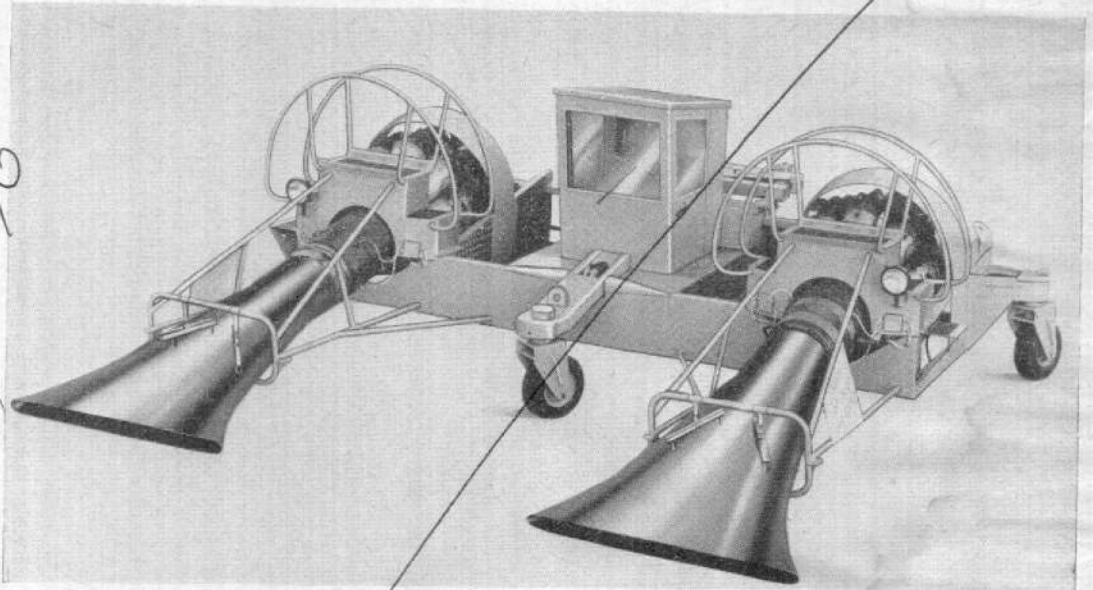
Weight (less hoses) 85 lb.

Brief description This portable fuel pumping unit is used for refuelling aircraft from barrelled stocks at forward landing areas. It is capable of pumping all grades of gas turbine fuel and gasoline used in aircraft, and also M.T. fuel, at a flow rate of 50 gallons per minute. The fuel is drawn from a barrel through a standpipe and 7 ft. suction hose to an engine-driven pump, and from the pump the fuel passes via a 5-micron filter and 12 ft. delivery hose and trigger nozzle to the aircraft tank. The pump unit is a Goodenough 1 1/2 in. Model 154B automatic self-priming centrifugal pump direct-coupled to a J.A.P. Model J8 air-cooled two-stroke gasoline engine of 79.7 c.c. capacity. The pump unit and filter are mounted in a tubular steel frame fitted with carrying handles.

RESTRICTED

ITEM 31

RUNWAY DE-ICER



A.P. Reference 4944A

Ref. No. 4C/3240

Classification 1

Overall dimensions

Length 19 ft. 0 in.

Width 16 ft. 0 in.

Height 6 ft. 0 in.

