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5th July 1950.

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Conservator (East)

The Cardiff Type Sulky

I attach for your information copy
report on above.


for Director (Scotland).

Encl.

Col. B

Will you please see
+ then show to Mr. Woolridge.
As the sulky is under evolution I
think there is no action, from us,
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The Cardiff type Sulky.Origin.

There are many instances where extraction from the stump to the nearest point reached by a road vehicle means so long a haul that an intermediate stage has to be introduced between minor extraction to a rack and the road.

For this role a Sulky was designed in Wales.

Description.

The Sulky consists of a tubular steel arch mounted on two pneumatic tyred wheels. The towing vehicle must be equipped with a winch from which the cable is carried over a pulley on the top of the arch to the bundle of logs which are to be carried. A sling secures the butt ends of the logs which can be winched in to the sulky. On reaching the sulky the butts are lifted into the arch and the winch cable secured. The sulky can then be towed with the tops of the poles trailing on the ground.

Photographs of the sulky in operation are attached to this report. Initial trials proved promising and a batch of twelve sulkies to this general design was produced and sent for field trials in various Conservancies in England, Scotland and Wales, ^{whose} reports have now been received.

Observations.

1. General - It is only to be expected that opinions will differ when a trial is carried out in so many different places under widely differing conditions. This case was no exception and opinions have ranged from:-
"The Sulky in it's present design was useless" to
"The Sulky has really proved it's worth and in positions where lorries cannot manœuvre it is the only answer."
There is, however, general agreement that some such means of providing for an intermediate stage in extraction is necessary and the reports contain useful criticisms to guide future design.
2. Capacity - The design was intended to take a load of 2 Tons but where small poles were carried the space in the arch would not accommodate this load. The arch is regarded as too small and the square wheel boxes offer a definite obstruction.
3. Tractor - In most cases a Fordson with winch was regarded as suitable and a D2 appears to meet the worst conditions in which a sulky can be used.
4. Turning Circle - With the Sulky fully loaded the turning circle is inconveniently large as the wheels easily foul the load.
5. Speed - 4 m.p.h. is regarded as the maximum speed for a loaded sulky.
6. Drawbar Coupling - The jaws are regarded as too short and the pin hole too small.
7. Tyre Valves - These protrude from the wheels and are vulnerable.
8. Top Pulley - This is unsuitable and it should be replaced by a bollard which will allow the hook and chain of the sling to be pulled right through to raise the load.
9. Wheel Bearings - These are criticised as plain bearings. No cases of trouble are reported and for these loads and speeds the plain bearings should be adequate.

Further Action.

A new type of sulky using a boom instead of an arch is now under consideration. This design is expected to be more convenient for handling small diameter poles. The various points of criticism on the Cardiff Arch Sulky have been taken into account in this new design.

W. H. L.
Machinery Research Officer.

