

**OPERATOR'S INSTRUCTIONS**

AND

55

**ILLUSTRATED LIST OF PARTS**

FOR

**Ransomes**

**CERTES MARK 12**

**LAWN MOWER**



**RANSOMES SIMS & JEFFERIES, LTD.**  
**ORWELL WORKS - IPSWICH - ENGLAND**

*Telephone:* IPSWICH 54711 (8 lines)    *Telegrams:* "RANSOMES 1874 TELEX"

# OPERATOR'S INSTRUCTIONS

1. The green should be swept before using the machine, to remove stones, worm heaps and rubbish, which blunt and damage the knives and prevent the mower from working properly.
2. **LUBRICATION.** Every eight working hours the machine should be oiled at the following points, using the oil gun provided.

Land Roll Bearings through nipples A.

Land Roll Freewheel through nipples B.

Gearing through nipple C.

Front Roll Oilbath through nipples E.

Cutting Cylinder Spindle through nipples D.

A little oil should be applied occasionally to the Adjusting Screw G, Handwheel F and Fulcrum Pin T.

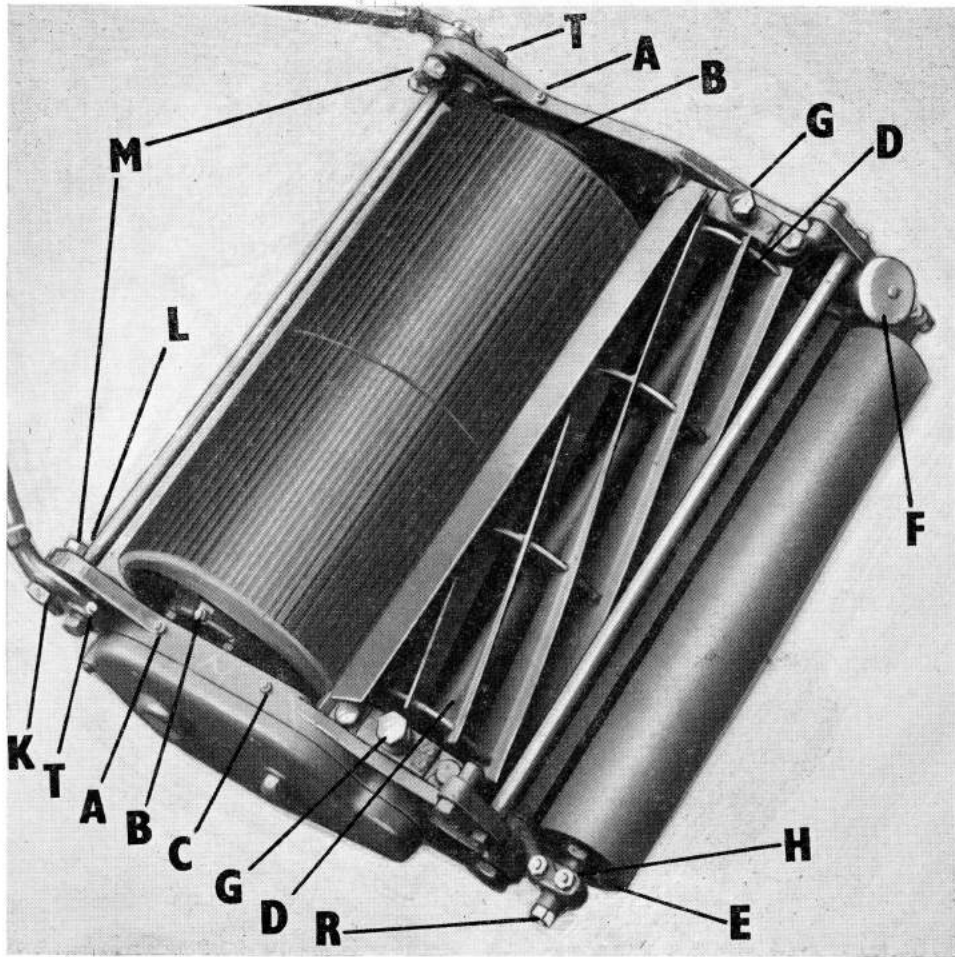


FIG. 1

Use a good class SAE 30 oil, and take care that each point gets the requisite amount of oil. Such points as the Freewheel, B, front roller E, and gear housing C, will overflow if too much oil is given.

