

October, 1904.

Part Catalogue B. 6006.

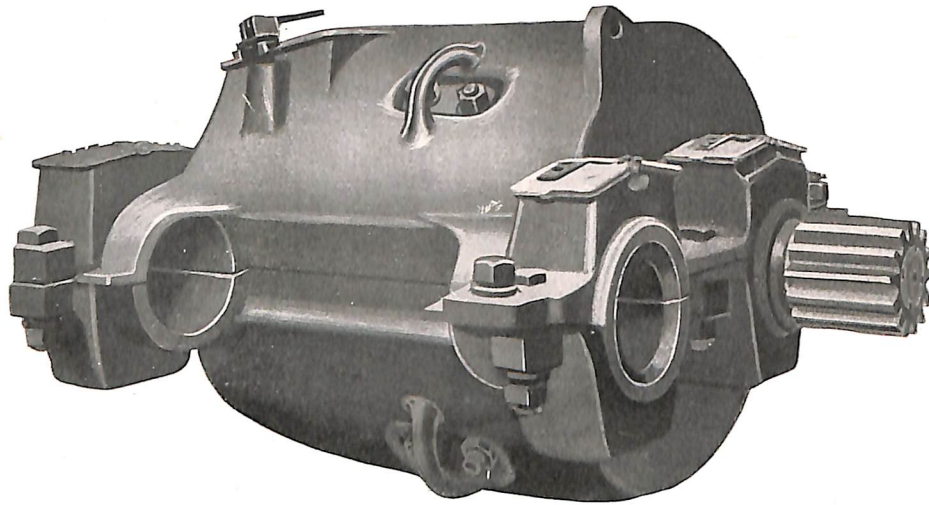
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Parts
—OF—
Westinghouse No. 200
Tramway Motor.

THE BRITISH
WESTINGHOUSE ELECTRIC & MANUFACTURING CO., Ltd.
LONDON AND MANCHESTER.



General View of No. 200 Motor.

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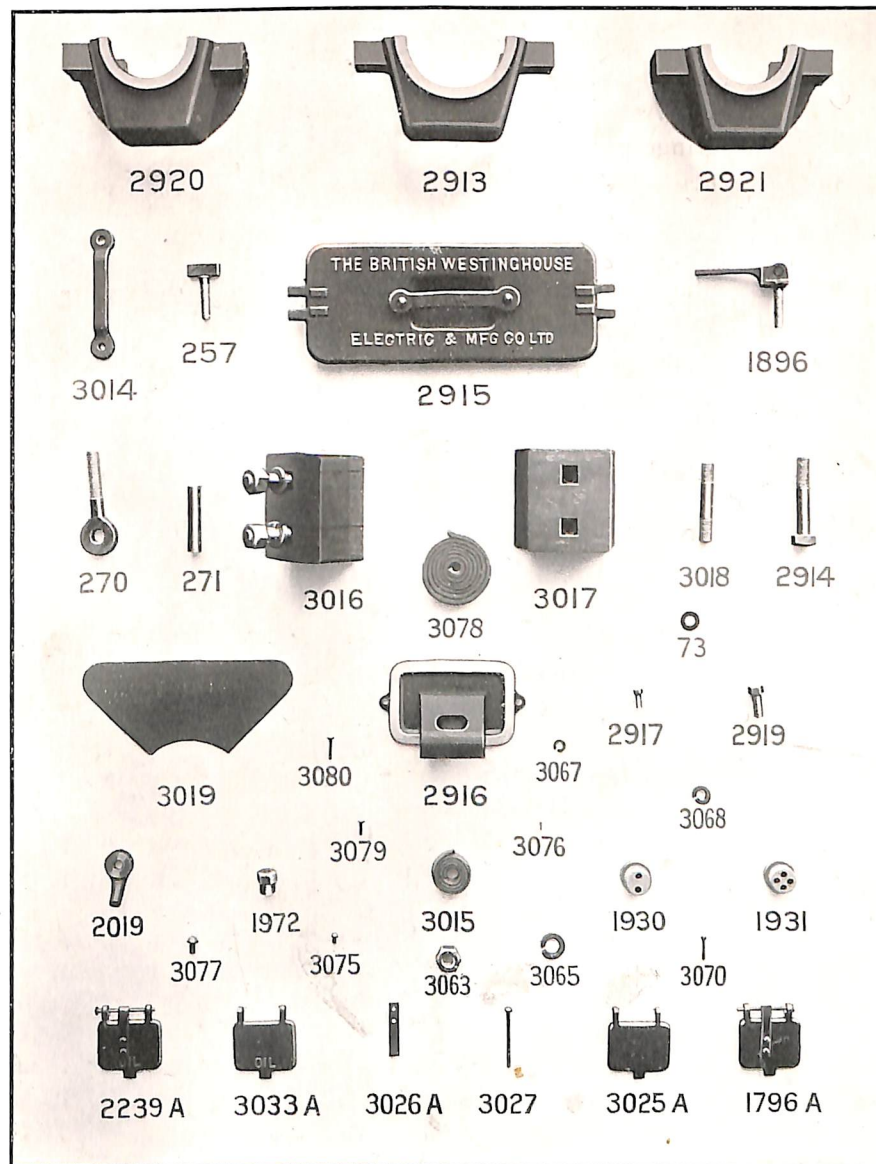
FRAME.

