

## PATENT SPECIFICATION



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### PROVISIONAL SPECIFICATION

#### Improvements in or relating to Lifting Jacks

We, SMITH'S JACKING SYSTEMS LIMITED, a British Company, of Jackall Works, Edgware Road, London, N.W.2, and DONALD WILFRED SESSIONS, a British

5 Subject, of the Company's address, do hereby declare the nature of this invention to be as follows:—

This invention relates to lifting jacks and is particularly concerned with simplifying and cheapening the construction of telescopic screw jacks. From this point of view it is advantageous to use open-ended tubes closed by cylindrical blocks or plugs. These blocks or plugs can be threaded into the tubes but this threading increases cost, or grub screws could be used, but again this involves drilling and tapping the screw holes.

20 According to the invention the block has an annular groove in its outer surface into which the tube is pressed. If a suitable depth of groove is used and the tube is of suitable metal and well swaged into the groove, the block will be firmly held in position against movement in all directions in relation to the tube. Whilst a single groove usually suffices, more than one can be provided if desired. The jack may comprise two tubes one within the other and both having blocks fixed within their upper ends as above described. The block on the inner tube may be internally threaded to receive the long jack screw, the upper end of which is plain and passes through a plain bearing hole in the other block, whereby both blocks serve to support the screw against deformation by the

load being lifted. The plain end of the screw may extend for some distance above the outer block and carry a hexagonal nut thereon whereby the screw can be rotated to cause the inner block and tube to move downwards out of the outer tube. The upper end of the threaded part of the screw may be tapered down to the plain part to form a self centering bearing for a bearing thrust block which has a similarly tapered hole and between which and the outer block is a ball race. A pressed metal hook may be welded to the outer tube for carrying a bumper bar or some other projection may be welded or otherwise secured to the outer tube and adapted to co-operate with any suitable part on a motor-car for lifting it. The lower end of the screw may have a ring fitted into a groove or some other abutment for limiting the relative movement between the inner tube or plunger and the screw. The lower end of the inner tube or plunger may carry a fixed or pivoted metal or rubber ground engaging foot. The outer tube may be of drawn steel, whilst the inner tube may be of less robust construction, viz. a welded tube. The slight roughness at the welded joint in the inner tube will then assist in preventing rotary movement of the block or plug therein.

Dated this 16th day of May, 1939.  
S. MATTHEWS,  
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### COMPLETE SPECIFICATION

#### Improvements in or relating to Lifting Jacks

70 We, SMITH'S JACKING SYSTEMS LIMITED, a British Company, of Jackall Works, Edgware Road, London, N.W.2, and DONALD WILFRED SESSIONS, a British Subject, of the Company's address, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

[Price 1/-]

This invention relates to lifting jacks and is particularly concerned with simplifying and cheapening the construction of telescopic screw jacks. From this point of view we have found that it is advantageous to use open-ended tubes in which cylindrical blocks or plugs are fitted to provide bearings or nuts for the screws of the jacks. These blocks or plugs can be threaded into the tubes but this threading