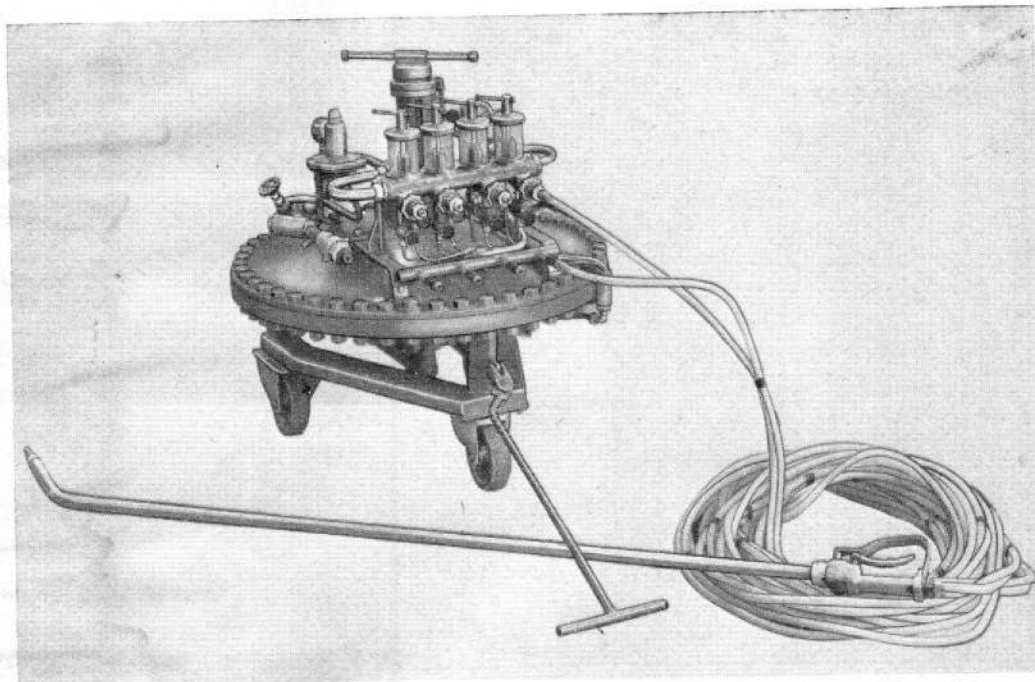
Weight 3½ tons

Brief description This runway de-icer is used for clearing snow and ice from airfield runways, by blowing rather than melting, and is most effective when used on light virgin snow. The de-icer consists of a chassis, mounted on three pneumatic-tyred fully castoring wheels, which carries an operator's cabin and two Derwent Mk. 8 gas turbine engines fitted with flat nozzles. The engines are mounted one at each side of the chassis with the exhaust nozzles facing forward so that the jet efflux is concentrated in a wide stream over the ground. The cabin is mounted central on the chassis and contains the engine controls, instruments, intercom and V.H.F. radio system, and also a 4-ton hydraulic jack for raising and lowering the engine nozzles. The de-icer is secured to the front of a 2500 gallon aircraft refuelling vehicle which acts as the prime mover and also carries the fuel supply for the gas turbine engines.

RESTRICTED

ITEM 32

PLANT, AIRCRAFT WASHING, Mk. 2



A.P. Reference 4957A

Ref. No. 4K/3282

Classification 2

Overall dimensions

Diameter 2 ft. 11 in.

Height 3 ft. 0 in.

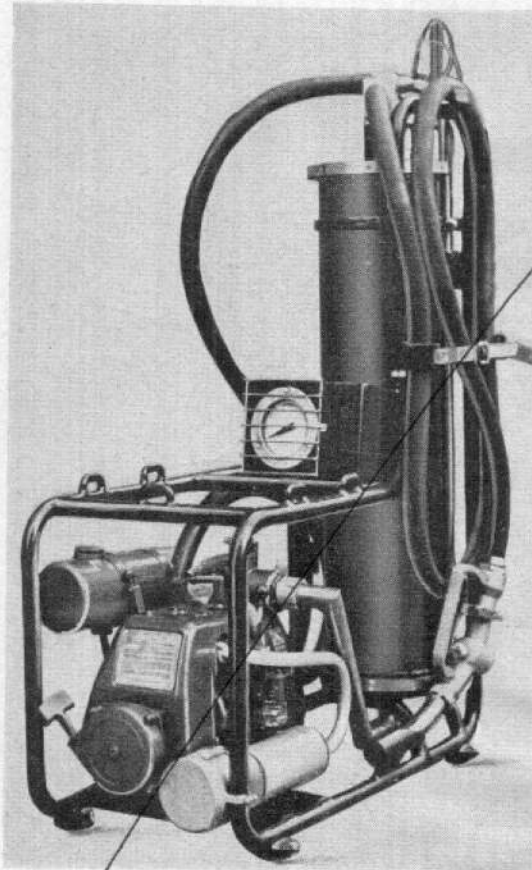
Weight (with accessories) 666½ lb.

Brief description This equipment is used in conjunction with an external water supply and a low pressure air supply (25-35 p.s.i.) for applying a foam compound for cleaning the surfaces of aircraft. The plant comprises a pressure vessel in which a slack rubber diaphragm separates the upper cleaning compound chamber from the lower water chamber, the unit being mounted on three wheels, one of which is castoring, and is provided with the necessary control valves. The plant is actuated by water pressure to supply a 1 to 9 dilution of cleaning compound in water to each of four spray lances that mix the diluted solution with low pressure air to create a foam suitable for application to aircraft surfaces. Three systems (water, air and cleaning compound) are mounted on the vessel body, and manifolds in the air and cleaning compound systems provide for the connection of the hoses of up to four spray lances for applying the foam. A liberal supply of water at adequate pressure is required for the subsequent rinsing of the cleaned surfaces.

RESTRICTED

ITEM 33

FUEL PUMPING UNIT, LIGHTWEIGHT, PORTABLE (COBAR)



AL 79

A.P. Reference 1464G, Vol. 1, Part 2, Sect. 3, Chap. 15

Ref. No. 4G/8217

Classification 1

Overall dimensions

Length 2 ft. 11 in.

Width 1 ft. 8 in.

Height 3 ft. 10 in.

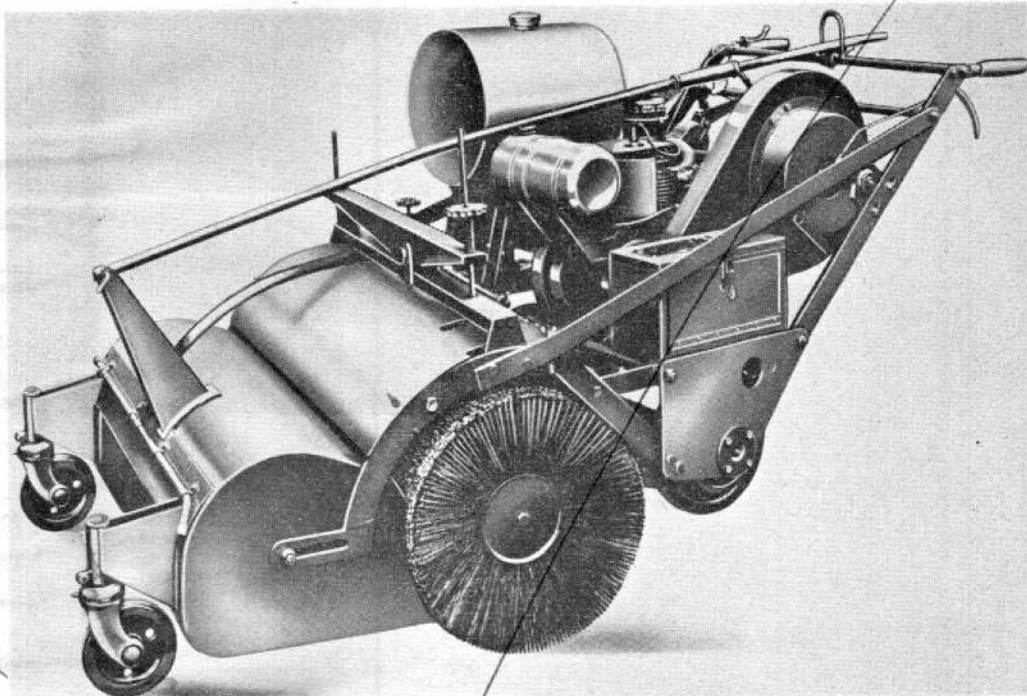
Weight (dry) 100 lb. (filled with fuel) 180 lb.

