

Report No. 63

THE WOLSELEY SWIPEORIGIN

This machine was originally designed for the destruction of potato haulm. It was later realised that it might have a far wider application and experiments have been carried out on various types of light vegetation frequently requiring clearance from ground in preparation for forest planting.

DESCRIPTION

The Wolseley Swipe is designed as a mounted implement for the Ferguson tractor. The main feature is a vertically mounted shaft driven from the tractor power take off by a V belt. At the bottom of the shaft is a disc to which are attached three chains each 20 inches long. The whole of this assembly is carried in a frame mounted on the tractor's 3 point linkage. The shaft revolves at 550 r.p.m. and the chains are flung out radially under centrifugal force cutting a swathe of 48 inches. A view of the general assembly is seen at Photograph 1.

The makers are:-

Wolseley Engineering Ltd.,
Electric Avenue,
Witton,
Birmingham, 6.

The price is £45. 0. Od. + £15. 5. Od. for the special power take off.

OBSERVATIONS

1. The machine was tested on a variety of vegetation and was found to be highly successful on gorse, bracken, brambles, heather and all kinds of similar light vegetation with stem diameters up to $\frac{1}{2}$ inch. The performance on gorse was the most spectacular of all as in this case it was able to sever stems up to $\frac{3}{4}$ of an inch. All the vegetation was chopped into small pieces on the ground and in the case of bracken and bramble etc. it almost disappeared.
2. A 2.4 acre area of dense bracken up to 6 ft. high mixed with patches of bramble and a few small birch and elder was cleared in 4 hours working time. On heavy gorse it was necessary for the machine to do two cuts to completely clear the ground.

Conservation should all have had a copy
Please call their attention to it and add the Director's obs.

memo all 22/2

/The

W.S.H.

Prima facie, a most promising machine which is cheap enough to have a useful place in many forests where a Ferguson is or can be available, and where tall heather, gorse, bracken or young regrowth of (e.g.) Birch has to be cut.

Cons. attention should specially be drawn to this.

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J.S.H.

The only light vegetation that could not be successfully cut was young grass which was inclined to lie down in front of the chain flails.

A photograph of the machine passing through dense gorse is seen at Photograph 2.

2. Obstacles in the path of the machine such as stumps, stones etc. were successfully passed over by the chains but there was a tendency for the disc carrying the chains to foul on a stump or mound in the ground. The result of this fouling was that the U bolts carrying the shaft were broken or the frame was bent. A modification was introduced during the trial which consisted of fitting a domed bottom onto the disc so giving it a tendency to ride over obstacles and this was very successful. (Photograph 3).

3. When raising the "Swipe" on the tractor hydraulic lift the power take off is still driven. Consequently the belt, then being out of line, rides off the pulleys.

4. Chain life, obviously the fastest wearing part, can not be assessed as the machine was only operated for 10 hours. Only one chain failed in this time and this was due to jamming between the revolving disc and the stationary mounting. This source of trouble has now been eliminated by a new design by the makers.

