MODEL 33 CALCULAGRAPH
REPAIR PARTS LISTING AND IDENTIFICATION

1. GENERAL

1.01 This practice lists and identifies the parts required in the servicing and repair of the Model 33 Calculagraph toll call timer. This section is reissued for renumbering purposes. Copies of Section 996-101-001 are automatically cancelled by Section 996-501-001 and should be destroyed.

1.02 The required parts can be ordered, following standard ordering procedures, from the Calculagraph Co., Hanover, N.J.

1.03 All parts listed are used with either the 30 minute elapsed time or the 60 minute elapsed time type unless a particular part is specified for one of these models only.

1.04 All parts are listed following the figure in which they appear. Following these listings is a miscellaneous parts and equipment list and a part number-to-figure number cross reference.

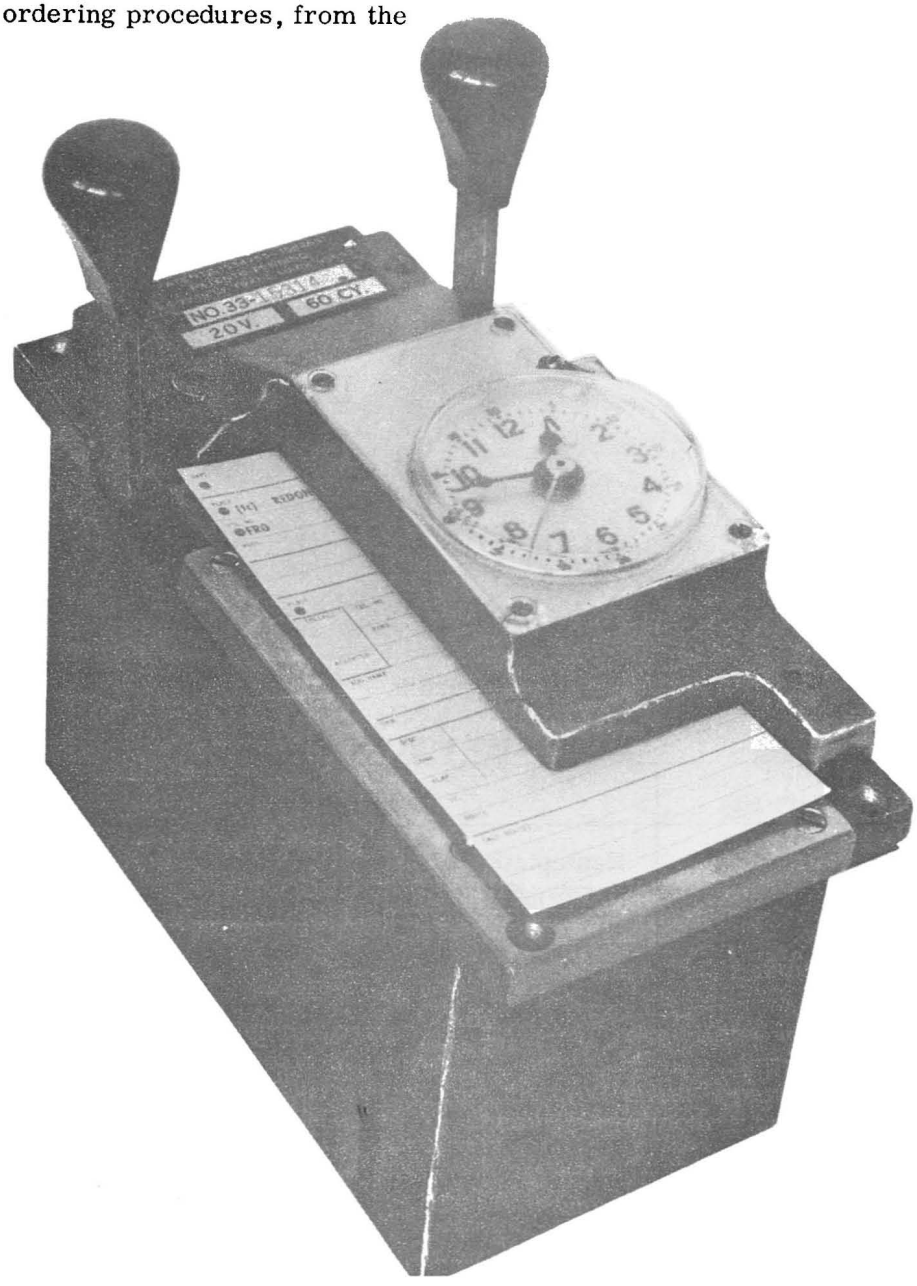


Figure 1. Model 33 Calculagraph

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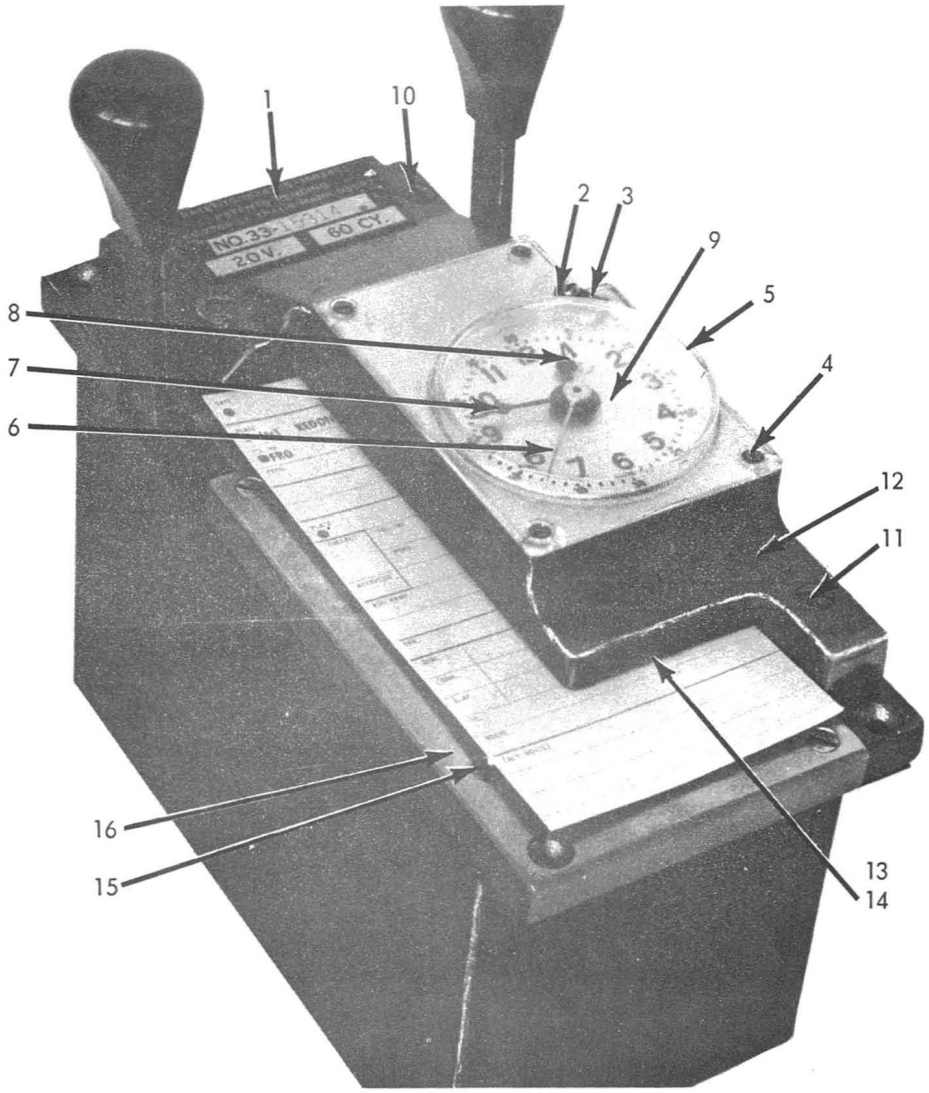


Figure 2.

PARTS LIST FOR FIGURE 2

Index No.	Part No.	Description	Quantity
1	33-218	Nameplate (Specify serial number)	1
2	20-21-22	Screw, Keyhole Cover	1
3	33-190	Cover, Keyhole	1
4	20-21-19	Screw, Crystal	4
5	33-235	Crystal	1
6	33-59	Hand, Second	1
	L-2113	Hand, Second, Red	1
7	33-60	Hand, Minute	1
8	33-57	Hand, Hour	1
9	33-236	Dial	1
10	20-21-17	Screw, Platen Holder	2
11	20-21-18	Screw, Platen Holder	1
12	33-71	Platen Holder	1
13	20-21-20	Screw, Platen	2
14	35	Platen, Printing	1
15	33-62	Screw, Ticket Plate	3
16	33-61	Plate, Ticket	1
	L-1074	Plate, Ticket (New Style for IBM Cards)	1

