

SINGER
110W102,W103

LIST OF PARTS



MACHINES Nos. 110w102 and 110w103

THE SINGER MANUFACTURING COMPANY

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Instructions for Ordering

In ordering from this list, use **ONLY** the **PART** number in the **FIRST** column.

The number stamped on a Sewing Machine Part is the number of the Single Part only, except when the part includes Set Screws, Clamping Screws, Studs and Rollers Spun on, Small Wires riveted, or Parts soldered together, etc., which it is necessary to furnish in combination.

Every combination of parts sent out has its specific number which, although not stamped on Parts (except in above cases) must be used when ordering the combination.

Each number always indicates the **SAME PART** in whatever list it appears, or for whatever Machine.

The letters after some of the numbers indicate the style of finish only, as follows:

- A. Hardened, Polished and Plated.
- B. Polished and Plated.
- C. Hardened only.
- D. Polished only.
- E. Soft, not polished.
- F. Hardened and Polished.
- H. Blued.

These letters **MUST BE USED** when they appear in the list and **AFTER** the number, as in the list.

In this series

200001 to 201500 are Screw Numbers.

201501 to 201800 are Nut Numbers.

201801 to 202000 are Roller Numbers.

202001 and upward are numbers of Machine Parts.

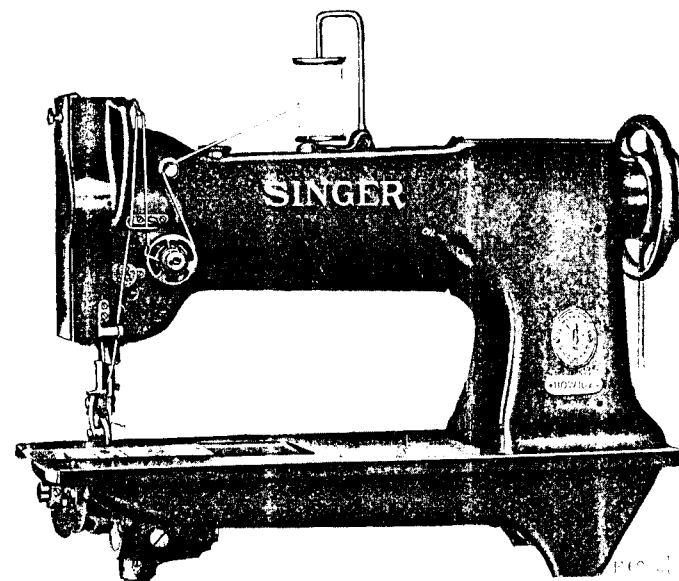
The figures in the second column refer only to the plate in which the illustration of the part is shown and are **NOT TO BE USED** in ordering.

Two or more numbers over a cut indicate that the difference between such parts is not visible in an illustration.

Parts marked with an asterisk (*) are furnished only when repairs are made at the factory.

LIST OF PARTS COMPLETE

FOR



MACHINE No. 110w102

VERTICAL HOOK. ROLLER PRESSER.
CONTINUOUS WHEEL FEED

For Leather Work

No.	Plate	Name
*237701	----	Arm
202247	14396	" Cap
200278H	14176	" " Screw
202248	14176	" " " Washer
204235	14398	" Position Pin (2)
200010E	14176	" Screw (2)
200004E	14176	" "
202005	14176	" " Washer (3)
237702	14397	" Shaft with 200357E and 203100
237748	14396	" " Bushing (back) with 202299
202299	----	Arm Shaft Bushing (back) Oil Packing (wick)

No.	Plate	Name
200071E	14176	Arm Shaft Bushing (back) Screw (3)
207080	14396	Arm Shaft Bushing (front) with 202244
202244	—	Arm Shaft Bushing (front) Oil Packing (wick)
200502B	14176	Arm Shaft Bushing (front) Oil Packing Thumb Screw
200338C	14176	Arm Shaft Bushing (front) Set Screw
203100	—	Arm Shaft Oil Packing (wick) ...
200357E	14176	" " " " Stop Screw
202632	14396	" Side Plate
200462B	14176	" " " Thumb Screw
223842	14397	Balance Wheel (belt groove 23 in. diam.) with 200328C and 200335C
200062H	14176	Balance Wheel Adjusting Screw..
200328C	14176	" " Position Screw ...
200335C	14176	" " Set Screw
*238601	—	Bed
240003	14396	" Slide (back)
213750H	14396	" " (front)
203470	14176	Bobbin
*203520	—	" Case
203648	14176	" " Latch
*202056	—	" " " Pin
203473	14176	" " " Plunger
203474	14176	" " " Spring
236078	14176	" " Lever
*203476	—	" " " Eccentric
204243	14176	" " " Position Pin
235751	14176	" " " Fulcrum
200056D	10884	" " " " Screw
203478	14176	" " " Slide Stud
203214	14176	" " Tension Spring
200984C	14176	" " " " Regulat- ing Screw
200594C	14176	Bobbin Case Tension Spring Screw
203216	—	" " Washer (cloth)
203521	14176	Bobbin Case complete, Nos. 200594C, 200984C, 202056, 203214, 203216, 203473, 203474, 203520 and 203648
210911	14396	Face Plate
202135	14176	" " Position Pin
200473B	14176	" " Thumb Screw
237707	—	Feed Wheel
350085F	14398	" " Adjusting Screw
237708	14398	" " " " Block
238603	14400	" " Bracket with 238630 ..
238604	14400	" " " Plate

No.	Plate	Name
200158B	14398	Feed Wheel Bracket Plate Screw (2)
237710	14398	Feed Wheel Bracket Spring
238608	—	" " Driving Gear (for 16 stitches)
238609	14403	Feed Wheel Driving Gear (for 17½ stitches)
238610	—	Feed Wheel Driving Gear (for 19 stitches)
238613	14398	Feed Wheel Driving Gear Key
238614	14398	" " " " " Shift- ing Collar with 201464C
201464C	14398	Feed Wheel Driving Gear Key Shifting Screw Stud
238615	14398	Feed Wheel Driving Gear Key Spring
201202D	14398	Feed Wheel Driving Gear Key Spring Screw
238616	14398	Feed Wheel Driving Gear Key Stop Pin
238617	14398	Feed Wheel Driving Gear Separat- ing Washer (2)
238621	—	Feed Wheel Driving Pinion (for 16 stitches)
238622	14403	Feed Wheel Driving Pinion (for 17½ stitches)
238623	—	Feed Wheel Driving Pinion (for 19 stitches)
231433	14398	Feed Wheel Driving Pinion Key ..
238632	14403	" " " " Spacing Washer (for use in place of Feed Wheel Driving Pinion when one or two lengths of stitch are re- quired)
238627	14397	Feed Wheel Driving Shaft
237722	14400	" " " " Bushing (back)
238628	14400	Feed Wheel Driving Shaft Bushing (front)
200362C	14398	Feed Wheel Driving Shaft Bushing Set Screw
221743	14398	Feed Wheel Driving Shaft Collar with two 200380C
200380C	14398	Feed Wheel Driving Shaft Collar Set Screw
237724	14400	Feed Wheel Driving Shaft Gear with 200378C and 201220C
201220C	14398	Feed Wheel Driving Shaft Gear Position Screw

No.	Plate	Name
200378c	14398	Feed Wheel Driving Shaft Gear Set Screw
201666e	14398	Feed Wheel Driving Shaft Nut ...
203411	14398	" " " " Washer
238629	14398	" " Stud with 238616
238630	14398	" " " Bushing
238631	14398	" " " Collar with 200152n
200152n	14398	" " " Pinch Screw
201697c	14398	" " " Nut
*203482	—	Hook (sewing)
203483	—	" 203482 with 201253e, 201376e and 203251
203547	—	Hook and Bobbin Case complete, Nos. 203483 and 203521
235755	14181	Hook Bevel Gear Socket, 18 teeth
235527	14181	" " " Bushing (lower) (brass)
200362c	14398	Hook Bevel Gear Socket Bushing (lower) Set Screw
235756	14181	Hook Bevel Gear Socket Bushing (upper) (brass)
449c	14181	Hook Bevel Gear Socket Bushing (upper) Set Screw
200555n	14181	Hook Bevel Gear Socket Screw ..
235635	14181	" " " " Thrust Washer
235529	14181	Hook Driving Bevel Gear with two 350089c
350089c	14181	Hook Driving Bevel Gear Set Screw
237728	14397	" " Shaft
235857	14181	" " " Bevel Gear with 200374c and 200396c
237729	14397	Hook Driving Shaft Bevel Gear Housing with 200346c and three 200362c
237730	14400	Hook Driving Shaft Bevel Gear Housing Cap (bottom)
237731	14400	Hook Driving Shaft Bevel Gear Housing Cap (bottom) Gasket..
237732	14400	Hook Driving Shaft Bevel Gear Housing Cap (side)
237733	14400	Hook Driving Shaft Bevel Gear Housing Cap (side) Gasket
200053c	14181	Hook Driving Shaft Bevel Gear Housing Cap Screw (4)
201082e	14181	Hook Driving Shaft Bevel Gear Housing Screw (long)
225532	14399	Hook Driving Shaft Bevel Gear Housing Screw (long) Washer..