Style No.	Number per Motor.	Description.	Price.
			£ s. d.
2920	1.	Cap under armature bearing, pinion end.....	0 19 6
2921	1.	Cap under armature bearing, comm. end.....	0 18 6
2913	2.	Cap under axle bearing.....each	1 2 7
2914	10.	M.B. bolt for holding field together, and armature and axle caps to field, without nuts or washers.....each	0 0 10
3063	18.	Hex. I. nut for bolts, Style Nos. 2914 and 3018, $\frac{7}{8}$ ".....per doz.	0 2 0
3065	18.	Lock washer for bolts, Style Nos. 2914 and 3018, $\frac{7}{8}$ ".....per doz.	0 0 6
271	2.	C.R.S. hinge pin for halves of field.....each	0 1 0
270	2.	Eye bolt for holding halves of field together.....each	0 2 2
2915	1.	Commutator cover with handle complete ...	0 16 0
3014	1.	Handle for commutator cover.....	0 1 3
257	1.	T bolt for commutator cover.....	0 0 6
1896	1.	Locking lever and eye bolt, complete, for commutator cover.....	0 1 9
3078	1.	Felt strip for commutator cover.....	0 0 6
3076	6.	Copper belt rivet for felt on commutator cover. No. 12 x $\frac{1}{2}$ ".....per doz.	0 0 3
3077	2.	Iron rivet, for handle on commutator cover, $\frac{3}{8}$ " x $\frac{3}{4}$ ", round head.....per doz.	0 0 3
2239A	4.	Oil box cover with spring and hinge pin, complete.....each	0 1 9
3033A	4.	Oil box cover without spring and hinge pin.....each	0 1 3
1796A	4.	Grease box cover, with spring and hinge pin complete.....each	0 1 9
3025A	4.	Grease box cover, without spring or hinge pin.....each	0 1 3
3026A	8.	Steel spring for oil and grease box covers $\frac{3}{2}$ " x $\frac{5}{8}$ " x $\frac{3}{4}$ ".....per doz.	0 3 0

Order by Style Number

FRAME—Continued.

Style No.	Number per Motor.	Description.	Price.		
			£	s.	d.
3075.	16.	Rivet for spring on oil and grease box covers, $\frac{1}{4}'' \times \frac{1}{2}''$, round head.....per doz.	0	0	3
3027	8.	Hinge pin for above covers, $\frac{1}{4}'' \times 3\frac{5}{8}''$...each	0	0	3
2916	1.	Hand-hole cover	0	3	3
2917	2.	M.B. tap bolt without nuts or washers, for hand-hole cover, $\frac{3}{8}'' \times 1''$per doz.	0	1	6
3067	1.	Lock washer for Style No. 2917, $\frac{3}{8}''$...per doz.	0	0	5
3015	1.	Soft felt gasket for hand-hole cover	0	0	3
3016	4.	Pole-piece, complete with studs, nuts and washers	0	18	8
3017	4.	Pole-piece without detail parts	0	15	8
3018	8.	Studs for pole-piece, $\frac{7}{8}'' \times 5\frac{1}{4}''$, without nuts or washers	0	0	9
3070	8.	Split pin for pole piece studs, $\frac{3}{16}'' \times 1\frac{1}{4}''$per doz.	0	0	3
1930	2.	Soft rubber bushing with two holes for insulating leads from frame	0	2	0
1931	1.	Soft rubber bushing with four holes for insulating leads from frame	0	2	0
2019	1.	C.B. ground terminal.....	0	2	3
2919	1.	M.B. tap bolt, without nuts or washers, for ground terminals, $\frac{5}{8}'' \times 1\frac{1}{2}''$per doz.	0	2	0
73	1.	Washer for Style No. 2919 bolt, $\frac{5}{8}''$...per doz.	0	0	3
3068	1.	Lock washer, $\frac{5}{8}''$per doz.	0	0	5
3019	1.	Fuller board upper field insulating shield ...	0	1	3
3080	6.	Copper rivet for rivetting F.B. Shield, Style No. 3019, to frame, $\frac{3}{16}'' \times 1\frac{3}{8}''$per doz.	0	0	6
3079	3.	Copper belt rivet for rivetting F.B. Shield, Style No. 3019, to frame. No. 7 $\times \frac{3}{4}''$per doz.	0	0	3
1972	2.	Gas tap plug for lower field yoke, $\frac{3}{4}''$...each	0	1	6



Order by Style Number.