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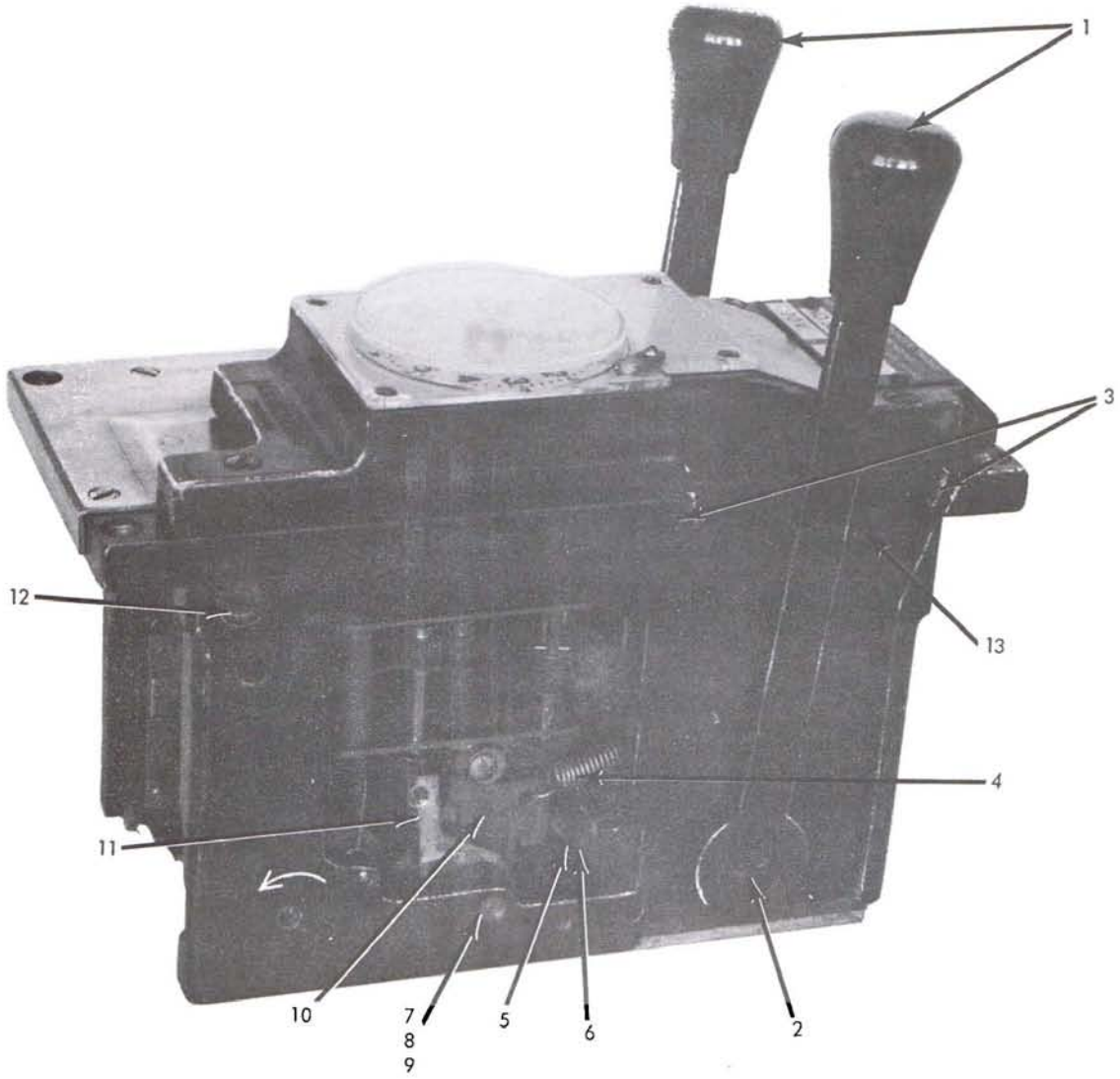


Figure 3.

PARTS LIST FOR FIGURE 3

Index No.	Part No.	Description	Quantity
1	33-56	Handle, Black	2
	L-762	Handle, Red, Left	1
	L-763	Handle, Green, Right	1
2	20-21-21	Screw, Handle	2
3	33-222	Bumper, Rubber	4
4	33-31	Spring, Stop Latch Connecting	1
5	33-193	Screw, Pointer Lifter	1
6	33-18	Lifter, Pointer	1
7	138	Pin, Taper	2
8	33-144	Washer, Flat	6
9	33-38	Shaft, Feed Bracket	1
10	33-36	Latch, Front Stop	1
11	33-28B	Bracket, Feed (With Adjusting and lock screws)	1
	20-21-10	Screw, Adjust & Lock, Feed Bracket	3
	20-21-11	Screw, Lock, Feed Bracket	1
12	20-21-24	Screw, Frame	1
13	20-21-25	Screw, Frame	1

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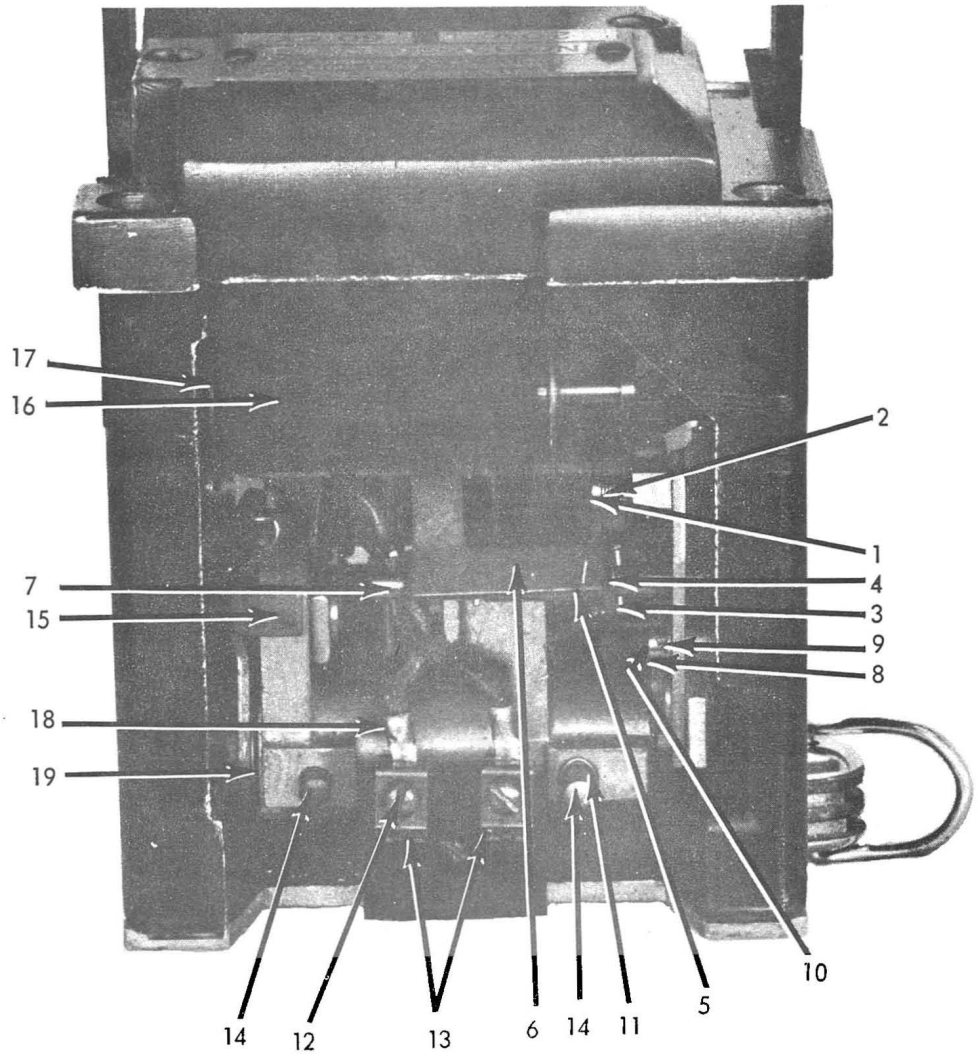


Figure 4.

PARTS LIST FOR FIGURE 4

Index No.	Part No.	Description	Quantity
1	33-216	Rivet, Rear Pawl Spring	1
2	33-215	Spring, Ribbon Feed Pawl, Rear	1
3	138	Pin, Taper	3
4		Washer, Rear Wing Shaft	2
5	33-29	Spring, Rear Wing	1
6	33-27	Wing, Rear	1
7	33-23	Shaft, Rear Wing	1
8	138	Pin, Taper	1
9		Washer, Post	2
10	33-201	Post, Pawl Latch, Rear	1
11	33-33	Spring, Bell Crank	1
12	20-21-16	Screw & Nut, Motor Contacts	2
13	33-63	Contact, Motor	2
14	OX1	Pin, Rear Lever Crank	2
15	33-48	Latch, Rear Stop	1
16	33-214	Spool, Rear Ribbon	1
17	33-151	Spring, Friction, Spool	1
18	116	Washer, Handle Shaft	2
19	33-183	Washer, Rear Stop Latch	2

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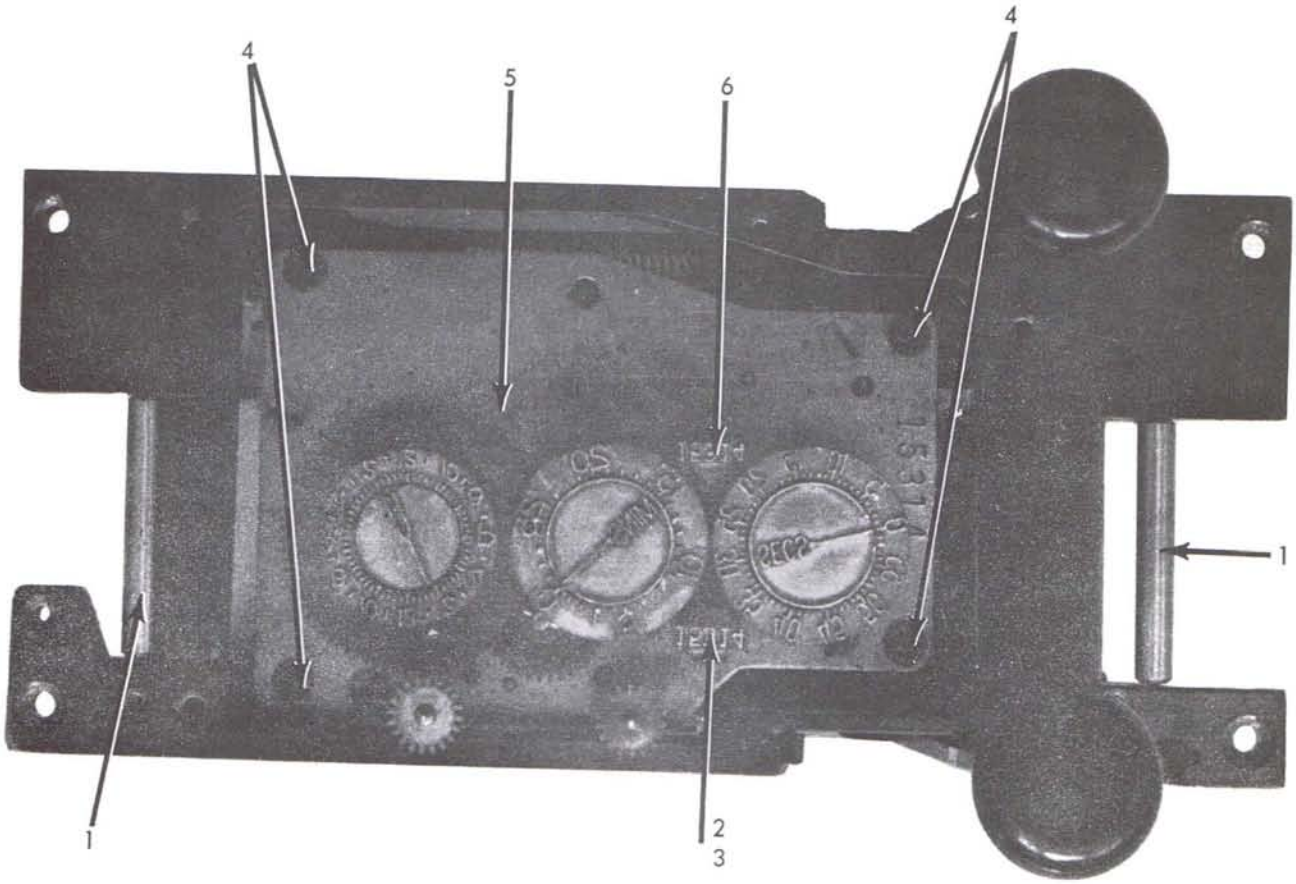


Figure 5.