No.	Plate	Name
201308n	14181	Hook Driving Shaft Bevel Gear Housing Screw (short)
200396c	11607	Hook Driving Shaft Bevel Gear Position Screw
200374c	14181	Hook Driving Shaft Bevel Gear Set Screw
237734	14181	Hook Driving Shaft Bushing (back)
200362c	14398	" " " " " Set Screw
235531	14181	Hook Driving Shaft Bushing (front)
200347c	14181	" " " " " Set Screw
221743	14398	Hook Driving Shaft Collar with two 200380c
200380c	14398	Hook Driving Shaft Collar Set Screw
203251	—	Hook Gib
201376e	14181	" " Hinge Screw
201253e	14181	" " Screw
237735	14397	" Saddle with 449c, 200347c and three 200362c
235534	14400	Hook Saddle Oil Cover
201185n	14399	" " " " Screw (2) ..
201318e	14399	" " " Stop Screw (2) ..
235535	—	" " Oiling Felt
202260	—	" " " Wick
235649	14399	" " " " Cover
200169n	14399	" " " " " Screw
201308e	14181	" " Screw (2)
203637	—	" " " Washer (2)
213018	14399	" Washer with 203476 and two 204243
207887	—	Knee Lifter Connection Lever
200262n	14399	" " " " Hinge Screw
237766	14397	Knee Lifter Connection Lever Lifting Rod with 202302
202302	14399	Knee Lifter Connection Lever Lifting Rod Cotter Pin
202838	—	Knee Lifter Lifting Lever
200262n	14399	" " " " Hinge Screw
237937	14399	Needle Bar with 200141e
202552	11607	" " Connecting Link
236073	14399	" " " " Oil Guard
200161n	11607	Needle Bar Connecting Link Oil Guard Screw
202333	11607	Needle Bar Connecting Link Stud with 202254

No.	Plate	Name
202254	---	Needle Bar Connecting Link Stud Oil Packing (wick)
200374c	14181	Needle Bar Connecting Link Stud Set Screw
200383c	14399	Needle Bar Connecting Link Stud Set Screw
*206891	----	Needle Bar Connecting Stud
202329	11607	" " " " 206891 with 200086c and 202330
202330	---	Needle Bar Connecting Stud Oil Packing (wick)
200686c	11607	Needle Bar Connecting Stud Pinch Screw
202692	14183	Needle Bar Crank with 200335c, 200374c, 200383c, 200428c and 202333
237737	---	Needle Bar Crank 202692 with 202329, 202399, 202400, 202552 and 237762
203172	11607	Needle Bar Crank Friction Washer
200428c	11607	" " " Position Screw ..
200325c	14176	" " " Set Screw
202664	14183	" " " Rock Frame
237738	---	" " " " 202664 with 237937
*38127	---	Needle Bar Rock Frame Driving Eccentric
*237749	---	Needle Bar Rock Frame Driving Eccentric Body
350107c	14399	Needle Bar Rock Frame Driving Eccentric Body Position Screw ..
443c	14399	Needle Bar Rock Frame Driving Eccentric Body Set Screw
1103c	14399	Needle Bar Rock Frame Driving Eccentric Regulating Screw ...
217b	14399	Needle Bar Rock Frame Driving Eccentric Set Screw
7071	14399	Needle Bar Rock Frame Driving Eccentric Set Screw Washer ..
237750	---	Needle Bar Rock Frame Driving Eccentric complete, Nos. 217b, 443c, 1103c, 7071, 38127, 237749 and 350107c
237739	14183	Needle Bar Rock Frame Driving Fork Lever with 200029c
200029c	14399	Needle Bar Rock Frame Driving Fork Lever Pinch Screw
237740	14403	Needle Bar Rock Frame Driving Fork Lever Slide Block (two pieces)

No.	Plate	Name
210910	11607	Needle Bar Rock Frame Hinge Stud with 202277
202277	---	Needle Bar Rock Frame Hinge Stud Oil Packing (wick)
200347c	14181	Needle Bar Rock Frame Hinge Stud Set Screw
202666	11607	Needle Bar Rock Frame Position Bracket
200098c	11607	Needle Bar Rock Frame Position Bracket Screw
202667	14397	Needle Bar Rock Frame Rock Shaft
210978	---	" " " " " " " " 202667 with 200386c and 210920 ..
202668	11607	Needle Bar Rock Frame Slide Block
210920	---	" " " " " " " " 202668 with 201141c
201141c	14399	Needle Bar Rock Frame Slide Block Screw Stud
200386c	11607	Needle Bar Rock Frame Slide Block Screw Stud Set Screw
200141c	11607	Needle Set Screw
207072	11607	Presser Bar Bushing (2)
200352c	14401	" " " Set Screw (2)
202671	14399	" " " Lifter
200653c	14401	" " " Hinge Screw ...
207963	14399	" " " Lifting Releasing Lever Bracket
200975c	14401	Presser Bar Lifting Releasing Lever Bracket Guide Screw
206608	14401	Presser Bar Lifting Releasing Lever Bracket Spring
202327	14401	Presser Bar Position Guide
202338	14401	" " " " " Lever with 200086c
200086c	11607	Presser Bar Position Guide Lever Pinch Screw
200352c	14401	Presser Bar Position Guide Set Screw
210948	14397	Presser Bar Spring (flat)
210949	14401	" " " " Bracket with 200086c
200086c	11607	Presser Bar Spring Bracket Pinch Screw
200538c	14401	Presser Bar Spring Regulating Screw
200948c	14401	Presser Bar Spring Support Screw
201951	---	Roller Presser, $\frac{1}{8}$ in. diam., $\frac{3}{8}$ in. face (fine)

No.	Plate	Name
201952	14401	Roller Presser 201951 with 1528J, 201699c, 350104c and twenty-eight 206417
203422	14401	Roller Presser Arm
203432	—	" " " 203422 with 201952
202560	14401	Roller Presser Arm Bracket (swing)
237772	—	" " " " 202560 with 200096D and 203432
200675c	14401	Roller Presser Arm Bracket Position Screw Stud
202558	14401	Roller Presser Arm Bracket Spring
202559	14401	" " " " " Stop
200141F	11607	Roller Presser Arm Bracket Spring Stop Screw
200096D	14401	Roller Presser Arm Screw
206417	—	" " Ball, $\frac{1}{8}$ in. diameter
201699c	14401	" " " Cone
202557	14183	" " Bar
350104c	14401	" " Hinge Screw
1528J	14401	" " " " Nut
237773	—	Roller Presser and Bar complete, Nos. 200675c, 202557 to 202559, 237772 and two 200141F
202068	14183	Spool Holder Base
200575H	14401	" " " Screw
204296	14183	" " Wire
200079H	14401	" " " Hinge Screw
204297	14183	Spool Holder complete, Nos. 200079H, 202068 and 204296
237762	14401	Take-up Lever
202399	14401	" " Driving Stud with 202277
202277	—	Take-up Lever Driving Stud Oil Packing (wick)
202400	14401	Take-up Lever Hinge Stud with 202423
202423	—	Take-up Lever Hinge Stud Oil Packing (wick)
200363c	14401	Take-up Lever Hinge Stud Set Screw
202401	—	Take-up Lever Oiling Felt
200132E	14401	" " " " Screw
244007	—	Tension Disc (back)
207964	—	" " (front)
210950	14402	" Release Driving Lever with 200394c and 202676

