

*Lawson W. Davis*  
**DIAL CORD**  
*Stringing* **GUIDE**

DC-1

**DIAL CORD DIAGRAMS COVERING  
MOST 1938 TO 1947 RECEIVERS**

A *Lawson W. Davis* PHOTOFAC T PUBLICATION  
FIRST EDITION

**75c**



*Howard W. Sams*  
**DIAL CORD**  
*Stringing* **GUIDE**

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MOST 1938 TO 1947 RECEIVERS**

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## PREFACE

A little over a year and a half ago a group of some thirty of us organized a new company with a new idea and a new purpose. We believed that technical radio data, properly prepared, could become a vital tool for better servicing . . . a tool as indispensable as a soldering iron, meter or a signal generator. We felt that the availability of factual information in a concise, standardized form would do more to help the service technician than any one other factor. Through the pursuit of this idea, PHOTOFACT Folders were born. Now we bring you the DIAL CORD STRINGING GUIDE. We know you will like it.

I give you our pledge. Every PHOTOFACT Book will be practical—not theoretical. Every PHOTOFACT Book will be the result of original research and investigation. Every PHOTOFACT Book must save your time and help you make more money. This DIAL CORD STRINGING GUIDE is such a book. Use it at your work bench. Keep a copy in your tool kit. You will need it time and time again.



October 1, 1947  
Indianapolis

## INTRODUCTION

One of the features of "PHOTOFACT" service which has elicited favorable comment from the radio service profession is the inclusion of a dial cord stringing diagram in each PHOTOFACT folder covering the servicing data on postwar radio receivers. In many instances such diagrams are not available as a part of the service manual provided by the receiver manufacturer, nor are they furnished universally by any other source of servicing material.

In response to a widespread demand from the servicing profession, the present book brings together in convenient form, not only the dial stringing diagrams of postwar sets but also those of many receivers manufactured since 1938.

In a great number of cases the sole reason for a service call to a customer's home is occasioned by the failure of the dial drive system. The format of this volume has been chosen with this situation in mind. It has been made of such size and shape that it will readily fit in the pocket or tool kit.

Often the service technician finds that the dial cord and spring have come off the pulleys and are a tangled mess in the bottom of the cabinet. This frequently presents an exasperating puzzle, for without a diagram it is difficult to determine how to start. Much precious time can be lost in fruitless trial and error experiment. Such time is hard to justify to the customer. As an example, there are four ways of stringing the average slide rule type dial. In the case of three of these, the pointer will either run the wrong way or will "hang up" in its travel. The remaining method is the correct one.

The present collection of dial cord stringing diagrams have been compiled from original PHOTOFACT data in the case of postwar receivers and from the available service data of receiver manufacturers for prewar sets. Every effort has been made to present as complete a compilation as possible. Some of the manufacturers' service literature did not include dial cord diagrams for certain prewar models.

Approximately 95% of the receiver models built since 1938 have employed dial cord drive systems as contrasted with belt, friction, planetary or gear drives. Only those types of drive systems which employ cord drive have been included in this book. The various manufacturers of drive belts have available authoritative guides and charts for proper belt selection. A universal type of belt has recently been offered by one company which can be cut to the required length and its ends permanently connected by means of an ingenious "zipper-like" device.



## Requirements of a Properly Operating Dial Drive Mechanism

In the drive systems covered in this book, a cord of special type is used to connect and control all of the moving parts of the radio tuning and indicating system. Usually the cord is wound several times around a tuning shaft, carried over small pulleys to a larger pulley on the tuning device (condenser or permeability tuner), and thence to a sliding or rotary pointer which indicates on a scale the frequency to which the set is tuned. A tensioning spring is usually fastened to the cord and attached to the large pulley on the tuning unit. The driving force of this system is supplied by the friction between the cord and the tuning shaft.

For proper operation the following points must be observed:

1. All drive members such as shafts, pulleys and pointer slides must be in good alignment and must rotate or slide without undue friction.
2. The cord must have proper tension. Too much or insufficient tension will interfere with proper operation.
3. The cord used must be of the proper size and type.

## Causes of Slipping Drive Systems

The greatest source of trouble in cord drive systems is due to slipping. This can be due to any one or a combination of the following causes: insufficient tension, friction of moving parts or excessive smoothness of the surface of the drive cord.

Insufficient tension may readily be corrected by shortening the cord. This can often be accomplished by tying a knot in the cord where it will not interfere with operation. Tension may also be increased by removing turns from the tension spring. This practice is not generally recommended. In many receivers the large pulley to which the spring is attached is provided with a series of holes to allow adjustment of tension.

Excessive friction in the bearings of the variable condenser or permeability tuner may cause the cord to slip. Pulleys which do not rotate freely or pointers which bind instead of sliding easily may be the cause of cord slippage. In these cases adjustment or replacement of the defective parts is indicated. Lubrication should be done sparingly to prevent oil from getting on the cord. An oil for this purpose should have a very light body and contain an oxidation inhibitor to prevent gumming. The manufacturers of dial cords and accessories have special dial oils for this purpose.

Another cause of excessive friction is too much tension on the dial cord, usually caused by high spring tension. In replacing a dial spring, care should be taken to use either a replacement from the receiver manufacturer or a similar spring from the assortments available from dial accessory manufacturers.

Some types of dial cords have a tendency to become smooth and slippery after extended use. This will cause slippage on the tuning drive shaft, making operation of the receiver difficult or impossible. Replacement with a new cord is the best solution of this condition. Roughening of the tuning shaft with a file or coarse sandpaper is not recommended. The abrasive action of the rough shaft will cut the cord in a short period of time causing it to fray and eventually break.

Friction of the cord can often be restored satisfactorily by treating it with friction-producing compounds. These are available in powder, stick or liquid form. The liquid preparation is to be preferred since it not only penetrates and impregnates the entire cord but also has a tendency to shrink the fibres. This serves to tighten the cord and may sometimes remedy a slipping drive without the necessity of removing the set from the cabinet. The liquid can easily be applied with a dropper or applicator.

## Properties of Dial Drive Cord

When it becomes necessary to replace a dial cord, this should be done with a cord especially developed for the purpose. Replacement should not be made with fish line, string or thread. The cost of the proper cord is a minor part of the repair job which is mainly labor.

In order to give satisfactory service for a long period of time, a drive cord must have the following mechanical properties:

1. Sufficient breaking strength.
2. Minimum elongation (stretch).
3. High resistance to abrasion.
4. High coefficient of friction.
5. Ability to withstand flexing.

The breaking strength should not be less than 20 pounds in a straight pull test and not less than 12 to 15 pounds when knotted. This allows tying and installing without danger of breaking. A higher tensile strength is of little advantage, as the normal operating tension on the cord, if properly installed, is seldom greater than one pound.

A good dial drive cord should have a minimum elongation or



stretch. Standard specifications of leading receiver manufacturers permit less than  $\frac{1}{4}$ " per foot elongation in 48 hours with an applied pull of 5 pounds. Substitute materials such as fish line often used in repair work will not meet this or some of the other requirements.

A dial cord is subject to friction whenever the set is tuned and must therefore possess reasonable resistance to abrasion. Nylon outer braiding performs excellently in this respect and many cords are now made using this material.

A very important property for a dial drive cord is that it have a relatively high coefficient of friction. This requires that the cord should not become smooth or slick during use. The type of thread used for the outer braid, the diameter of the individual strands and the method of braiding, determine its performance and life in this respect.

Small diameter drive shafts and pulleys subject the cord to continual flexing as the set is tuned. Choice of core and braid material determine the flexibility. The cord is chemically impregnated after manufacture to improve its flexibility and keep it soft during life.

Under the impetus of military requirements during the war, great advances were made in the improvement of dial cord performance. At present, various materials are used in the manufacture of cords to meet the foregoing requirements. Most common of these are nylon, silk, linen and fibreglas. Nylon and silk are suitable for outer braid material while linen, fibreglas or special low-stretch nylon are employed for cores.

### Selection of the Proper Size Dial Cord

The proper diameter of the cord is of greater importance than is generally realized by most service technicians. The groove radius of the pulleys and the diameter of the drive shaft are generally designed for a certain diameter cord. If a cord of greatly different diameter is substituted either excessive or insufficient friction occurs and early trouble may be expected. A cord of different diameter from the original may also affect the dial calibration.

Fortunately, for general replacement purposes, three sizes of cords will take care of replacement in over 85% of the radio receivers in the field using dial cords. These sizes are:

1. "Special Thin" or "Extra Thin"—diam. .024"-.028".
2. "Thin" or "Standard"—diam. .030"-.034".
3. "Medium" or "Light"—diam. .038"-.042".

In most instances the service technician will have no difficulty in determining the proper replacement, since it is usually possible

to compare the broken cord in the receiver with samples of these sizes. If the cord has previously been replaced and the customer complains of unsatisfactory operation, it may be necessary to consider whether a heavy enough replacement cord was previously installed.

As a general rule, when in doubt as to the proper replacement, it is advisable to use the heavier type (.040"), providing the following requirements are fulfilled:

1. The cord must fit the grooves in pulleys and other parts of the mechanism.
2. When coiled around the tuning shaft with the required number of turns, the cable must not bind against the panel or support bracket, during its entire travel. In many instances the tuning shaft has been reduced in diameter at the section around which the cord is wrapped. In this case a drive cord of excessive diameter will tend to bind at the chamfered ends of the reduced section. This will occur near the end of travel of the system.
3. The cord must not be too large to fit properly in the worm type drive pulleys sometimes used.

The use of the heaviest cord practicable allows for more friction on the drive shaft, thus minimizing slipping and reducing the possibility of stretching.

It is recommended that the service technician carry in his stock a large spool of each of the three sizes of dial drive cords described. While these sizes will handle most of the repair jobs to be encountered, there are many receivers requiring special cords such as phosphor bronze cables, heavier nylon cords, monel metal cables, special thin cables of steel and bronze or belts of bronze and steel. The catalogs of the various drive cord manufacturers should be consulted for these special types. Since the most important factor in servicing operations is time, it will pay to have small quantities of these "specials" on hand.

### General Notes on Re-Stringing Dial Drive Systems

It would appear from an inspection of the diagrams of this book that the designers have vied with each other to display their ingenuity in devising intricate and novel arrangements. This situation requires that any instructions which might be given here cannot be specific but must be of a general nature.

There are a number of considerations which apply to all drive cord systems and it is suggested that the following points be used as a check list to assure rapid and satisfactory dial cord replacement.



1. Study the diagram given in this guide and the receiver itself to determine the proper end of rotation of the large pulley on the tuning system, and the position and direction of travel of the pointer, from which to start the stringing procedure. If the stringing indicated does not seem to exactly fit the case in point, it would be wise to study the diagrams of other receivers of the same manufacturer. In the interest of covering as many models as possible in this book, similar diagrams have been combined and consolidated where such combinations will still show the correct method of stringing. In these cases the position and proportion of the various parts of the system may have been altered slightly to produce a universal diagram.
2. All pulleys, drive shafts, tuning mechanisms and sliding indicators should be checked to determine that they rotate or slide freely and have no tendency to bind. All points should be lubricated sparingly. Special light dial oil as provided by the dial accessory manufacturers should be used. Care should be taken to see that none of the lubricant is left on the cord.
3. Before actually stringing the cord around the parts of the system determination should be made that all pulleys and slides are in such position that there will be no sharp bends in the cord and that parts are not subjected to side friction during operation.
4. It is wise to next examine the tension spring or springs. If these show any indication of having had turns removed or of having been permanently stretched, they should be replaced. The new spring should be of the same shape, size and length as the original. The manufacturers of dial accessories provide assortments of springs for this purpose.
5. If it is necessary to cut the cord to length before stringing and the old cord is not available as a guide, be sure to cut enough cord to allow assembly including the tying of knots of the proper size. Since material is relatively inexpensive it is better to have a few inches of waste than to be forced to perform the operation over again.
6. If a number of holes for the fastening of the tension spring have been provided, the spring should be positioned in one of the inner holes. This will allow later adjustment to increase the tension if required.
7. After stringing, the tension should be checked to determine whether it is sufficient for reliable, proper operation. Be certain that the tension has not been made too great. In no case should the cord be as tight as a violin string. A cord which is too tight

will place undue strain on all parts and will prevent the set from tuning easily.

8. The tuning system should be rapidly operated from one end to the other to make certain that no binding is present. At the same time a check should be made that there is no tendency for the cord to climb out of idler pulleys or jam at the end of motion on the drive shaft.
9. Before replacing the set in the cabinet a drop of cement should be placed on the point of fastening of the pointer or indicator and also on the knots of the cord where it is fastened to the tension spring or to the tuning drive pulley, as the case may be. This will prevent any subsequent tendency for the knot to become loose.

We wish to acknowledge the assistance of the General Cement Manufacturing Company and the Walter L. Schott Company (Walsco) in the preparation of this book. These manufacturers of dial cords and accessories provided us with facts gained from their long experience.

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502	11
503	11
504	11
505	158
506	160
507	158
509	158
510	158
510A	158
511	158
512	162
515	162
516	162
518	158
520	11
522	158
523	158
524	170
525	159
531	162
532	162
533	162
535	159
539	159
540A	165
541	73
543	159
544	159
552	159
1002	169
DS365	164
DS372	164
EQ368	166
EQ410	166
ER369	166
ER370	166
EV384	166
FH413	162
FH440	162
FJ412	160
FW423	160
GB439	162
GB441	162
GH437	160
GH447	160
GH2-447	160
<b>EMPRESS</b>	
55	174
56	174
<b>ESPEY</b>	
RR13	168
RR13L	168
581	73
651	15
652	15
653	15
6511	15
6511-2	15
6511-S	15



Manufacturer	Diagram Number
<b>ESPEY (Continued)</b>	
6514	15
6516	15
6517	15
6520	15
6520-2	15
6521	15
6533	15
6540	15
6541	15
6542	15
6545	15
6546	15
6547	15
6560	15
6611	172
6612	172
6613	172
6614	172
6615	172
6630	172
6631	172
6632	172
6634	172
6635	172
7541	15
<b>FADA</b>	
602	178
605	185
606	185
609	73
610	73
637	175
652	171
1000 Series	173
1001	175
<b>FARNSWORTH</b>	
BC66	176
BC103	177
BC105	177
BC601	186
BC601X	186
BK106	177
BK107	177
BK108	177
BK110	188
BK111	188
BK112	188
BK602	186
BK602X	186
BK6025	186
BK6025X	186
BT20	73
BT22	176
BT52	73
BT53	73
BT54	73
BT55	176
BT56	176
BT61	176
BT63	182
BT600	183
BT600X	186
CC70	187
CK58	179
CK66	179
CK73	187
CK74	187
CK75	187
CK111	177
CT50	179
CT51	179
CT52	179
CT53	179
CT54	179
CT61	179

Manufacturer	Diagram Number
<b>FARNSWORTH (Continued)</b>	
CT62	179
CT63	179
CT64	179
DK73	187
DK75	187
EC260	28
EK262	28
EK263	28
EK263BL	28
EK263WL	28
EK264	28
EK264BL	28
EK264WL	28
EK265	28
ET060	180
ET061	180
ET063	180
ET064	180
ET065	180
ET066	180
<b>FEDERAL</b>	
1030T	138
1540T	138
<b>FERRAR</b>	
C81-B	184
<b>FIRESTONE</b>	
4A2	21
4A20	20
4A21	22
4A21X	24
4A22	22
4A22X	24
4A23	25
4A24	23
4A25	26
4A31	28
4A37	27
4B1	29
4B2	29
4C3	36
4C6	36
S7400-4	33
S7400-5	33
S7406-7	33
<b>FORD</b>	
6MF080	181
<b>FREED EISEMAN</b>	
46	193
<b>GAMBLE SKOGMO (See also Coronado)</b>	
C4B15	48
C4B16	48
C5D14	40
C5D16	48
15C6A	191
15C6B	190
864	80
3128 (Late)	182
4132	182
4164	183
4956	45
<b>GAROD</b>	
5A2	192
5API-Y	189
5D	194
5D2	194
6AU-1	82
6BU-1A	195
6DPS	196
6DPS-A	196
<b>GENERAL ELECTRIC</b>	
G61	197
G64	200
G65	200

Manufacturer	Diagram Number
<b>GENERAL ELECTRIC (Continued)</b>	
G66	197
G68	197
G69	197
G75	200
G78	197
G85	198
G86	197
G95	202
G99	198
GDE-73	204
GE-52	206
GE-73	204
GE-78	204
GE-93	205
GE-96	205
H73	203
H77	203
H78	203
H79	203
H87	203
H116	203
H118	203
H600	207
H600U	207
H601	207
H610	207
H610U	207
H611	207
H620	208
H620U	208
H621	208
H622	208
H623	208
H625	208
H630	208
H630U	208
H631	208
H632	208
H632U	208
H633	208
H634	203
H638	203
H640	203
H708	209
H736	209
HE74	204
HE74L	204
HE100	199
HE100H	199
HE100L	199
HE100LH	199
HE105	199
HE105L	199
HE740	204
HE740L	204
HJ119	203
HJ737	209
HJ905	203
HJ908	203
HJ908B	203
HJ1005	203
HJ1205	203
J62	210
J63	210
J64	211
J71	211
J105	211
J602	212
J603	212
J614	212
J620	210
J664	212
J709	209
J718	211
J728	211