PARTS LIST FOR FIGURE 5

Index No.	Part No.	Description	Quantity
1	33-43	Roller, Ribbon	2
2	33-122	Number Block, Rear (Specify Serial No.)	1
3	33-120	Post, Number Block	1
4	144	Screw, Movement Mounting	4
5	A-33-124-L1	Movement, Complete, 20 V., 60 cyc., 30 min. E.T.	1
	A-33-124-L5	Movement, Complete, 20 V., 25 cyc., 30 min. E.T.	1
	A-33-124-L6	Movement, Complete, 20 V., 50 cyc., 30 min. E.T.	1
	A-33-124-L8	Movement, Complete, 20 V., 60 cyc., 60 min. E.T.	1
	A-33-124-L9	Movement, Complete, 20 V., 25 cyc., 60 min. E.T.	1
	A-33-124-L10	Movement, Complete, 20 V., 50 cyc., 60 min. E.T.	1
6	A-33-23	Number Block & Arbor, Front (Specify Serial No.)	1
	33-139	Block, Front Number (Specify Serial No.)	1
	33-140	Arbor, Front Number Block	1

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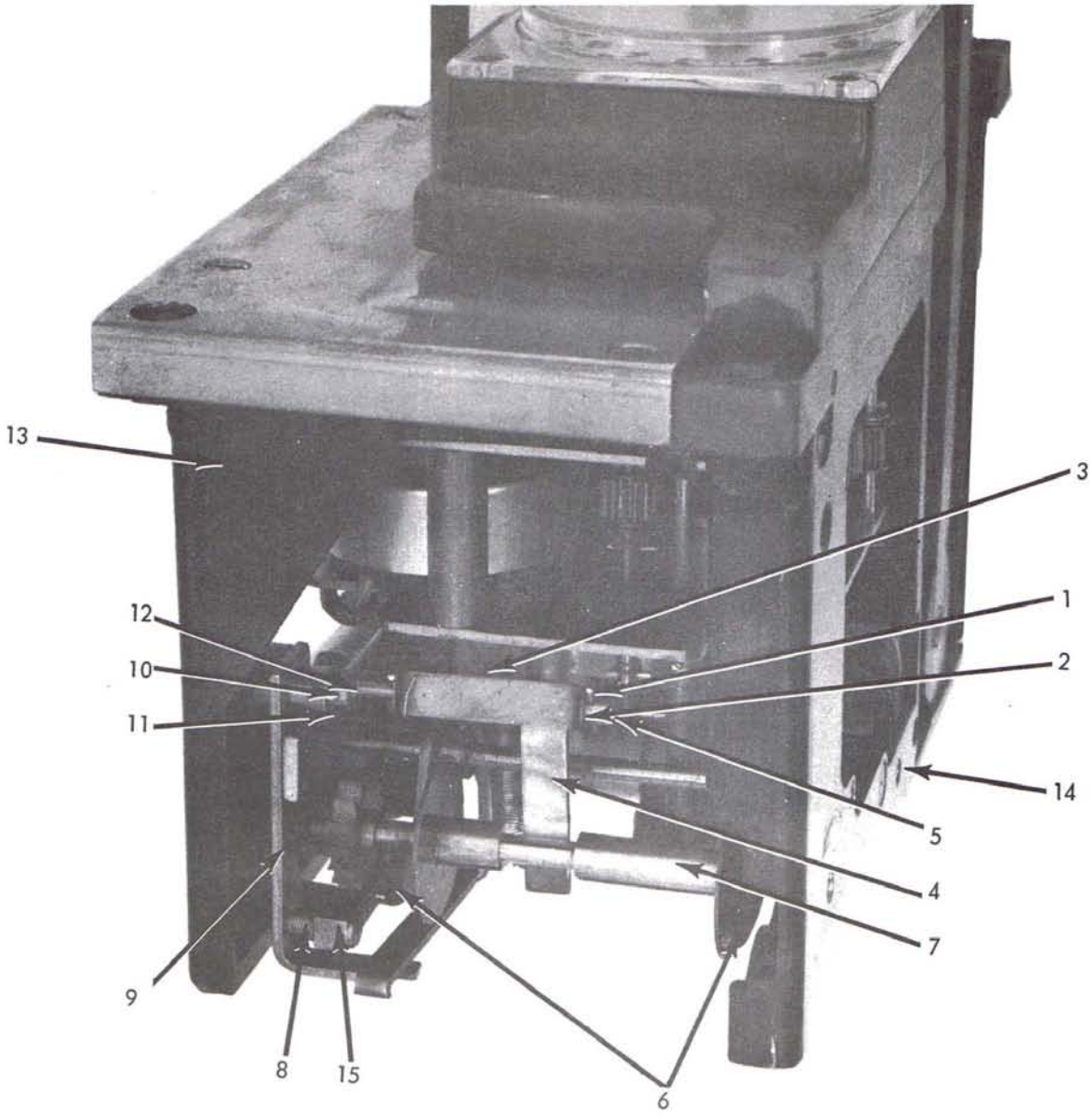


Figure 6.

PARTS LIST FOR FIGURE 6

Index No.	Part No.	Description	Quantity
1	138	Pin, Taper	3
2		Washer, Front Wing Shaft	2
3	33-29	Spring, Front Wing	1
4	33-24	Wing, Front	1
5	33-26	Shaft, Front Wing	1
6	33-17	Lock, Spool	1
7	33-152	Spool, Front Ribbon	1
8	33-217	Spring, Ribbon Feed Pawl, Front	1
9	33-22	Feed Bar Unit, Complete	1
10	138	Pin, Taper	1
11		Washer, Post	1
12	33-200	Post, Front Pawl Latch	1
13	33-70	Frame	1
14	20-21-13	Screw, Lock	2
15	33-4	Pawl, Front or Rear	2

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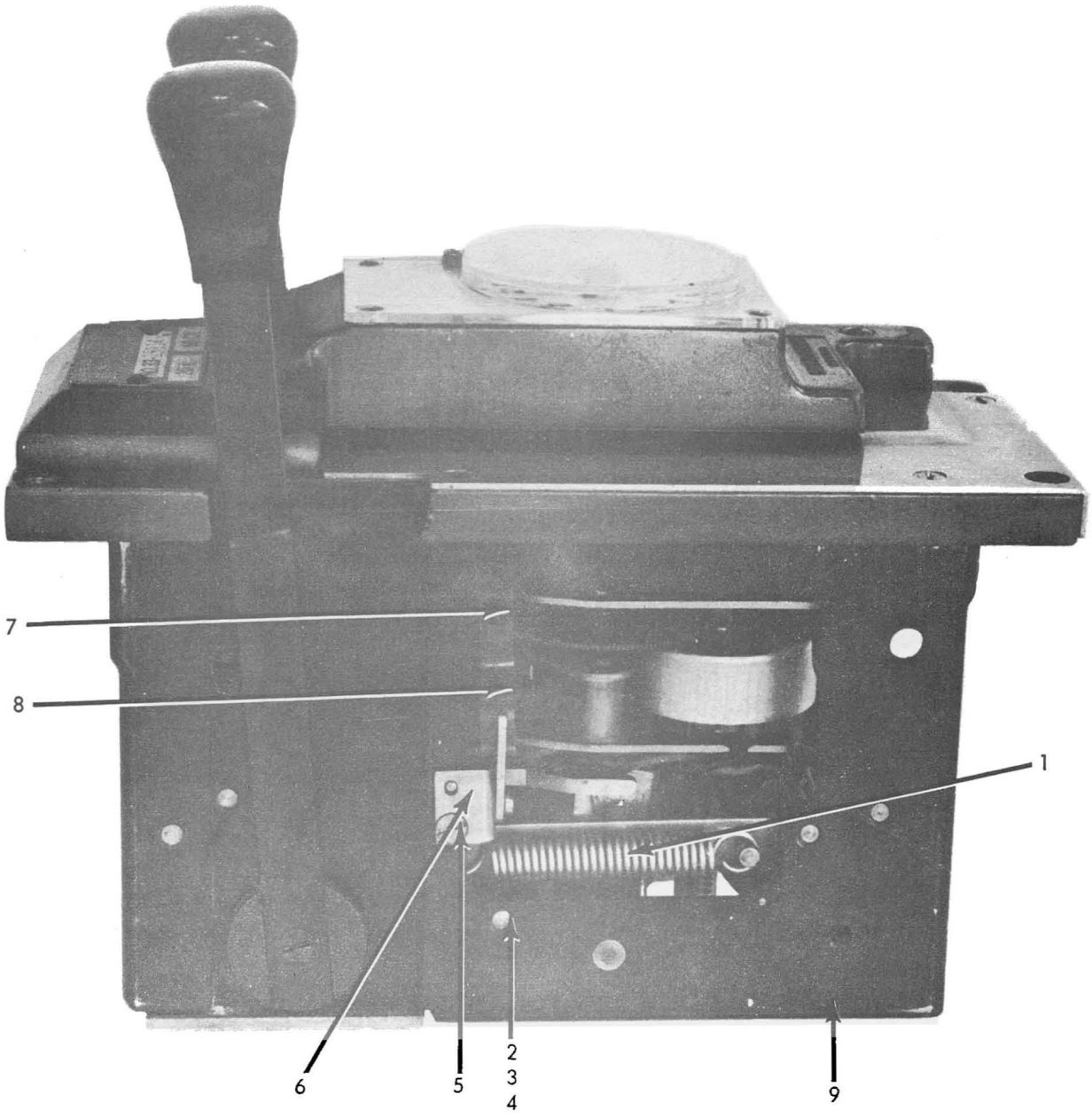


Figure 7.