No.	Plate	Name
202676	14402	Tension Release Driving Lever Pin
202677	14402	" " " " " Slide Bar
210966	—	Tension Release Driving Lever Pin Slide Bar 202677 with 200167E and 210952
202678	14402	Tension Release Driving Lever Pin Slide Bar Spring
200394c	14402	Tension Release Driving Lever Set Screw
210951	11610	Tension Release Washer
202407	10881	" Spring
200625F	11610	" Stud with 204925
200061c	14402	" " Set Screw
204925	11610	" " Washer
201572B	10881	" Thumb Nut
210953	11610	Tension complete, Nos. 200625F, 201572B, 202407, 202682, 207964, 210951 and 244007
202682	11610	Thread Controller Spring
210952	11610	" " " Stop
200167E	11610	" " " " Screw
210955	11610	" Guide (upper)
200582H	11610	" " Screw (2)
204329	—	" Oiler (felt)
237770	14402	" " Bracket with 204329
200582H	11610	" " " Screw
210956	11610	" Retainer Bracket with 200397H
200582H	11610	" " " Screw (2)
210960	11610	" " Disc
210961	11610	" " Plunger
210962	11610	" " " Spring
210993	11610	" " Sleeve
210963	11610	" " Socket
200368H	14402	" " " Set Screw
223844	14402	" " Spring
210957	11610	" " Stud
210958	11610	" " " Collar
200397H	11610	" " " Set Screw
210959	11610	Thread Retainer (lower) complete, Nos. 210956 to 210958, 210993 and 223844
237741	14402	Throat Plate, 53 elongated needle hole, for needle sizes 14 and 15
691F	14402	Throat Plate Screw (2)
237744	14183	Vertical Shaft
237745	14402	" " Bevel Gear (lower)
205508	14402	" " " " " Position Pin

No.	Plate	Name
235857	14181	Vertical Shaft Bevel Gear (upper) with 200374c and 200396c
200396c	11607	Vertical Shaft Bevel Gear (upper) Position Screw
200374c	14181	Vertical Shaft Bevel Gear (upper) Set Screw
237734	14181	Vertical Shaft Bushing (lower) ..
200346c	14402	" " " " Set Screw
237746	14402	Vertical Shaft Bushing (upper) ..
200362c	14398	" " " " Set Screw
237747	14402	Vertical Shaft Driving Gear with 200374c and 200396c
200396c	11607	Vertical Shaft Driving Gear Posi- tion Screw
200374c	14181	Vertical Shaft Driving Gear Set Screw
237754	14402	Vertical Shaft Oil Leader (lower) (brass)
237755	14402	Vertical Shaft Oil Leader (upper) (brass)

MACHINE No. 110w103

VERTICAL HOOK. ROLLER PRESSER.
CONTINUOUS WHEEL FEED

For Leather Work

Same as Machine No. 110w102 with the following
exceptions:

No.	Plate	Name
238634	14408	Feed Wheel, in place of 237707 ...
238611	----	" " Driving Gear (for 21 stitches), in place of 238608
238612	----	Feed Wheel Driving Gear (for 23 stitches), in place of 238609
238624	----	Feed Wheel Driving Pinion (for 21 stitches), in place of 238621
238625	----	Feed Wheel Driving Pinion (for 23 stitches), in place of 238622
238636	14408	Needle Bar with 200141r, in place of 237937
238640	----	Needle Bar Rock Frame 202664 with 238636, in place of 237738..
201990	----	Roller Presser, 3 in. diam., 1/4 in. face (fine), in place of 201951 ..
201991	14408	Roller Presser 201990 with 1528a, 201699c, 350104c and twenty-eight 206417, in place of 201952
238637	----	Roller Presser Arm 203422 with 201991, in place of 203432
238638	----	Roller Presser Arm Bracket 202560 with 200096b and 238637, in place of 237772
238639	----	Roller Presser and Bar complete, Nos. 200675c, 202557 to 202559, 238638 and two 200141r, in place of 237773
238635	14408	Throat Plate, 56 elongated needle hole, for needle sizes 12 and 13, in place of 237741

ACCESSORIES

FOR MACHINE No. 110w102

No.	Plate	Name
200157B	14403	Attachment Screw
203470	14176	Bobbin (5)
*225482	—	" Case Screw Driver Blade ...
*225483	—	" " " " Handle ..
225497	14334	Bobbin Case Screw Driver complete, Nos. 225482 and 225483 ..
238632	14403	Feed Wheel Driving Pinion Spacing Washer (2)
4822	14403	Roller Presser Hinge Screw Nut Wrench
16 x 4	—	Needles, six, two each, sizes 12, 14 and 16
200861D	14403	Bed Slide (back) Locking Thumb Screw
228221	—	Drip Pan with four wood screws $\frac{1}{2}$ in., No. 5
12361	14334	Machine Hinge Connection (2) ...
41490	14334	" Rest Pin (wood)
120342	14334	Oiler (copper plated) with 120343
120343	14334	" Spout ($3\frac{1}{2}$ in. long)
*225484	—	Screw Driver Blade
*225485	—	" " Handle
225498	14334	Screw Driver complete ($7\frac{1}{4}$ in. long), Nos. 225484 and 225485 ..
225554	14334	Wrench (steel)

BOBBIN WINDER

Swing Automatic, Right Hand

225453	10884	Frame with 202277 and 225438 ...
225454	10884	" Hinge Pin
202277	—	" Oil Packing (wick)
225438	10884	" " Well Cap
225455	10884	" Spring
225456	10884	" " Plunger
202473	10885	Pulley with 200389c
200389c	14398	" Set Screw
225381	10881	Spindle
225444	10884	Stop Latch
200056E	10884	" " Screw
225458	10884	" " Thumb Lever
225459	10884	" " " " Hinge Stud

No.	Plate	Name
225459	10884	Stop Latch Thumb Lever Joint Stud
202478	10884	" " Trip Lever
200299H	10884	" " " " Hinge Screw
225461	10881	Tension Bracket with 201499B
200082D	10881	" " Screw
228026	10884	" " " Washer
2102	10881	" Disc
202407	10881	" Spring
201499B	10881	" Stud
201572B	10881	" " Thumb Nut
225462	10881	Bobbin Winder Tension Bracket complete, Nos. 201572B, 202407, 225461 and two 2102
225433	10885	Bobbin Winder and Tension Bracket Base
225382	10885	Universal Bobbin Winder complete, Nos. 200056E, 200082D, 200299H, 202473, 202478, 225381, 225433, 225444, 225453 to 225456, 225458, 225462, 228026, two each 225459 and wood screws $\frac{3}{4}$ in., No. 12, R.H.B.

KNEE LIFTER

2763	14407	Rock Shaft
7539	14407	" " Hanger (back) with two wood screws 1 in., No. 10
20093	14407	Rock Shaft Hanger (front) with two wood screws 1 in., No. 10 ..
228562	14407	Rock Shaft Knee Arm
228563	—	Rock Shaft Knee Arm complete, Nos. 2766, 2767 and 228562
2766	14407	Rock Shaft Knee Arm Hub with 356c
356c	14407	Rock Shaft Knee Arm Hub Set Screw
2767	14407	Rock Shaft Knee Plate with 356c ..
228255	14407	" " " " Counterbalance Spring
356c	14407	Rock Shaft Knee Plate Set Screw
228238	14407	" " Lifting Lever with 356c
228239	—	Rock Shaft Lifting Lever 228238 with 8073, 204225, 228240 and 228241
228240	14407	Rock Shaft Lifting Lever Rod (3 in. long)
200529c	14407	Rock Shaft Lifting Lever Rod Set Screw

No.	Plate	Name
228241	14407	Rock Shaft Lifting Lever Rod Swivel with 200529c
204225	14407	Rock Shaft Lifting Lever Rod Swivel Spring
8073	14407	Rock Shaft Lifting Lever Rod Swivel Spring Plunger
356c	14407	Rock Shaft Lifting Lever Set Screw
2770	14407	" " Stop Dog with 356c ...
356c	14407	" " " " Set Screw ..
228243	14407	Rock Shaft complete, Nos. 2763, 7539, 20093, 228239, 228255, 228563 and two 2770

(Other Knee Lifter parts are listed with parts of machine head.)