3. **ADJUSTMENTS.** To alter height of cut. This is regulated by a knurled Hand Wheel, F, which when turned in a clockwise direction, raises the cutters. Each half turn of this wheel raises or lowers the bottom blade  $1/32$  of an inch.

Should the front roller get out of alignment with the land roll, correction can be made by a special adjustment of the R.H. carriage. After making any adjustment be sure to tighten the clamping bolt.

**CAUTION.** The machine should never be used with the bottom blade pressing on the lawn. If it does, the spiral cutters are liable to be damaged by the bottom blade being forced upwards, the machine will also work heavily and the turf will be badly marked.

To see if the mower is set correctly, turn it on its side and place a straight edge across the land roll and front roll, the bottom blade must be clear of the straight edge. If a grass box is being used the knives should be set higher to allow for the weight of the box and its contents.

**Cutters.** If the machine does not cut cleanly, set the cylinder carefully to the bottom blade by means of the adjusting screws G. When correctly set, the cylinder should revolve freely but be in "wiping" contact with the bottom blade, and should be able to cut a piece of writing paper cleanly when held against the edge of the bottom blade. This cutting test should be made across the whole width of each cutter. If the paper cannot be cut cleanly without undue pressure of the cylinder on the bottom blade, then the cutters have become dull, and if used in this condition, will only bruise the grass and make the mower hard to push. The keen edges can be restored by a grinding-in process (See Fig. 3) and to get the best results from your "Certes" it is a good policy to grind-in the cutters periodically, say, once a month.

**Front roller bearings.** The front roll turns on adjustable hollow centres and should rotate perfectly freely without float. To take up any play, slacken the nut H (R.H. side of machine) and turn cone R as required. Tighten nut H which will lock the adjustment.

The "Certes" is fitted with a universal handle and can be used in two ways:—

1. Fixed handle with crossbar.
2. Swinging handle with crossbar.

To change from fixed to swinging handles, loosen locknut K and slacken screws L about one turn. Re-tighten locknuts to prevent screws working out. When working the mower with swing

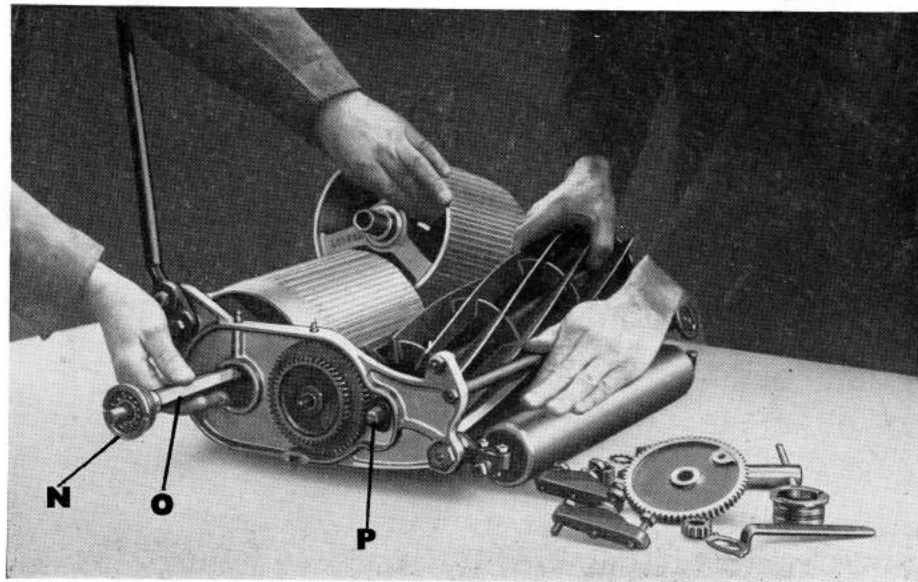


FIG. 2

handle, a suitable low position can be arranged for lifting the front of the machine when turning, by adjusting screws M. Tighten the nut to maintain the required setting.