PARTS LIST FOR FIGURE 7

Index No.	Part No.	Description	Quantity
1	33-32	Spring, Feed Bar	1
2	138	Pin, Taper	1
3		Washer, Post	2
4	33-202	Post, Feed Reverse Unit	1
5	20-21-20	Screw, Throwout Latch	1
6	33-149	Latch, Throwout	1
7	20-21-27	Screw, Throwout Spring	1
8	33-150	Spring, Throwout	1
9	20-21-12	Screw, Lock	1

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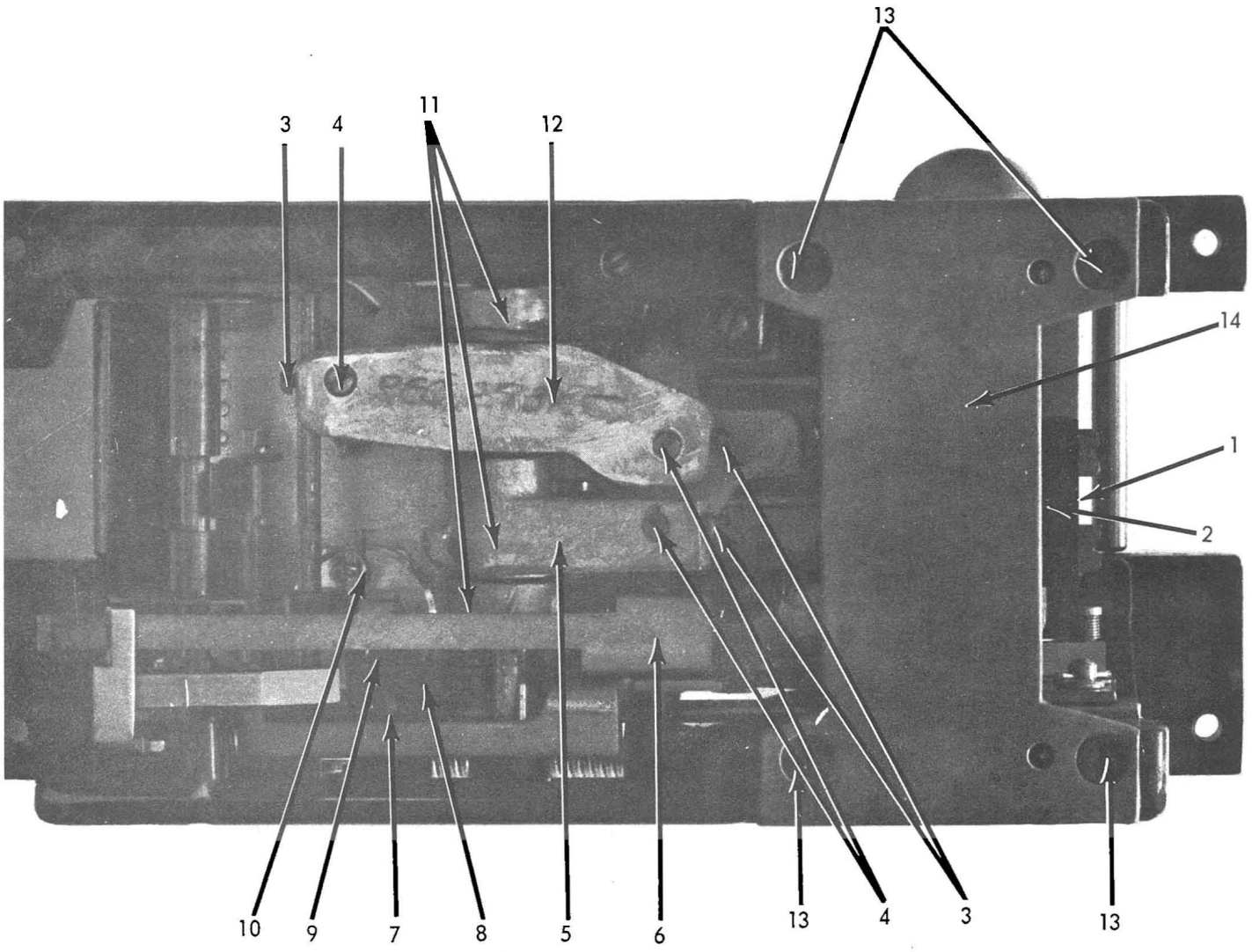


Figure 8.

PARTS LIST FOR FIGURE 8

Index No.	Part No.	Description	Quantity
1	20-21-26	Screw, Motor Contact Block	1
2	33-72	Block, Motor Contact	1
3	20-21-2	Screw, Lock	3
4	20-21-9	Screw, Adjusting	3
5	33-35	Bell Crank Unit, Single, Complete	1
	L-783	Bell Crank Unit, Single, Complete (For set back handle)	1
6	33-1	Reverse Unit, Complete	1
7	20-21-23	Screw, Reverse Lock Spring	1
8	33-7	Spring, Reverse Lock	1
9	33-189	Spring, Spool Lock	1
10	33-30	Spring, Front Shift Arm	1
11	33-28	Lever Mechanism, Complete	1
	L-782	Lever Mechanism, Complete (For set back handle)	1
12	33-34	Bell Crank Unit, Double, Complete	1
13	20-21-21	Screw, Bearing Plate	1
14	33-67	Bearing Plate, Rear	1

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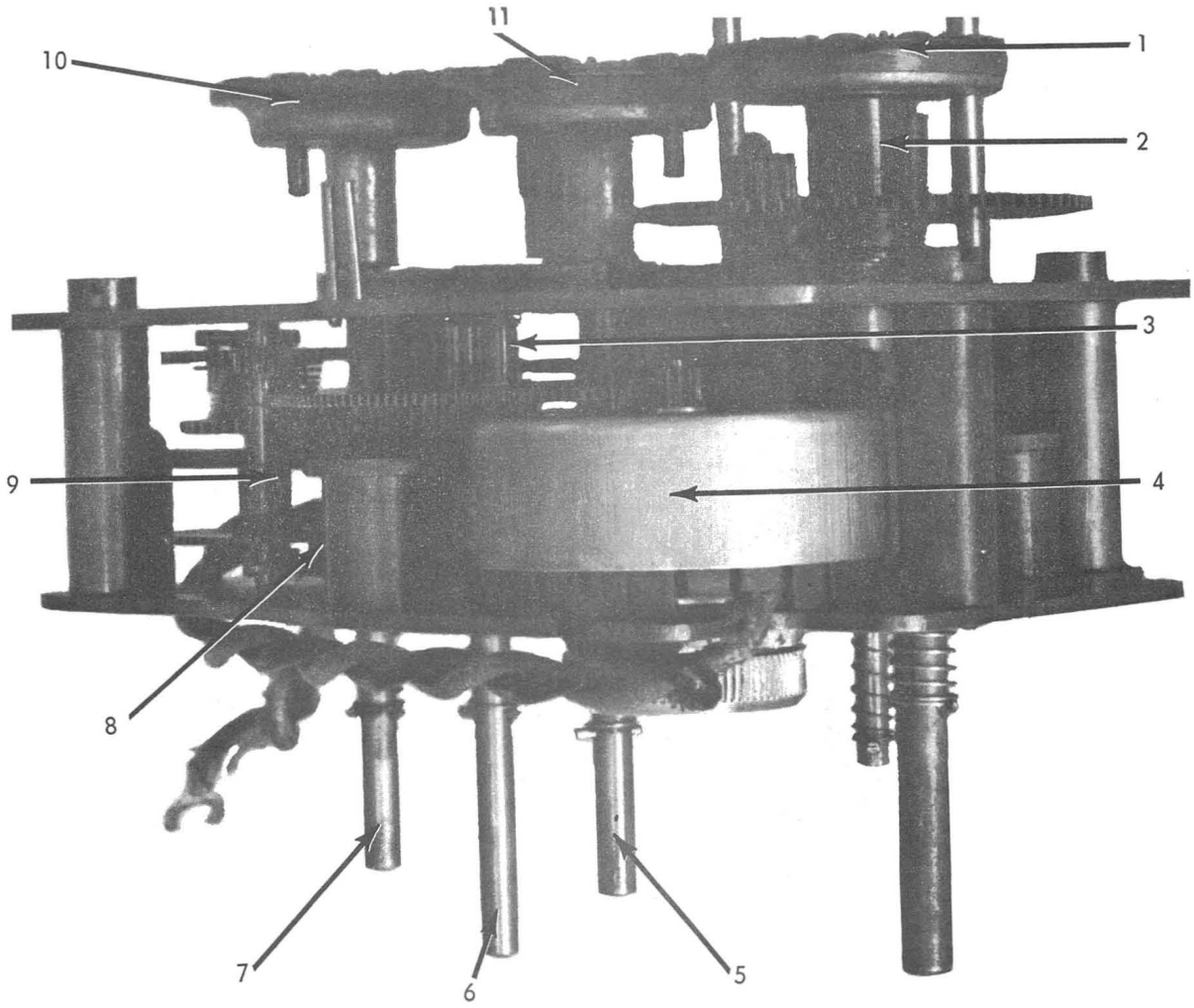


Figure 9.