Manufacturer	Diagram Number
<b>GENERAL ELECTRIC (Continued)</b>	
J805	211
J808	211
J809	211
J818	211
J828	211
J1106	211
J1108	211
JE81	213
JE101	215
JE107	215
JE810	213
L600	212
L601	212
L610	212
L611	212
L631	212
L642	212
L643	212
L650	214
L651	214
L652	214
L653	212
L660	214
L663	212
L673	212
L674	212
LF115	216
LF116	216
LFC1118	216
LFC1128	216
LFC1228	216
X115	220
X125	220
X145	220
X225A	212
X225V	212
20	210
35	215
40	216
50	218
60	211
80	211
100	217
101	217
103	217
105	217
106	221
180	219
200	222
201	222
203	222
205	222
205M	222
219	227
220	227
221	227
250	225
260	225
303	223
321	224
326	226
327	226
417	230
<b>GENERAL TELEVISION</b>	
1A5	73
2A5	73
3A5	73
5A5	73
14A4F	6
15A5	73
17A5	73
19A5	73
21A4	73
22A5C	73
23A6	73



Manufacturer	Diagram Number
<b>GILFILLAN</b>	
56A	73
56B	73
56C	73
56D	73
66A	229
66AM	229
66B	73
66D	229
66DM	229
66P	231
66PM	231
<b>GLOBE</b>	
5BP1	233
6AP1	233
6D1	232
6P1	228
6U1	232
62C	237
551	11
<b>GOODRICH (See Mantola)</b>	
<b>GRANTLINE</b>	
500	234
501	234
605 (Series A)	92
606 (Series A)	92
651	15
6547	15
<b>HALLICRAFTERS</b>	
S-38	235
S-40	236
S-41B	242
S-41W	242
<b>HOFFMAN</b>	
A200	239
A202	240
A300	82
A309	240
A401	82
A501	241
A700	238
B400	244
B1000	18
<b>HOWARD</b>	
4BT	171
220	171
221	171
270	171
271	171
300 Series	243
307-4	243
307TP-2	243
430 (Series 2)	246
438	246
460	250
500 Series	245
718FM	249
765	248
768	248
780	248
806	247
808	247
808 (Series X)	259
810	247
865	255
868	255
901A-E	73
901A-H	73
901A-I	73
901A-M	73
901A-P	73
901A-W	73
906	253
906C	253
920	73

Manufacturer	Diagram Number
<b>HUDSON</b>	
DB39	256
DB40	252
SA39	256
SA40	252
<b>JEFFERSON TRAVIS</b>	
MR-2B	251
MR-3	251
<b>JEWEL</b>	
500A	18
500B	18
500C	18
501A	18
501B	18
501C	18
502A	18
502B	18
502C	18
503A	18
503B	18
503C	18
504A	18
504B	18
504C	18
505A	18
505B	18
505C	18
<b>KNIGHT</b>	
5A-150	15
5A-152	15
5A-154	15
5A-190	11
5B-160	18
5B-175	16
5B-176	16
6A-122	254
6A-127	261
6A-195	16
6B-122	254
6B-127	261
8B-210	258
D-182	249
D-197	249
<b>LAFAYETTE</b>	
B33	6
B112	41
B195	183
BB9 (A)	191
BB9 (B)	190
FA15W	257
FA15Y	257
J62	237
J62C	237
MC10B	11
MC10Y	11
MC13	11
<b>LEARADIO</b>	
561	260
562	260
563	260
565	260
565BL	260
566	260
567	260
568	260
661	270
6610PC	270
6611PC	270
6612PC	270
6614	260
6615	260
6616	260
6617PC	260
6619	260
<b>LEWYT</b>	
615A	265

Manufacturer	Diagram Number
<b>LEXINGTON</b>	
6545	15
<b>LIBERTY</b>	
A6K	264
A6P	264
6K	264
507A	264
<b>LINCOLN</b>	
S13L-B	185
<b>LINCOLN (Allied Radio Corp.)</b>	
5A-110	26
<b>LYRIC</b>	
546T	73
546TY	73
546TW	73
<b>MAGIC TONE</b>	
500	19
501	19
<b>MAGNAVOX</b>	
CR-101	262
CR-101M	262
CR-108M	266
CR-122	266
CR-187	263
CR-188	263
CR-189A	267
CR-189B	267
CR-190	271
CR-192A	267
CR-192B	267
CR-193	263
CR-198A	263
CR-198B	263
CR-198C	263
<b>MAGUIRE</b>	
500BI	269
500BW	269
500DI	269
500DW	269
561BI	269
561BW	269
561DI	269
561DW	269
661	269
661A	269
700A	268
700E	268
<b>MAJESTIC</b>	
5A410	272
5A430	272
7C432	274
7C447	274
8S452	273
8S473	273
<b>MANTOLA</b>	
R459	118
R643	4
R652	6
R652N	6
R654-PM	275
R654-PV	275
R655	275
R662	6
R662N	6
R7543	73
<b>MASON</b>	
45-1A	73
45-1B	73
45-1P	73
45-3	73
45-4	73
45-5	73

Manufacturer	Diagram Number
<b>MECK</b>	
PM-5C5-DW10	6
PM-5C5-PW10	6
RC-5C5-P	6
6A6-W4	187
<b>MEDCO (See Telesonic)</b>	
<b>MEISSNER</b>	
9-1065	6
<b>MIDLAND</b>	
M6B	278
<b>MIDWEST</b>	
P-6	276
PB-6	276
S-8	282
ST-8	282
TM-8	282
<b>MINERVA</b>	
L702	171
L728	19
W117	6
W117-3	11
W702-B	171
W710	281
W710-A	281
W728	19
<b>MONITOR</b>	
TA56M	129
TW56M	129
<b>MONTGOMERY WARD (See Airline)</b>	
<b>MOPAR (See Chrysler)</b>	
<b>MOTOROLA</b>	
BK6	279
CR6	280
CT6	279
FD6	279
NH6	279
OE6	279
PC6	279
PD6	283
9-24	285
9-24A	285
9-44	288
16-C	284
17-D	287
18-O	289
19-B	289
25-F	290
26-C	291
26-C7	291
27-D	293
27-D6	293
28-O	291
29-B	291
29-B6	291
30-P	291
35-F	294
35-N	292
36-C1	295
36-C2	295
37-D1	296
37-D2	296
38-O	291
39-B1	291
39-B2	291
40-P	286
43-H	297
44-K	298
45-B12	158
45-N	299
51-A	73
51-C	73
51-F11	300
51-F12	301
51-R11	300



Manufacturer	Diagram Number
<b>MOTOROLA (Continued)</b>	
52-C	73
53-A	73
53-C	73
54-A	73
54-C	73
55-F11	303
55-X11	302
55-X11A	304
55-X12	302
55-X12A	304
55-X13	302
55-X13A	304
60-XW	301
61-A	305
61-B	305
61-C	306
61-D	306
61-E	305
61-F	307
61-T21	308
61-T23	314
61-X11	301
61-X12	301
61-X13	301
62-A	305
62-B	305
62-E	305
62-F1	312
63-A	305
63-E	305
65-F11	303
65-F12	303
65-F21	309
65-T21	310
65-T21B	310
65-X11	19
65-X11A	19
65-X12	19
65-X12A	19
65-X13	19
65-X13A	19
65-X14	19
65-X14A	19
65-X14B	19
71-A	313
72-C	311
75-F21	315
81-C	306
81-F21	308
81-F22	308
81-K31	316
82-A	317
83-F1	312
83-K1	321
85-F21	309
85-K21	309
93-F1	312
95-F31	320
95-F31B	320
95-F33	320
101-F21	319
101-R21	319
103-CK2	318
103-F1	312
103-F2	312
103-K1	322
250	325
251	325
<b>MURPHY</b>	
113	258
122	258
<b>NATIONAL CO.</b>	
NC-46	326

Manufacturer	Diagram Number
<b>NATIONAL UNION</b>	
571	117
571A	117
571B	117
G-613	324
G-619	189
<b>OLDSMOBILE</b>	
982160	323
982282	327
982375	323
<b>OLYMPIC</b>	
6-501	328
6-501VU	328
6-501WU	328
6-502	328
6-502P	328
6-502U	328
6-503	328
6-504	6
6-504L	6
6-601V	329
6-601W	329
6-602	329
6-606	272
6-606A	272
6-606U	272
6-617	329
<b>PACKARD BELL</b>	
5DA	73
5FP	73
551	333
551-D	333
556	333
561	330
563	330
568	73
651	333
661	331
662	332
861	332
1052	334
1052-A	334
1054-B	337
1063	272
<b>PHILCO</b>	
UN6-100	336
UN6-450	335
UN6-500	335
39-40	339
39-45	339
39-55	342
39-116	342
39-770	338
40-110	341
40-130	340
40-135	340
40-140	340
40-145	340
40-150	344
40-155	344
40-158	348
40-160	345
40-165	345
40-170CS	340
40-180	344
40-185	344
40-190	344
40-195	338
40-200	338
40-201	338
40-205	342
40-215	342
40-216	342
40-217	342
40-503	340

Manufacturer	Diagram Number
<b>PHILCO (Continued)</b>	
40-506	340
40-507	340
40-516	342
40-525	340
40-526	340
40-527	340
40-710	351
40-715	351
40-725	349
40-748	349
40-755	349
40-756	349
40-780	349
40-2710	351
40-2725	349
40-2780	349
41-230	350
41-235	350
41-250	353
41-255	353
41-260	352
41-265	352
41-280	353
41-285	353
41-287	353
41-290	353
41-295	338
41-296	353
41-300	338
41-315X	338
41-316	342
41-608	355
41-609	355
41-610	353
41-611	353
41-616	342
41-629	353
41-712	354
41-713	354
41-714	346
41-722	347
41-745	347
41-758	347
41-759	347
41-788	356
42PT-2	343
42PT-4	343
42PT-7	343
42-121	362
42-122	358
42-123	361
42-124	364
42-125	364
42-126	364
42-350	357
42-380	363
42-395	363
42-400	338
42-706	343
42-724	360
42-730	366
42-760	359
42-761	359
42-762	359
42-788	356
42-1002	369
42-1003	367
42-1005	367
42-1008	365
42-1009M	365
42-1009W	365
42-1012	368
42-1013M	368
42-1013W	368

Manufacturer	Diagram Number
<b>PHILCO (Continued)</b>	
42-1015	338
42-1016	338
46-131	370
46-132	371
46-200	173
46-200I	173
46-201	173
46-202	173
46-203	173
46-250	372
46-250I	372
46-251	372
46-350	373
46-420	377
46-420I	377
46-421	374
46-421I	374
46-427	375
46-480	376
46-1201	379
46-1203	378
46-1209	380
46-1213	382
46-1226	380
<b>PHILHARMONIC</b>	
6810	196
8701	196
8702	196
8703	196
8710	196
8711	196
8712	196
<b>PHILLIPS PETROLEUM CO.</b> (See Woolaroc)	
<b>PILOT</b>	
T-411-U	381
T-500	73
T-510	381
T-511	381
T-521	383
T-530	393
<b>PONTIAC</b>	
983667	384
983679	386
983680	394
983775	386
983910	108
983911	386
984170	108
984171	386
<b>PREMIER</b>	
15LW	127
<b>PURE OIL (See Puritan)</b>	
<b>PURITAN</b>	
501	385
501X	124
502	385
502X	124
503	388
504	387
506	20
507	20
508	25
<b>RCA VICTOR</b>	
QB-1	391
HF-2	390
QB-2	391
QU-2C	392
QU-2M	392
QB-3	399
QU-3C	396
QU-3M	396
HF-4	390
4QB	398



Manufacturer	Diagram Number
<b>RCA VICTOR (Continued)</b>	
4QB4	398
QB-5	397
QU-5	392
TT-5	395
TRK-5	395
5Q5	398
5Q6	398
5Q8	398
5Q12	400
5Q12A	400
5Q55	398
5Q56	398
5Q66	398
6QU	400
HF-6	401
QB-6	391
6Q1	402
6Q4	402
6Q4X	402
6Q7	400
6Q8	400
6QK8	400
7QB	403
7QBK	403
QU-7	407
7Q4	405
7Q4X	405
7QK4	405
HF-8	401
8QB	403
8QBK	403
QU-8	407
8Q1	406
8Q2	404
8Q4	406
8QU5C	404
8QU5M	404
QB-9	391
9QK	408
TRK-9	410
9M1	409
9Q1	408
9M2	409
9Q4	405
10Q1	406
10-X	411
U-10	107
11Q4	414
11QK	414
11QU	414
11X-1	411
Q-11	397
12AX	411
12AX2	411
12Q4	414
12QK	414
12QU	414
12X	411
12X2	411
Q-12	397
U-12	107
TRK-12	410
14AX	411
14AX2	411
14X	411
14X2	411
Q-14	412
Q14E	412
Q-15	412
Q-15E	412
15X	397
16K	413
16T2	413
16T3	413
16T4	413

Manufacturer	Diagram Number
<b>RCA VICTOR (Continued)</b>	
16X4	415
16X11	397
16X13	397
16X14	397
Q-16	416
Q-16E	416
17K	139
Q-17	416
18T	139
Q-18	398
19K	417
U-20	107
Q-22	391
Q-22A	391
Q-23	416
QK-23	392
Q-24	391
25BK	418
25BT2	419
25BT3	418
Q-25	420
U-25	395
26BP	421
26X1	397
26X3	397
26X4	397
Q-26	396
U-26	395
27K	422
Q-27	420
28T	139
28X	140
28X5	140
29K	141
29K2	141
Q-30	423
U-30	414
Q-31	423
Q-33	399
34X	411
35X	411
36X	397
U-40	107
BK-42	427
BT-42	427
U-42	107
U-43	107
Q-44	426
U-44	425
45X18	424
U-45	425
K-50	107
M-50	409
U-50	400
QU-51C	428
QU-51M	428
B-52	419
QU-52C	392
QU-52M	392
55AU	429
55F	419
55FA	419
55U	429
QU-55	430
T-55	107
X-55	107
56X	431
56X2	431
56X3	431
56X5	397
56X10	397
56X11	397
QU-56C	432
QU-56M	432
T-56	107

Manufacturer	Diagram Number
<b>RCA VICTOR (Continued)</b>	
58AV	142
58V	142
59AV1	142
59V1	142
M-60	409
K-60	434
T-60	107
X-60	107
K-61	107
K-62	434
T-62	107
T-63	107
64F1	138
64F2	138
64F3	138
T-64	433
65AU	429
65U	429
65X1	138
65X2	138
T-65	433
668X	435
66X1	436
66X2	436
66X3	436
66X4	436
66X9	436
67AV1	437
67V1	437
M-70	439
K-80	434
T-80	433
K-81	434
K-82	434
TRK-90	410
94BK2	442
94BT2	442
95T5	443
95T5LW	443
96BK6	442
96BT6	442
96E	443
96E2	395
96K	395
96K2	395
96K5	395
96K6	395
96T	443
96T1	443
96T2	395
96T3	395
96T4	441
96T5	441
96T6	441
96T7	395
96X1	444
96X2	444
96X3	444
96X4	444
96X11	444
96X12	444
96X13	444
96X14	444
97E	395
97K	395
97KG	395
97K2	395
97T	395
97T2	395
97X	443
97Y	395
98EY	395
98K	414
98K2	395

Manufacturer	Diagram Number
<b>RCA VICTOR (Continued)</b>	
98T	395
98T2	395
98X	395
98TG	395
99K	414
99T	414
V-101	440
V-102	413
K-105	434
110K	445
110K2	445
111K	445
U-115	443
U-119	395
TRK-120	410
U-121	443
U-122E	395
U-123 (1 band)	443
U-123 (2 band)	441
U-124	395
U-125	395
U-126	414
U-127E	443
U-128	414
U-129	414
U-130	390
U-132	401
U-134	401
V-140	446
V-170	413
V-175	413
V-200	447
V-201	139
VHR-202	447
V-205	447
VHR-207	447
V-209	142
V-210	142
211K	141
VHR-212	142
V-215	142
V-219	142
V-221	142
V-225	142
V-300	447
V-301	447
V-302	447
VHR-307	447
V-405	447
VHR-407	447
515	397
516	411
517	411
522	411
526	411
527	411
612V1	448
612V2	448
612V3	448
910KG	414
911K	414
<b>RADIOLA</b>	
61-1	397
61-2	397
61-3	397
61-5	397
61-10	397
<b>RADIONIC</b>	
6W	167
<b>RADIO WIRE TELEVISION (See Lafayette)</b>	
<b>RAY ENERGY</b>	
AD	449
AD4	453
SRB-1X	450