FOR MACHINE No. 110w103

Same as for Machine No. 110w102 with the following exception:

16 x 4	---	Needles, six, size 9
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FEED GEARS

No.	Plate	Name
238605	---	Feed Wheel Driving Gear (for 12 stitches)
238606	---	Feed Wheel Driving Gear (for 14 stitches)
238607	---	Feed Wheel Driving Gear (for 15 stitches)
238608	---	Feed Wheel Driving Gear (for 16 stitches)
238609	14403	Feed Wheel Driving Gear (for 17½ stitches)
238610	---	Feed Wheel Driving Gear (for 19 stitches)
238611	---	Feed Wheel Driving Gear (for 21 stitches)
238612	---	Feed Wheel Driving Gear (for 23 stitches)
238618	---	Feed Wheel Driving Pinion (for 12 stitches)
238619	---	Feed Wheel Driving Pinion (for 14 stitches)
238620	---	Feed Wheel Driving Pinion (for 15 stitches)
238621	---	Feed Wheel Driving Pinion (for 16 stitches)
238622	14403	Feed Wheel Driving Pinion (for 17½ stitches)
238623	---	Feed Wheel Driving Pinion (for 19 stitches)
238624	---	Feed Wheel Driving Pinion (for 21 stitches)
238625	---	Feed Wheel Driving Pinion (for 23 stitches)

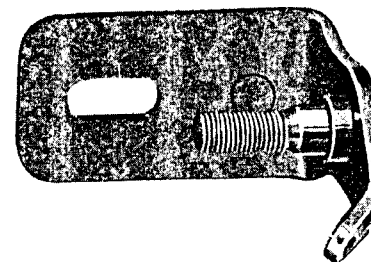
FEED WHEELS

FOR MACHINE No. 110w102

No.	Plate	Name
237707	—	Feed Wheel
237767	14382	" " (coarse)
237771	14382	" " (knurled)
238523	14382	" "