Brief description This portable fuel pumping unit is used for refuelling Naval aircraft and helicopters from barrelled fuel stocks in areas where the normal refuelling vehicles and installations are not available. It is capable of pumping all grades of gas turbine fuel and gasoline used in aircraft, and also M.T. gasoline, at a flow rate of 20 gallons per minute, and must not be used for pumping any other fluids. The fuel is drawn from a barrel through a standpipe and 10 ft. suction hose to an engine-driven pump, and from the pump the fuel passes via a 2-stage filter unit and 10 ft. delivery hose and trigger nozzle to the aircraft tank. A differential pressure gauge indicates when the filter element is clogged and requires renewal. The pump is an "Alcon" self-priming centrifugal pump and is direct-driven by a J.A.P. Mk. 10/2 98 c.c. air-cooled four-stroke gasoline engine, the pump impeller being mounted on the end of the engine shaft. The engine/pump unit and the filter are mounted in a tubular steel frame on which provision is made for coiling the hoses and stowing the standpipe and delivery nozzle.

RESTRICTED

ITEM 34

SWEeper, MECHANICAL, TYPE J



A.P. Reference 4307A

Ref. No. 4C/3345

Classification 1

Overall dimensions

Length 7 ft. 3 in.

Width 4 ft. 0 in.

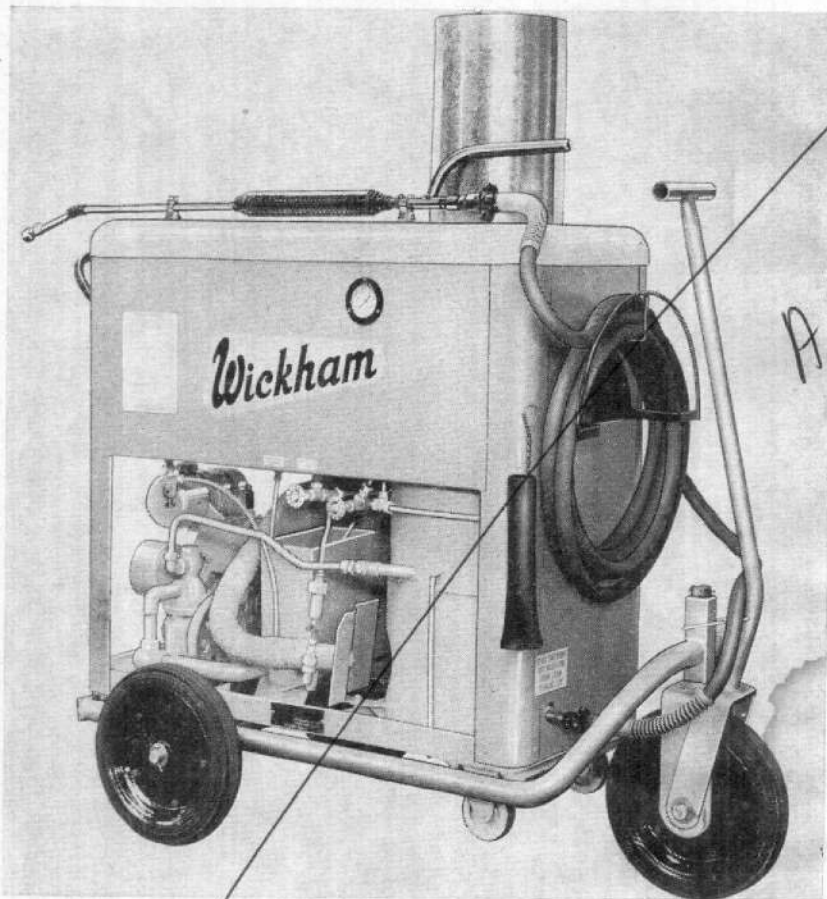
Height 3 ft. 1½ in.

Weight

Brief description This mechanical sweeper is used for sweeping the floors and surrounds of hangars and similar large builders. A J.A.P. Model 4/3B single-cylinder four-stroke 288 c.c. gasoline engine is installed in the sweeper and provides the drive via a hand-operated clutch for the solid rubber tyred road wheels which in turn drive the rotating brushes through a shaft and bevel gearing. The sweeper is operated by the clutch and throttle controls at the rear end and incorporates a collector box for the sweepings, front castor wheels, and a 6½ gallon water tank and spray tube. Adjustment is provided for brush wear.