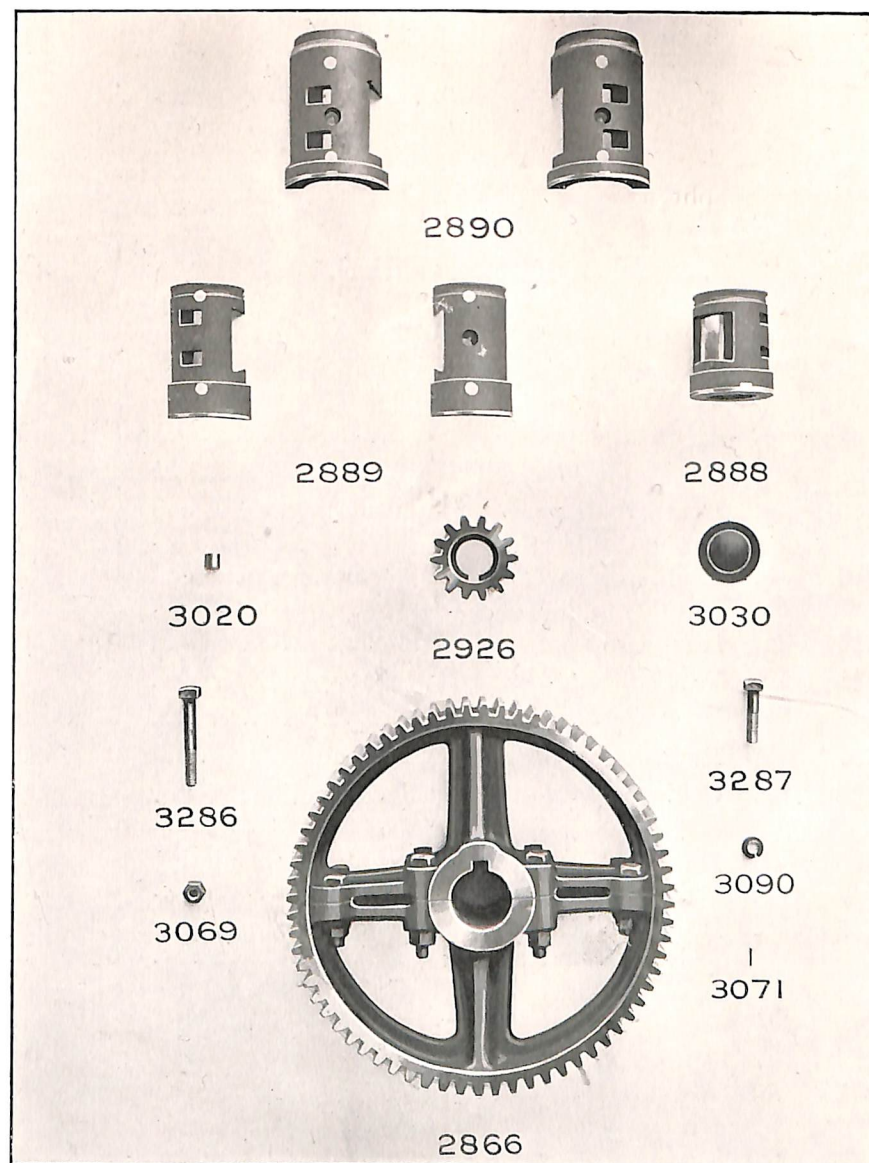
BEARINGS.

Style No.	Number per Motor.	Description.	Price.
			£ s. d.
2890	2.	Split axle bearing, 3 $\frac{3}{4}$ " bore \times 8" (babbitted) each	1 12 0
		<i>or</i>	
8016	2.	Split axle bearing, 4" bore \times 8" (babbitted) each	1 12 0
2889	I.	Split armature bearing, pinion end, 3" \times 8"...	1 10 0
2888	I.	Solid armature bearing, commutator end, 3" \times 6"	0 19 6
3020	4.	Dowel pin for bearings.....per doz.	0 1 10
3030	I.	Sheet steel dust cap for solid armature bearing	0 0 3

GEARS.

2926	I.	Forged steel pinion, 14 teeth, 5" face	0 19 3
		<i>or</i>	
2925	I.	Forged steel pinion, 18 teeth, 5" face	1 2 3
2866	I.	Steel gear wheel, 68 teeth, 5" face, 4" bore.....	4 16 4
		<i>or</i>	
8017	I.	Steel gear wheel, 68 teeth, 5" face, 3 $\frac{3}{4}$ " bore	4 16 4
		<i>or</i>	
2867	I.	Steel gear wheel, 64 teeth, 5" face, 3 $\frac{3}{4}$ " bore...	4 12 4
		<i>or</i>	
8018	I.	Steel gear wheel, 64 teeth, 5" face, 4" bore ...	4 12 4
3287	4.	Machine bolt, without nut or washer, for bolting together halves of gear, $\frac{3}{4}$ " \times 3 $\frac{1}{2}$ "	0 3 6
3286	4.	Machine bolt, without nut or washer, for bolting together halves of gear, $\frac{3}{4}$ " \times 5"	0 4 6
3090	8.	Lockwashers, $\frac{3}{4}$ "	0 0 5
3069	8.	Nut, $\frac{3}{4}$ "	0 1 0
3071	8.	Split pin, $\frac{1}{8}$ " \times 1"	0 0 3
2927	I.	Steel pinion key, $\frac{5}{8}$ " \times $\frac{1}{2}$ " \times 3 $\frac{5}{8}$ "	0 0 9
341	I.	Steel gear key, 1" \times 1" \times 5"	0 2 4