**TO TAKE LAND ROLL OUT OF MACHINE.** Take off gear cover by undoing hexagon nut and removing bolt. Undo nut on end of land roll spindle and lever off gear wheel (LO 44). Remove dust cap from opposite side frame and take out set screw in end of spindle. Using special key spanner unscrew housings N, which will extract ball bearings from spindle, which can then be withdrawn. When unscrewing the housings note that the R.H. side one has a R.H. thread and the L.H. one a L.H. thread. (This is marked on the side frames.) Note carefully the position of each loose part so that when re-assembling the gears and rolls will take up their correct alignment.

**TO TAKE CUTTING CYLINDER OUT OF MACHINE.** Remove the gear cover, take off hexagon nut and remove pinion from cylinder spindle. Undo the two nuts at each end of the cylinder caps and remove them. Lift up L.H. end of cylinder as shown in Fig 3 and the spindle end can be withdrawn through the slot in the side frame (P).

**TO REPLACE CUTTING CYLINDER.** Insert the spindle end into the slot in side frame. Press the bearing housings, slightly on the cross, into the slide ways, keeping the R.H. housing at the top of the slot. Do not exert too much pressure to get the cylinder back; it will slide into position quite easily, and the housings will gradually assume their correct angle as the cylinder takes up a horizontal position. Replace the cylinder caps and then turn the mower over and insert the springs under the housings. Place the springs against the lugs on the side frames and, with a suitable screwdriver lever the ends into the correct position taking care to see that the springs are set squarely between lug and housing. Replace cylinder pinion and tighten nut, not forgetting the distance piece that should be fitted between ball bearing and pinion.

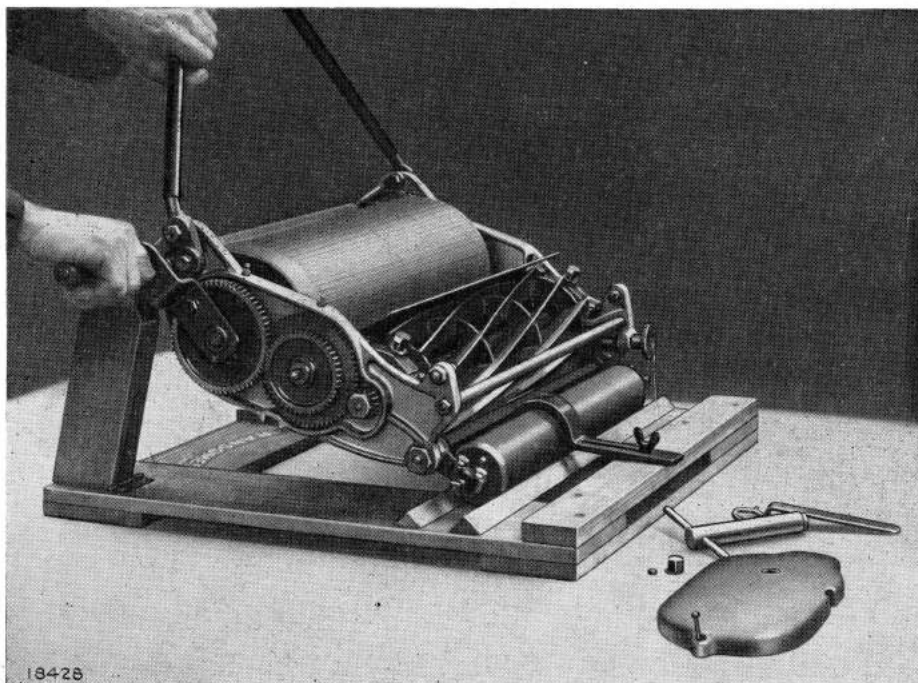


FIG. 3. Grinding-in Rest.

**GRINDING-IN CUTTING CYLINDER.** To maintain keen cutting edges on which clean cutting depends, we recommend a periodic grinding-in with carborundum paste. We can supply, at an extra charge, a special stand for this operation, which enables it to be carried out simply and effectively, and in a matter of a few minutes.

Place the machine in the stand as shown in the illustration on previous page securely clamping the front roll. Remove the gear cover and screw one of the machine's side handles into the tapped hole in the main gear wheel. The special handle illustrated is only supplied with the grinding-in frame. Now apply carborundum paste in small quantities with a brush to the edges of all the spiral cutters and turn the handle in an anti-clockwise direction so that the cylinder revolves backwards. As the grinding process continues the cylinder should be adjusted to the bottom blade by screws G. A light pressure on the bottom blade is all that is necessary, and this will allow the carborundum paste to get to the edges. Examine the edges of the cutters to make sure that grinding is taking place through their entire length and that they have become sharp.