PARTS LIST FOR FIGURE 9

Index No.	Part No.	Description	Quantity
1	33-160	Cup & Dial, T.O.D.	1
2	A-33-29	Spool & Triangle, T.O.D.	1
3	A-33-4	Arbor, No. 2	1
4	N-680879	Motor (Specify 20V.-60 cyc., 110V.-60 cyc., 20V.-50 cyc., 110V.-50 cyc., or 20V.-25 cyc.)	1
5	33-21-27	Arbor, No. 9 (Use with 33-21-25, 30 min. E.T. only)	1
	33-518	Arbor, No. 9 (Use with 33-572, 60 min. E.T. only)	1
6	A-33-8	Arbor, No. 8, with "T" piece	1
7	33-21-23	Arbor, No. 6 (Use with 33-21-24, 30 min. E.T. only)	1
	33-517	Arbor, No. 6 (Use with 33-516, 60 min. E.T. only)	1
8	A-33-2	Arbor, No. 3, 70 T & 24 T	1
9	A-33-5	Arbor, No. 4	1
10	33-21-24	Cup & Dial (30 min. E.T. only)	1
	33-516	Cup & Dial (60 min. E.T. only)	1
11	33-21-25	Cup & Dial (30 min. E.T. only)	1
	33-572	Cup & Dial (60 min. E.T. only)	1

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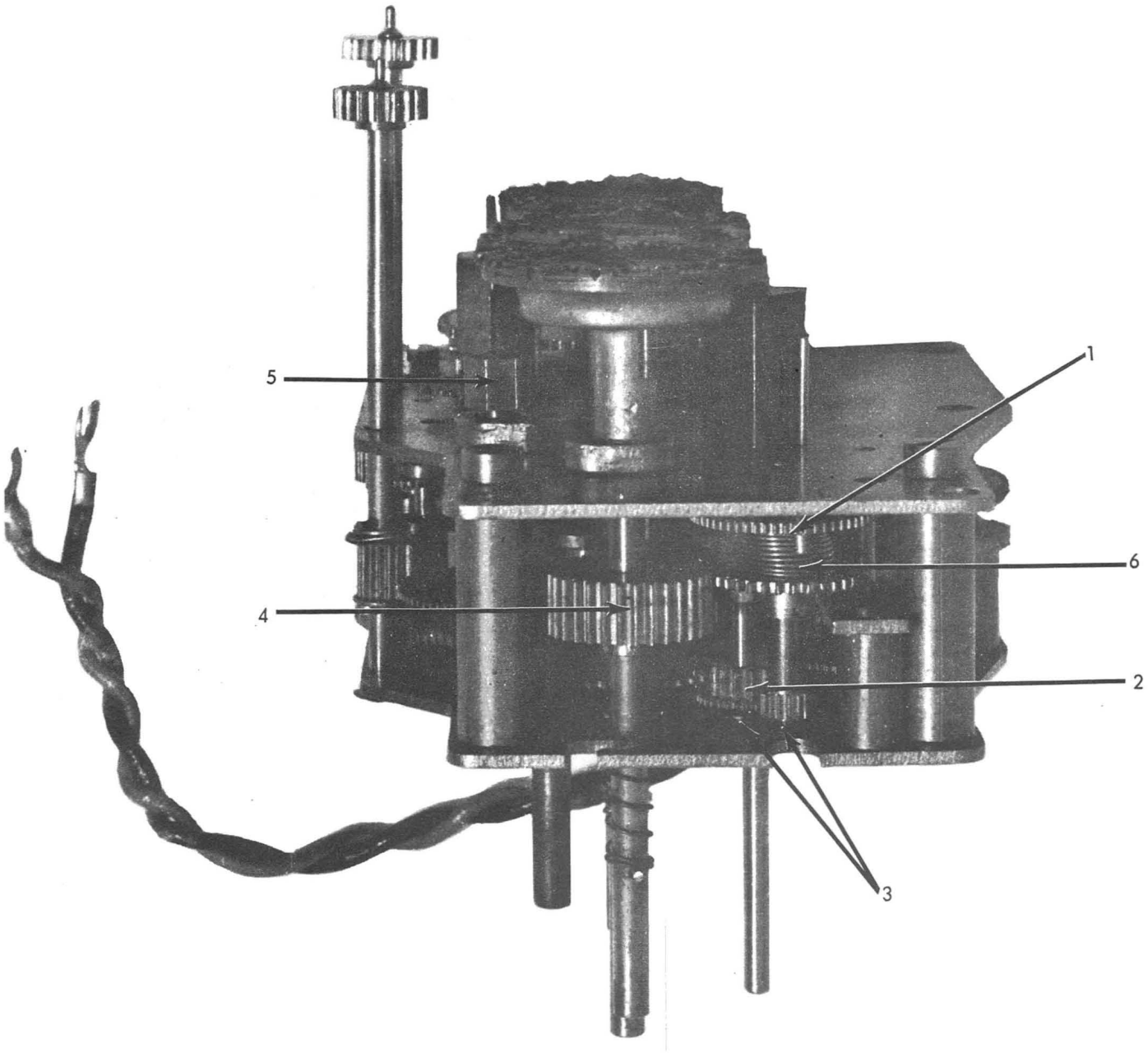


Figure 10.

PARTS LIST FOR FIGURE 10

Index No.	Part No.	Description	Quantity
1	A-33-3	Arbor Unit, No. 5 (30 min. E.T. only)	1
	33-152	Arbor Unit, No. 5 (60 min E.T. only)	1
2	A-33-7	Arbor Unit, No. 7 (30 min. E.T. only)	1
	33-513	Arbor Unit, No. 7 (60 min. E.T. only)	1
3	33-508	Washer, Arbors 5 & 7 (60 min. E.T. only)	1
4	33-109	Pinion, 33T, Arbor No. 6	1
5	33-120	Post, Rear Number Block	1
6	33-49	Spring, Pullback	1

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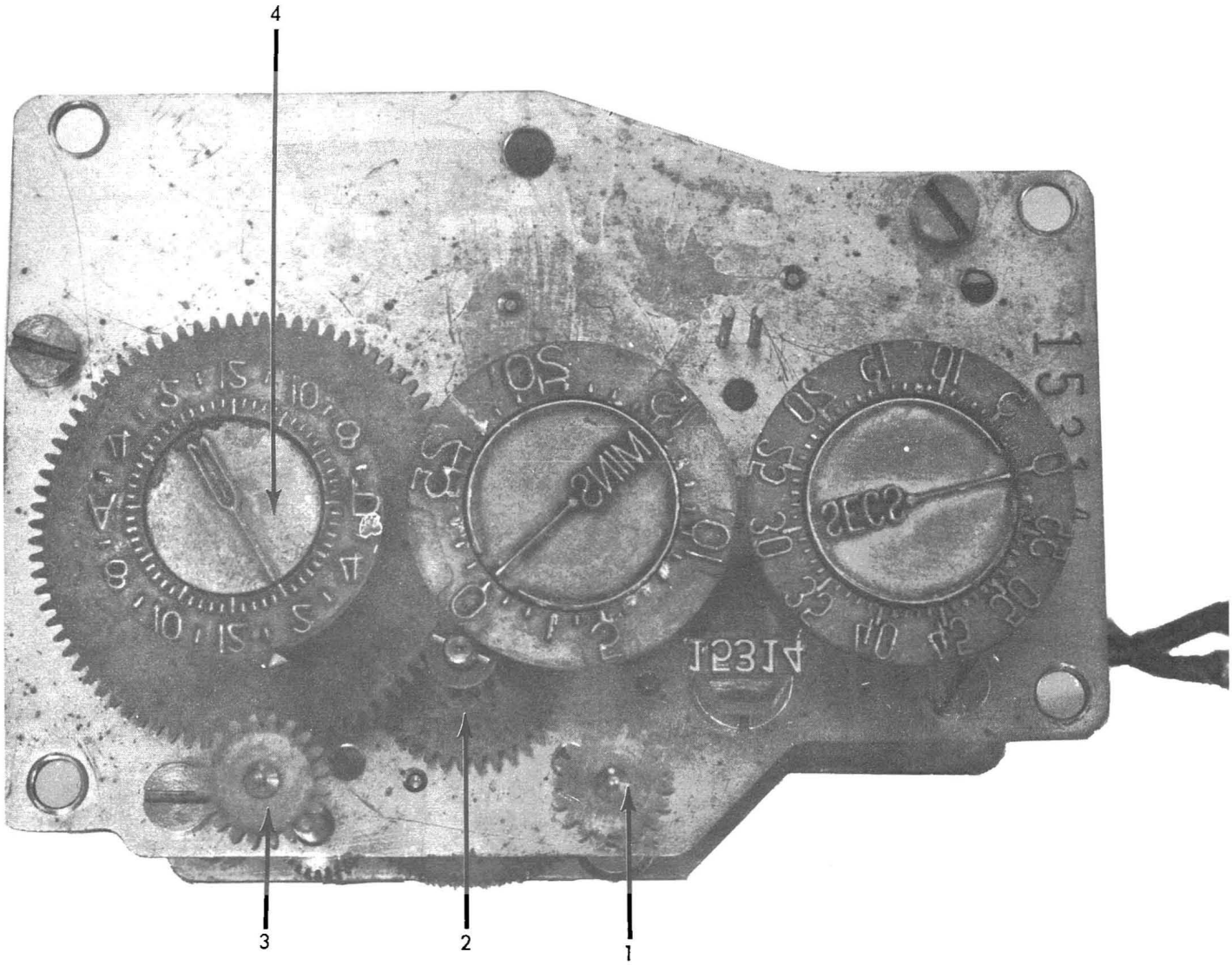


Figure 11.