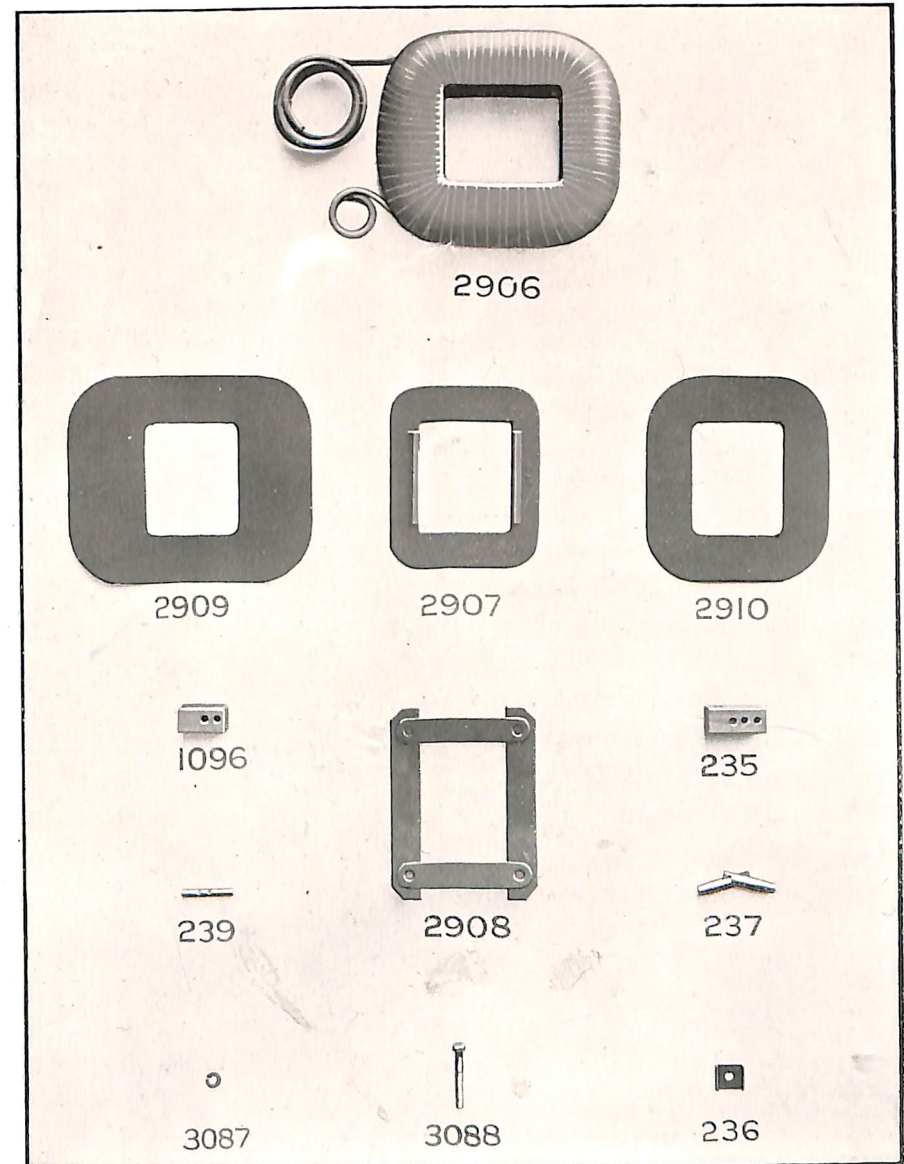
Order by Style Number.



NOTES.—Fig. 2890 above also represents Style Number 8016 on p. 8.
 Fig. 2926 " " " " Number 2925 on p. 8.
 Fig. 2866 " " " " Numbers 2867, 8017, and 8018 on p. 8.

FIELD COILS.

Style No.	Number per Motor.	Description.	Price.		
			£	s.	d.
2906	4.	Field coil with cable leads completeeach	8	2	10
2907	4.	C.B. coil supporteach	0	7	6
2908	4.	Steel spring for coileach	0	1	3
2909	4.	Leatheroid washer for insulating field coil from frame.....	0	2	0
2910	4.	Leatheroid washer for insulating field coil from support.....	0	2	0
236	2.	Iron clamp for hard wood cleatper doz.	0	3	0
3088	2.	Tap bolt for No. 236, 1/2" x 3 1/2" ..per doz.	0	2	0
3087	2.	Lock washer, 1/2".....per doz.	0	0	5
237	4.	Knuckle joint connector for leadseach	0	4	9
239	2.	Cable connector for field connections (3/2 or 4/3 cable)each	0	1	3
1096	1.	Hard wood cleat with two holes for insulating leads from frame.....	0	0	9
235	1.	Hard wood cleat with three holes for insulating leads from frame.....	0	0	6