When grinding is complete make sure that all traces of the abrasive is wiped off the cutters and bottom blade. Use an oily rag to do this.

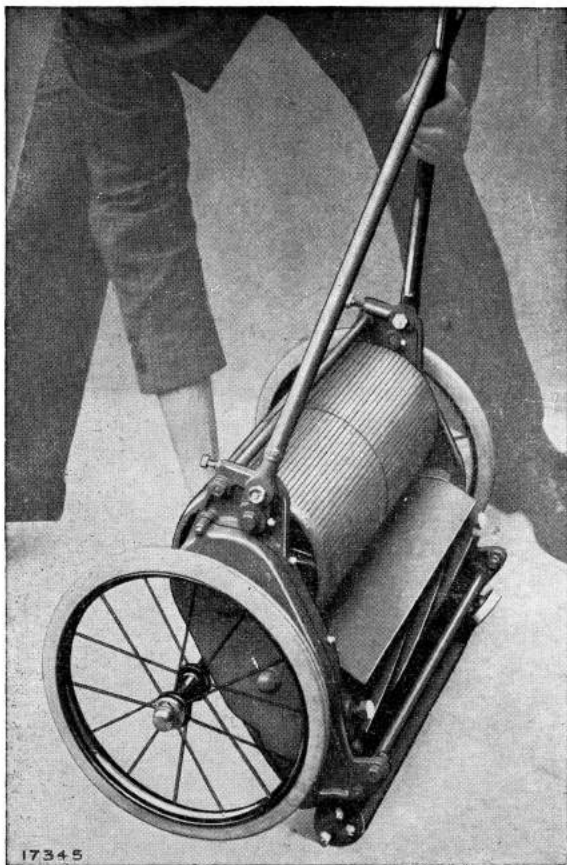


FIG. 4

**CARRIAGE.** When the machine has to be moved from green to green or lawn to lawn, the transport carriage should always be used as the Certes should not run on its rollers when off the grass. Fig. 4 shows an easy way of mounting the machine on the carriage.

NOTE.—In referring to the mower throughout these instructions, right or left hand is given as standing at the handles.

## ILLUSTRATED LIST OF PARTS

for

### "CERTES" MOWER, MARK 12

NOTE.—Lockwashers where not quoted in this list are of standard single coil spring type.