RESTRICTED

PLANT, STEAM CLEANING, MOBILE (WICKHAM)



A.P. Reference 4323B

Ref. No. 4K/3050

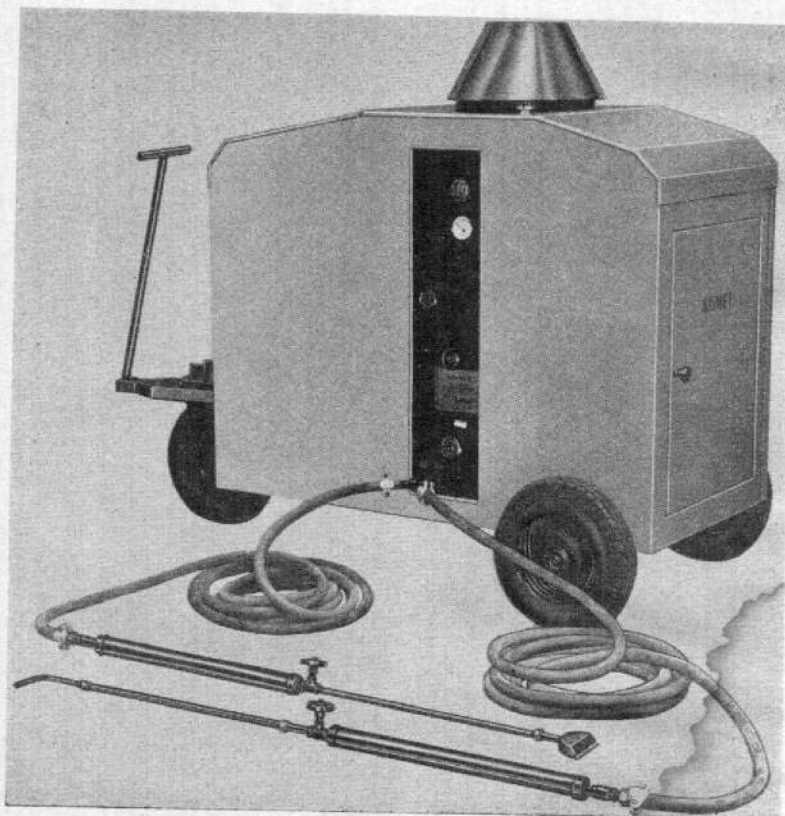
Overall dimensions

Length (drawbar up) 5 ft. 1 in. **Width** 2ft. 5 in. **Height** (with chimney) 5 ft. 2 in.
Weight 5½ cwt. (approx.) (less chimney) 4 ft. 1 in.

Brief description This mobile heavy duty steam cleaning plant supplies steam at high pressure through a flexible hose and steam cleaning gun and is used mainly for cleaning Naval aircraft, particularly carrier based aircraft on disembarkation. It may be used also for removing dirt, oil, grease and other organic contaminants from the surfaces of metal equipment. The plant is mounted on a three-wheeled chassis and consists of an engine-driven pump which supplies a mixture of water and detergent (Gensol No. 12) to a steam coil where wet steam is generated at pressure up to 100 lb.in². The steam coil is heated by the combustion of kerosine in a fire chamber where it is fed with air by a blower, also driven by the engine. The plant includes the tanks for water, fuel and water/detergent solution, a constant water supply of 120 gallons per hour being fed by a hose from the water mains. The power unit is a Villiers Model 515H, 150 c.c. air-cooled four-stroke gasoline engine.

ITEM 37

PLANT, STEAM CLEANING, HEAVY DUTY, TYPE C



A.P. Reference 4323B

Ref. No. 4K/2961

Overall dimensions

Length 6 ft. 0 in.

Width 2 ft. 5 in.

Height 4 ft. 9 in.

Weight (dry) 900 lb.