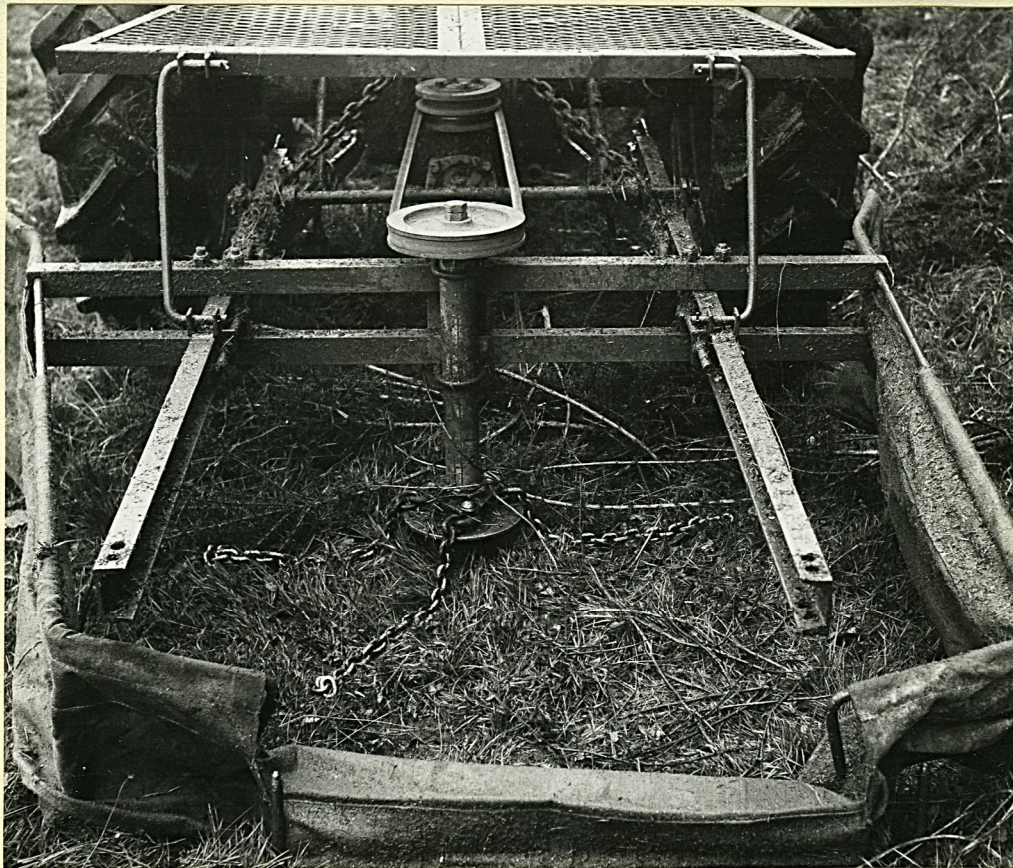
CONCLUSIONS

The Wolsley Swipe has shown itself to be a most effective machine for the removal of small scrub growth. So successful is it, in fact, that there is always a tendency to ask it to do too much and break, what is essentially a cheap, light and fast working machine

R. G. SHAW

Machinery Research Officer

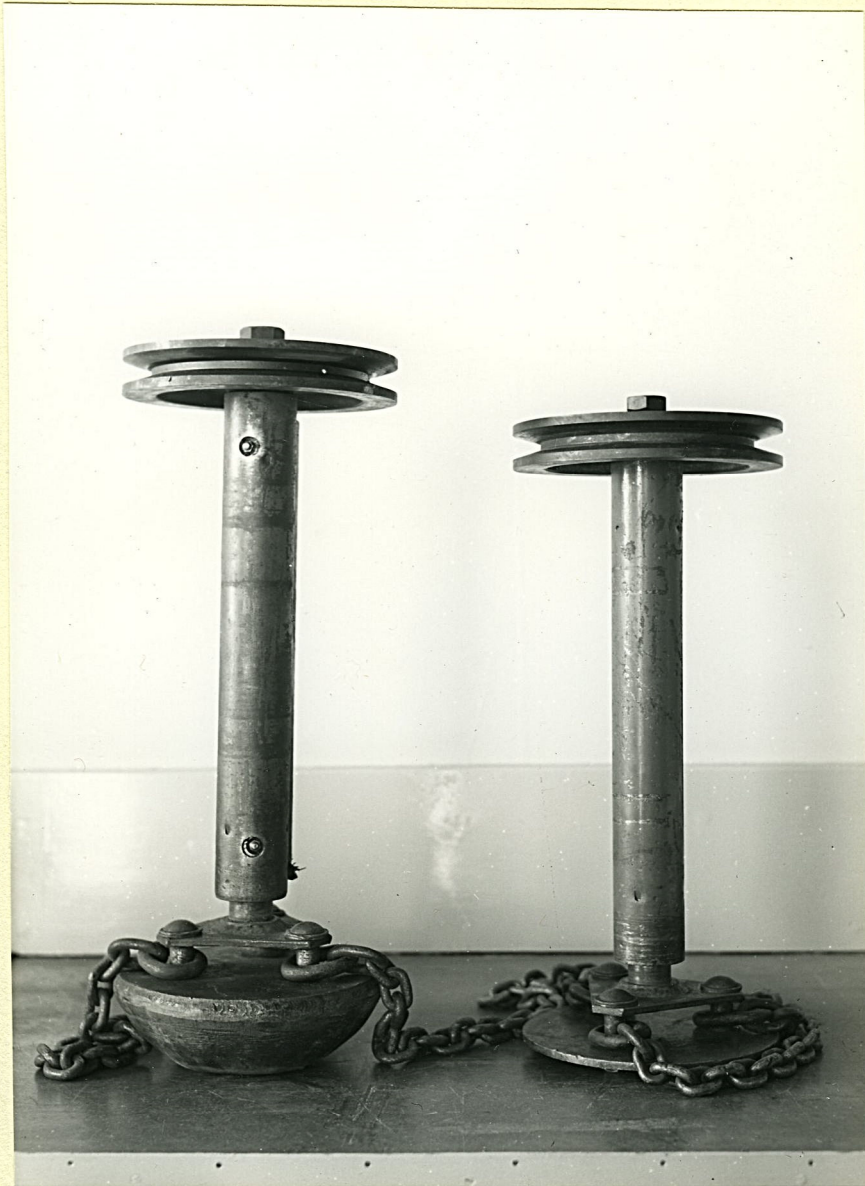
February, 1957.



Photograph 1. Showing the Wolseley Swipe mounted on the 3 point linkage of a Ferguson tractor. Note the chains on the ground which fly out radially as the shaft revolves cutting up all light vegetation that comes into their path. The canvas screen round the back and sides is to reduce the amount of debris flung out by the machine.



Photograph 2. Showing the passage made through a dense patch of gorse by one passage of the Wolseley Swipe.



Photograph 3. Showing (on the left) the modification introduced during the trial and (on the right) the standard shaft and disc. The domed bottom to the disc was successful in allowing the disc to ride over stumps etc. which were fouled by the plain disc.