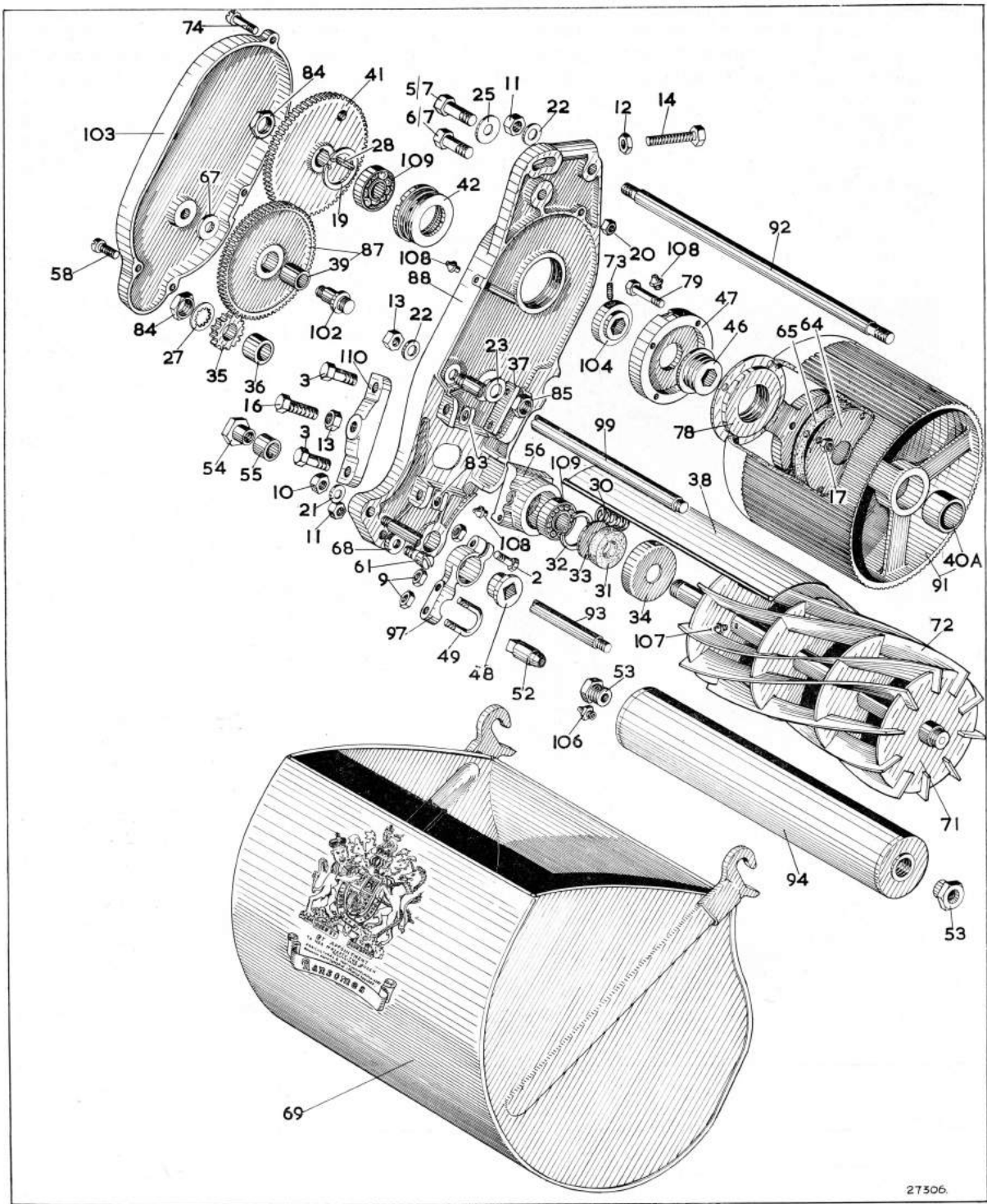
Split pins are also not quoted, but are of standard type.