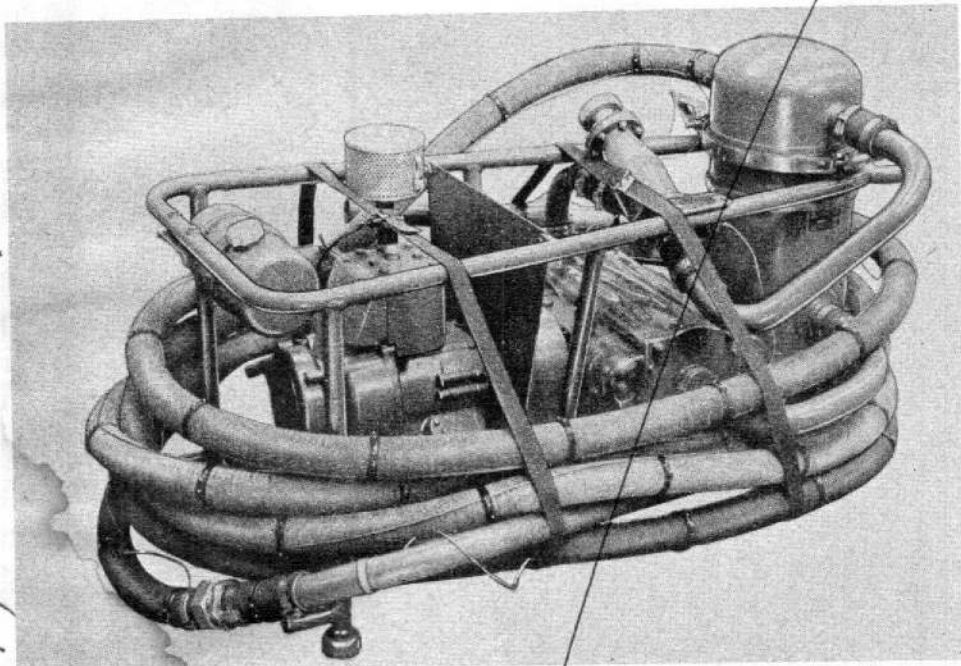
Classification 1

Brief description This mobile heavy duty steam cleaning plant supplies steam under pressure through two flexible hoses and steam cleaning guns and is used for removing dirt, oil, grease and other organic contaminants from the surfaces of metal equipment, such as mechanical transport, heavy machinery and ground equipment. The plant is mounted on a three-wheeled chassis and consists of an engine-driven pump which supplies a mixture of water and detergent to a steam coil where wet steam is generated at a working pressure of 80 lb. per sq. in. The coil is heated by the combustion of kerosine in a fire chamber where a forced draught is created by an air blower. The plant includes the tanks for water, fuel and water/detergent solution, a constant water supply of 120 gallons per hour being fed by a hose to the plant from the water mains. The power unit is a Villiers Mk. 25 air-cooled four-stroke gasoline engine.

~~RESTRICTED~~

ITEM 38

FUEL PUMPING UNIT, LIGHTWEIGHT, PORTABLE, Mk. 3 (KELSTON)



A.P. Reference 1464G, Vol. 1, Part 2, Sect. 3, Chap. 13, App. 1

Ref. No. 4K/3961

Classification 1

Overall dimensions

Length 3 ft. 9 in.

Width 2 ft. 1 in.

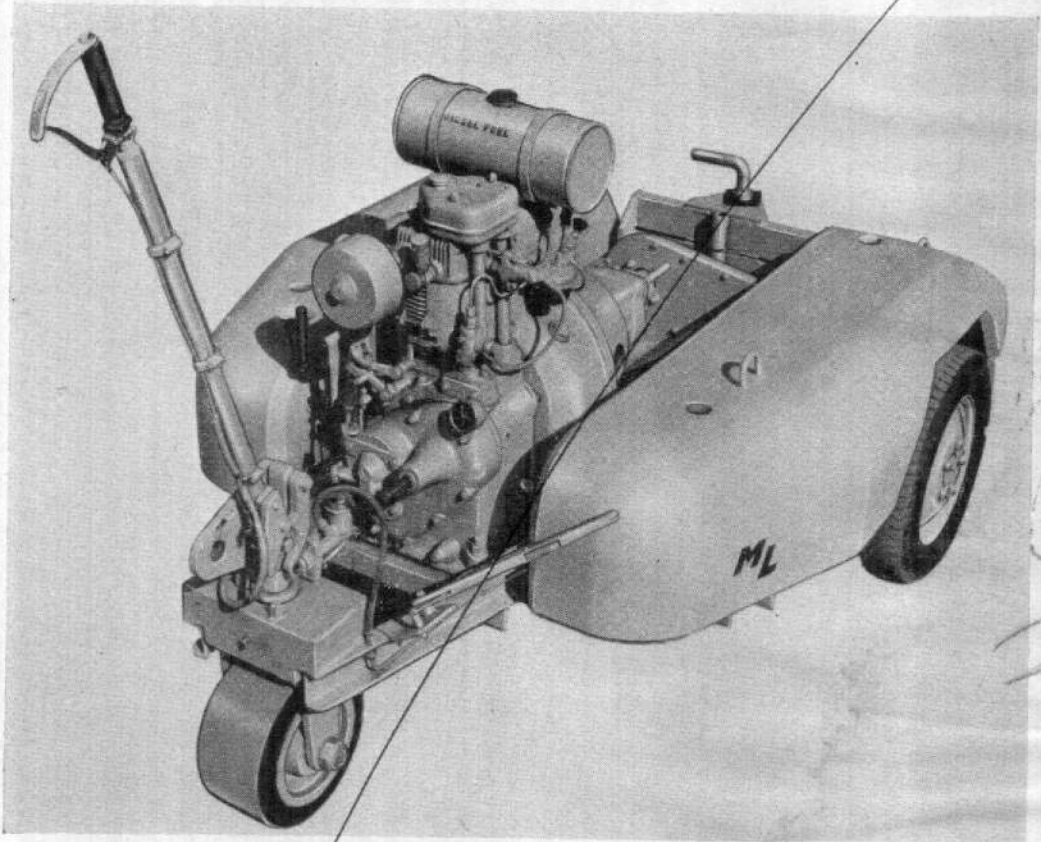
Height 1 ft. 11½ in.

Weight 175 lb.

Brief description This unit is used for refuelling aircraft from barrelled stocks at forward landing areas, and incorporates a two-position by-pass valve which, when set to its low pressure position, relieves the fuel pressure in excess of 5 lb. per sq. in. when the unit is used for filling Sealdrums. The unit is capable of pumping all grades of aircraft and M.T. fuel at a flow rate of 40 g.p.m. The fuel is drawn from a barrel through a standpipe and 15 ft. suction hose to the pump and passes via a Stream-Line filter and 30 ft. delivery hose and trigger nozzle or pressure fuelling coupling to the aircraft tank or Sealdrum. The Kelston Model 1540 self-priming line pump is of the pulsating type and is driven by a Villiers Type 515H 150 c.c. air-cooled four-stroke gasoline engine. The unit equipment is mounted in a tubular steel frame, around which the hoses are coiled when not in use.