Manufacturer	Diagram Number
<b>RECORDIO</b>	
6810	451
6820	451
6830	451
6832	451
<b>REGAL</b>	
L76	171
W800	171
W801	171
W900	454
W901	454
1049	452
<b>REMLER</b>	
MP5-5-3	173
<b>RENARD</b>	
L-1A	455
PT-1A	455
1B5T-1	455
<b>SCOTT</b>	
800-B	456
<b>SEARS ROEBUCK (See Silvertone)</b>	
<b>SENTINEL</b>	
263	459
264	459
273	459
284-I	26
284-NA	26
284-NI	26
284-W	26
285-P	26
289-T	261
292-K	23
293-I	454
293-T	459
293-W	459
294-I	459
294-N	459
294-T	459
1U-284I	26
1U-284NA	26
1U-284NI	26
1U-284W	26
1U-285	261
1U-293I	459
1U-293T	459
1U-293W	459
1U-294I	459
1U-294N	459
1U-294T	459
1U-294W	459
<b>SETCHELL-CARLSON</b>	
416	192
<b>SILVERTONE</b>	
R-381	460
771	458
R-1161	458
1771	458
1781	462
1781-A	462
2011	73
2051	73
2411	73
2461	458
2511	73
2761	458
4608	461
4609	461
4628	461
4629	461
4638	461
4639	461
4648	461
4649	461
4666	465
4667	463

Manufacturer	Diagram Number
<b>SILVERTONE (Continued)</b>	
4686	465
4728	461
4748	461
4766	465
4767	463
4777	463
4791	465
4792	465
4798	463
5502	466
5511	460
5511-A	460
5571	460
5571-A	460
5581	458
5601-A	460
5621	458
6008	464
6009	464
6011	467
6012	467
6016	464
6017	464
6018	464
6019	464
6022	464
6036	470
6038	470
6046	464
6047	464
6048	464
6049	464
6050	6
6051	468
6052	468
6068	464
6069	464
6071	6
6072	469
6074	470
6079	470
6092	466
6093	466
6100	73
6104	466
6105	466
6111	466
6122	464
6132	464
6136	470
6138	470
6146	464
6148	464
6157	473
6168	464
6190	474
6200-A	475
6220	475
6220-A	475
6230	475
6230-A	477
6285-A	477
6301	478
6303	474
6320	476
6321	480
6322	471
6323	471
6324	471
6325	472
6335	472
6336	472
6337	472
6346	472
6346-A	472
6359	472

Manufacturer	Diagram Number
<b>SILVERTONE (Continued)</b>	
6360	472
6361	472
6362	472
6363	472
6364	472
6368	472
6379	472
6380	472
6381	472
6382	472
6407	472
6408	472
6409	472
6421	471
6424	471
6425	472
6435	472
6436	472
6437	472
6438	472
6438-A	472
6438-B	472
6439	472
6439-A	472
6440	472
6441	472
6446	472
6447	471
6449	460
6490	472
6490-A	472
6495	472
6497	472
6551	482
6561	482
6621	482
6661	482
6721	482
6751	482
6751-A	482
6761	482
6761-A	482
6921	482
7010	479
7021	481
7034	479
7037	483
7038	484
7048	483
7049	466
7054	489
7065	73
7066	73
7067	466
7068	466
7069	483
7070	483
7071	487
7080	486
7090	488
7100	485
7104	491
7106	491
7112	491
7115	490
7116	490
7117	490
7167	466
7168	466
7221	493
7228	410
7230	395
7245	492
7905	396
7915	408

Manufacturer	Diagram Number
<b>SIMPLON</b>	
WVV2	494
<b>SKY KNIGHT</b>	
CB-500-P	6
<b>SKYROVER</b>	
N5-RD-250	20
N5-RD-251	20
<b>SONORA</b>	
RBU-176	451
RCU-208	495
RDU-209	189
RKRU-215	498
RMR-219	496
RQU-222	501
RX-223	497
<b>SPARTON</b>	
5AM26PS	500
5AW06	503
6AW26PA	502
7AM46	499
8AM46	499
10BW76PA	504
<b>SPIEGEL (See Air Castle)</b>	
<b>STEWART-WARNER</b>	
01-5H	509
01-6A	509
010-6AX	509
01-6B	509
010-6BX	509
01-6C	509
010-6CX	509
01-6D	507
01-6DX	507
01-6F	509
01-6F9	509
01-6G	507
01-6GZ	507
01-8C7	506
01-8C7-Z	506
01-9A	506
01-9A-Z	506
11-6U	505
11-6U-Z	505
11-7A1	508
11-7A9	508
11-8D	510
11-8F	510
11-8R	510
11-8R8	508
11-8R9	508
11-9B	506
11-9B-Z	506
11-10A	510
51T126	20
51T136	20
51T146	20
51T176	20
61T16	20
61T26	20
61TR36	511
61TR46	511
62T16	512
62T36 (Dial Only)	20
62TC16	512
62TC26	512
62TC36	512
72-CR16	510
72-CR26	510
205GA	513
205GZ	513
9000-B	20
9001-C	22
9001-D	22
9001-E	22
9001-F	22
9002 (Dial Only)	20
9003	514



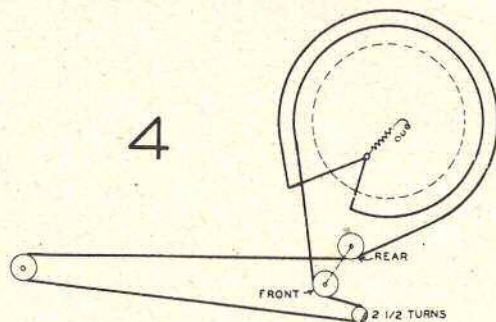
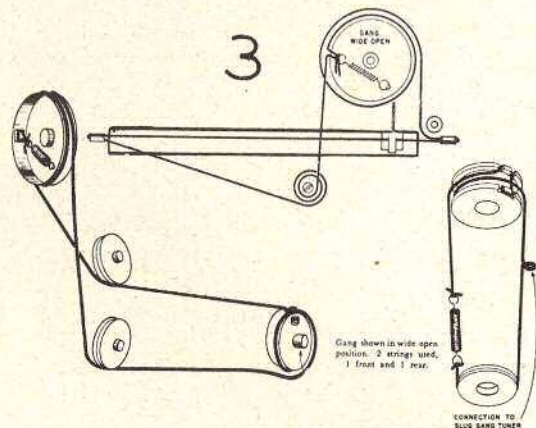
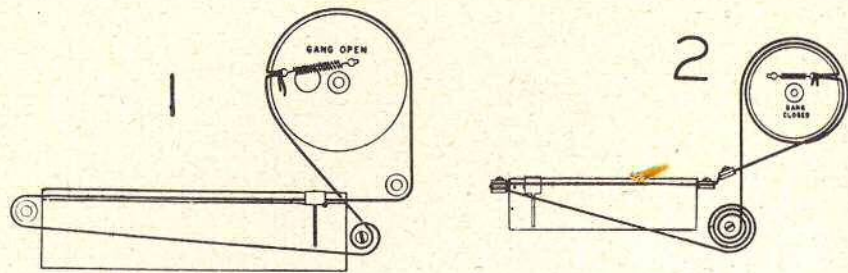
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<b>STEWART-WARNER (Continued)</b>	
9004	510
9005-A	14
9005-B	14
9007-A	516
9007-F	516
9007-G	516
9014-E (Dial Only)	20
9017 (Dial Only)	20
A51T1	515
A51T2	515
A51T3	515
A51T4	515
R-3581	513
R-3589	513
R-3861	513
R-3869	513
<b>STRATAVOX</b>	
579-1-58A	120
<b>STROMBERG-CARLSON</b>	
1100-H	517
1100-HI	517
1101-HB	454
1101-HI	454
1101-HM	454
1101-HW	454
1101-HY	454
1105 (Series 10-11)	518
1110-HW (Series 10)	519
1110-PTW (Series 10)	519
1121 (Series 10-11-12)	520
1121-HW	520
1121-LW	520
1121-M1-O	520
1121-M2-W	520
1121-M2-Y	520
1121-PFM	520
1121-PFW	520
1121-PGM	520
1121-PGW	520
1121-PLM	520
1121-PLW	520
1121-PSM	520
<b>SWANK</b>	
DU101	521
<b>TELESONIC (MEDCO)</b>	
1635	6
1642	167
<b>TELE-TONE</b>	
109	258
117-A	258
133	258
134	258
135	260
<b>TEMPLE</b>	
E510	189
E511	11
E519	189
F611	324
F616	523
F617	524
G515	189
G516	189
<b>TEMPOTONE</b>	
500E Series	269
<b>TRAV-LER</b>	
5000	11
5000-I	11
5002	73
5007	18
5008	18
5009	18
5010	18
5011	18
5012	18
5020	73

Manufacturer	Diagram Number
<b>TRUETONE</b>	
D705	80
D934	466
D1015	40
D1016	40
D1042	45
D1070	43
D1117	525
D1118	182
D1124	48
D1145	41
D1172	41
D1176	41
D1202	182
D1215	40
D1224	48
D1644	189
D1645	38
D2127	182
D2133	526
D2149	41
D2210	40
D2211	40
D2224	182
D2261	48
D2610	527
D2611	527
D2612	20
D2613	20
D2615	529
D2616	528
D2620	531
D2621	530
D2622	275
D2623	18
D2624	78
D2630	78
D2634	125
D2642	275
D2644	13
D2645	68
D2661	527
D2663	4
D3619	95
D3630	73
D3630N	73
<b>ULTRADYNE</b>	
L46	35
<b>U. S. TELEVISION (See also Clearsonic)</b>	
5-16 Series	174
5-46 Series	174
<b>UNITONE</b>	
88	171
<b>VAN CAMP</b>	
576-1-6A	144
<b>VIEWTONE</b>	
RC-201A	173
RRC-201	173
<b>VOGUE</b>	
553R	11
554R	11
<b>WALGREEN</b>	
568	14
571	117
<b>WARWICK (See Clarion)</b>	
<b>WATTERSON</b>	
4581	73
RC4581	73
4582	11
ARC4591A	73
4790	132
<b>WELLS-GARDNER</b>	
1A17	46
1A29	45
1A62 Series	183
1A62-4	183
1A63 Series	183

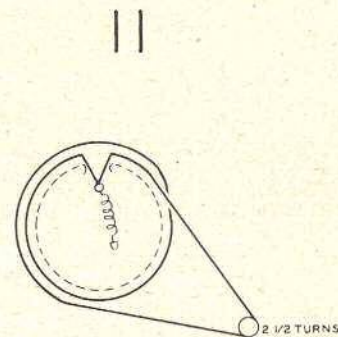
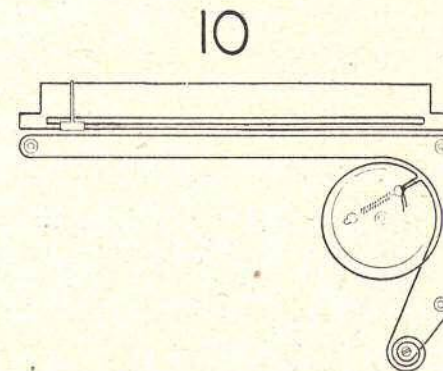
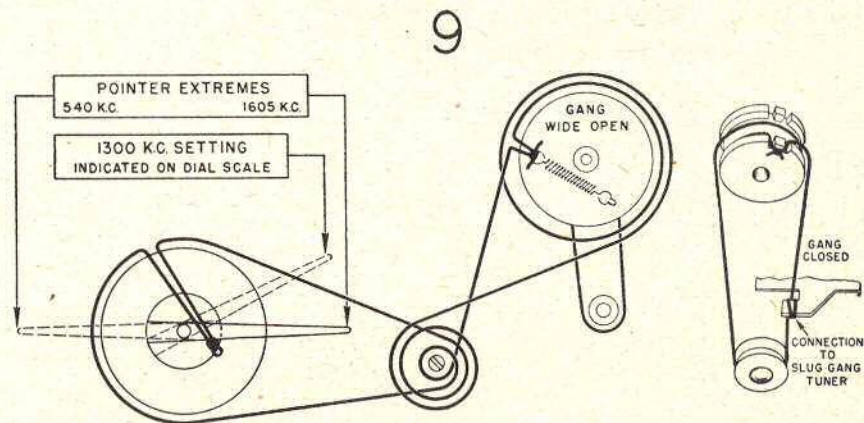
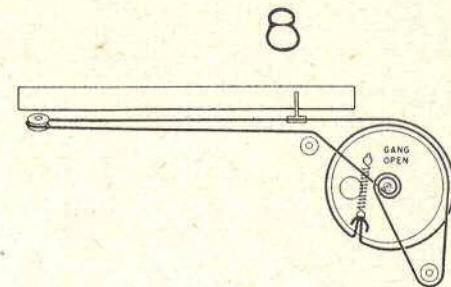
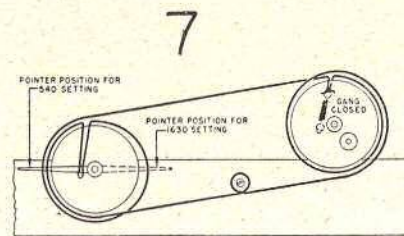
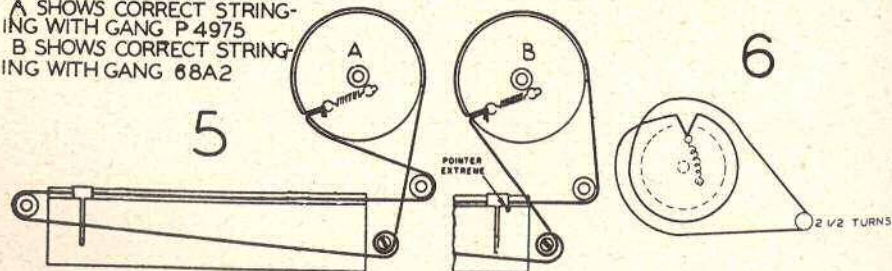
Manufacturer	Diagram Number
<b>WELLS-GARDNER (Continued)</b>	
1A63-3	183
1A63-4	183
5A25S	72
6A43	41
6A44	47
6A65 Series	532
6B10	532
6B16	532
6B18	532
7A40	45
7A41	45
7A66	526
7D11 Series	182
8A30	45
8A31	45
8A51 Series	41
A10 Series	61
A20 Series	64
A22 Series	60
A23 Series	60
A24 Series	60
S2	64
T3 Series	64
<b>WESTERN AUTO (See Truetone)</b>	
<b>WESTINGHOUSE</b>	
H-104	533
H-105	533
H-107	533
H-108	533
H-110	533
H-111	533
H-113	535
H-114	535
H-116	535
H-117	535
H-119	535
H-122	534
H-125	536
H-126	536
H-130	534
H-133	539
H-137	533
H-138	533
H-148	538
H-155	534
H-1251	536
WR-12X7	537
WR-12X8	411
WR-12X9	397
WR-12X12	397
WR-12X14	415
WR-12X15	137
WR-12X16	140
WR-13X8	411
WR-42X2	446
WR-42X3	413
WR-42X4	437
WR-42X5	437
WR-42X7	413
WR-42X14	437
WR-42X15	437
WR-158	443
WR-168	540
WR-168A	540
WR-170	107
WR-172	107
WR-175	107
WR-176	107
WR-186	537
WR-258	443
WR-260	541
WR-264	395
WR-270	107
WR-272	107

Manufacturer	Diagram Number
<b>WESTINGHOUSE (Continued)</b>	
WR-274	102
WR-290	417
WR-366	410
WR-368	410
WR-370	410
WR-372	107
WR-373	107
WR-374	102
WR-388	417
WR-473	107
WR-474	107
WR-476	102
WR-480	537
WR-482	537
WR-484	537
<b>WILCOX-GAY (See Recordio)</b>	
<b>WOOLAROC</b>	
3-1A	20
3-2A	20
3-3A	25
3-4A	516
3-9A	385
3-10A	385
3-11A	387
3-29A	388
<b>ZENITH</b>	
4K016	542
4K035	542
5D011	544
5D027	544
5G003	544
5R080	544
5R086	544
6D014	542
6D014W	542
6D015	544
6D015Y	544
6D029	542
6D029G	542
6D030	544
6G001	544
6G001Y	544
6G004Y	543
6MF590	548
6MF591	548
6MF593	545
6MN495	547
6MN496	547
6MN595	546
6R084	549
6R087	542
7ML592	550
7MN596	546
8G005Y	542
8H023	551
8H032	552
8H033	552
8H034	551
8H050	552
8H051	552
8H052	552
8H061	552
9H079	542
9H079E	542
9H079R	542
9H081	542
9H082R	542
9H085R	542
9H088R	542
12H090	35
12H091	35
12H092	35
12H093	35
12H094	35