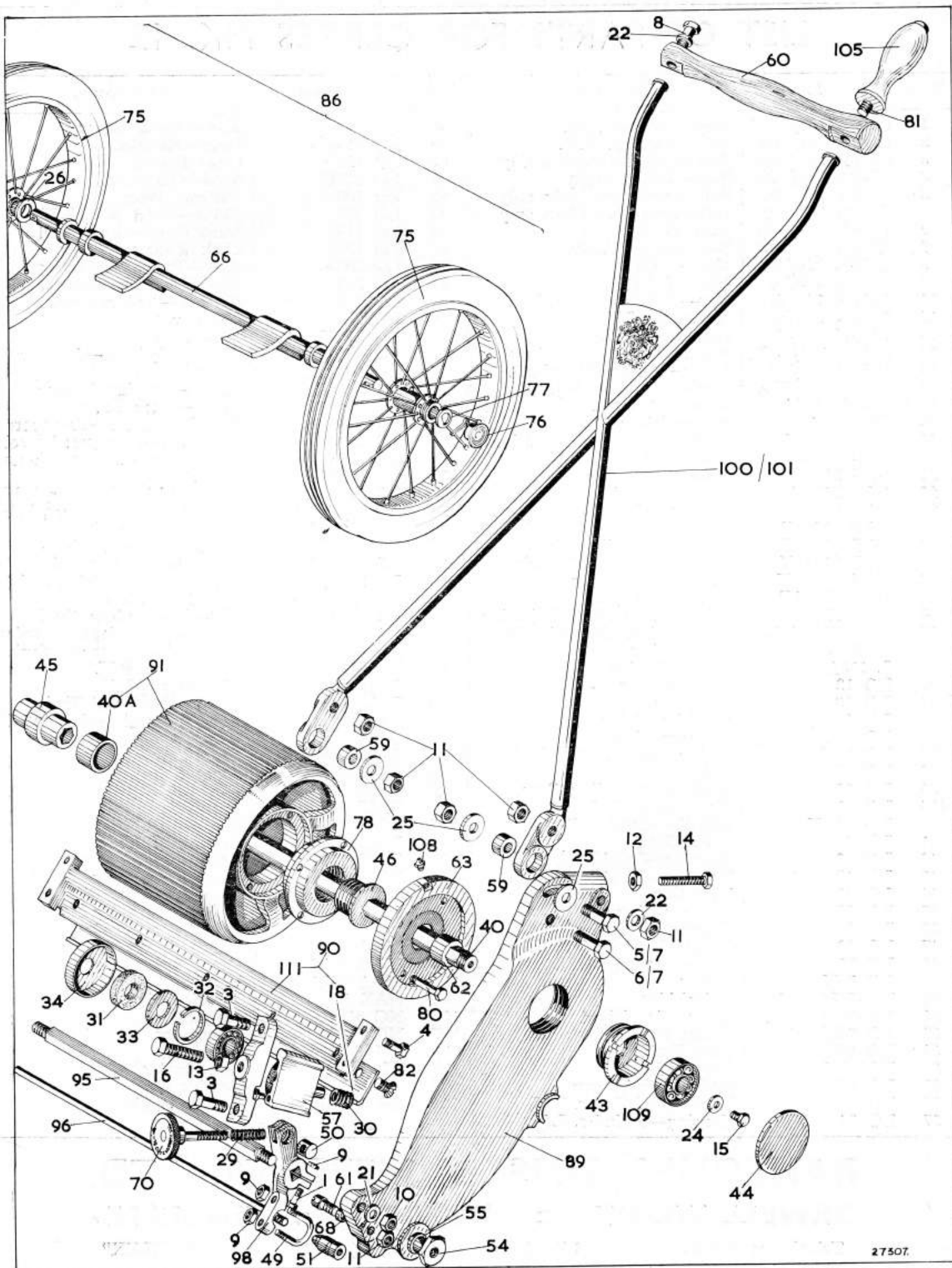
*Nuts.* The mark of the nut applicable to any bolt or screwed pin, stud, etc., will be found in brackets by the side of its mating part.

All shafts, studs, etc., are supplied complete with nuts, keys, split pins and washers where applicable.

## Parts Not Illustrated

Mark	Description	Mark	Description
GSF 5001AJ LAS 785	Spanner— $\frac{1}{4}$ " $\times$ $\frac{3}{8}$ " UF Grinding-in Rest	LMS 1015 LS 2506/4	Land Roll and Bush (Bramble) Oil Gun