RESTRICTED

HANDLER, MECHANICAL, Mk. 1 (MINI-HORSE)



A.P. Reference 4494B

Ref. No. 4C/3367

Overall dimensions

Length 9 ft 2 in

Width 4 ft 10½ in

Classification 1

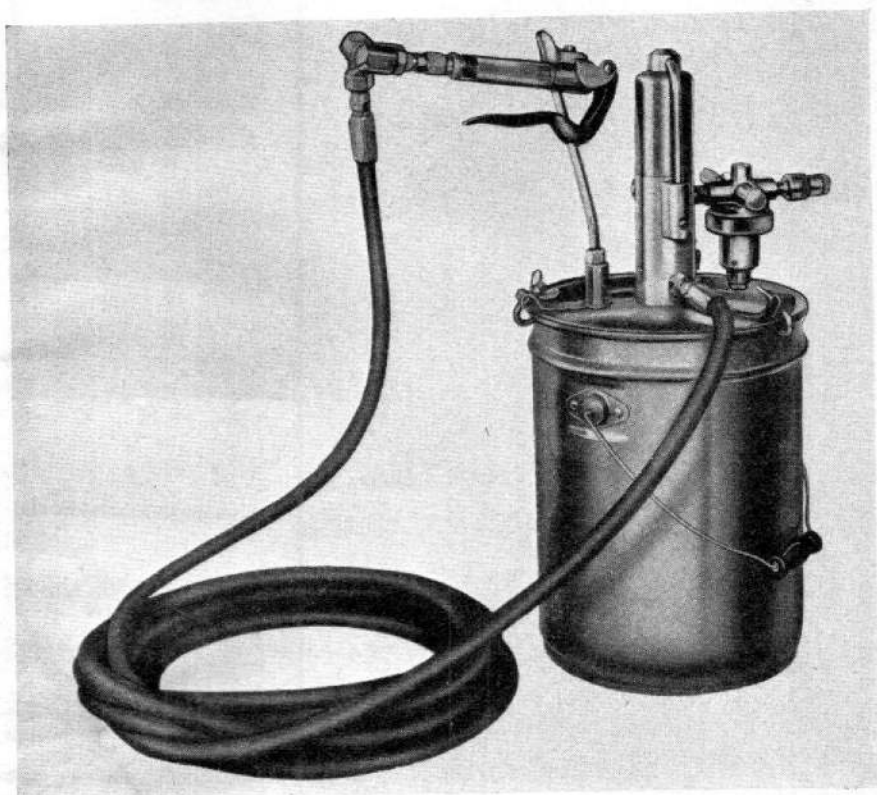
Weight 2542 lb

Height 3 ft 7 in

Brief description This pedestrian-controlled vehicle is used for towing ground servicing trolleys and other trailer type equipment of up to 15 tons in weight. It consists of a three-wheeled chassis on which a Coventry Victor AD.3 6 h.p. air-cooled diesel engine provides the drive to the two rear pneumatic-tyred wheels via a 3-speed/reverse gearbox and differential unit. The transmission is through an automatic centrifugal clutch which engages at a specified engine speed. Steering on the front solid-tyred castor wheel is controlled by a pivoted tiller arm incorporating the throttle control; this control is a squeeze lever on the handle grip which, when released, reduces the engine speed to tick-over so that the clutch automatically disengages. Hydraulic brakes on the rear wheels are applied by raising the tiller or pushing it down and, in addition, a mechanical parking brake is provided. A three-tier towing pintle is attached to the chassis rear cross bar. Solid cast weights are bolted to each side of the chassis.