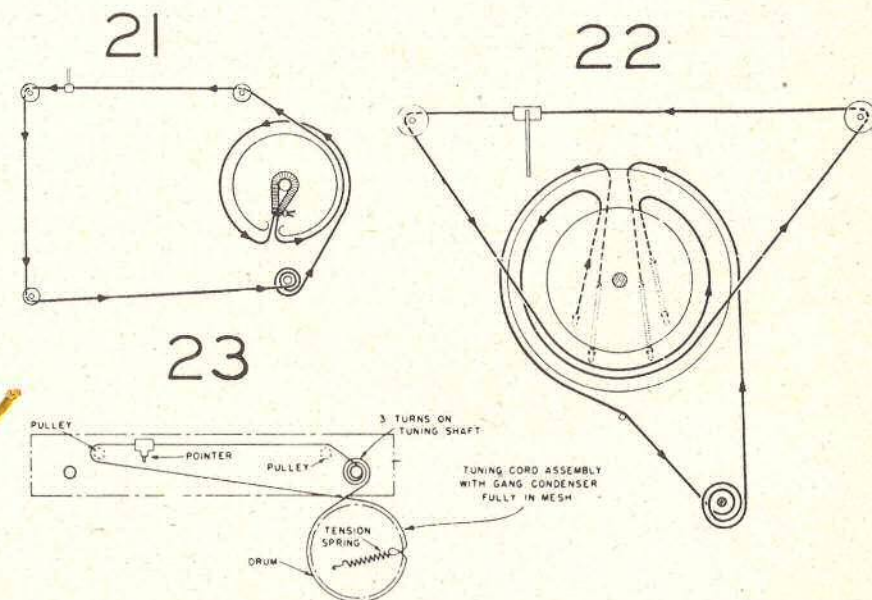
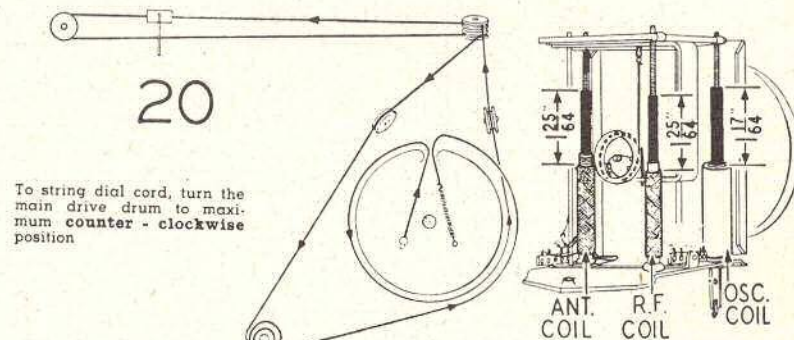
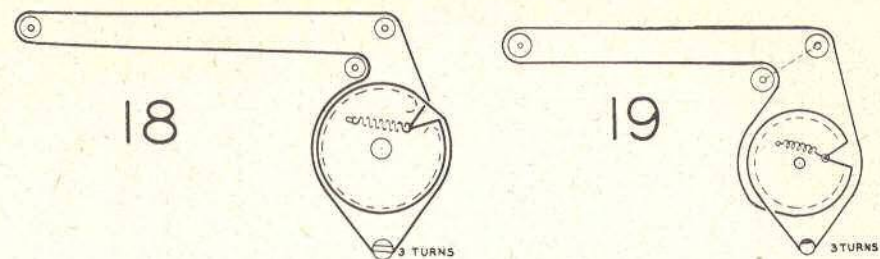
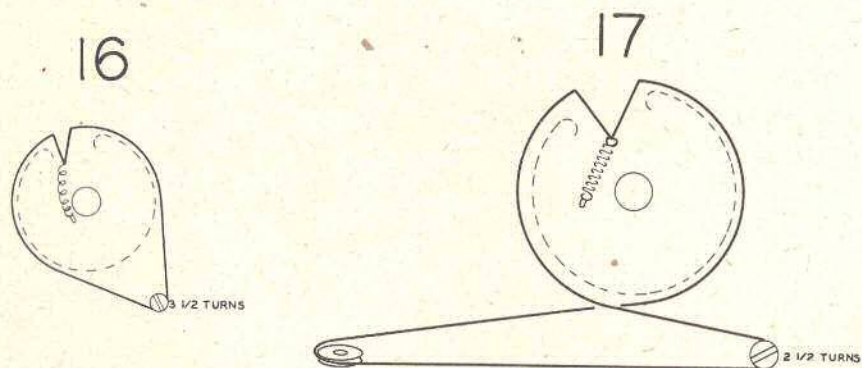
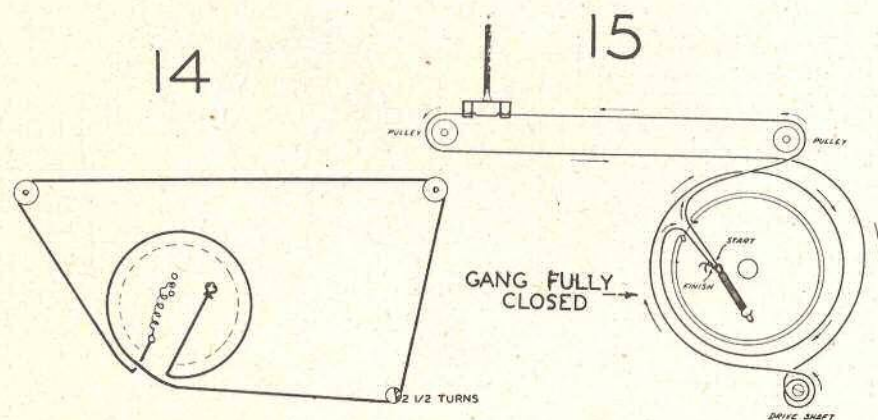
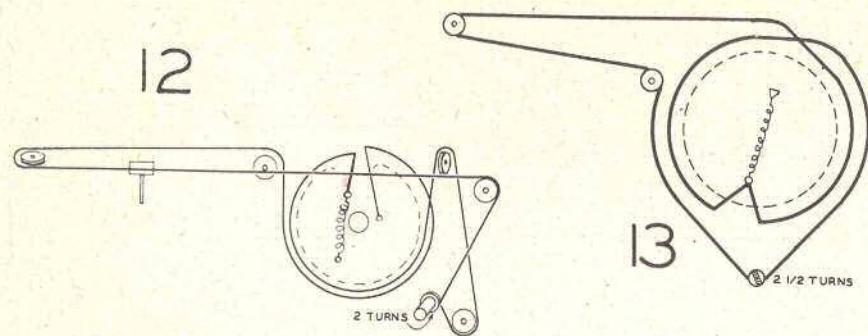




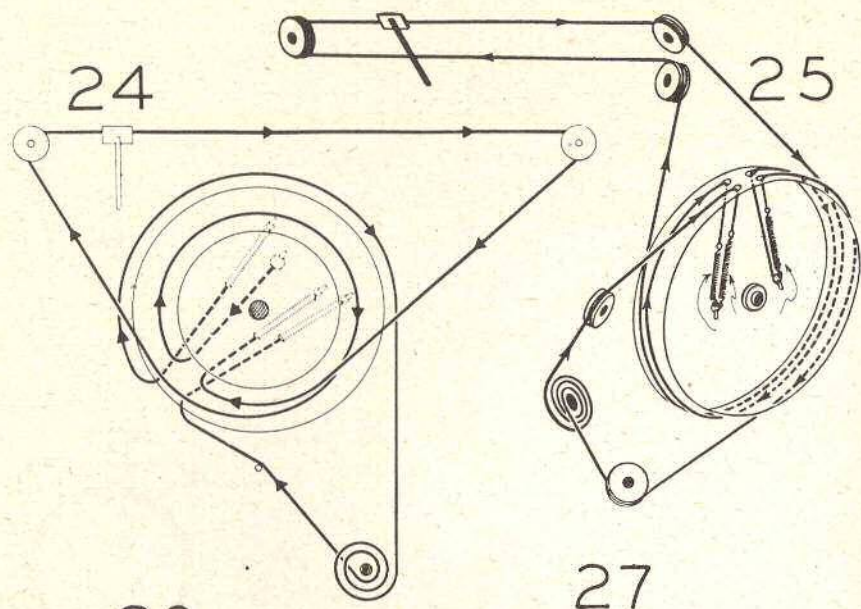
A SHOWS CORRECT STRINGING WITH GANG P 4975  
B SHOWS CORRECT STRINGING WITH GANG 68A2





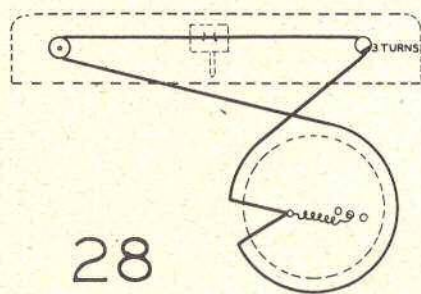




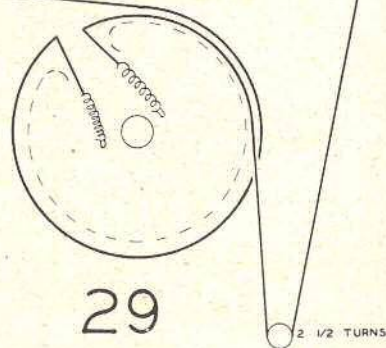


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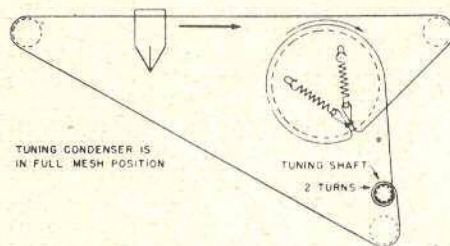
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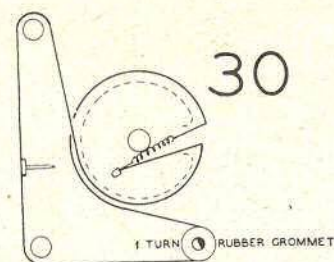


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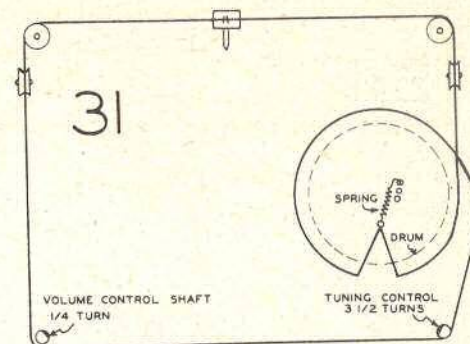


TUNING CONDENSER IS  
IN FULL MESH POSITION

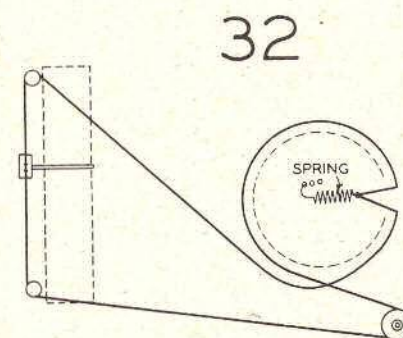
TUNING SHAFT  
2 TURNS



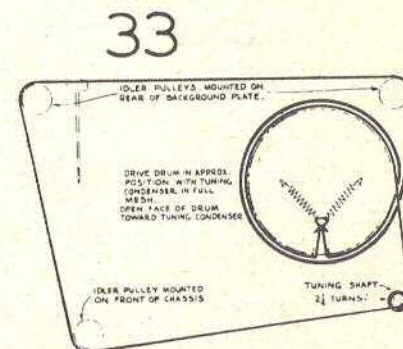
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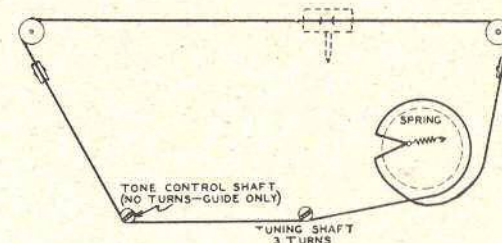


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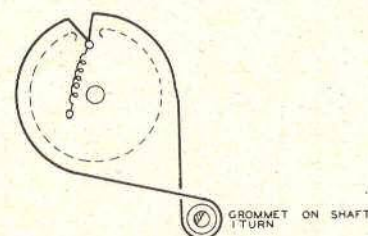


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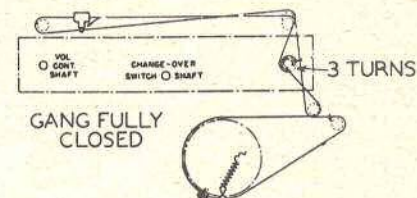
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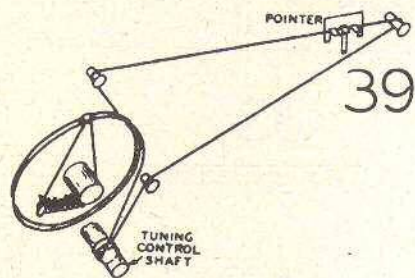
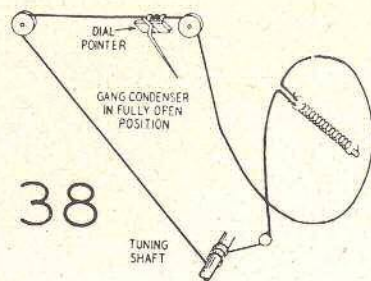
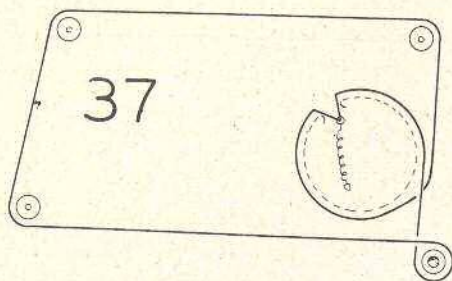
35



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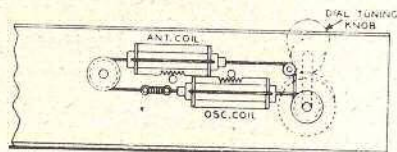




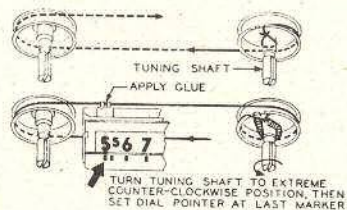


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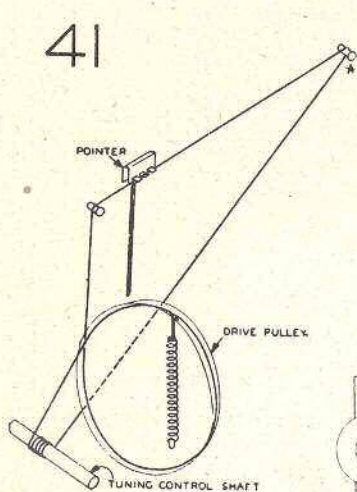
When tying the string to the tension spring make sure that the spring takes up all slack.



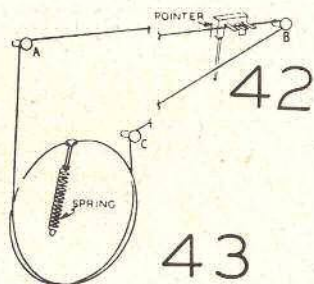
View of Tuning Coil Assembly.



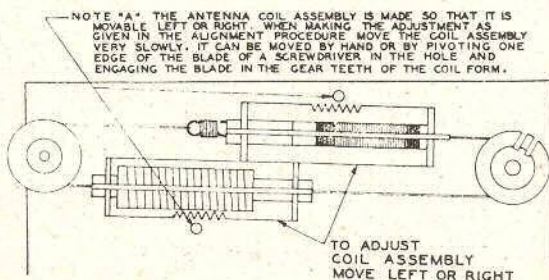
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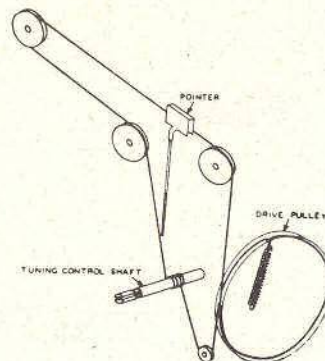
Turn gang condenser to full open position — See illustration. Use a new drive cord 42 inches in length.



