

# FROM A.D.U.s TO G.D.U.s

BY

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Now that dieso has almost replaced F.F.O. as the fuel burnt in the Fleet, coal-burning days are easily forgotten. Today, fuelling ship causes little sweat and few problems provided the 'Chief Stoker's Party' takes accurate dips (or counts the fuel-tank ladder rungs correctly); so let us spare a thought for the lads who used to hump many tons of coal into the bunkers whilst the Chief Stoker still had to keep the ship upright.

Having spared them (and the dust count) a brief thought and remembered that, having shovelled the coal into the bunkers, they then had to shovel it at the required forcing rate into the furnaces, let us also remember that their toil was still not done. Combustion of the coal produced as a by-product a vast amount of ash and thereby a lot more shovelling and humping. How popular then must have been the A. and A. which authorized the installation of ash-removing engines in H.M. ships.

Readers might share a passing interest in the Stone's Ash Expeller which, after trials in H.M.S. *Africa*, was brought into popular use in the Service and which is described in *The Marine Steam-Engine* by R. Sennet\* and H. J. Oram\* first published in 1882.

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\*Both subsequently served in the appointment of Engineer-in-Chief of the Fleet.

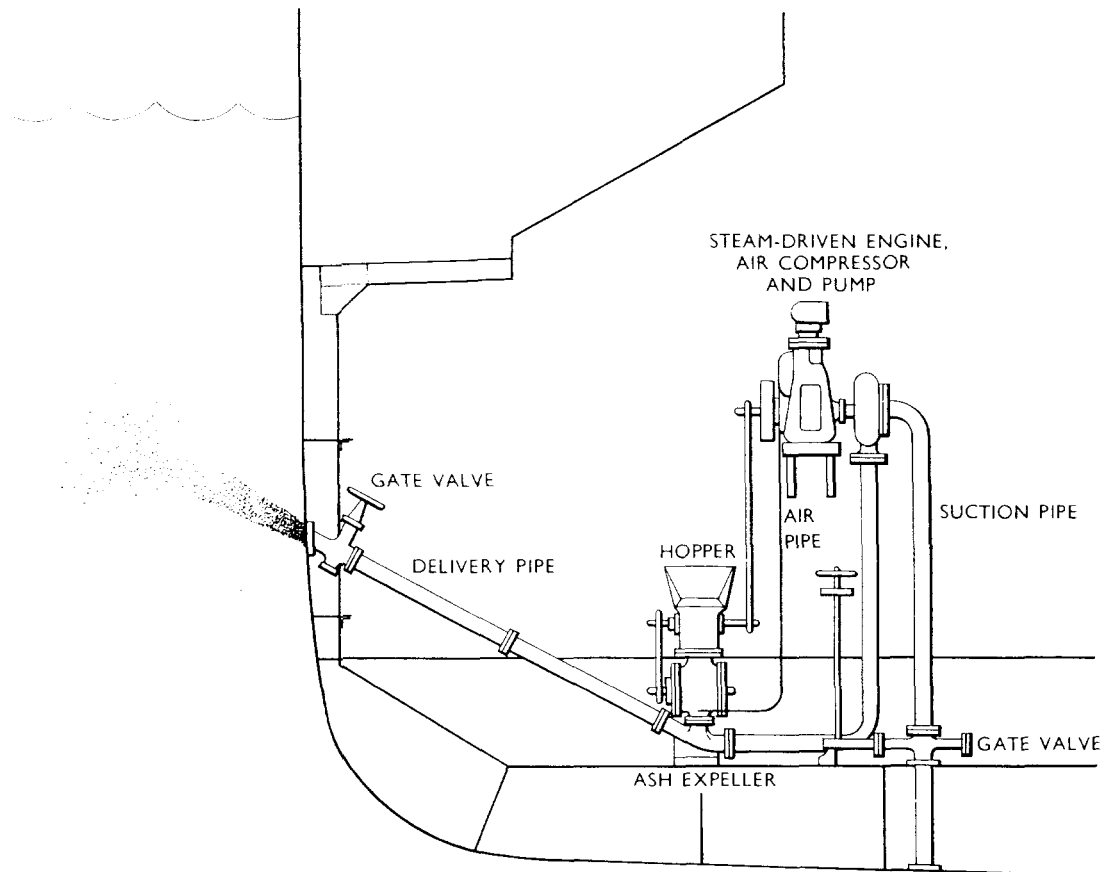


FIG. 1—STONE'S PATENT HYDRO-PNEUMATIC UNDERLINE ASH EXPELLER

The ultimate in ash expellers must have been the Stone's Patent Hydro-pneumatic Underline Ash Expeller! In this arrangement a stream of water pumped from the sea is continually moving through a discharge pipe which passes under the expeller. The ash and other refuse are shovelled into a crushing hopper, whence they pass into a double-ported revolving drum which alternately presents its opening to the hopper and to the moving stream of water beneath. The ashes are then caught up by the stream and carried along a delivery pipe discharging at the ship's side above the bilge keel, so as to be well clear of the main circulating-pump inlet thus effectually preventing any of the ashes from interfering with the main condenser tubes. Sufficient compressed air is supplied to the drum to ensure against the ingress of water to the ship (good thinking!).

Both the air compressor and the pump are coupled to a two-crank single-cylinder steam engine which is also utilized for driving the crusher and the revolving drum.

Such an arrangement might well be installed in ships' galleys of today as being likely to be more efficient than the currently-fitted Garbage Disposal Units at disintegrating knives, forks, and spoons!