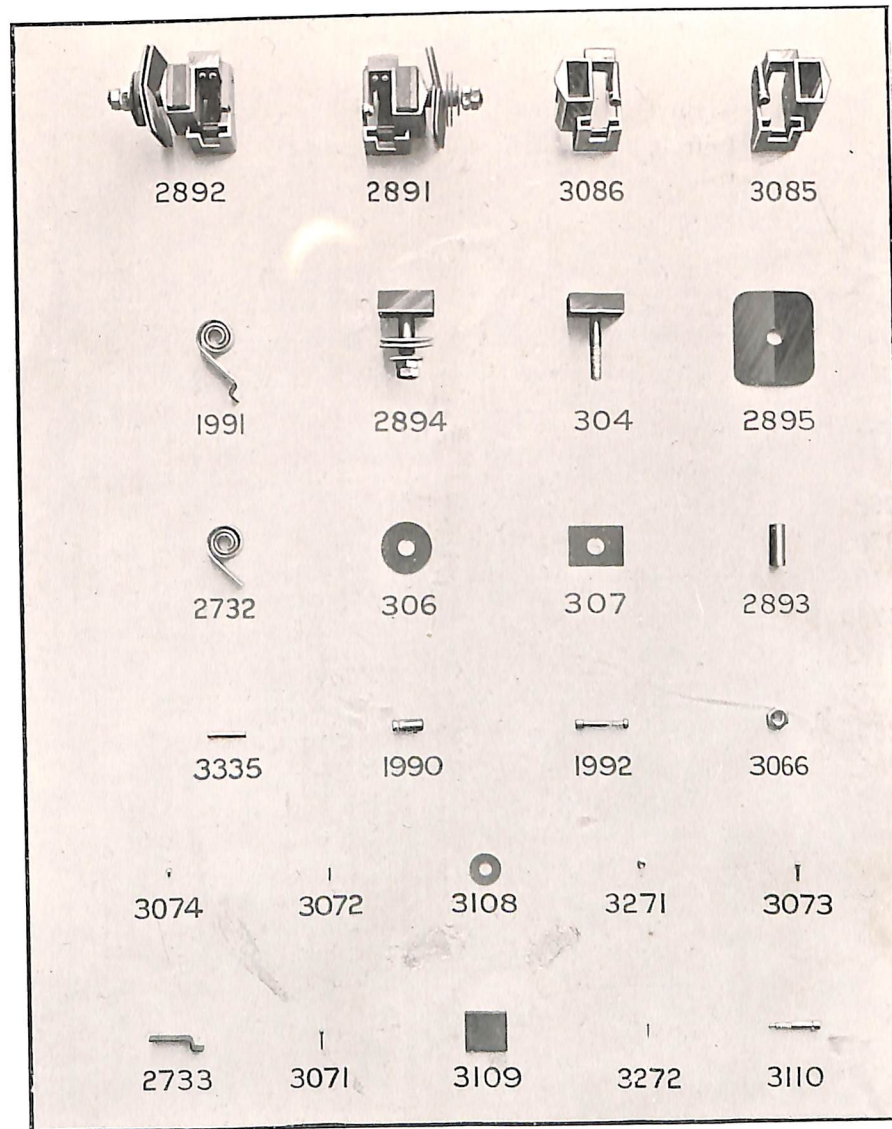


Order by Style Number.

BRUSH HOLDERS.

Style No.	Number per Motor.	Description.	Price.		
			£	s.	d.
2891	1.	Right hand brush holder, complete	3	3	0
2892	1.	Left hand brush holder, complete	3	3	0
3085	1.	Right hand brush holder without parts	0	17	4
3086	1.	Left hand brush holder without parts.....	0	17	4
2894	2.	Brush holder bolt, complete, with insulation, tube, nuts, washers, etc.each	0	12	0
304	2.	Brush holder bolt without detail parts ...each	0	6	0
2893	2.	Fullerboard and mica bushing for bolt, Style No. 304	0	1	0
1991	2.	Brush holder spring and tip, complete...each	0	2	5
2732	2.	Brush holder spring without tip	0	2	3
2733	2.	Hard copper tip for spring.....each	0	1	3
3074	4.	Copper rivets, $\frac{3}{16}$ " \times $\frac{3}{8}$ ", for fastening tip to spring	0	1	3
2895	4.	Bent fullerboard washer	0	0	9
306	4.	Round fullerboard washer	0	0	3
307	2.	Sheet steel guide piece	0	1	6
1992	2.	Worm screw and collar, complete	0	1	6
3110	2.	Worm screw without collar.....each	0	1	0
3271	2.	Collar for worm screw	0	0	6
3272	2.	Split pin for collar, $\frac{3}{32}$ " \times $\frac{5}{8}$ "	0	0	2
1990	2.	Worm wheel	0	1	3
3335	2.	Worm wheel spindle	0	0	6
3072	2.	Taper pin for worm wheel spindle No. 0 x 1 in.per doz.	0	0	6
3073	4.	Machine screw for clamping leads, No. 14-24 \times 1"	0	0	9
3066	4.	Lock nut, $\frac{3}{4}$ "	0	1	0
3108	4.	Plain washer, $\frac{3}{4}$ "	0	0	6
3071	2.	Split pin, $\frac{1}{8}$ " \times 1" for bolt Style No. 304	0	0	3
3109	2.	Carbon brush, $\frac{1}{2}$ " \times $2\frac{3}{8}$ " \times $2\frac{3}{4}$ "	0	0	9