PLATE 10881—FULL SIZE

225461



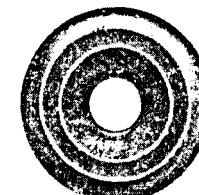
200082



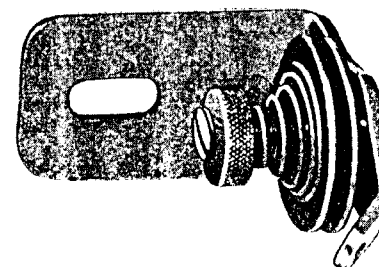
202104



2102



225462



202407



201499



201572



PLATE 10884—FULL SIZE

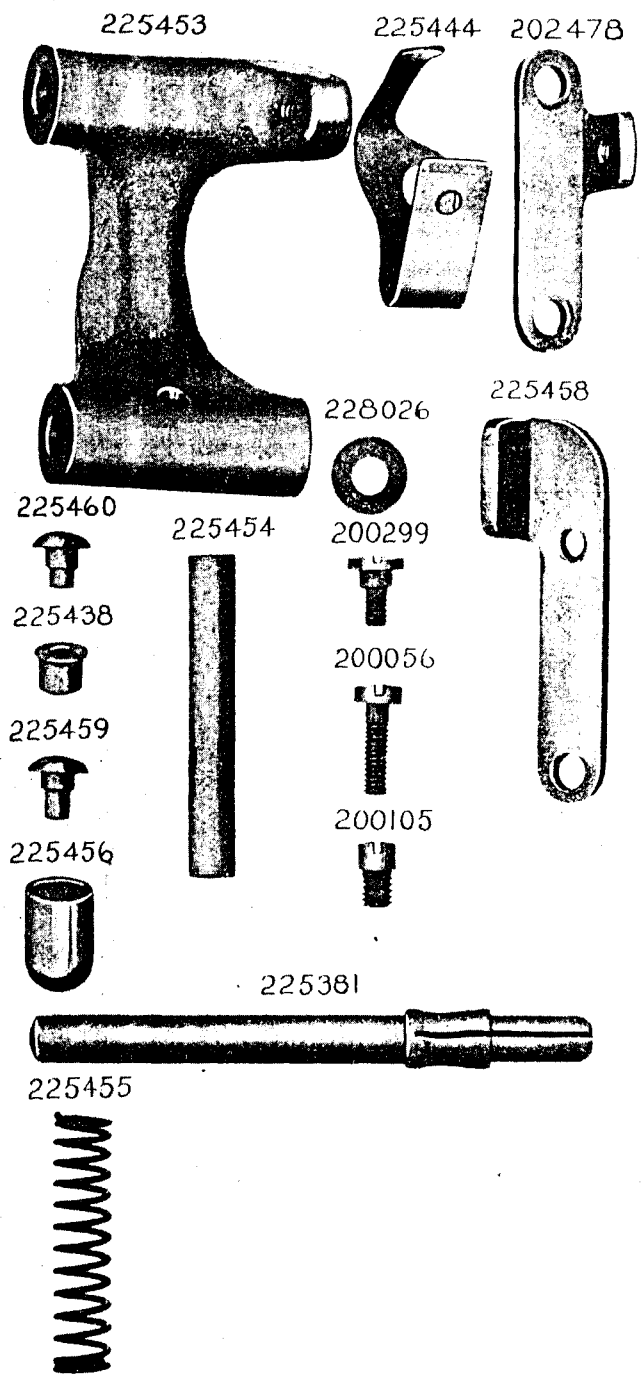


PLATE 10886—ONE-FOURTH SIZE

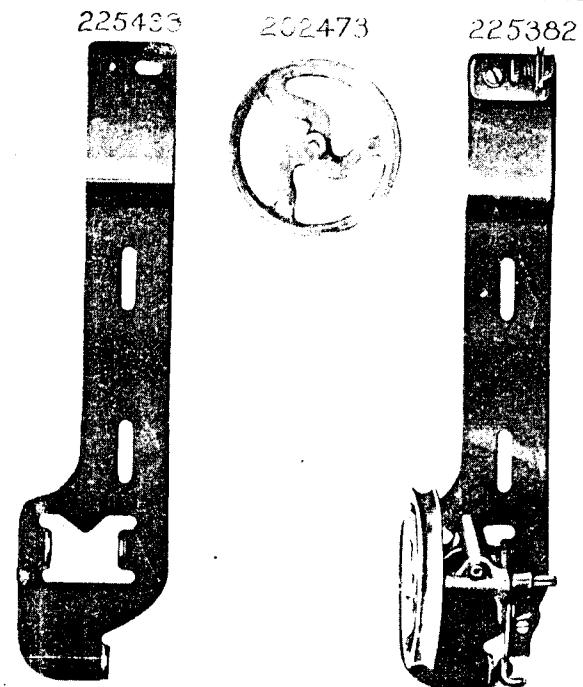


PLATE 11607—FULL SIZE

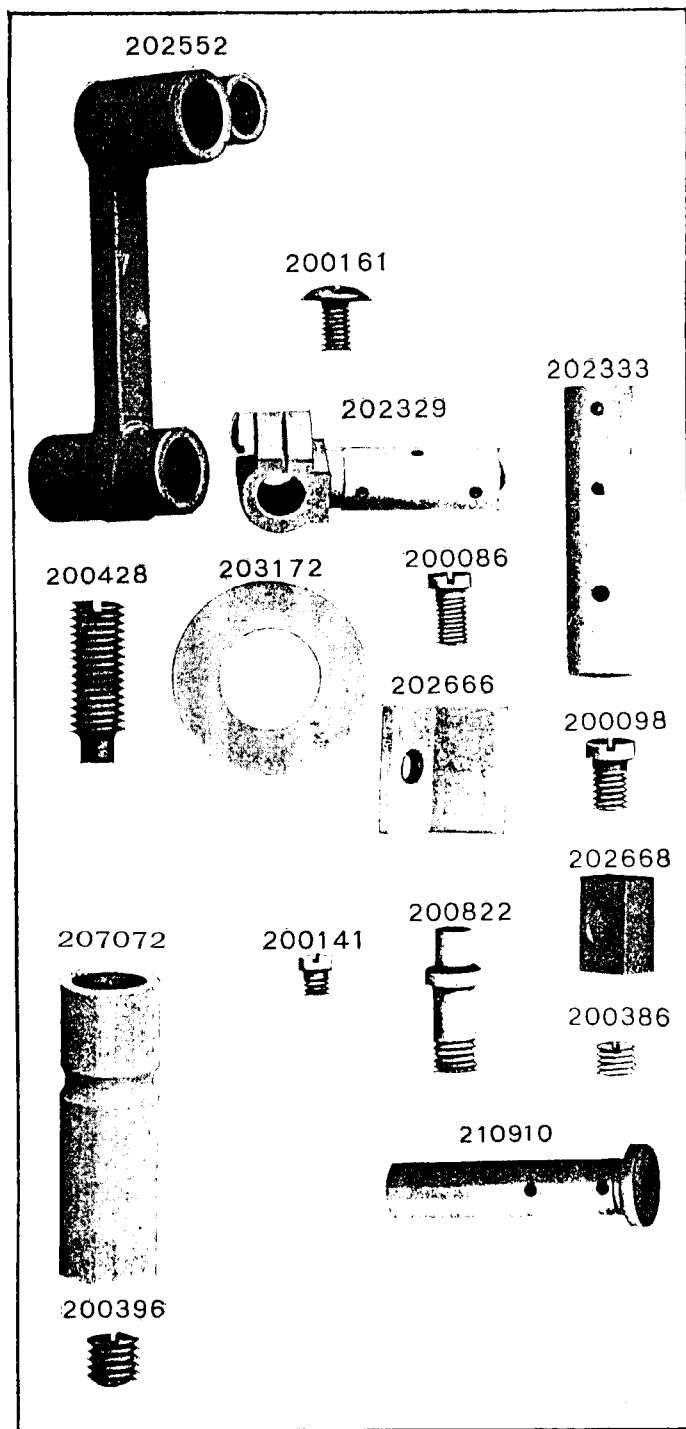


PLATE 11610—FULL SIZE

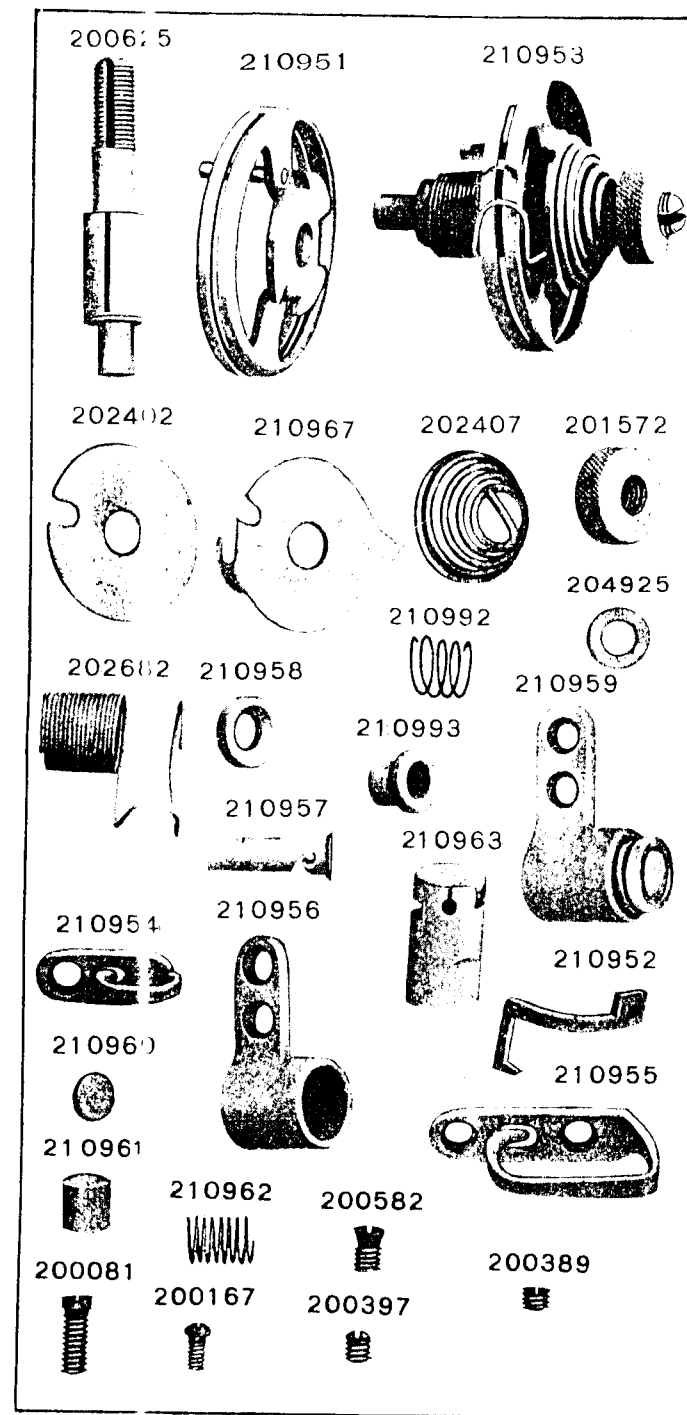


PLATE 14176—FULL SIZE

200278 202248 200071 202036 200338



8582



200010



200004



200570



202005



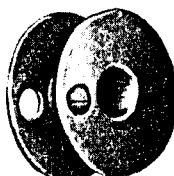
204243



200502

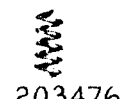


203470



203648

203474



235751



203478



200357



200062



200335



236078



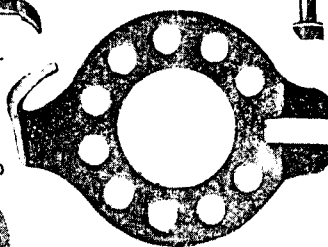
200462



200328



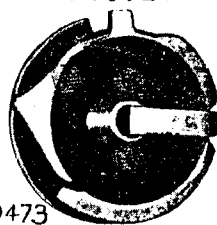
203473



203214

200984 200594

203521



200473

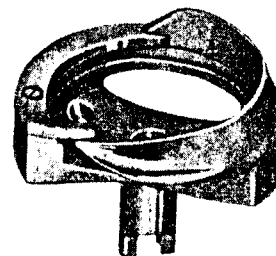


202135



PLATE 14181—FULL SIZE

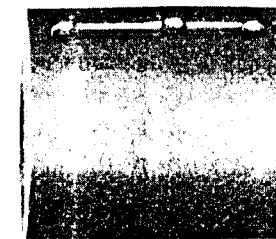
237726



235755



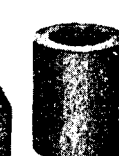
235531



200555



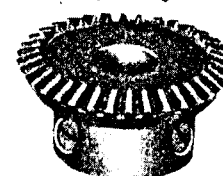
235527



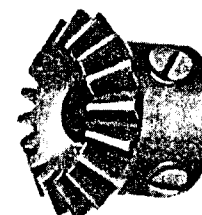
235635



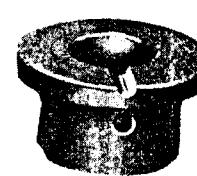
235529



235857



235756



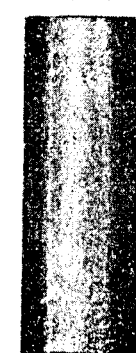
200485



201308



237734



201376



200347



449



350089



200053



201082



200374



201253

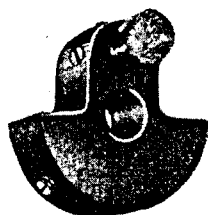


221148

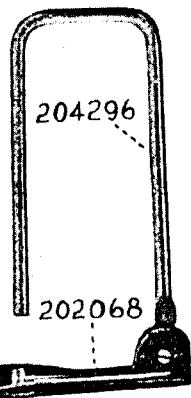


PLATE 14183—ONE-HALF SIZE

202692



204297



204296

202068

202664 237744 202557



237739

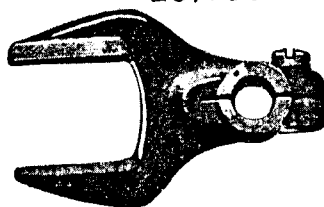
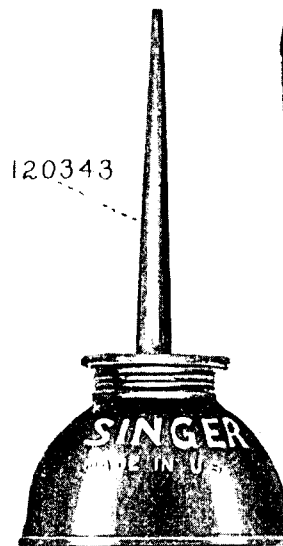