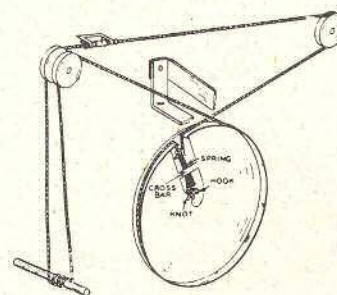
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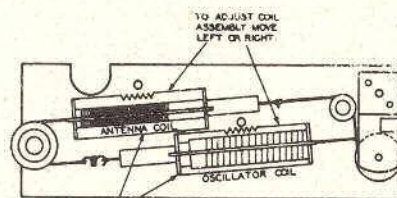
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46

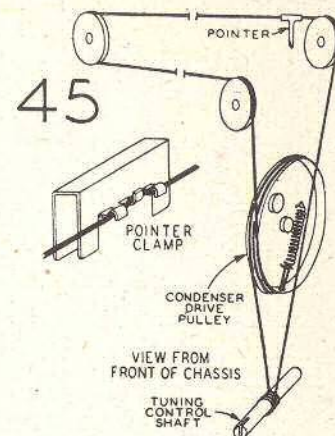


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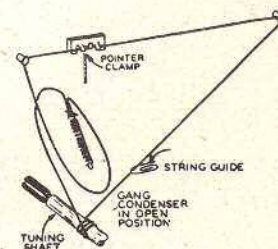


NOTE: THE ANTENNA COIL ASSEMBLY IS MADE SO THAT IT IS MOVABLE LEFT OR RIGHT. WHEN MAKING THE ALIGNMENT PROCEDURE MOVE COIL ASSEMBLY VERY SLOWLY.

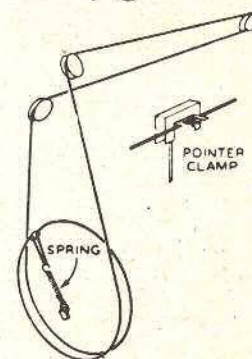
COIL ASSEMBLY VIEW



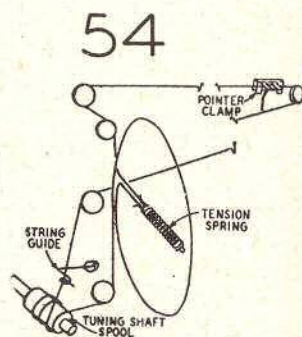
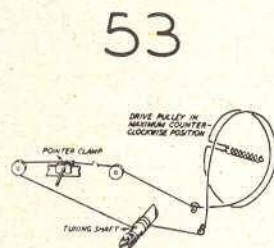
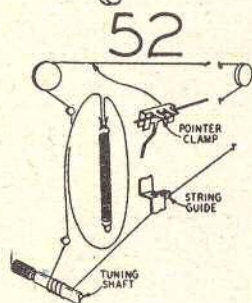
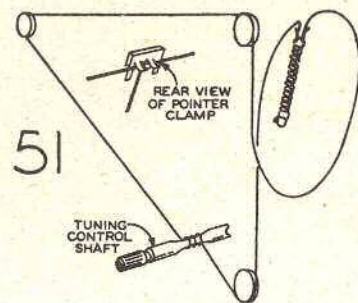
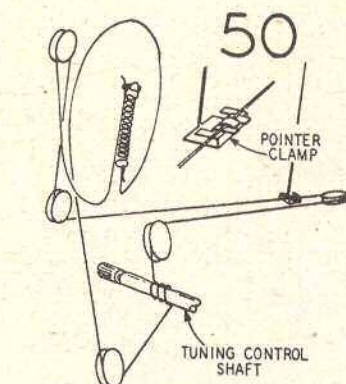
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49





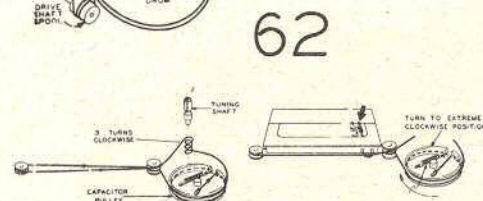
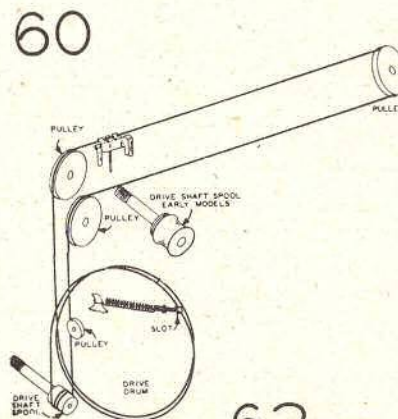
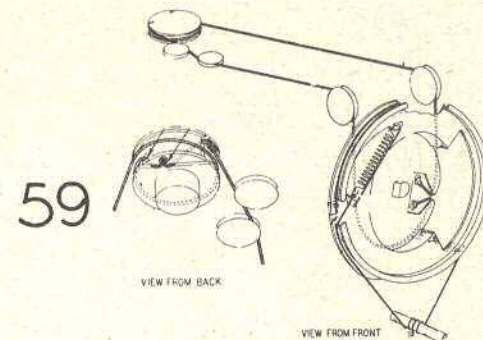
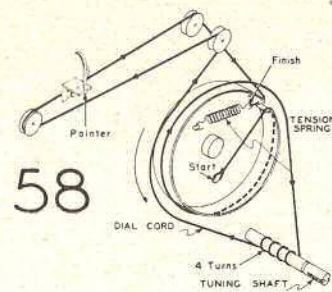
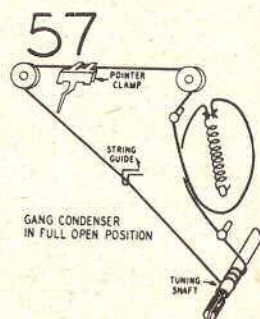
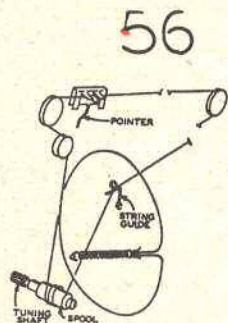
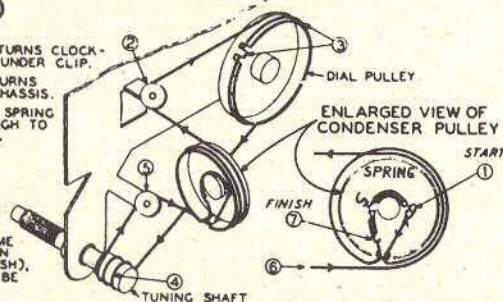


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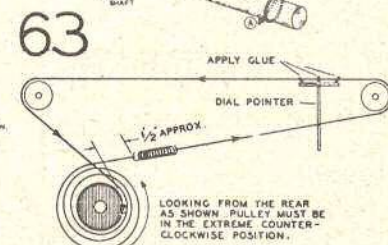
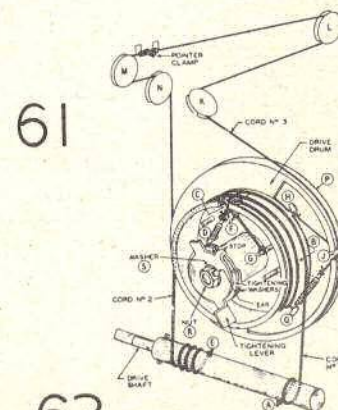
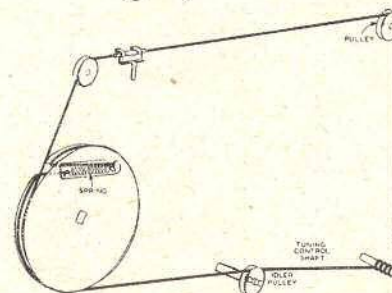
- IN STEP 3, WIND  $1\frac{1}{2}$  TURNS COUNTER-CLOCKWISE, PASS STRING UNDER CLIP.
- IN STEP 4, WIND 3 TURNS TOWARD FRONT OF CHASSIS.
- IN STEP 7, BE SURE SPRING IS STRETCHED ENOUGH TO TAKE UP ALL SLACK.

**IMPORTANT!**

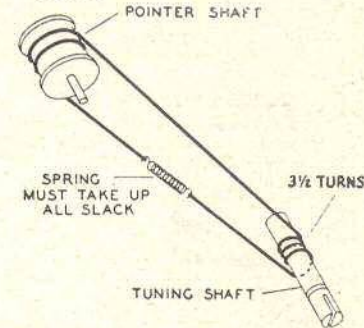
WHEN CONDENSER PULLEY IS IN EXTREME COUNTER-CLOCKWISE POSITION (ROTORS OUT OF MESH), DIAL POINTER MUST BE AT 16 (1600 KC).



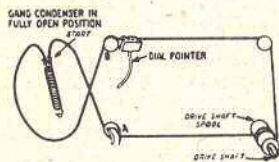
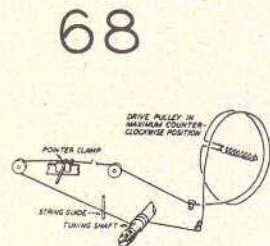
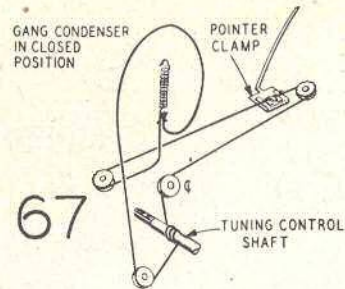
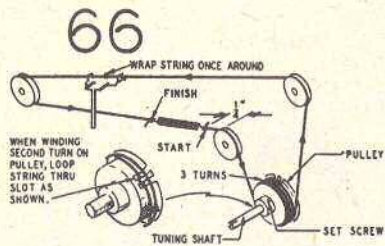
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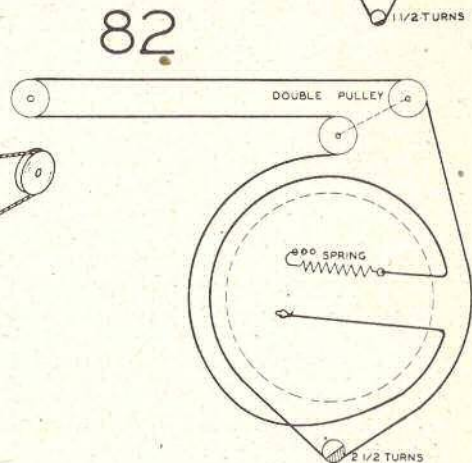
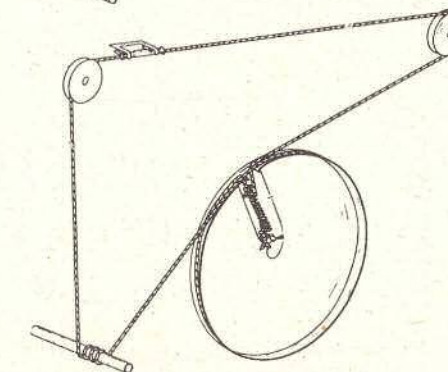
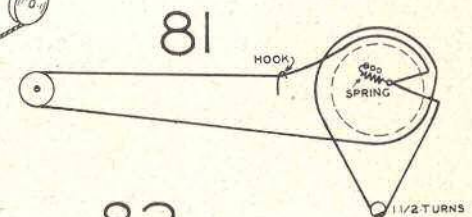
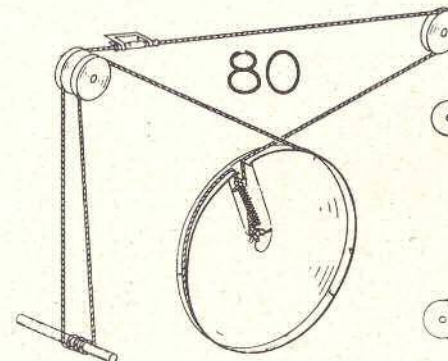
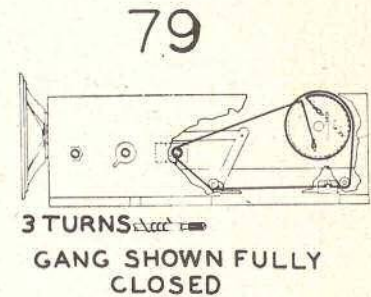
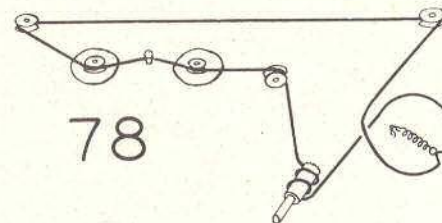
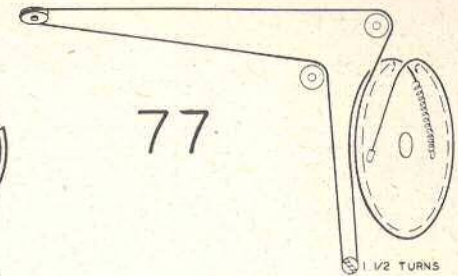
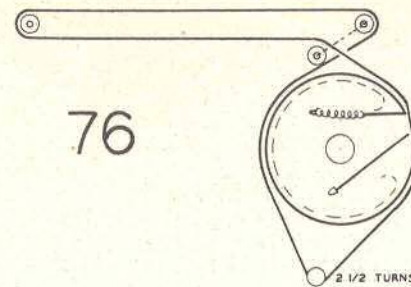
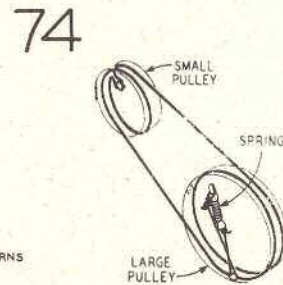
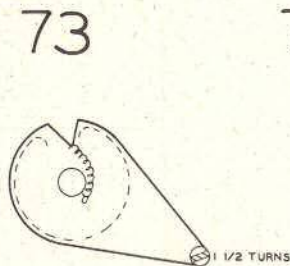
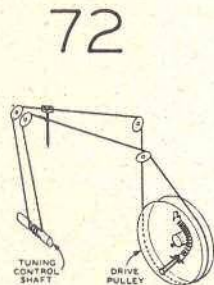
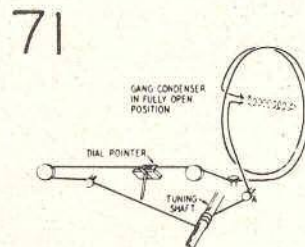
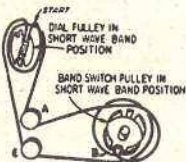
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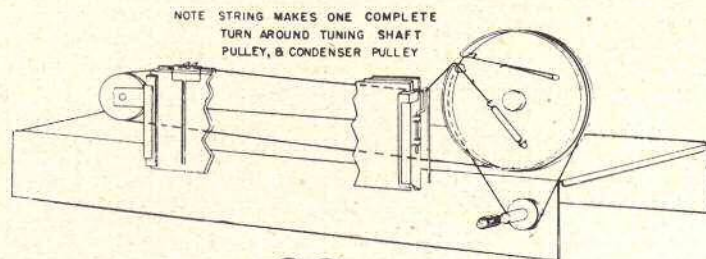




Both the dial pulley and the band switch pulley must be turned to the short wave band positions as shown in the illustration. Install the new cord exactly as shown then change the position of the band switch several times and note the movement of the dial.