PARTS LIST FOR FIGURE 11

Index No.	Part No.	Description	Quantity
1	A-33-13	Arbor, No. 14, with 18T pinion	1
2	A-33-21	Gear & Pinion, 36T & 12T	1
3	A-33-16	Arbor, No. 17, with 20T pinion	1
4	A-331-1	Arbor, No. 20, T.O.D. Pointer	1

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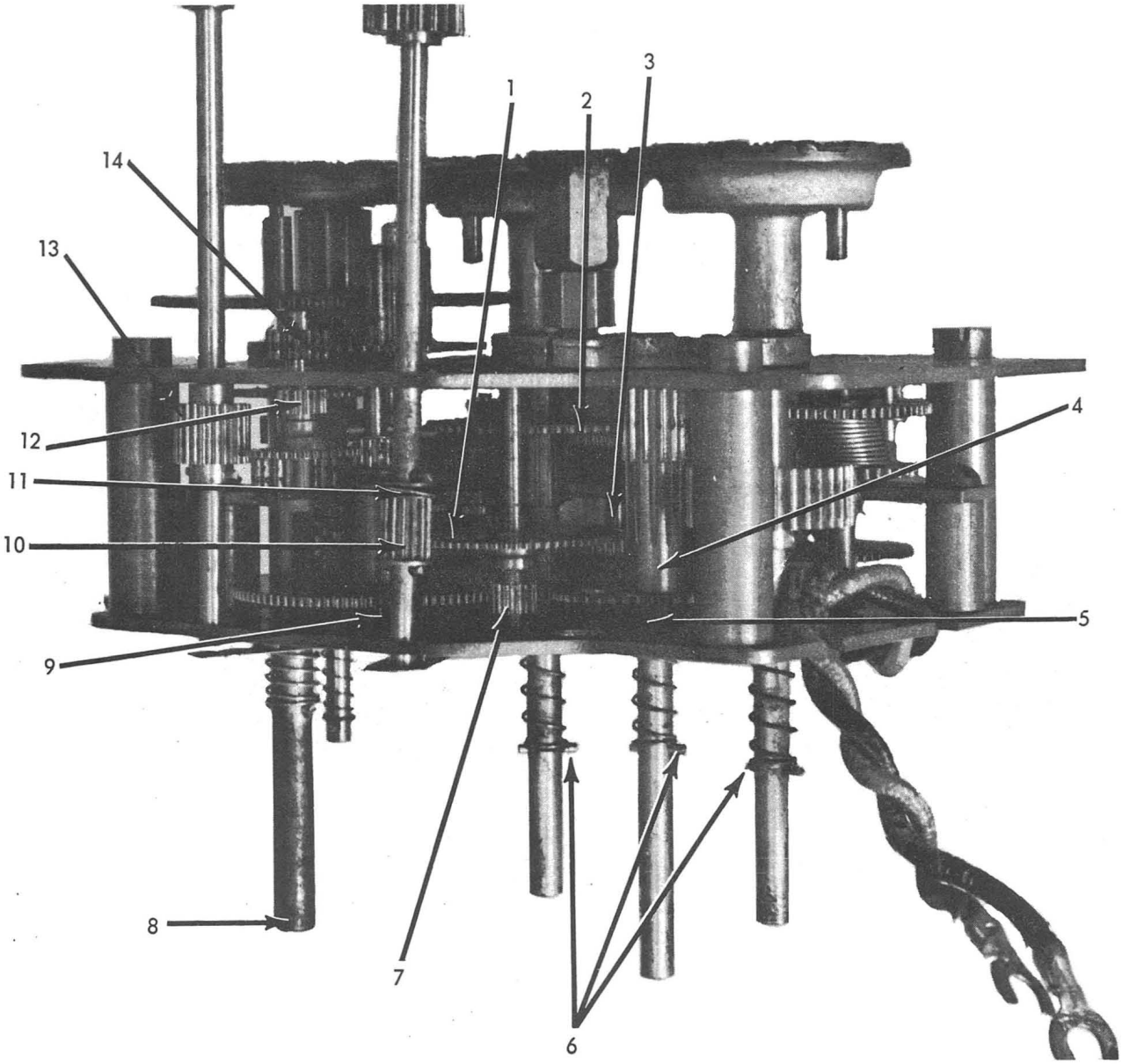


Figure 12.

PARTS LIST FOR FIGURE 12

Index No.	Part No.	Description	Quantity
1	A-33-12	Gallery Plate, Post & Pinion	1
2	33-114	Gear w/ Long Hub, No. 9 Arbor	1
3	A-33-10	Arbor, No. 10	1
4	33-116	Gear w/ Long Pinion, No. 8 Arbor	1
5	33-44	Spacer, Gear	1
6	138	Pin, Taper	13
7	A-33-19	Arbor, No. 13	1
8	A-33-22	Arbor, No 22, T.O.D. Lifter	1
9	A-33-14	Arbor, No. 15	1
10	33-95	Pinion, 15T, Arbor No. 14	1
11	33-133	Spring, Friction Drive, Arbor No. 14	1
12	A-33-15	Arbor, No. 16	1
13	33-98	Pinion, 25T, Arbor No. 17	1
14	A-33-17	Arbor, No. 18	1

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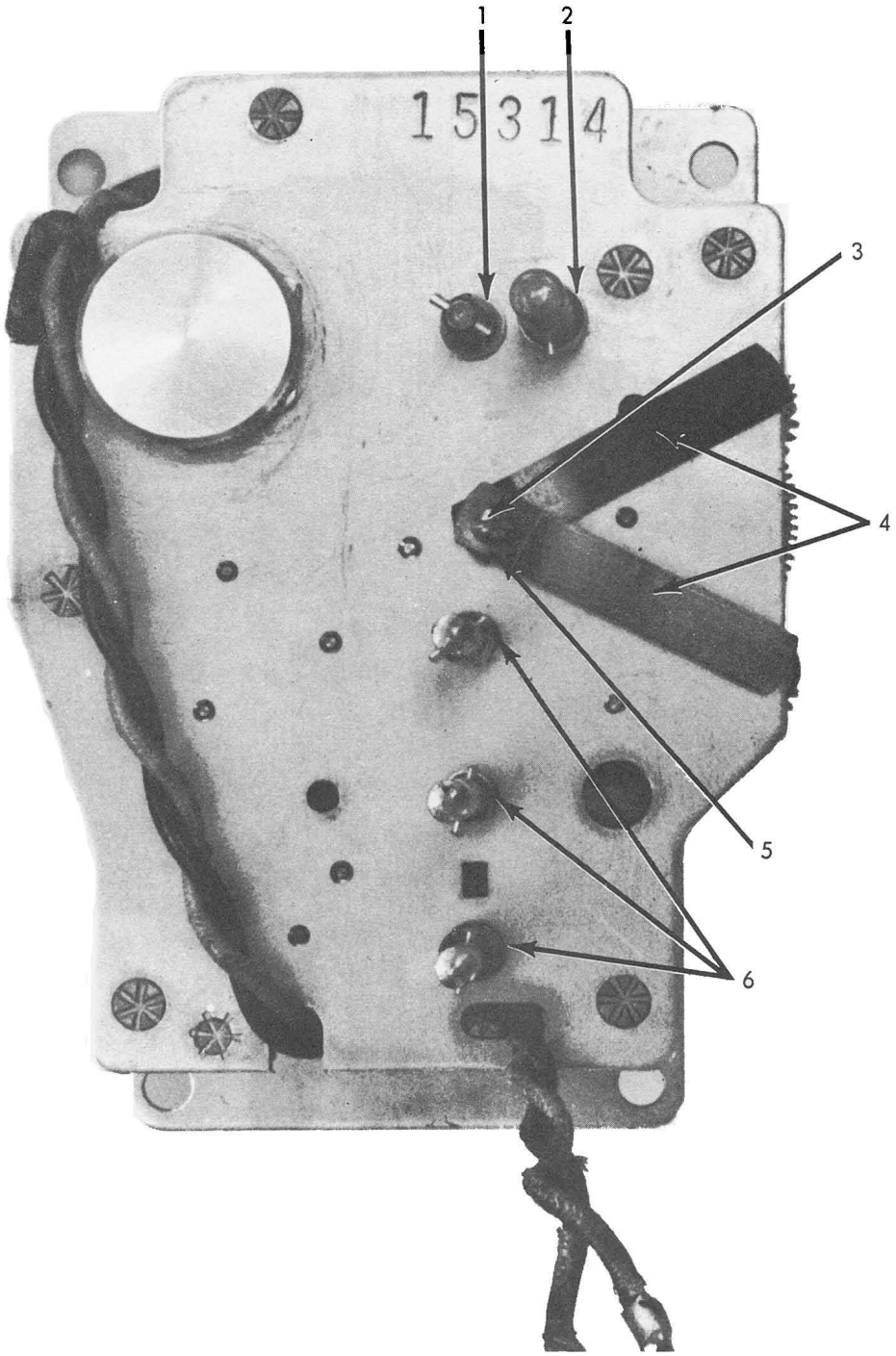


Figure 13.

PARTS LIST FOR FIGURE 13

Index No.	Part No.	Description	Quantity
1	74A	Spring, T.O.D. Pointer Arbor No. 20	1
2	33-174	Spring, T.O.D. Arbor No. 22	1
3	20-21-2	Screw, Flat Spring	1
4	33-156	Spring, Flat	2
5	33-138	Spacer, Flat Spring	1
6	74B	Spring, Arbor	3