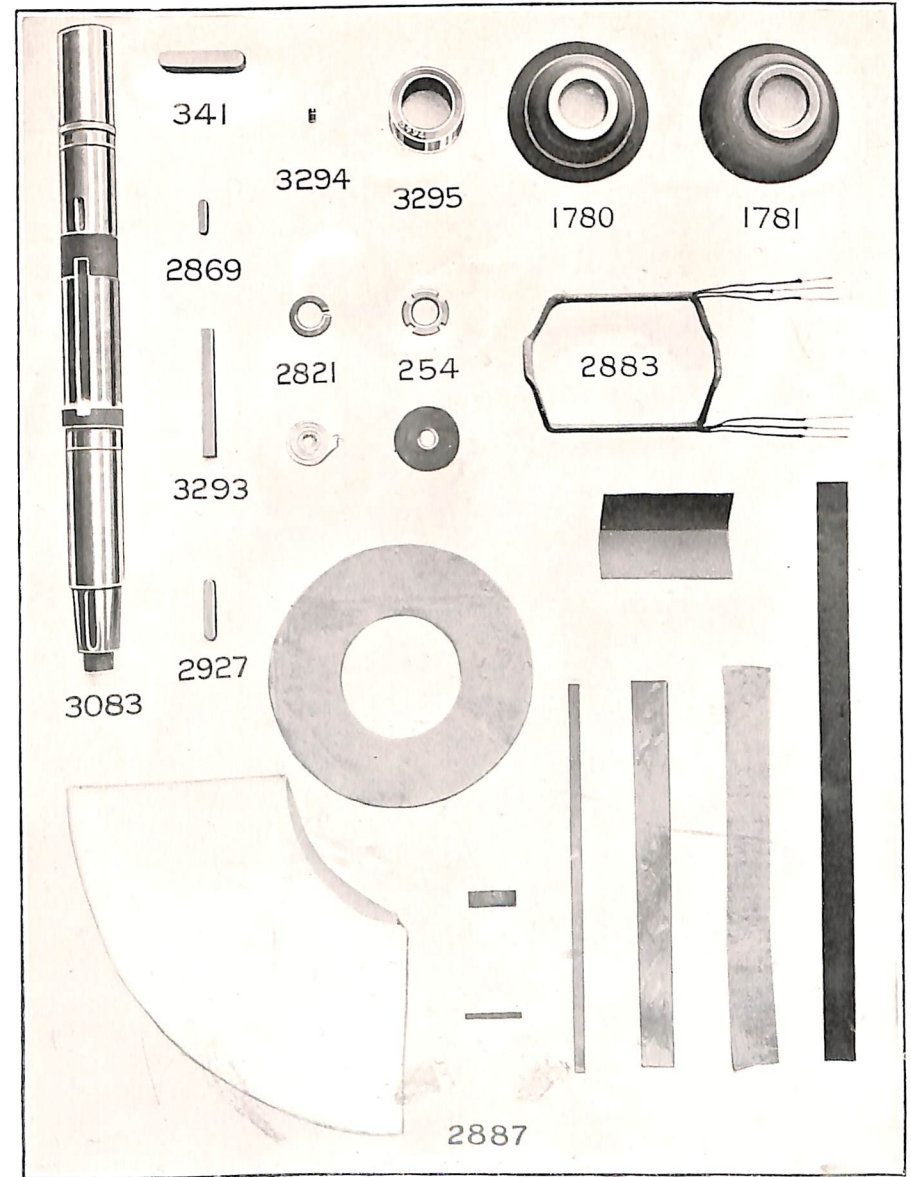
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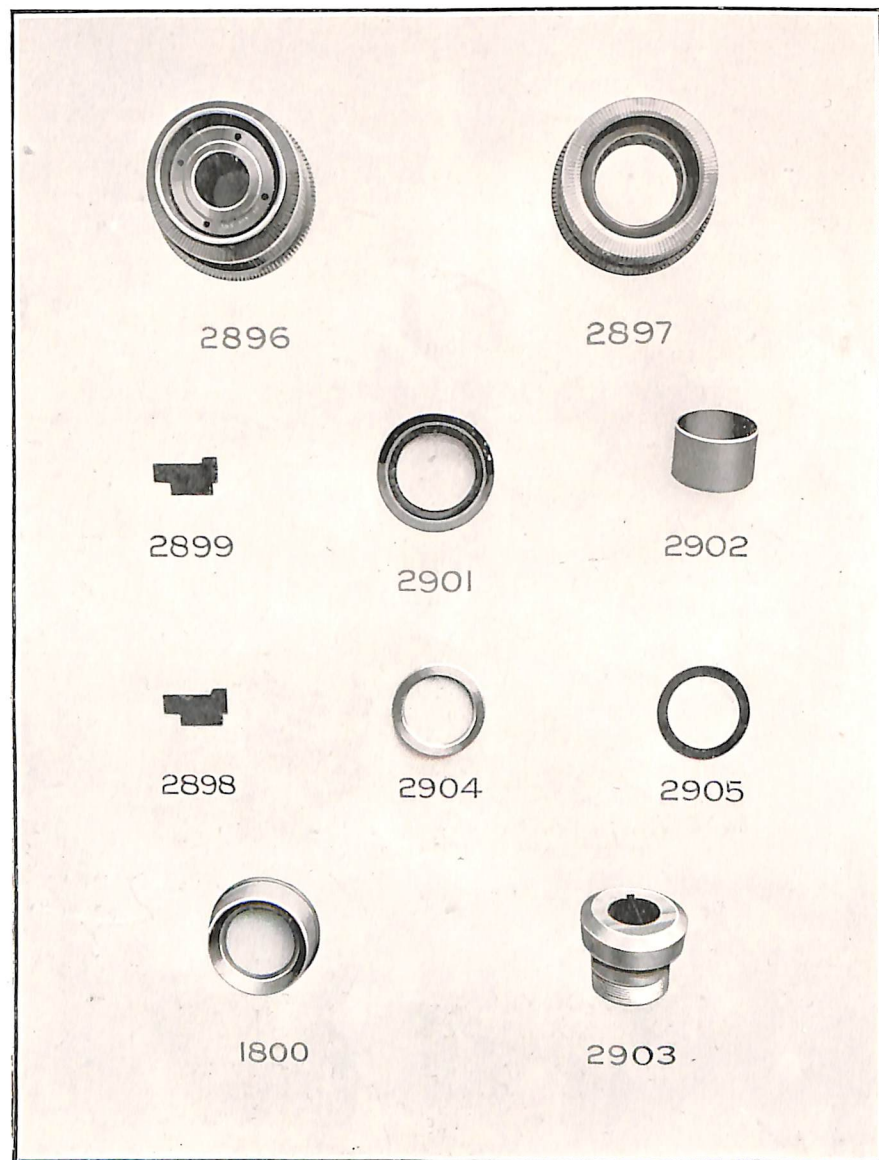


ARMATURE.