ITEM 40

LUBRICATOR, HIGH-PRESSURE, TYPE 8639UR



A.P. Reference ◀ 119F-2203-16 ▶

Ref. No. 4K/3461 ◀ and 4K/4296 ▶

Classification 2

Overall dimensions

Width 10½ in

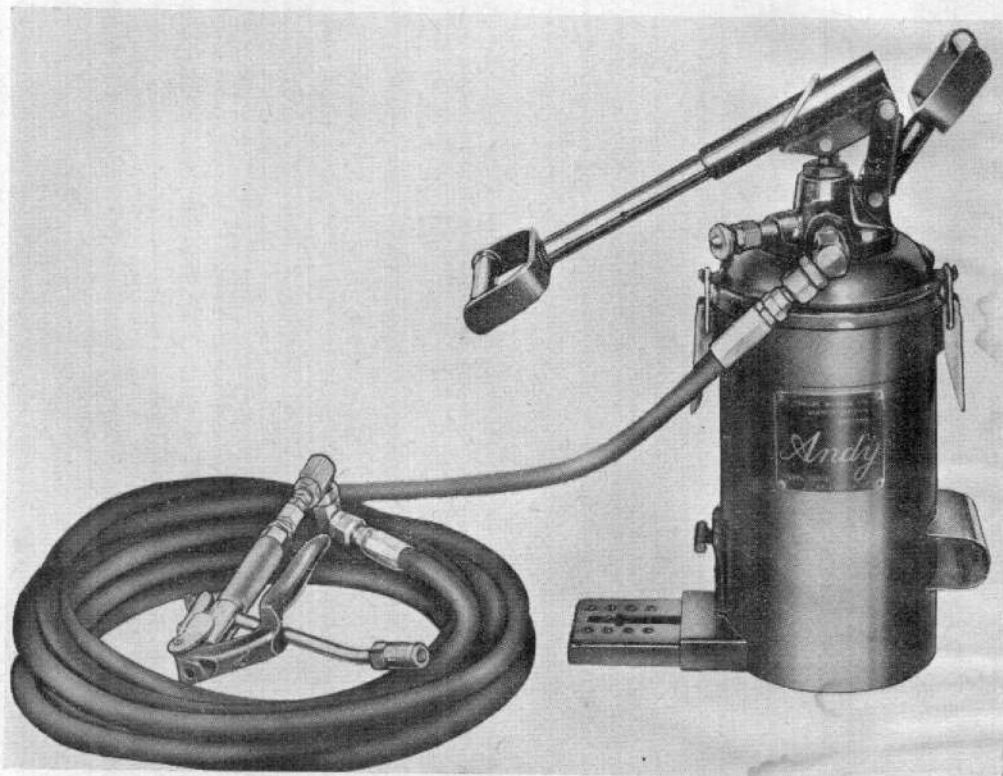
Height 21 in

Weight 25 lb

Brief description This lubricator is an air operated unit designed specifically for pressure lubricating with grease or oil. It can be used with a normal hanger pressure air supply or with a mobile compressor. The equipment comprises an air motor attached to a pump that forms an assembly with a lid which clamps on to a 28 lb. container, immersing the pump in the lubricant. A spring loaded follower is used with the grease lubricant to assist scavenging of the container. The air motor delivers 60 lb/in². maximum air supply to give a lubricant pressure of 2800 lb/in². The lubricator ◀ 4K/3461 ▶ is supplied complete with a 30 ft. length of delivery hose together with a control valve which can be fitted with any standard grease connector. ◀ The lubricator 4K/4296 differs in that it has a 15 ft length hose, and carries a warning plate marked "For M.T. use only". ▶

ITEM 41

LUBRICATOR, HIGH-PRESSURE, TYPE 5000



A.P. Reference 1464G, Vol. 1, Part 2, Sect. 5, Chap. 47

Ref. No. 4K/3462

Classification 2

Overall dimensions

Dia. of tank 6½ in.

Width 10½ in.

Height 18½ in.

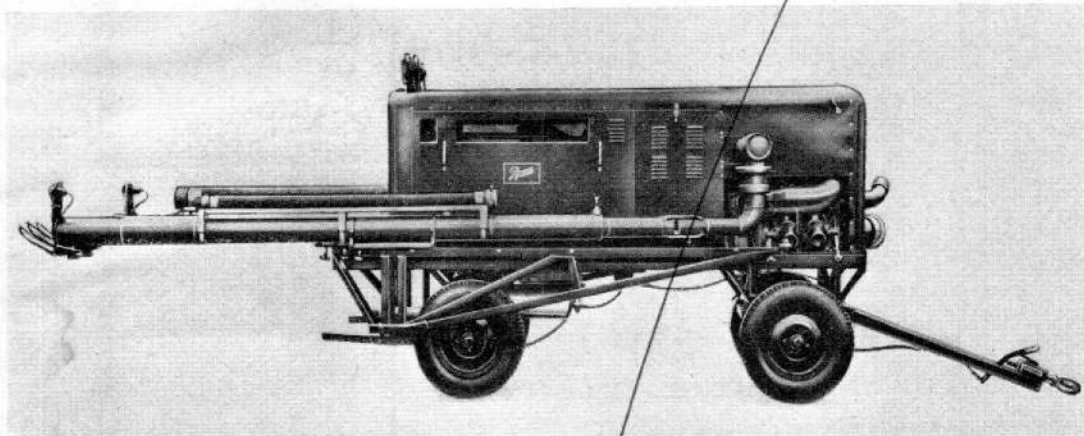
Weight 37 lb.

Brief description This lubricator is a manually operated pressure lubricator and is intended for use where normal pressure air supply is not available. The lubricator comprises a manually operated pump that is fitted to a cover which clamps to a 8½ lb. lubricant container, immersing the pump in the lubricant. The container is designed to accept the standard 7 lb. Service grease package; alternatively the grease may be loaded directly into the container, in which case it will accept 8½ lb. of grease or 1 gallon of oil. The pump delivers 0.225 cu. in. on each stroke and develops 5000 lb/in.² readily; higher pressures may be developed depending on the effort applied. The lubricator is supplied complete with a 20 ft. length of delivery hose together with a control valve which can be fitted with any standard grease connector.

RESTRICTED

ITEM 42

UNIT, FOAM DISPENSER



AC 76.
A.P. reference 4945A, Vol. 1 and 6, Chap. 1

Ref. No. 4C/3166

Classification 1

Overall dimensions

Length 24 ft.

Width 7 ft. 6 in.

Height 6 ft.

Weight 2 ton 5 cwt.

Brief description This Foam Dispenser Unit is designed as part of a runway foam laying equipment and is used, in conjunction with Item 43, in reducing the fire hazard when an aircraft lands under "wheel up" conditions, by providing a carpet of foam along the runway. The Unit comprises a Coventry Climax centrifugal pump, Type UFP Mk. 14, powered by a Rolls Royce B.81 Mk. 7P engine, a Pyrene "Round-the-Pump" Inductor, six foam generators and operating controls located on a control panel. The equipment is towed along the runway at approximately 3 m.p.h. discharging foam at the rate of 10000 g.p.m. over an area of 45 ft. wide and 1200 yds. long in not more than 16 minutes. The width of the carpet can be varied from 45 ft. to 90 ft. by adjusting the angle of spread of the six movable foam generators, providing that the operating speed of the Units, and consequently the length of the carpet, are reduced in order to maintain a constant depth of $1\frac{3}{4}$ inches. A 100 ft. reel of intercomm. cable is supplied for communications between the Unit operator and the tractor driver and two flat beam lamps are mounted on top of the engine compartment to provide flood-lighting of the area being foamed. The foam generating equipment will withstand any changes of ambient temperature between -40°C and $+70^{\circ}\text{C}$, and will operate efficiently at temperatures between -26°C and $+50^{\circ}\text{C}$.