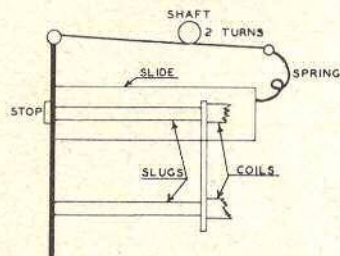




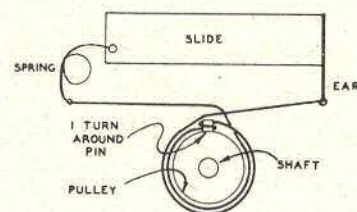


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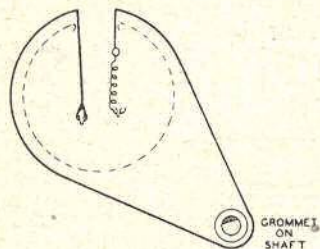
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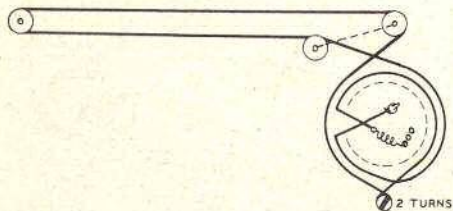
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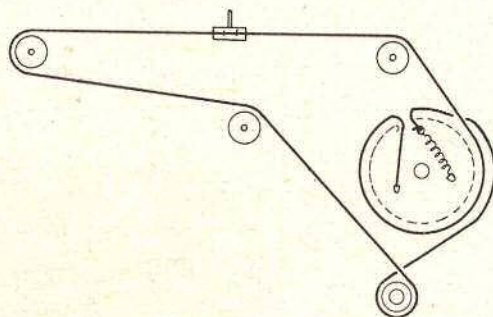
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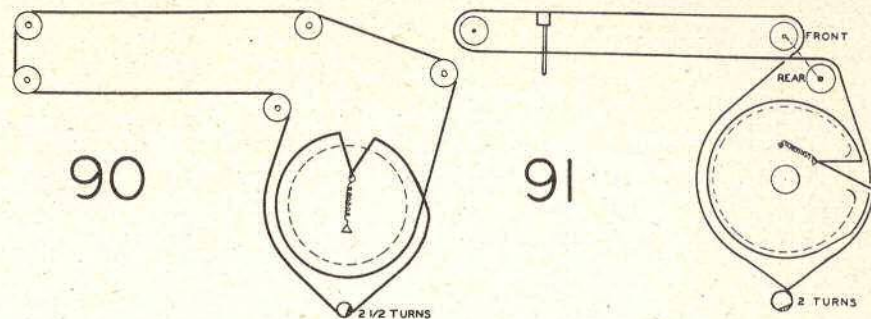
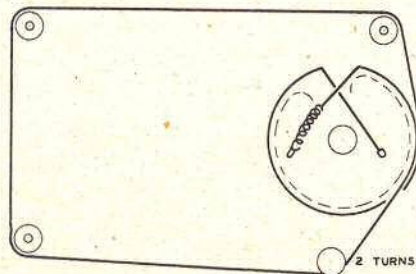
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87

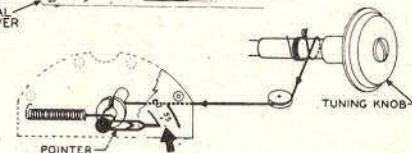
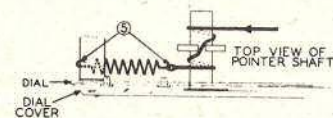


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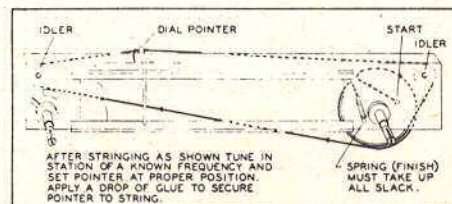


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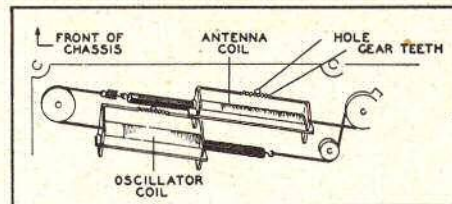
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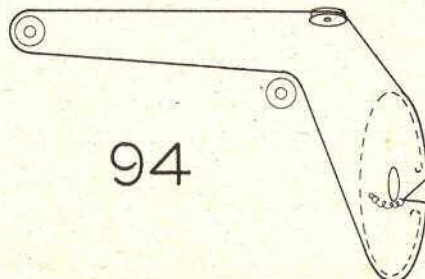
92



93

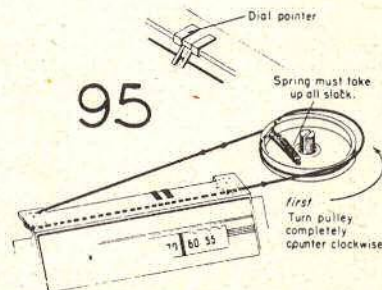


View of Coil Assembly

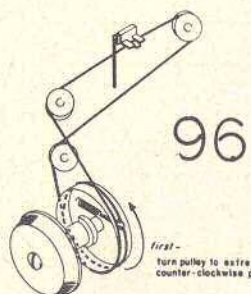


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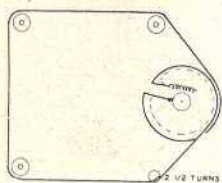
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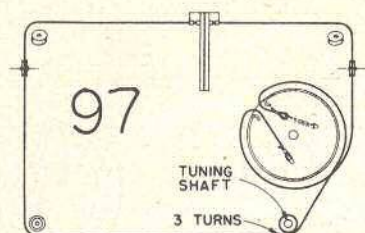
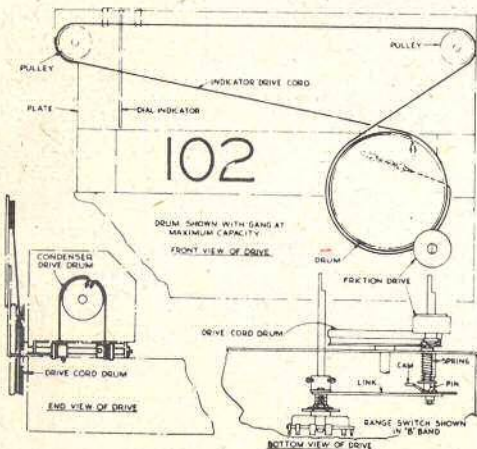
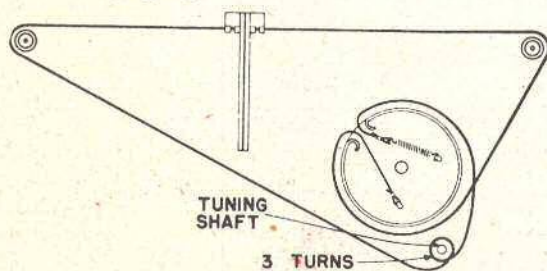




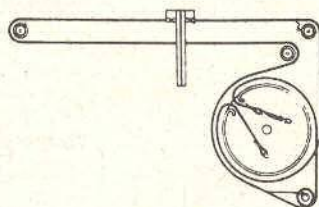
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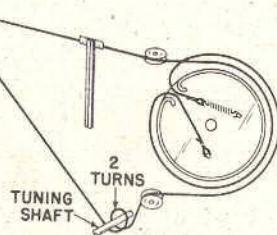
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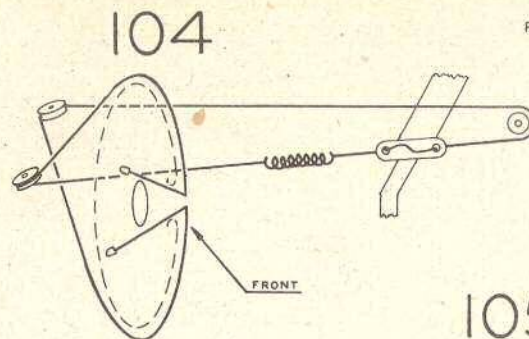
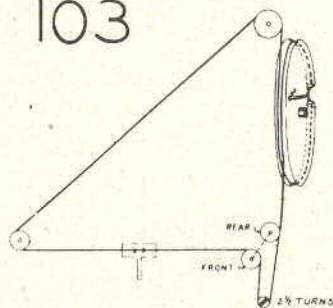
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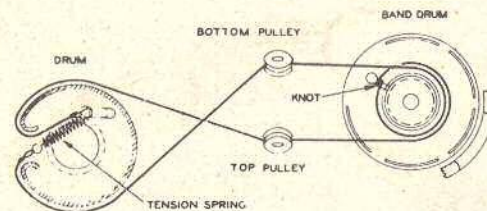


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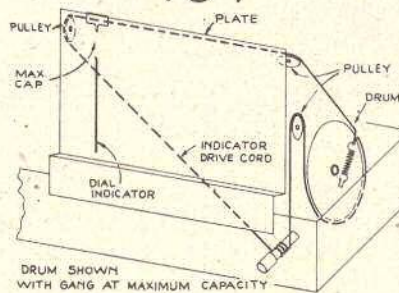


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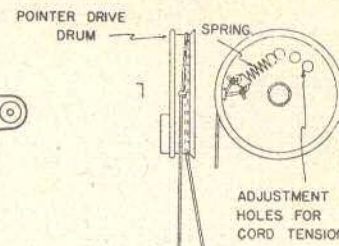
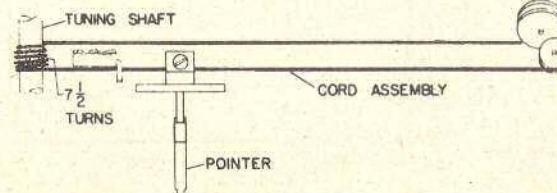
CORD DRIVE FOR BAND INDICATOR DRUM



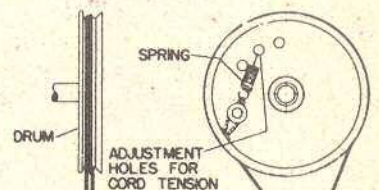
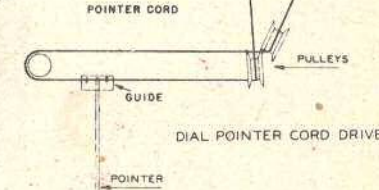
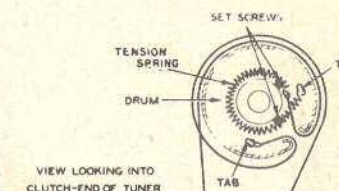
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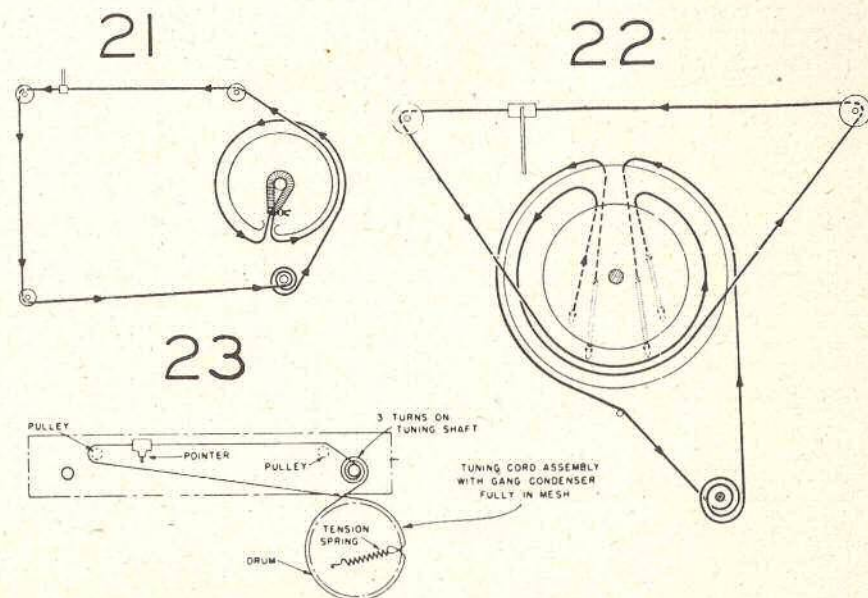
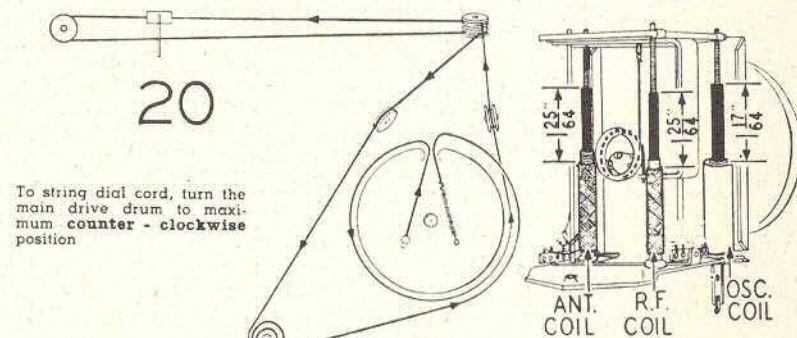
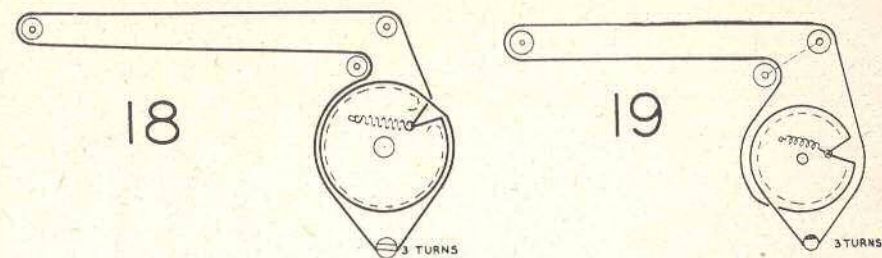
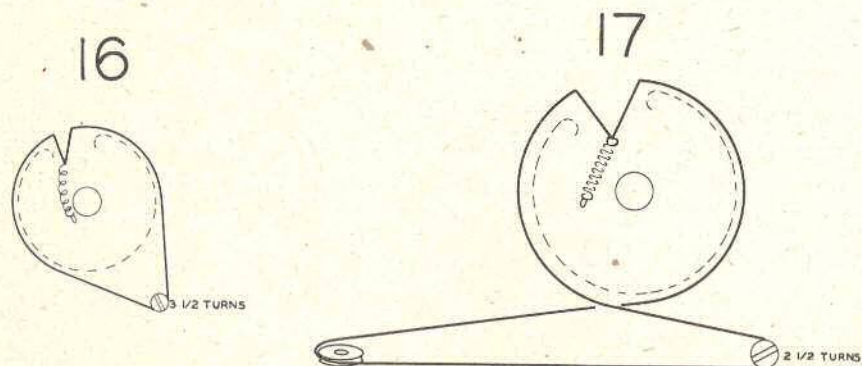
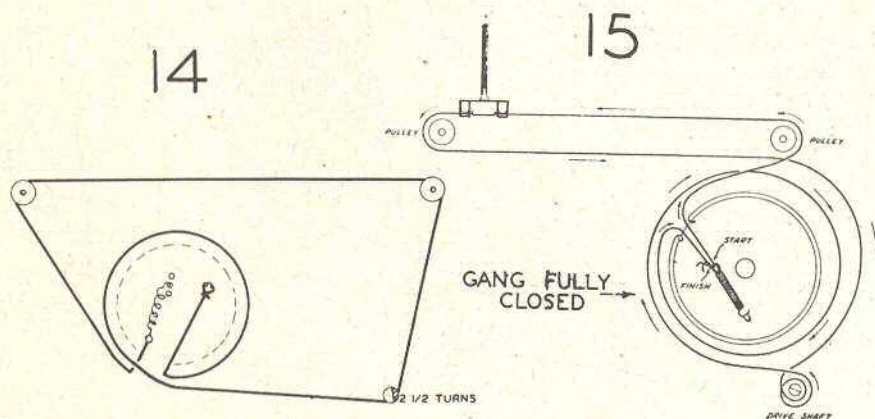
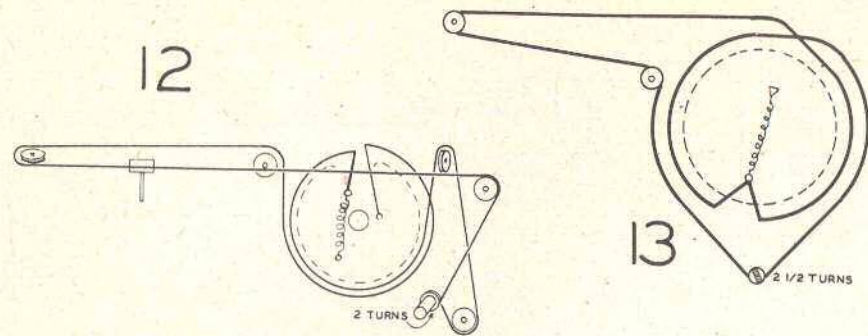
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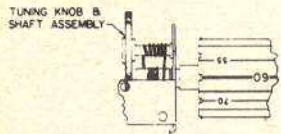
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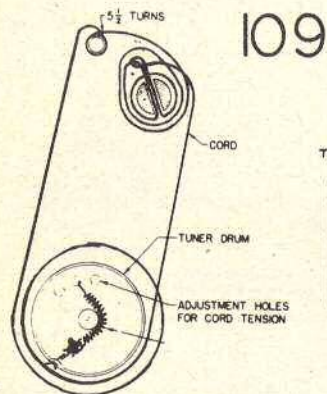








TO RECALIBRATE: AFTER REPLACING DRIVE STRING, TURN COIL CORES FULLY IN, THEN HOLD DIAL SHAFT STATIONARY WITH PLIERS, AND REVOLVE DIAL WITH FINGERS UNTIL THE 60 CALIBRATION LINE IS IN RELATION SHOWN TO BRACKET.