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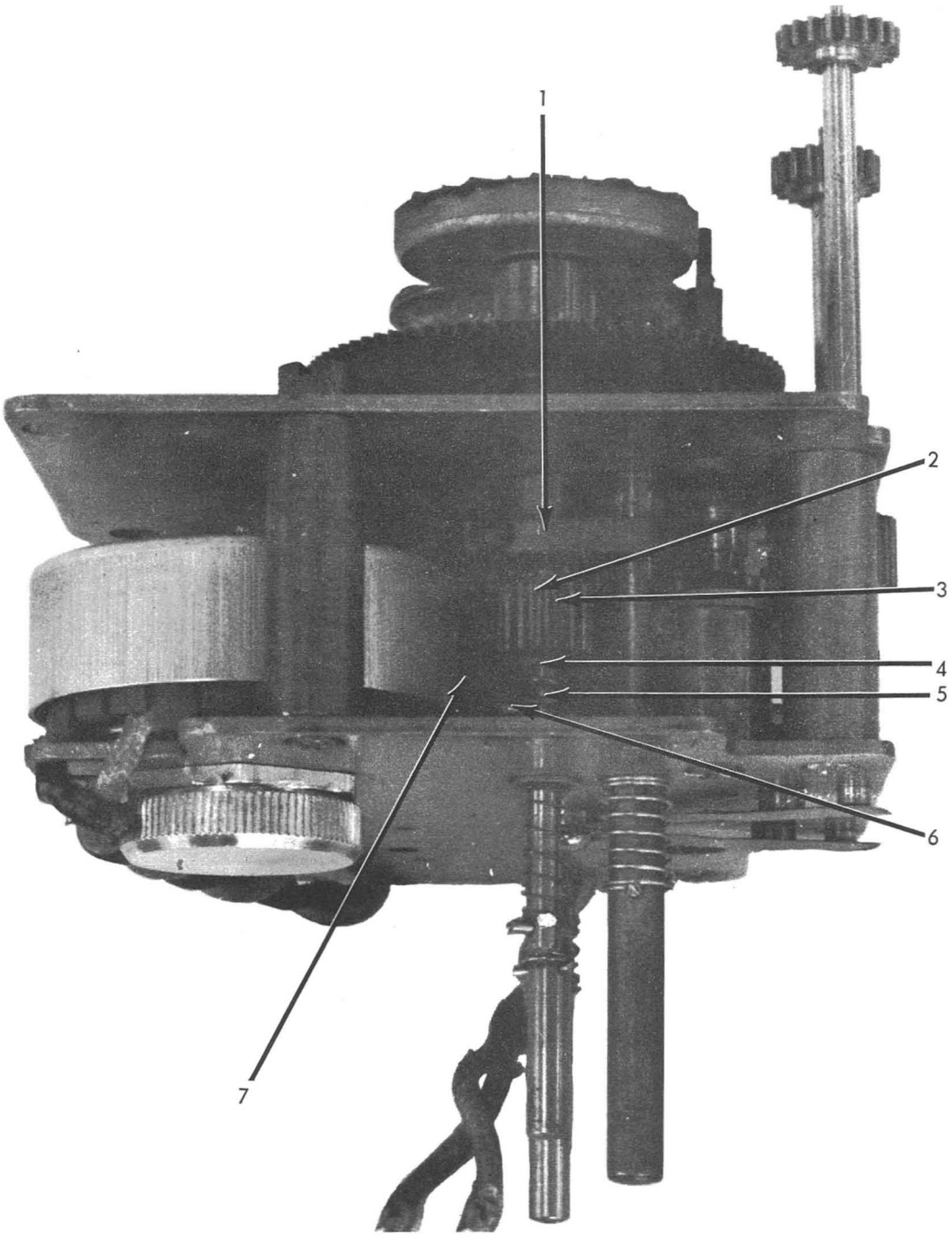


Figure 14.

PARTS LISTS FOR FIGURE 14

Index No.	Part No.	Description	Quantity
1	33-146	Clamp, T.O.D. Cup	1
2	146	Synchronizing Unit, T.O.D.	1
3	146A	Pinion, T.O.D.	1
4	146B	Spring, Friction	1
5	146C	Washer, Flat	3
6	146D	Pin, Taper	2
7	A-33-11	Arbor, No. 11	1

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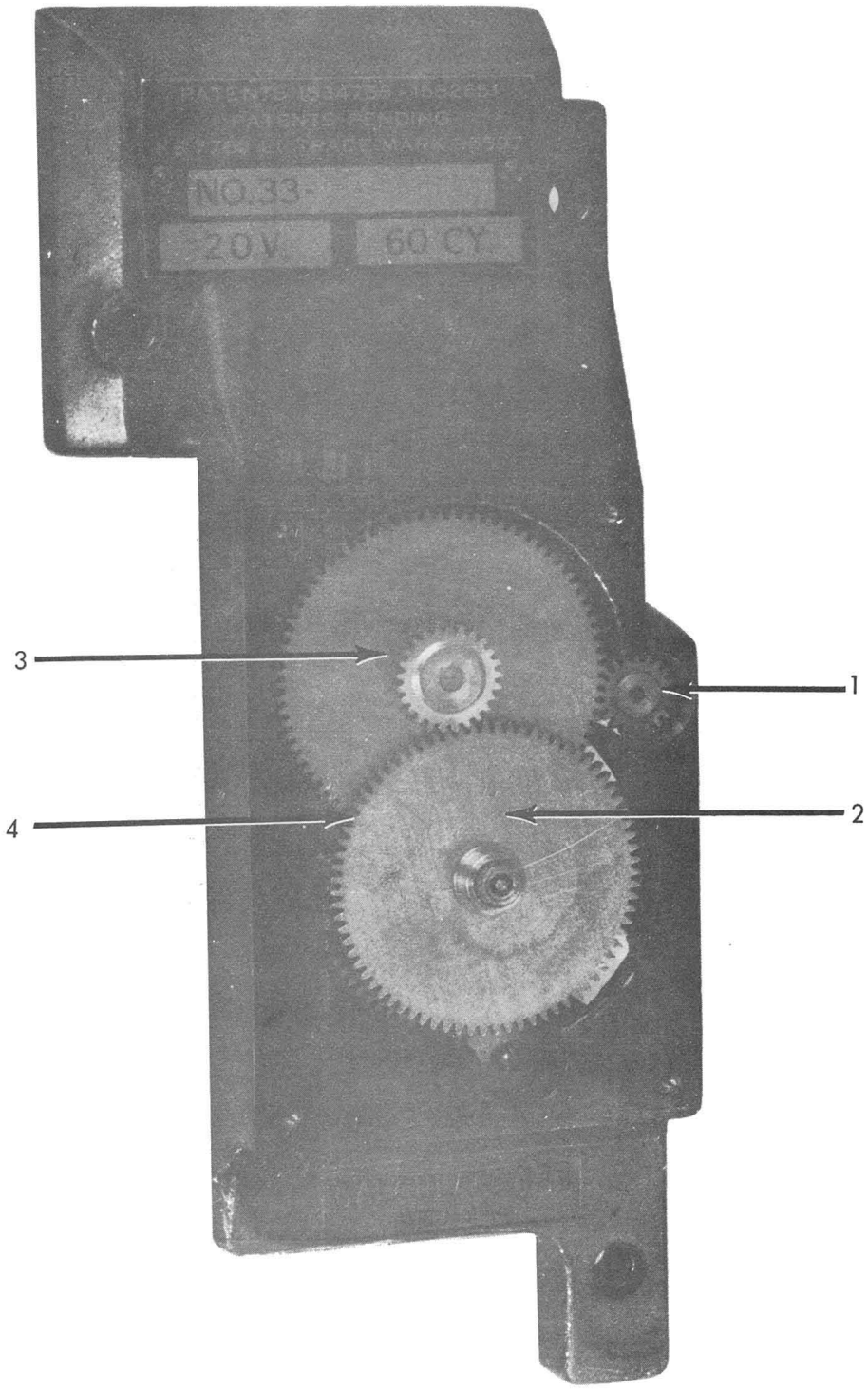


Figure 15.

PARTS LIST FOR FIGURE 15

Index No.	Part No.	Description	Quantity
1	33-171	Pinion, Hand Setting	1
2	A-33-162	Gear, 75T, Hour Hand	1
3	A-33-170	Gear, 80T, Idler, w/25T pinion	1
4	A-33-80	Gear, 80T, Minute Hand	1

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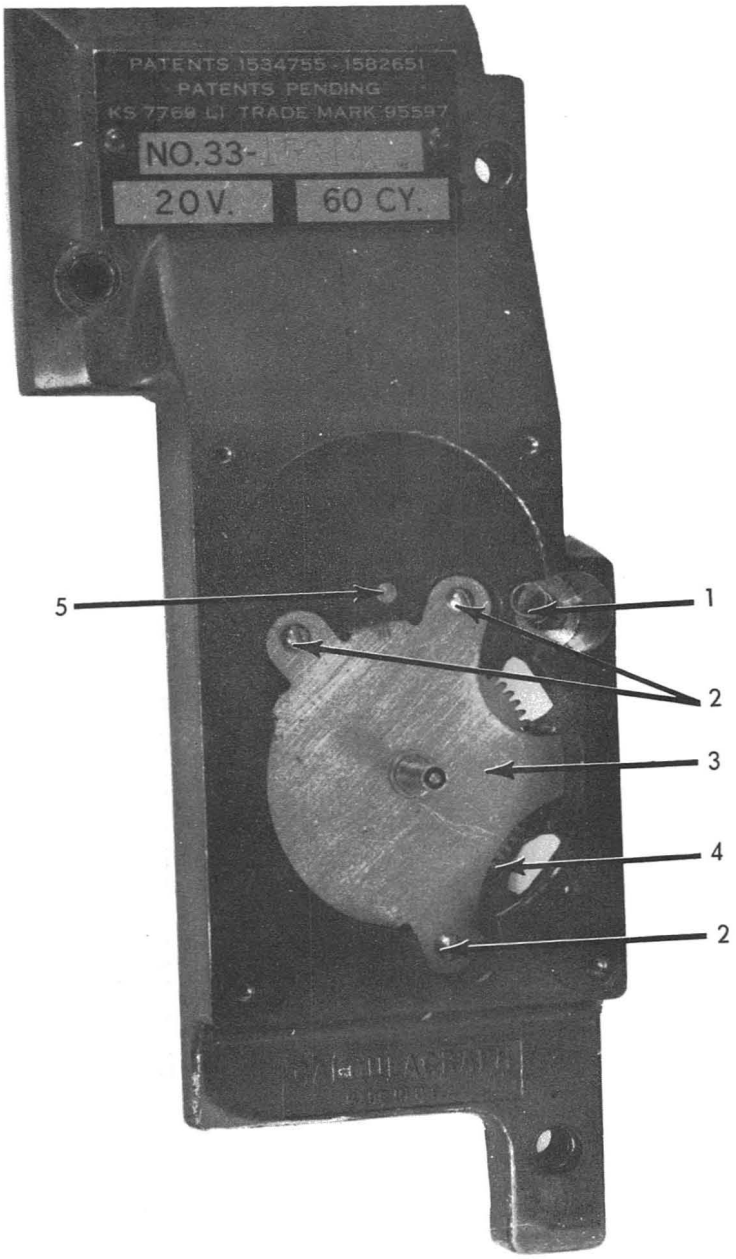


Figure 16.