RESTRICTED

ITEM 47

TROLLEY, AIRCRAFT WASHING PLANT**A.P. Reference** 119F-1902-16**Ref. No.** 4K/4091 (Electrically driven)
4K/4092 (I.C.E. driven)**Classification** 1**Overall dimensions****Length** (less towbar) 17 ft 6 in
(towbar raised) 13 ft 0 in**Width** 4 ft 9 in**Height** 5 ft 5 in**Weight** (dry) 3472 lb**Power unit**

4K/4091 10 h.p., 415V. 3 phase, 50 c/s electric motor

4K/4092 Gasoline engine, Coventry Victor, Type AN4 four stroke, air cooled

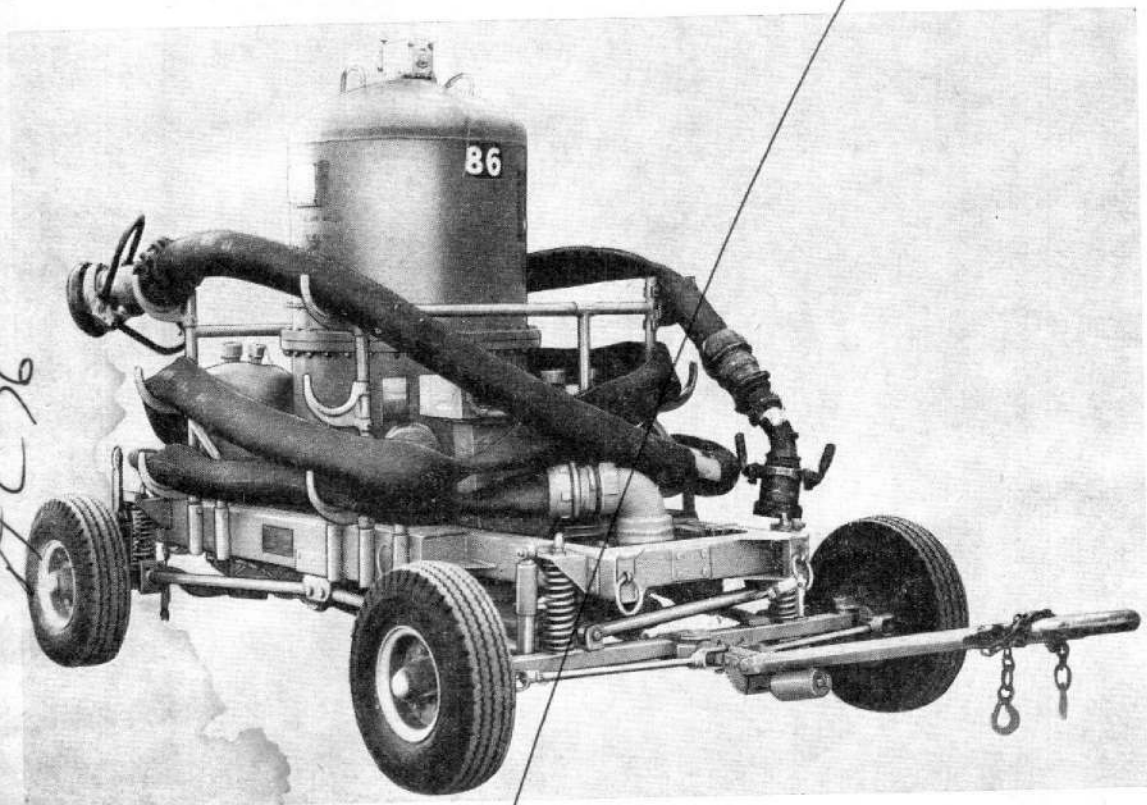
Brief description This mobile aircraft washing plant is used for the application of foam cleaning compound, or water, to aircraft surfaces. The plant comprises a standard 35 cwt, Type C chassis, on which are mounted a water pump, a compressor and air receiver, a foam dispensing assembly, foam spraying lances, water spray lances and water spray nozzles. The power unit drives the water pump and compressor only; the vehicle must be towed to the point of operation. A source of water supply must be available from a hydrant or static water tank.

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ITEM 48

TROLLEY, HYDRANT, MH-2



A.P. Reference 119R-0201-16

Ref. No. 4K/4099

Classification 1

Overall dimensions

Length (less drawbar) 9 ft 2½ in Width 5 ft. 7½ in.

Height 5 ft 6½ in Drawbar length 3 ft 6½ in

Weight 1600 lb (approx)

Brief description The trolley comprises a 4-wheeled trailer chassis with coil spring suspension assisted by hydraulic shock absorbers with equipment mounted on the trailer to filter and record the quantity of fuel delivered into aircraft from a fuel hydrant at a minimum hydrant pressure of 80 lb/in². The equipment may also be used for defuelling operations.

A reducing valve in the system controls the delivery pressure at 50 lb/in². Other main components in the system include a filter separator, meter and coupling units for the hydrant and aircraft noses.

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