Style No.	Number per Motor.	Description.	Price.
			£ s. d.
2882	I.	Armature complete, including commutator and shaft.....	52 16 0
2883	37.	Armature coileach	0 5 6
2884	I.	Complete set of rewinding material for one armature, including coils and insulation ...	11 18 0
3083	I.	Shaft, turned, threaded, and key seated	2 15 0
2869	I.	Steel key for commutator, $\frac{1}{2}$ " \times $\frac{1}{2}$ " \times 2", rd. ended.....	0 0 9
3293	I.	Steel key for laminations, $\frac{9}{16}$ " \times $\frac{3}{4}$ " \times $7\frac{5}{8}$ ", sq. ended.....	0 1 0
2927	I.	Steel pinion key, $\frac{5}{8}$ " \times $\frac{1}{2}$ " \times $3\frac{5}{8}$ "	0 0 9
3295	I.	Armature nut, drilled and tapped	0 5 3
3294	I.	Armature nut locking screw.....per doz.	0 1 3
1780	I.	Steel wiper ring, commutator end.....	0 14 3
1781	I.	Steel wiper ring, gear end	0 15 7
254	I.	Pinion nut	0 1 0
2821	I.	Lock washer for end of shaft, $1\frac{3}{4}$ ".....	0 0 5
2887	I.	Insulating material for rewinding armature, includes:— $\frac{1}{2}$ lb black Hartford tape, 6 yards surgical braid, 2 fullerboard strips, 6 pieces best mica white, 25 yards waxed twine, 4 pieces bond paper and mica, 6 pieces bond paper and mica, 2 oil duck washers, 3 oil duck strips, 37 paraffined fullerboard cells, 1 drilling cap.....	0 12 0
2885	3lb	Steel banding wireper lb	0 1 7

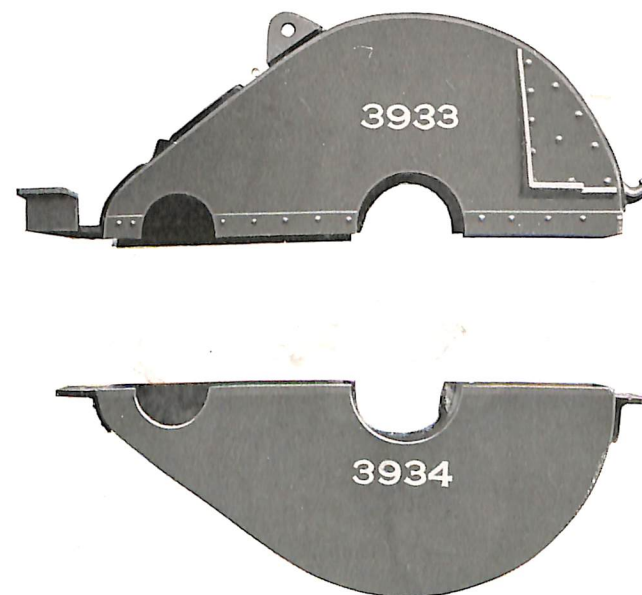
Order by Style Number.





COMMUTATOR.

Style No.	Number per Motor.	Description.	Price.		
			£	s.	d.
2896	I.	Commutator complete	15	2	0
2897	I.	Set of copper and mica segments (III), set and finished (but without bush, etc.)	8	18	0
2898	III.	Copper segment, unfinished.....each	0	1	1
2899	III.	Mica segment, unfinished	0	0	6
2900	I.	Set of mica segments (III) finished	3	2	7
2901	2.	Mica V ring	1	3	3
2902	I.	Mica bushing	0	7	10
2903	I.	C.I. commutator bush	0	14	5
2904	I.	C.B. commutator nut.....	0	9	0
2905	I.	Sheet steel washer, $\frac{1}{32}$ " \times $4\frac{9}{32}$ " i.d. \times $5\frac{5}{8}$ " o.d....	0	0	3
1800	2.	Forged commutator V Ring	0	8	6
2869	I.	Steel key, $\frac{1}{2}$ " \times $\frac{1}{2}$ " \times 2"	0	0	9