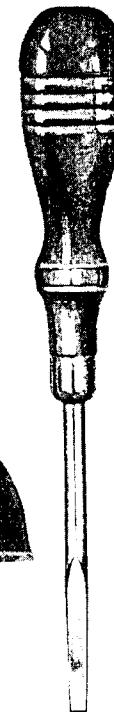
PLATE 14334—ONE-HALF SIZE

120342



120343

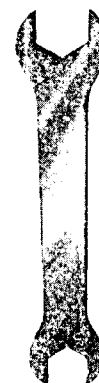
225498



225497



225554



41400

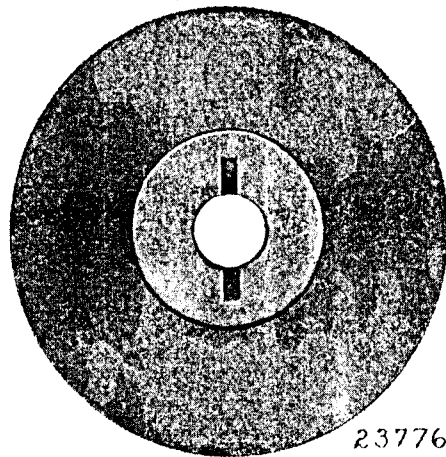


12361

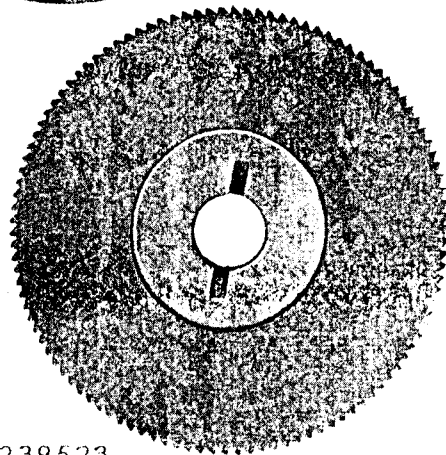


PLATE 14382—FULL SIZE

237771



237767

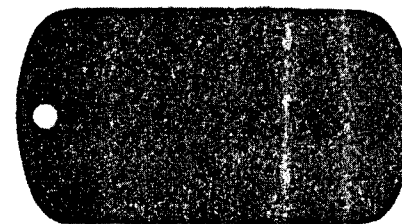


238523

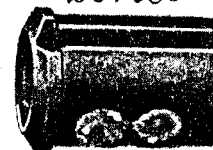


PLATE 14396—ONE-HALF SIZE

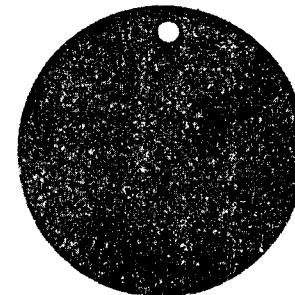
202247



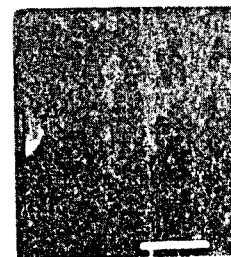