TONE INDICATOR DRUM



SPRING

SPRING

2 1/2 TURNS

SPRING

SPRING

ADJUSTMENT HOLES FOR CORD TENSION

TIE STRING BOTH SIDES OF EYE-LET AND INSIDE HOOK OF SPRING

5 1/2 TURNS

TUNING SHAFT

POINTER

CORD

110

111

4 1/2 TURNS

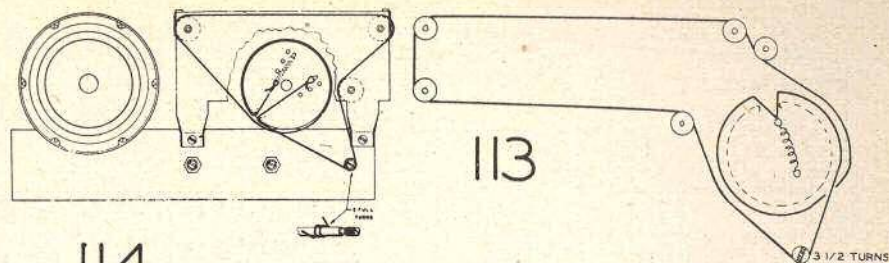
TUNING SHAFT

VOLUME

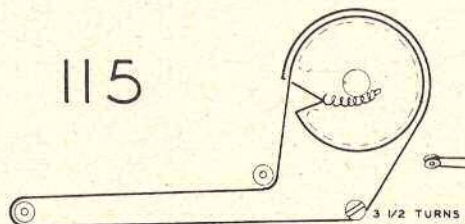
SPRING

112

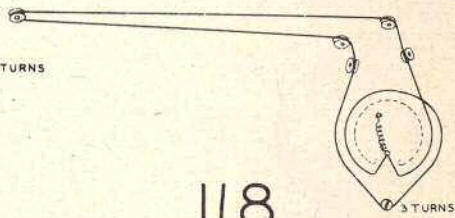
POINTER DRIVE DRUM



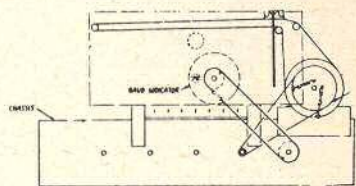
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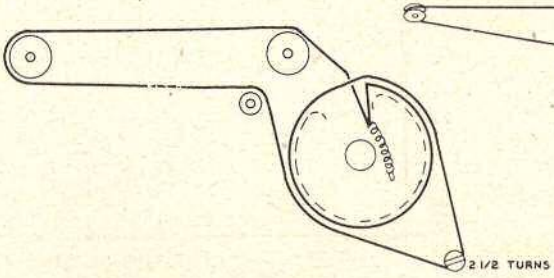
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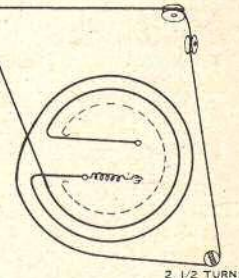
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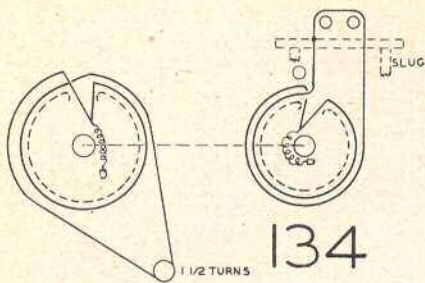
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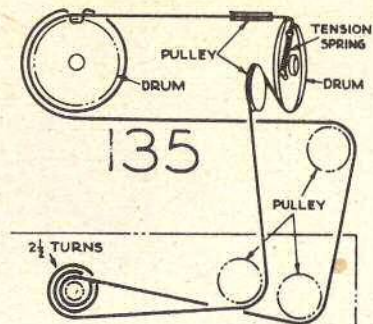
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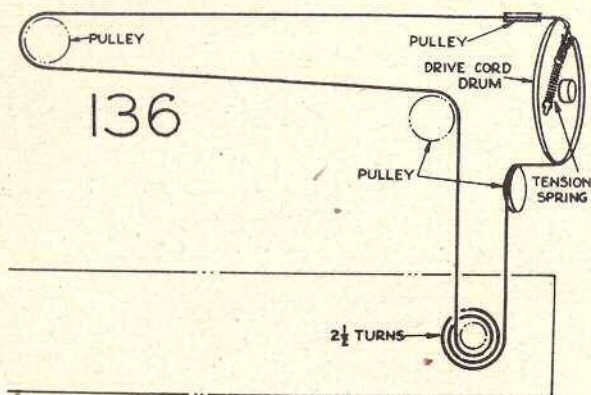




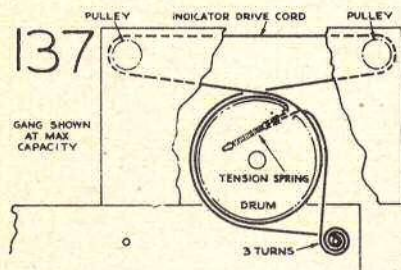
134



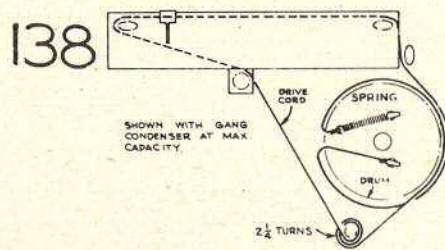
135



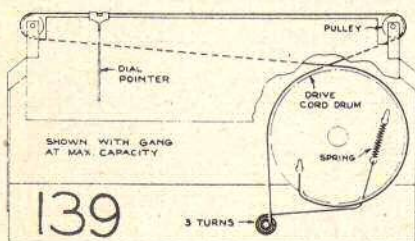
136



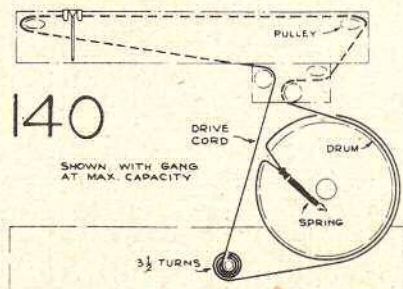
137



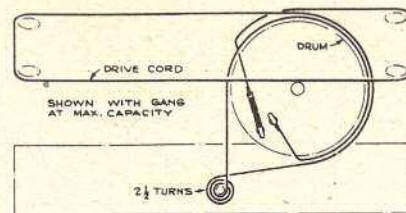
138



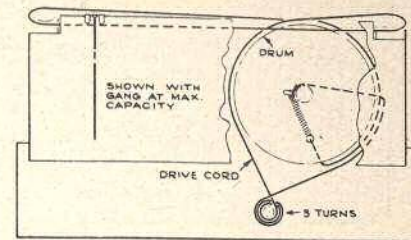
139



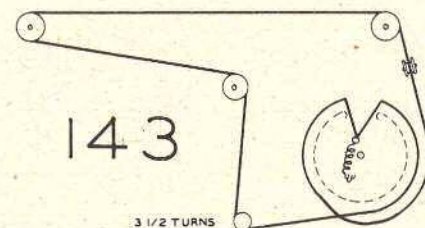
140



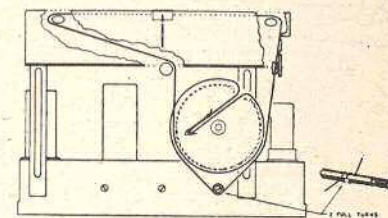
141



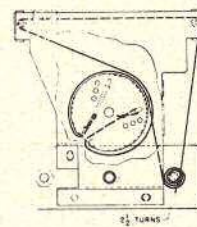
142



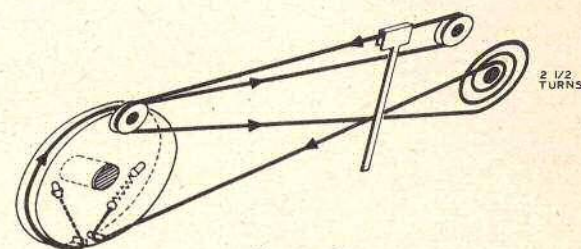
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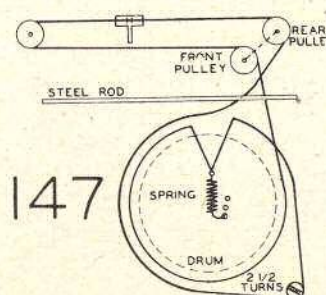
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145



146

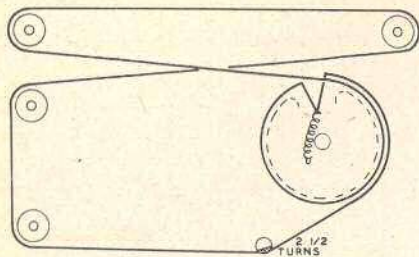


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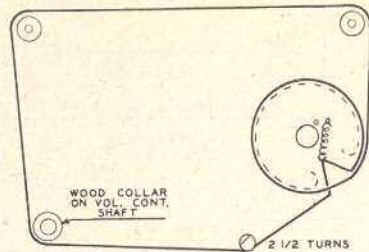


148

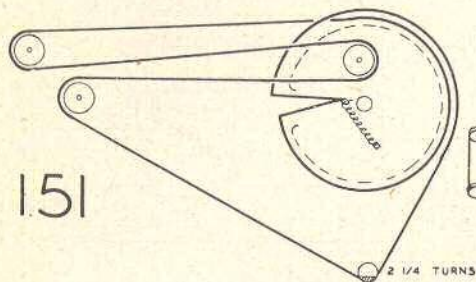




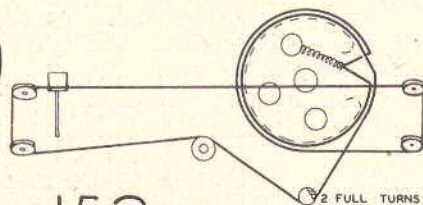
149



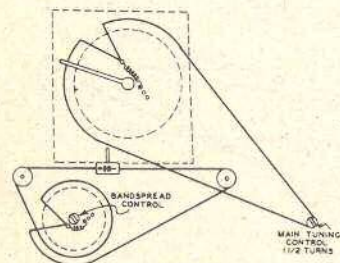
150



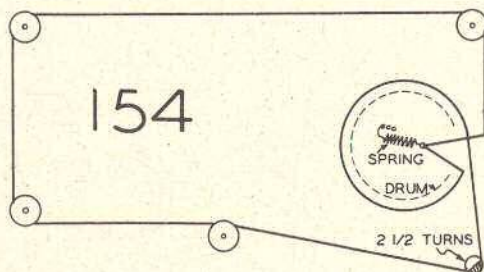
151



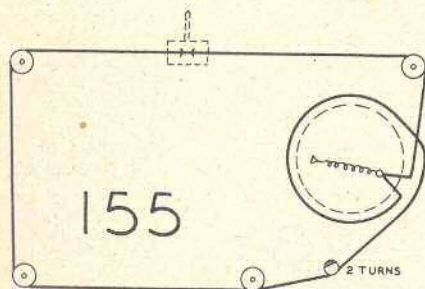
152



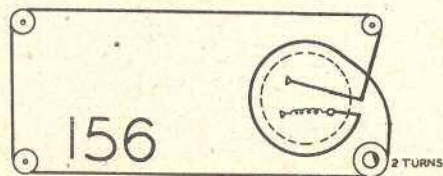
153



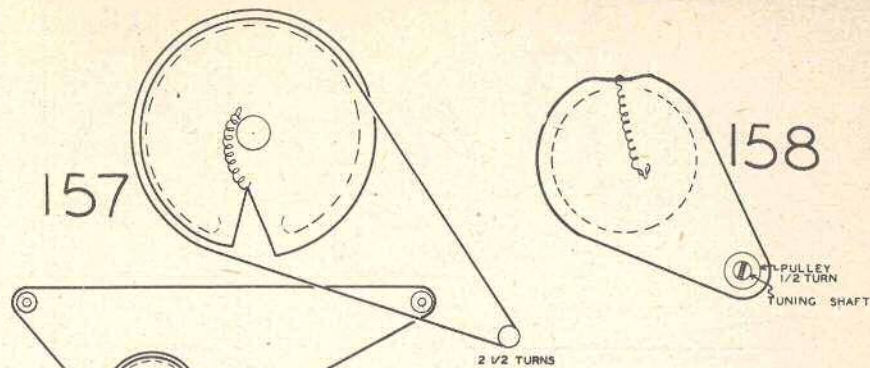
154



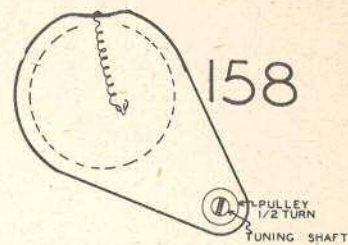
155



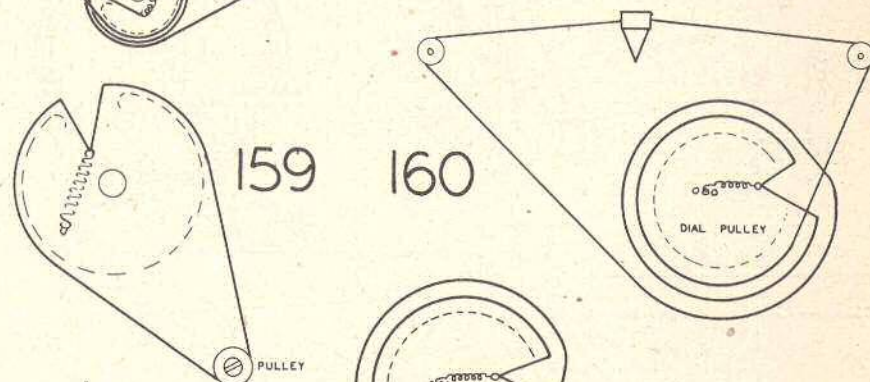
156



157

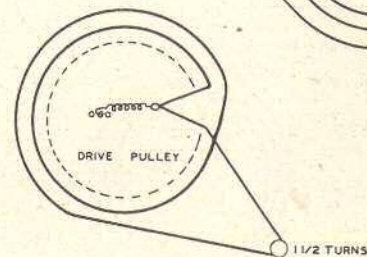


158

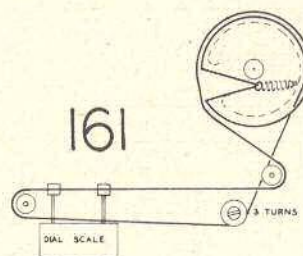


159

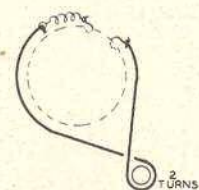
160



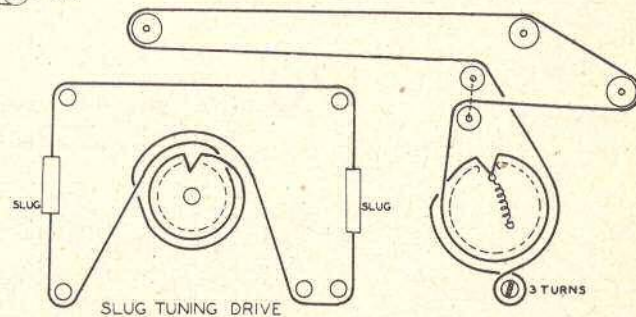
162



161

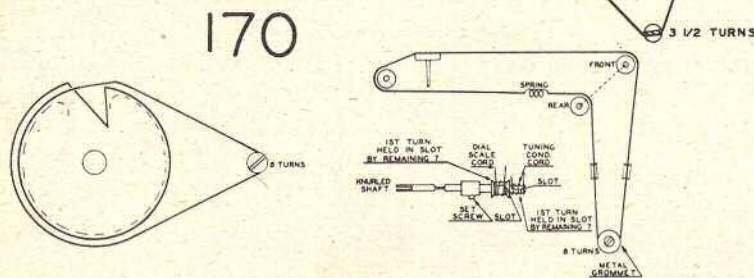
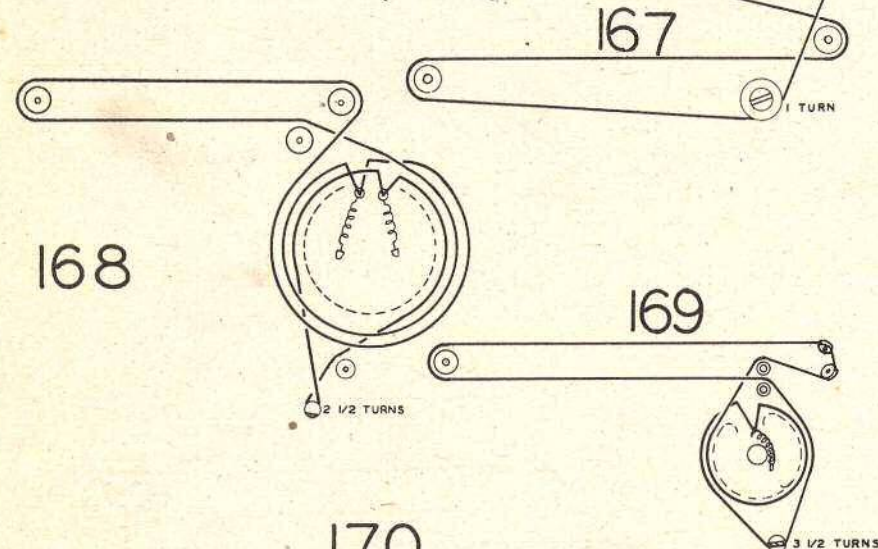
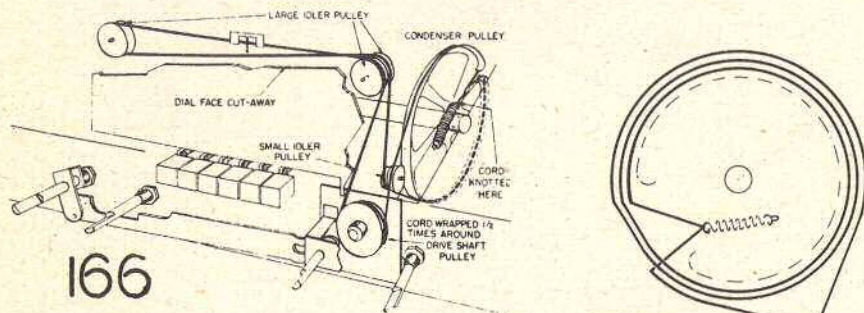
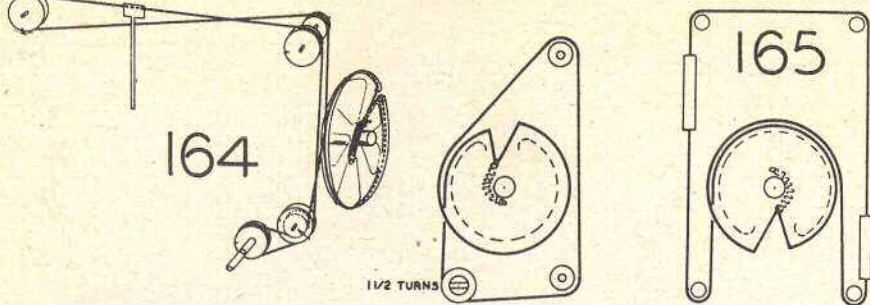