PARTS LIST FOR FIGURE 16

Index No.	Part No.	Description	Quantity
1	33-65	Spring, Hand Setting Pinion	1
2	20-21-22	Screw, Gear Bridge	3
3	A-33-50	Bridge, Gear	1
4	A-32-E	Gear, Second Hand	1
5	33-192	Post, Idler Gear	1

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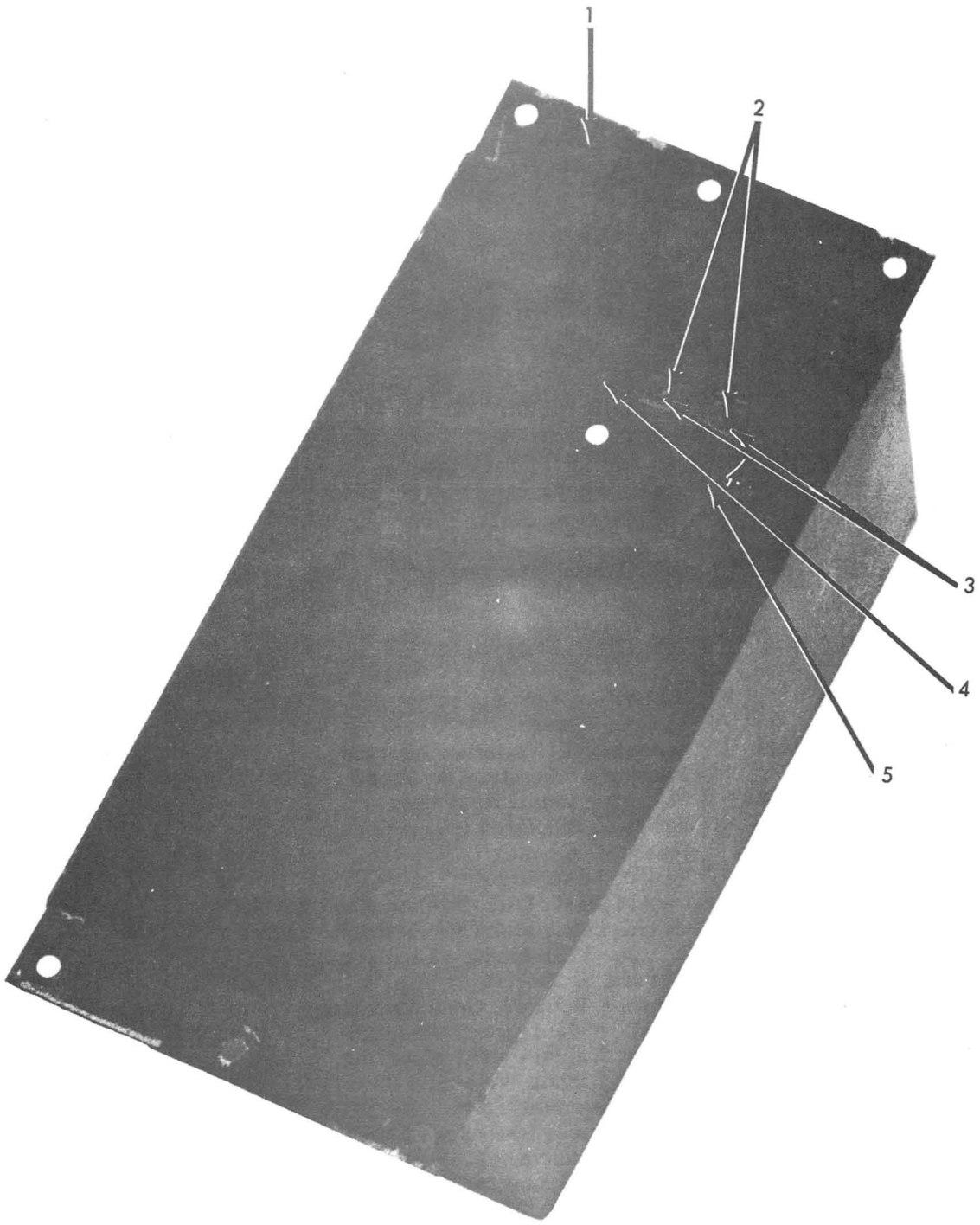


Figure 17.

PARTS LIST FOR FIGURE 17

Index No.	Part No.	Description	Quantity
1	33-74	Case, Complete	1
2	20-21-14	Screw, Contact Mounting	2
3	33-66	Contact, Spring	2
4	20-21-15	Screw & Nut, Block Mounting	2
5	33-73	Block, Case Contact	1

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MISCELLANEOUS PARTS AND EQUIPMENT LIST

Index No.	Part No.	Description	Quantity
1	30-134	Oil, Electric Motor	2 oz., 4 oz., 8 oz., Pint
2	152	Oil, Clock Movement	1 oz., 2 oz., 4 oz., 8 oz., Pint, Quart
3	153	Oil, Lever Mechanism	2 oz., 4 oz., 8 oz.
4	50	Ribbon	1
5	147	Ribbon, Clamp	
6	20-21-29	Screws, Mechanism, Assorted	Pkg. of 24
7	33-194	Brackets, Mounting, w/Screws	1 set
8	33-226-227	Mounting Detail Assembly	1
9	33-226	Bracket, Insulated Mounting	2
10	33-227	Shield, Insulating	1
11	33-224	Guard, Dust, Right	1
12	33-225	Guard, Dust, Left (For standard handle)	1
13	712	Guard, Dust, Left (For setback handle)	1
14	33-199	Adapter (For Model 33 in opening for Model 6 or 30)	1
15	33-213	Screw & Washer, Case Mounting	2
16	33-212	Screw, Calculagraph Mounting, 1-3/8 in. lg.	4
17	577	Screw, Calculagraph Mounting, 7/8 in. lg.	4
18	A-33-37	Crank, Ribbon Winding	1
19	A-33-39	Key, Time Setting	1
20	171	Transformer, 2-1/2 watt - UT-2-1/2 W. & cord (To convert 110V. 60 cyc. to 20V. to power 1 calculagraph)	1
21	172	Transformer, 15 Watt - WH-15 W. (To convert 110V. 60 cyc. to 20V. to power up to 7 calculagraphs)	1

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NUMERICAL CROSS REFERENCE

PART NUMBER TO FIGURE AND LIST NUMBER

Part No.	Fig. No.
A-32-E	16
A-33-1	11
A-33-2	9
A-33-3	10
A-33-4	9
A-33-5	9
A-33-7	10
A-33-8	9
A-33-10	12
A-33-11	14
A-33-12	12
A-33-13	11
A-33-14	12
A-33-15	12
A-33-16	11
A-33-17	12
A-33-19	12
A-33-21	11
A-33-22	12
A-33-23	5
A-33-29	9
A-33-37	Mis.
A-33-39	Mis.
A-33-50	16
A-33-80	15
A-33-124-L1	5
A-33-124-L5	5
A-33-124-L6	5
A-33-124-L8	5
A-33-124-L9	5
A-33-124-L10	5
A-33-162	15
A-33-170	15
L-712	Mis.
L-762	3
L-763	3
L-782	8
L-783	8
L-1074	2
L-2113	2
N-680879	9
OX1	4
20-21-2	8, 13
20-21-9	8
20-21-10	3
20-21-11	3
20-21-12	7
20-21-13	6
20-21-14	17
20-21-15	17
20-21-16	4
20-21-17	2
20-21-18	2
20-21-19	2
20-21-20	2, 7

Part No.	Fig. No.
20-21-21	3, 8
20-21-22	2, 16
20-21-23	8
20-21-24	3
20-21-25	3
20-21-26	8
20-21-27	7
20-21-29	Mis.
30-134	Mis.
33-1	8
33-4	6
33-7	8
33-17	6
33-18	3
33-21-23	9
33-21-24	9
33-21-25	9
33-21-27	9
33-22	6
33-23	4
33-24	6
33-26	6
33-27	4
33-28	8
33-28B	3
33-29	4, 6
33-30	8
33-31	3
33-32	7
33-33	4
33-34	8
33-35	8
33-36	3
33-38	3
33-43	5
33-44	12
33-48	4
33-49	10
33-56	3
33-57	2
33-59	2
33-60	2
33-61	2
33-62	2
33-63	4
33-65	16
33-66	17
33-67	8
33-70	6
33-71	2
33-72	8
33-73	17
33-74	17
33-95	12
33-98	12

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Numerical Cross Reference (Con't.)

Part No.	Fig. No.
33-109	10
33-114	12
33-116	12
33-120	5, 10
33-122	5
33-133	12
33-138	13
33-139	5
33-140	5
33-144	3
33-146	14
33-149	7
33-150	7
33-151	4
33-152	6
33-156	13
33-160	9
33-171	15
33-174	13
33-183	4
33-189	8
33-190	2
33-192	16
33-193	3
33-194	Mis.
33-199	Mis.
33-200	6
33-201	4
33-202	7
33-212	Mis.
33-213	Mis.
33-214	4
33-215	4
33-216	4
33-217	6
33-218	2

Part. No.	Fig. No.
33-222	3
33-224	Mis.
33-225	Mis.
33-226	Mis.
33-226-227	Mis.
33-227	Mis.
33-235	2
33-236	2
33-508	10
33-512	10
33-513	10
33-516	9
33-517	9
33-518	9
33-572	9
35	2
50	Mis.
74A	13
74B	13
116	4
138	3,4,6,7,12
144	5
146	14
146A	14
146B	14
146C	14
146D	14
147	Mis.
152	Mis.
153	Mis.
171	Mis.
172	Mis.
577	Mis.

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ADDENDUM 996-501-001 CA
ISSUE 1, AUGUST, 1965
GEN. TEL. CO. OF CALIF.

MODEL 33 CALCULAGRAPH
REPAIR PARTS LISTING AND IDENTIFICATION

1. GENERAL

1.01 This Addendum is issued to add procedures followed by the California Company and to supplement the information in GSP 996-501-001.

1.02 File this Addendum immediately ahead of Section 996-501-001 in the General System Practice (GSP) binder. With ink or red pencil, write in the cross reference "See Addendum" at the indicated points of change in the main section.

2. CHANGES

2.01 Change Paragraph 1.02 to read as follows:

1.02 The required parts can be ordered following the procedure below.

1. List the parts needed, by manufacturer's order number, on Form 1797 (Report of Stock Items Which Are Low).

2. Forward the Form 1797 to the division office.

3. Order replacement ribbons for the calculagraph from stationery storeroom (RC 1342). Use the description and material code number shown below. The description is: Ribbon - Calculagraph - 1-3/8 inches x 3 yards - Blue. The material code number is: 609851.

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