207080



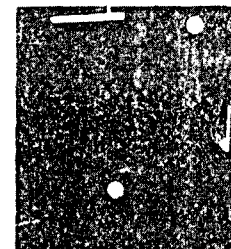
202632



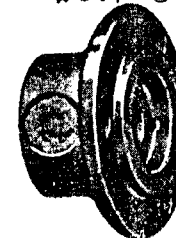
213750



240003



237748



210911

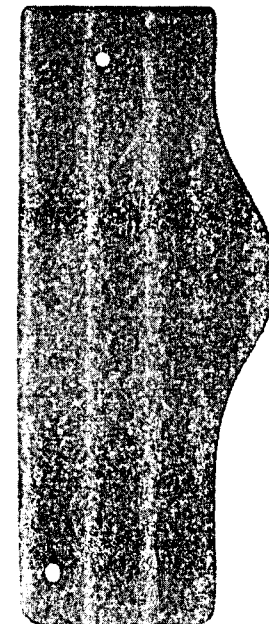


PLATE 14397—ONE-FOURTH SIZE

237702 238627 237728 202667 237766

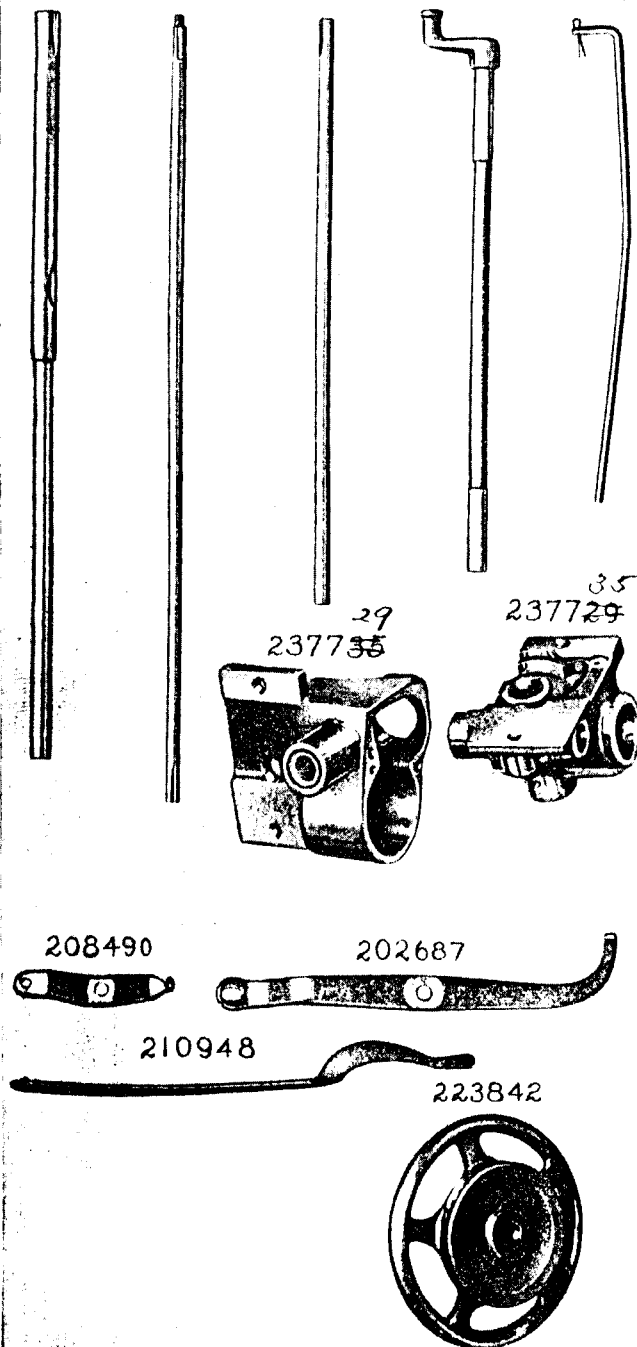


PLATE 14398—FULL SIZE

204235 238614 238629

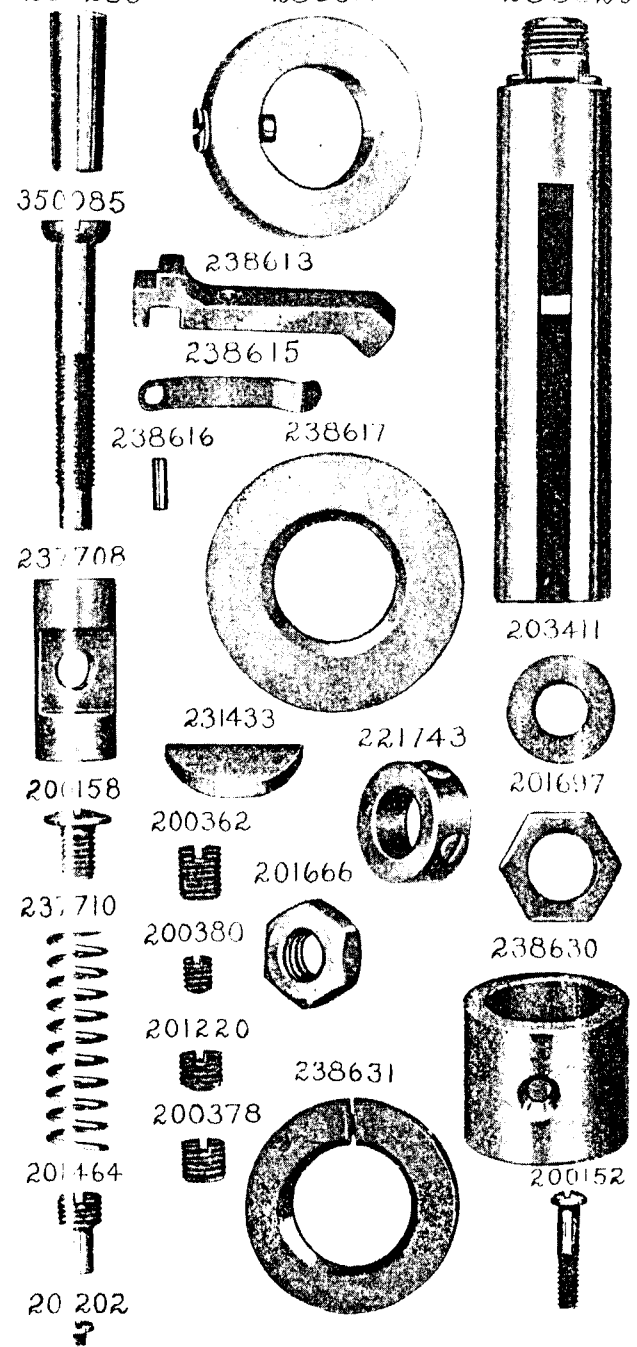


PLATE 14399—FULL SIZE

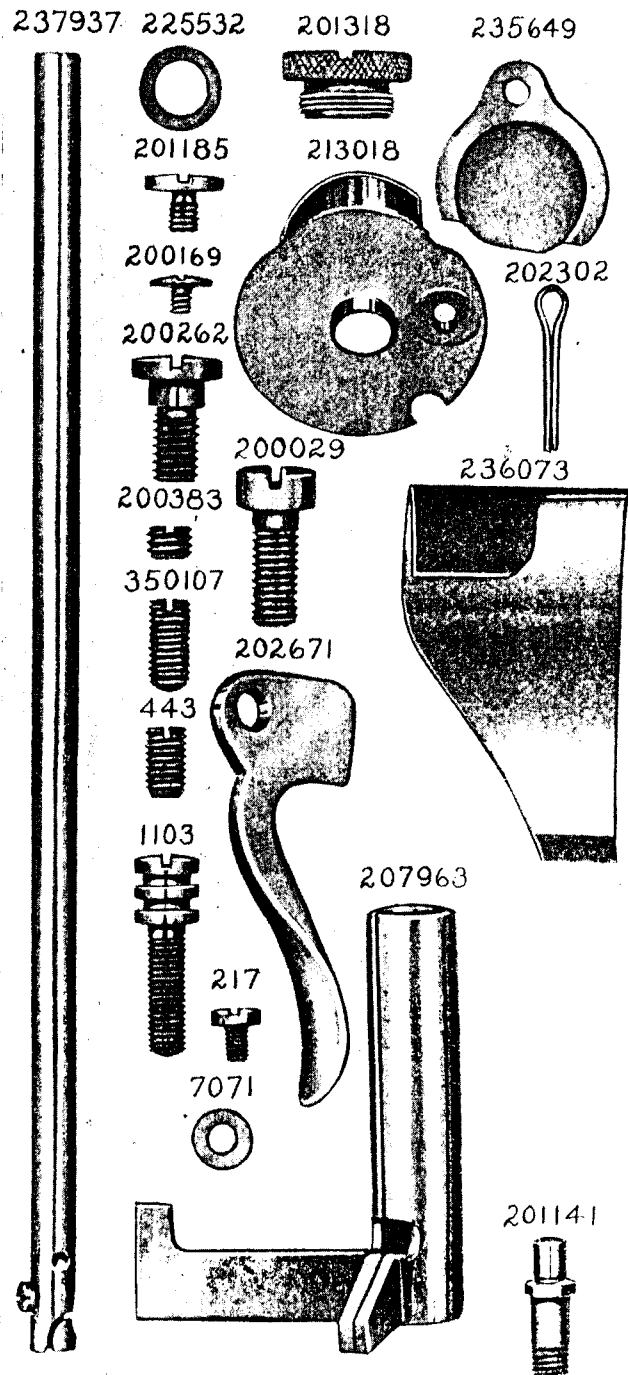


PLATE 14400—ONE-HALF SIZE