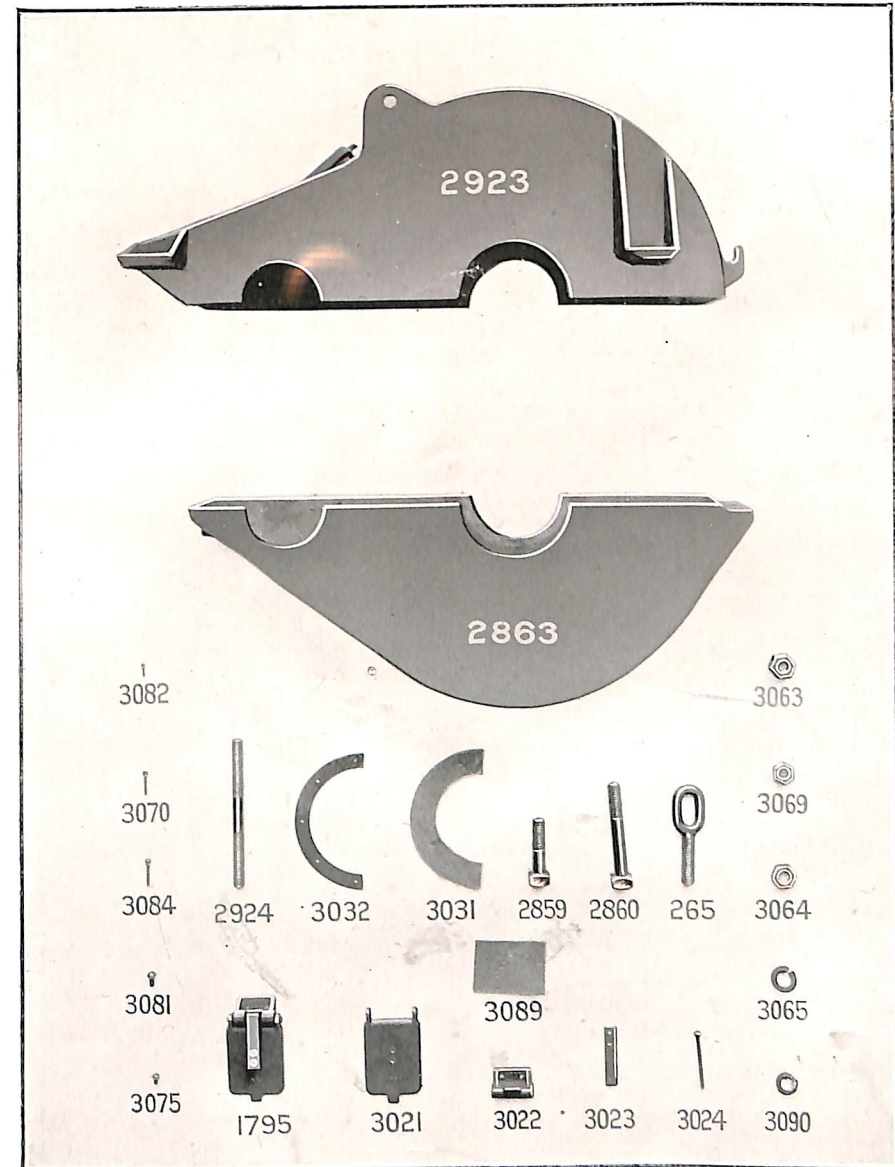


Order by Style Number.

GEAR CASE.

Style No.	Number per Motor.	Description.	Price.		
			£	s.	d.
3933	1.	Pressed steel upper half gear case	3	10	0
3934	1.	Pressed steel lower half gear case	2	10	0
2923	1.	M.I. upper half gear case.....	3	4	0
2863	1.	M.I. lower half gear case, with bolts, Style Nos. 2860 and 265	2	10	0
2924	1.	Threaded rod, $\frac{3}{4}$ " \times $9\frac{3}{4}$ ", for holding gear case to frame, without nuts, &c.	0	1	9
3032	2.	Sheet iron half ring for fixing felt half wiper ring to gear case	0	0	3
3031	2.	Felt half wiper ring.....	0	0	9
3082	10.	Iron rivets for fastening half rings to gear case, $\frac{1}{8}$ " \times $\frac{3}{4}$ "	0	1	0
2859	2.	M.B. bolt for holding gear case to frame, $\frac{7}{8}$ " \times $3\frac{1}{2}$ "	0	0	10
2860	1.	M.B. bolt for bolting the halves of gear case together, $\frac{7}{8}$ " \times 6"	0	1	10
265	1.	Eye bolt for bolting two halves of gear case together	0	3	6
3063	4.	Nut for bolts, Style Nos. 2860, 265, and 259, $\frac{7}{8}$ "	0	2	0
3064	2.	Lock nut for bolts, Style Nos. 265 and 2860, $\frac{7}{8}$ "	0	0	9
3070	2.	Split pin, $\frac{3}{16}$ " \times $1\frac{1}{4}$ "	0	0	3
3084	2.	Split pin, $\frac{3}{16}$ " \times $1\frac{1}{2}$ "	0	0	3
3069	4.	Hex nut for Style No. 2924, $\frac{3}{4}$ "	0	1	0
3065	3.	Lock washer for Style Nos. 2860 and 2859, $\frac{7}{8}$ "	0	0	6
3090	4.	Lock washer for Style No. 2929, $\frac{3}{4}$ "	0	0	5
1795	1.	M.I. gear case cover, with spring and hinge complete	0	3	5
3021	1.	M.I. gear case cover without spring or hinge..	0	1	3
3022	1.	Hinge lug for cover	0	0	9
3023	1.	Steel spring for cover, $\frac{1}{8}$ " \times $\frac{3}{4}$ " \times $3\frac{1}{16}$ "	0	3	0
3024	1.	W.I. hinge pin, $\frac{1}{4}$ " \times $3\frac{1}{2}$ "	0	2	0
3089	1.	Felt for inside of cover	0	0	6
3081	2.	Rivet for fastening hinge lug to gear case, $\frac{5}{16}$ " \times $\frac{3}{4}$ "	0	0	9
3075	2.	Rivet for fastening spring to cover, $\frac{1}{4}$ " \times $\frac{1}{2}$ "	0	0	3

Order by Style Number.



The British Westinghouse Electric & Mfg. Co., Ltd.

This Company operates in the British Empire with the exception of Canada:
and also in Norway and Sweden.

Head Offices :

LONDON : Westinghouse Building, Norfolk Street, Strand, W.C.
Telegraphic and Cable Address :—“ Multiphase, London.” Telephone :—No. 3261 Gerrard.

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