# LIST OF PARTS FOR CERTES MK. 12

Item	Mark	Description	Item	Mark	Description
1	CUFB 104/7R	Bolt—Carriage L.H.	58	LO 102	Screw—Gear Cover
2	CUFB 104/10R	Bolt—Carriage R.H.	59	LO 104U	Bush—Handles
3	CUFB 105/10R	Bolt—Cylinder Bearing Cap	60	LO 112	Cross Handle
4	CUFB 105/11R	Bolt—Bottom Block	61	LO 127U	Stud—Grassbox
5	CUFB 106/9R	Bolt—Overgreen Units only	62	LO 166	Distance Piece
6	CUFB 106/11R	Bolt—Overgreen Units only	63	LO 167	Cover—Land Roll, L.H.
7	CUFB 106/12R	Bolt—Handles	64	LO 187	Inner Cover—Land Roll
8	CUFB 106/13R	Bolt—Cross Handle	65	LO 188	Cork Washer
9	CUFN 104/A	Nut— $\frac{1}{2}$ " UF	66	LO 203A	Axle—Transport Carriage
10	CUFN 105/A	Nut— $\frac{5}{16}$ " UF	67	LO 215	Washer—Intermediate Stud
11	CUFN 106/A	Nut— $\frac{3}{8}$ " UF	68	LO 225	Washer—Grassbox Stud
12	CUFN 204/A	Locknut— $\frac{1}{2}$ " UF	69	LO 265	Grassbox
13	CUFN 206/A	Locknut— $\frac{3}{8}$ " UF	70	LO 276U	Handwheel
14	CUFN 104/18R	Screw—Handle Adjusting	71	LO 278	Cutting Cylinder—10 knife
15	CUFN 105/5R	Screw—Land Roll Spindle	72	LOC 16 in.	Spiral Cutter
16	CUFN 106/13R	Screw—Cylinder Adjusting	73	LS 1639/1	Screw—Locking Collar
17	CWN 103/A	Nut— $\frac{3}{16}$ " Whit.	74	LS 2115/1	Screw—Gear Cover
18	GC 16-25	Bottom Blade	75	LS 2316/2	Wheel complete—Transport
19	GSF 1055BJ	Circlip—Land Roll Housing	76	LS 2316/12	Hub Cap—Transport Wheel
20	GSF 1980AA	Nut—2 BA	77	LS 2316/17	Dee Washer—Transport Wheel
21	GSF 2150D	Washer— $\frac{5}{16}$ " dia.	78	21761	Freewheel
22	GSF 2150E	Washer— $\frac{3}{8}$ " dia.	79	LS 2460/16	Bolt—Land Roll Cover, R.H.
23	GSF 2150G	Washer— $\frac{3}{8}$ " dia.	80	LS 2460/21	Bolt—Land Roll Cover, L.H.
24	GSF 2154EB	Washer—Land Roll Spindle	81	LS 2514/6	Bolt—Handle Grip
25	GSF 2154GL	Washer—Handle Bolt	82	LS 2521/7	Screw—Bottom Blade
26	GSF 2154KC	Washer—Carriage Wheels	83	LS 2626/1	Nut—Bearing Cap Bolt
27	GSF 2168AK	Shakeproof Washer	84	LS 2731/1	Nut—Cylinder Pinion and Main Gear
28	GSF 2230AE	Key—Main Gear	85	LS 2731/3	Nut—Intermediate Stud
29	GSF 2240JH	Spring—Front Roll Adjusting	86	LAS 125	Transport Carriage, Complete
30	GSF 2240NH	Spring—Cylinder Adjusting	87	LMA 339	Intermediate Gear and Bush
31	GSF 3571FV	Felt Washer	88	LMA 453B	Side Frame, R.H.
32	L 115A	Spring Washer	89	LMA 454	Side Frame, L.H.
33	LO 12	Dust Washer	90	LMA 460	Bottom Block and Blade
34	LO 13	Dust Cap	91	LMS 1012	Land Roll and Bush (Fluted)
35	LO 19	Cylinder Pinion	92	LMS 1060	Rear Stay
36	LO 20	Distance Piece	93	LMS 1063	Front Stay
37	LO 27U	Fixing Plate—Bottom Block	94	LMS 1070	Front Roll
38	LO 30A	Concave	95	LMS 1136	Carriage Stay
39	LO 33	Bush—Intermediate Gear	96	LMS 1139	Tie Rod
40A	LO 41	Bush—Land Roll	97	LMS 1141	Carriage, R.H.
40	LO 42AU	Spindle—Land Roll	98	LMS 1142	Carriage, L.H.
41	LO 44	Main Gear	99	LMS 1147	Centre Stay
42	LO 46	Housing—Land Roll, R.H.	100	LMS 2301	Handle Assembly
43	LO 47	Housing—Land Roll, L.H.			(Cross Handle)
44	LO 49	Dust Cap	101	LMS 2302	Handle Assembly
45	LO 53	Distance Sleeve			(Handle Grips)
46	LO 58	Adaptor—Freewheel	102	MAA 0168	Intermediate Stud
47	LO 59	Cover—Land Roll, R.H.	103	MAA 0170	Gear Cover
48	LO 71	Bush—Carriage, R.H.	104	MAA 0171	Locking Collar
49	LO 73U	U-Bolt	105	NAX 51	Handle Grip
50	LO 76U	Swivel Nut	106	NC 6100	Lubricator
51	LO 83U	Centre Pin—Fixed	107	NC 6101	Lubricator
52	LO 84U	Centre Pin—Adjustable	108	P 106	Lubricator
53	LO 85U	Cone Bush	109	RL 5	Ball Bearing
54	LO 87U	Sleeve Nut	110	SR 3U	Bearing Cap
55	LO 88	Bush—Side Frames	111	SR 148AU	Bottom Block
56	LO 93	Housing—Cylinder, R.H.			
57	LO 94	Housing—Cylinder, L.H.			

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