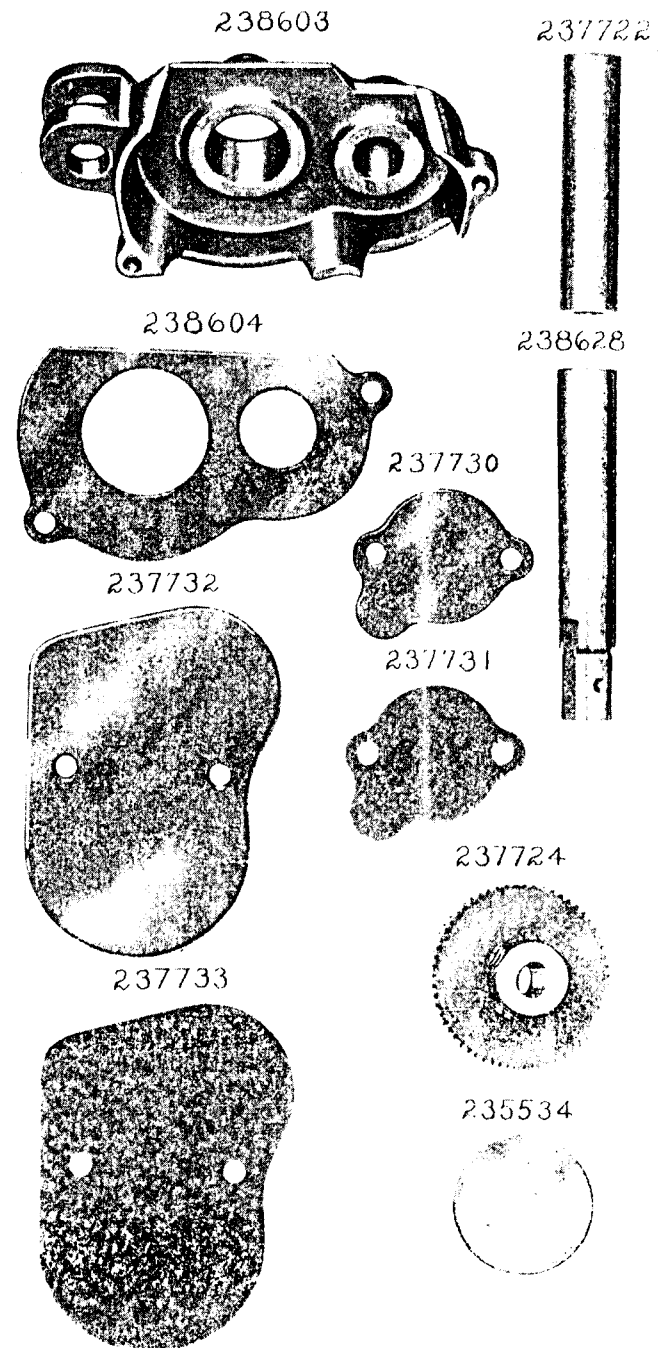


PLATE 14401—FULL SIZE

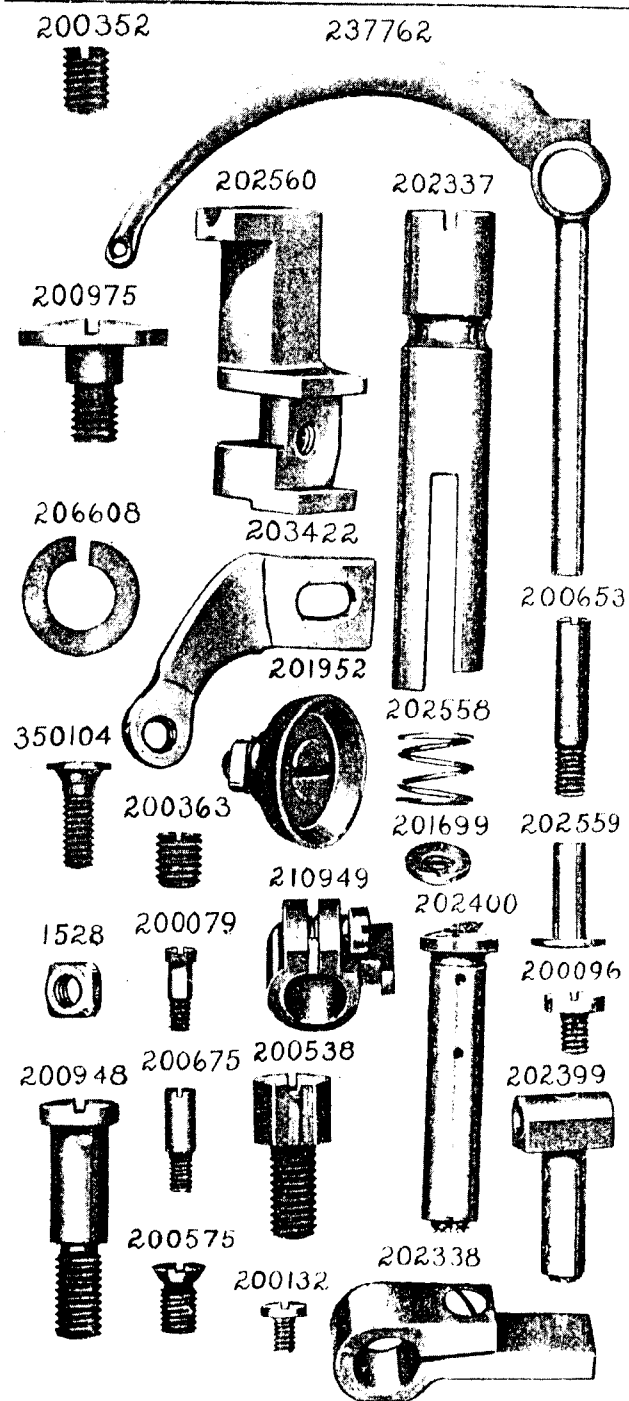


PLATE 14402—FULL SIZE

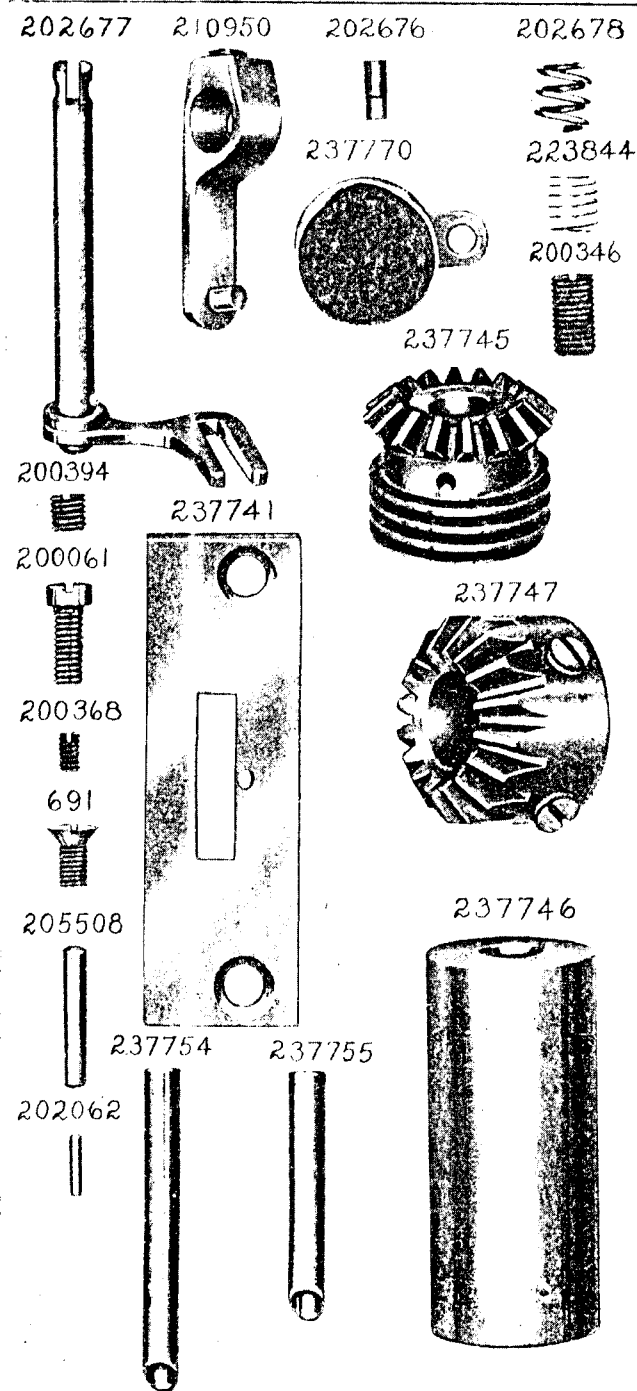


PLATE 14403—FULL SIZE

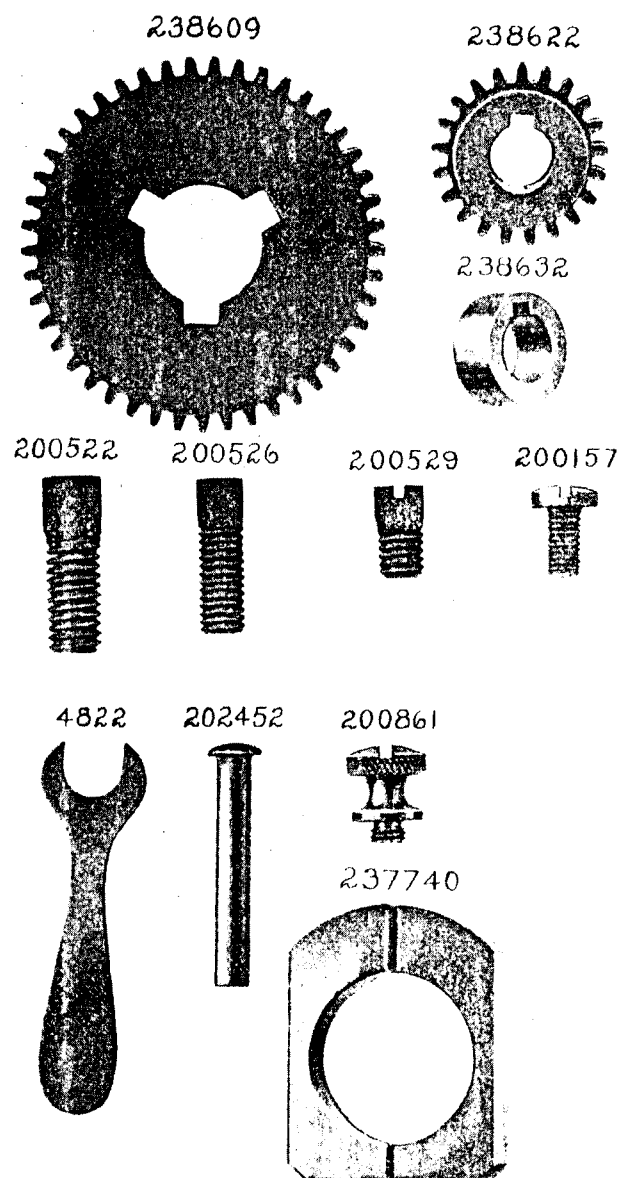
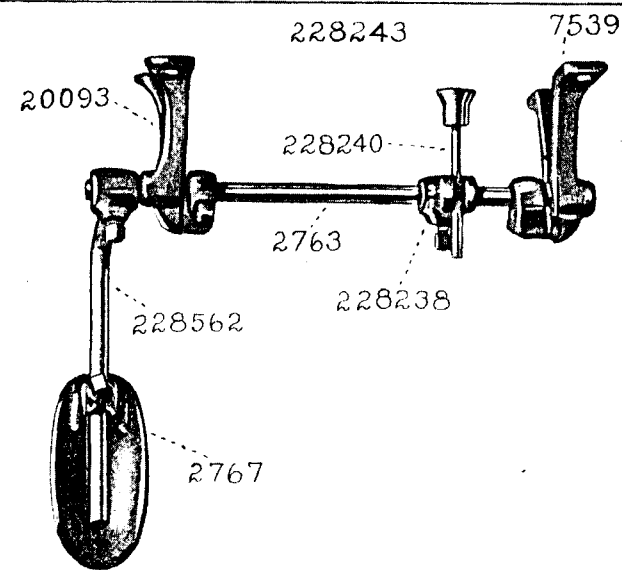


PLATE 14407—ONE-FOURTH SIZE



FULL SIZE

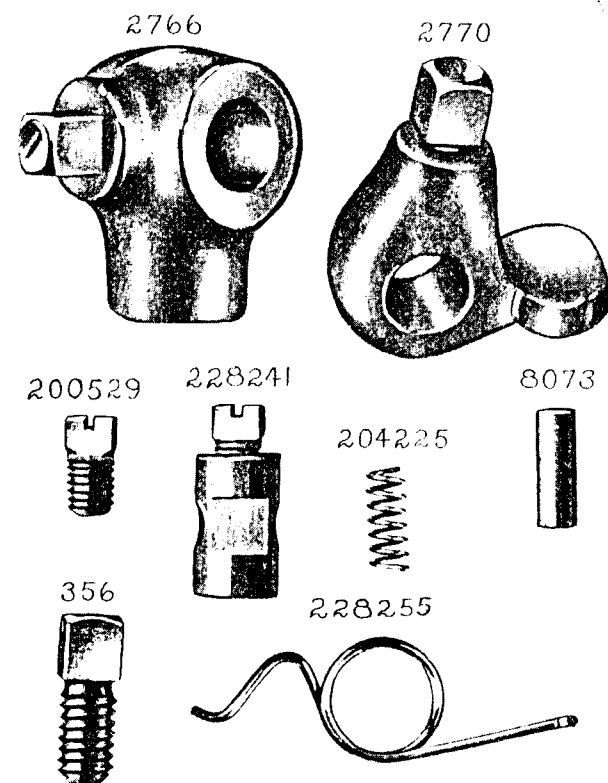
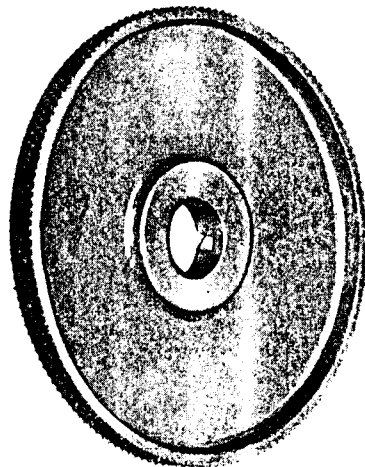


PLATE 14408—FULL SIZE

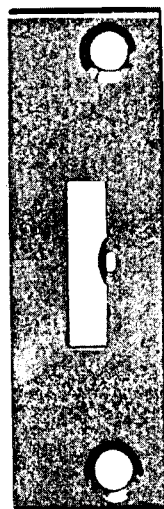
238636



238634



238635



201991

