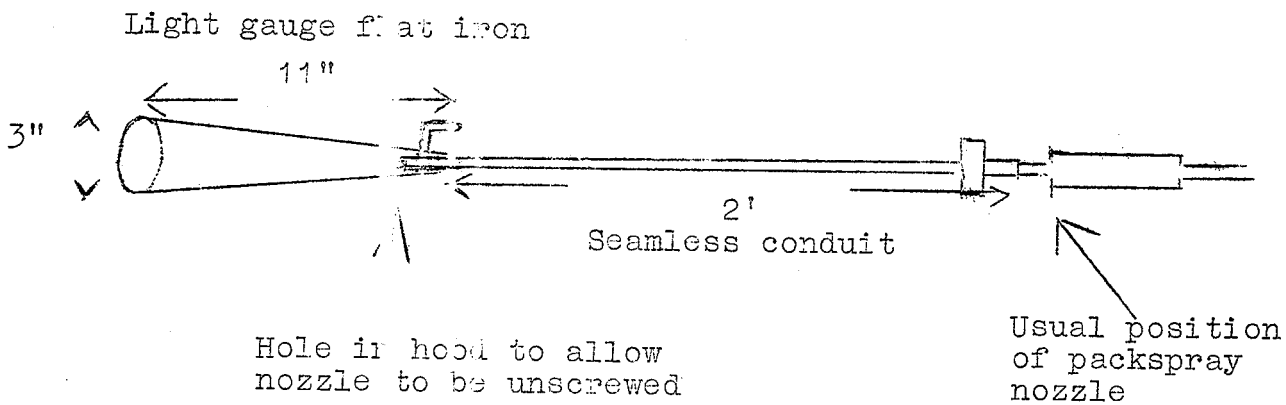
SIMPLE FLAME THROWER FOR CONTROL BURNING.

by F. H. McKinnell

This flame thrower is adapted from the normal type of packspray by removing the spray nozzle and screwing on the extension sketched below:



The nozzle has an extra large lever to facilitate movement when hot. The normal packspray nozzle aperture tends to be too large and the unit is more efficient if the jet is slightly burred around the edges.

Early units had the extension welded onto the end of the pump, but having it screwed on enables the unit to be used for fire fighting in the usual way simply by removing the extension and screwing on a standard nozzle.

It is essential that the rubber hose be replaced by a plastic one, as rubber is quickly perished by the fuels used, i.e.power kerosene and dieseline. The buckets in the spray pumps are affected in the same way and have to be replaced frequently.

Further trials are to be carried out to see how far cheap fuel, e.g. sump oil, can be mixed with the other fuels to reduce costs.

The unit is set alight by holding the hood over, e.g. burning litter, with the tap on, for about a minute. With a hood that is well carbonised inside it will then remain alight without continuous pumping. Once it is warm, only a small squirt is needed each time to light up and from four to six gallons an hour of fuel is consumed. Trying to throw the flame too far is to be avoided as it wastes fuel.

It is usually used on a jeep and can cover about 8 miles in an hour or more under warm conditions. The flame thrower is particularly useful for lighting up firelines along railways and main roads and between boundary tracks and 5-chain fire lines around State Forest boundaries.

In large blocks of forest to be burnt in spring the flame thrower enables a clean edge to be obtained with consequent less risk of breakaway fires later in the fire season. The reason for this is that the flame thrower can light up under more adverse conditions and more rapidly than a drip torch.

More complicated (and more expensive) power driven pump flame throwers are being developed, but there must still be a place for this type of unit which can be used for fire fighting as well as lighting and is readily adapted from existing equipment.

Probable improvements to this unit include:

1. Replace tap by a straight jet (1/16 inch is suggested).

Enquiries are being made to see if firms can supply these. If not, they may be made in our workshops or the conduit blanked off at the end with a piece of metal with a hole drilled in it.

2. The fuel squirted out must not strike the hood, as this reduces distance of squirt. Hence the jet in the nozzle should be true and the hood fixed firmly.

3. At the end of the pump where tap fits on the packspray unit the male thread is short (only $\frac{1}{2}$ inch long). When flame throwing attachment is fitted, the joint must either be welded or the thread lengthened to give extra strength. Both hands hold the pump behind this point and hence the attachment can easily be knocked against passing objects.