163

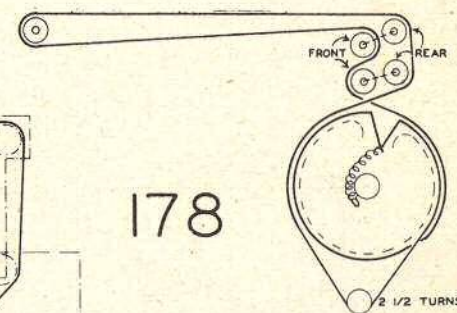
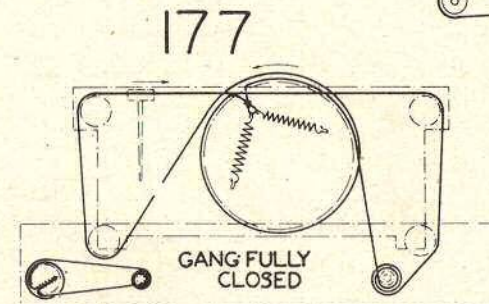
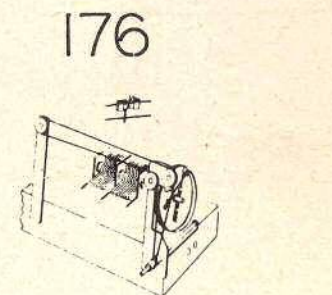
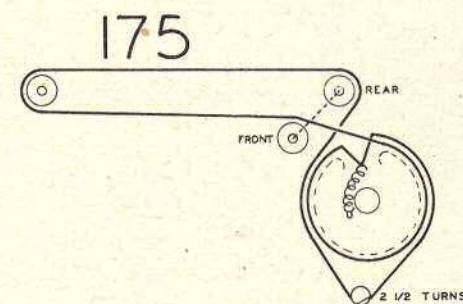
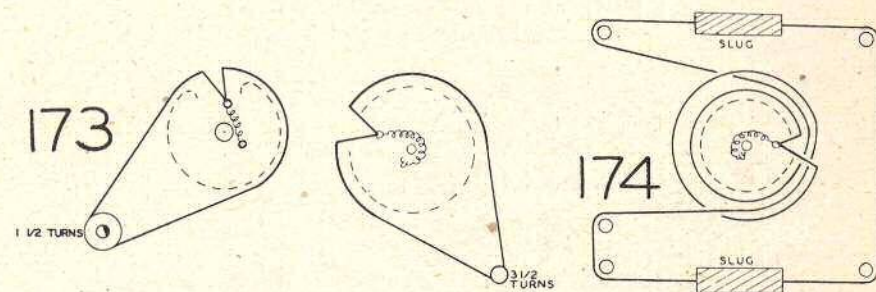
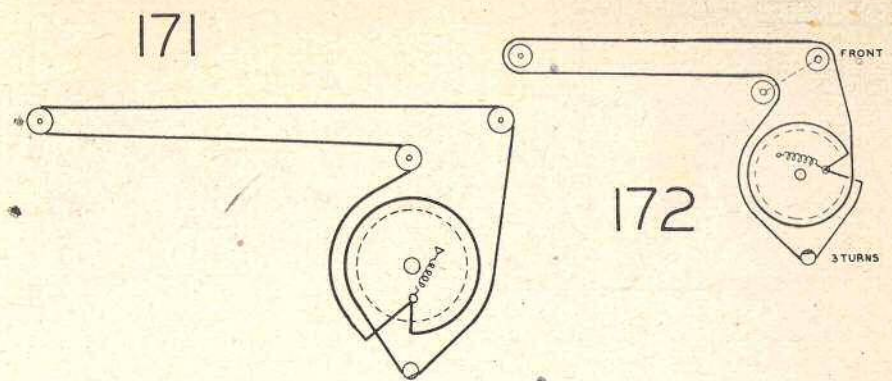
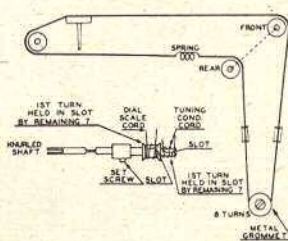


SLUG TUNING DRIVE



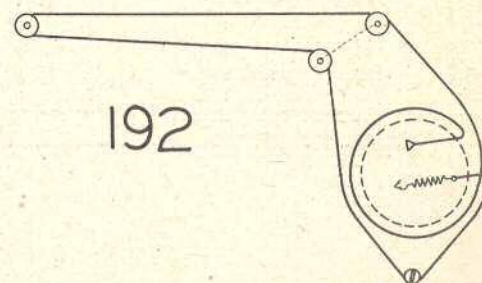
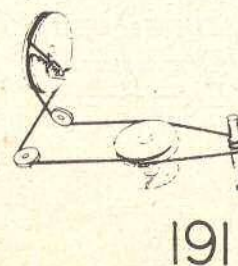
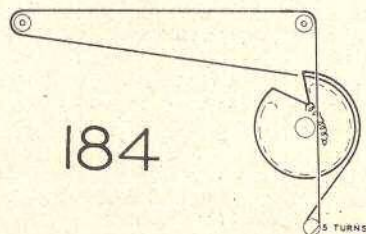
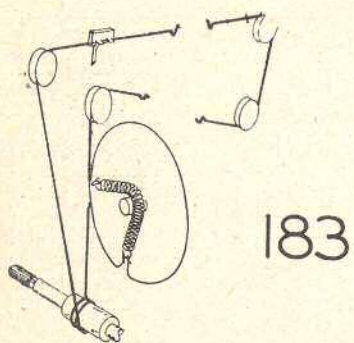
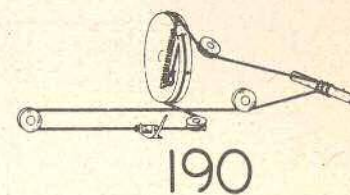
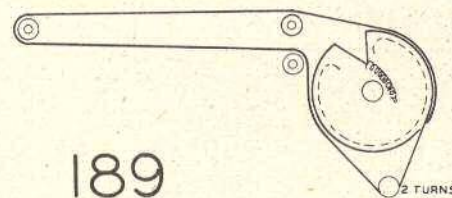
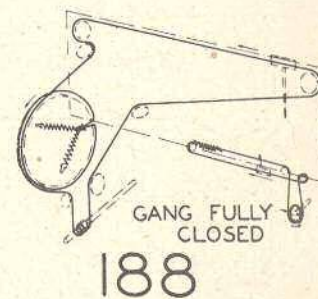
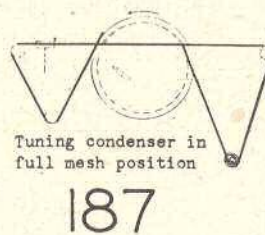
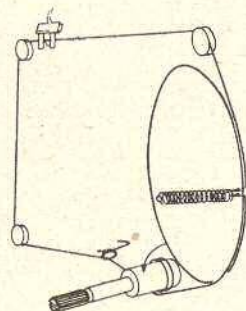
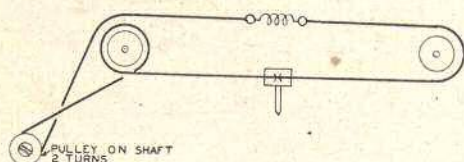
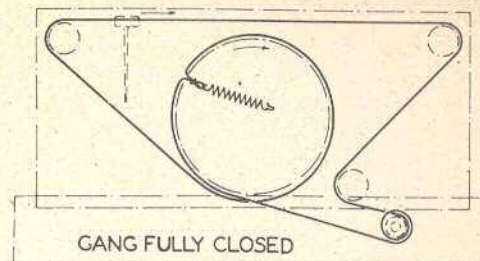
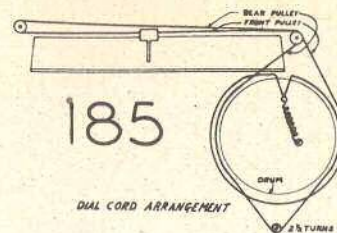
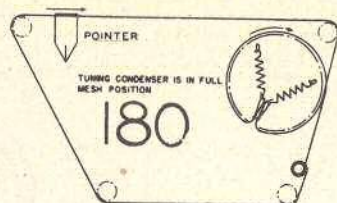
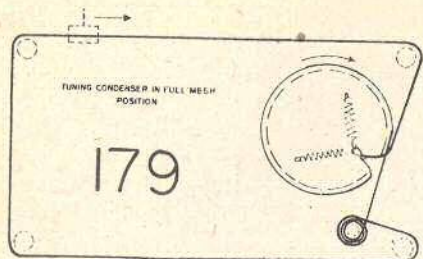


170



178







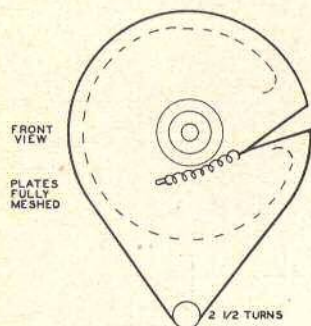


FIG. 1 DIAL DRIVE (AM)

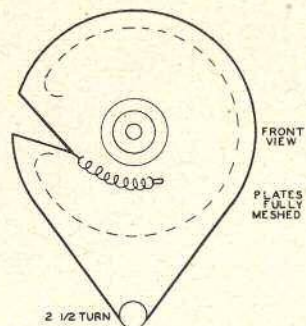


FIG. 2 DIAL DRIVE (FM)

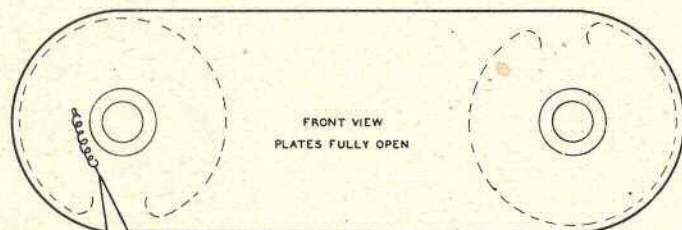


FIG. 3 DIAL DRUMS  
A.M. TUNING

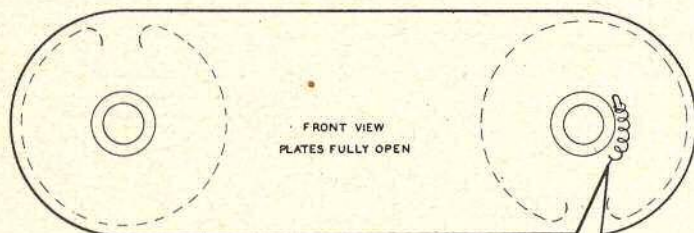
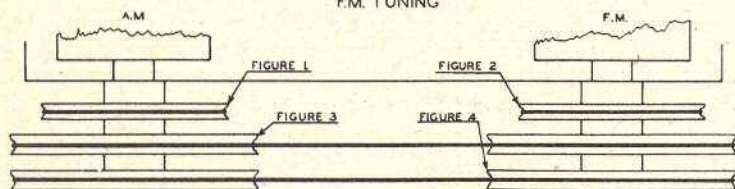
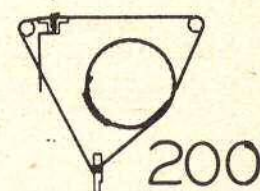
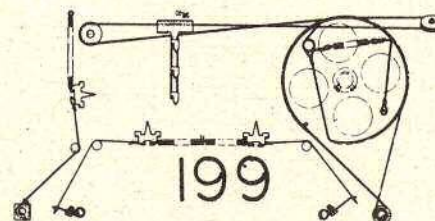
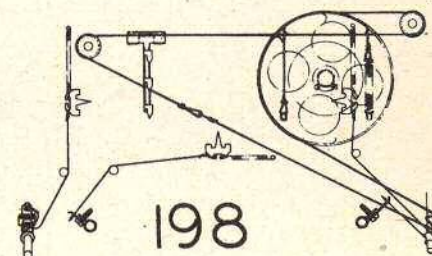
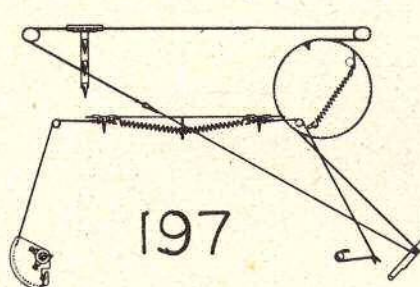
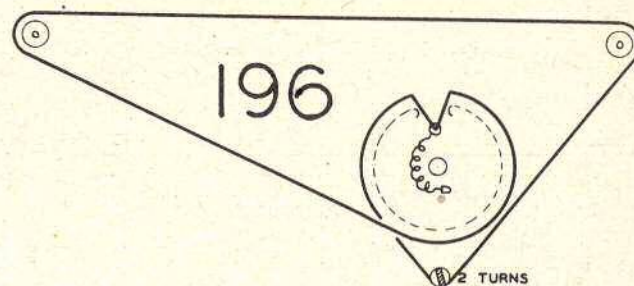
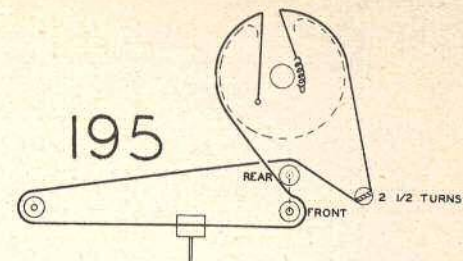
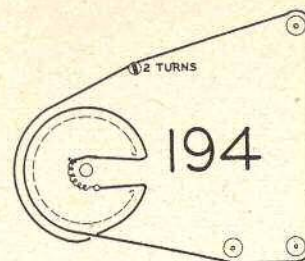


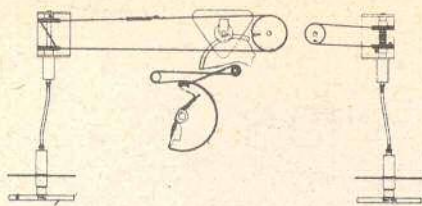
FIG. 4 DIAL DRUMS  
F.M. TUNING



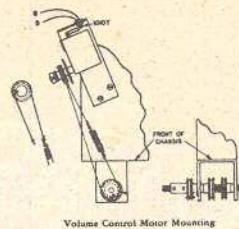
193



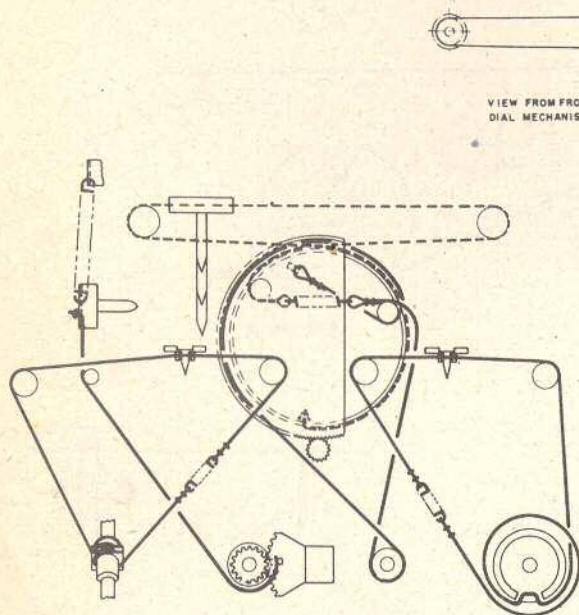




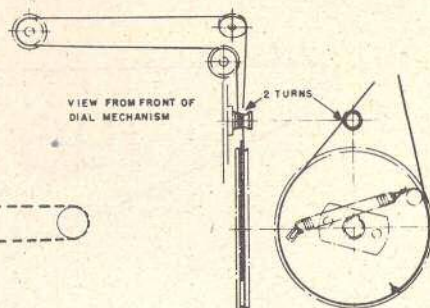
202



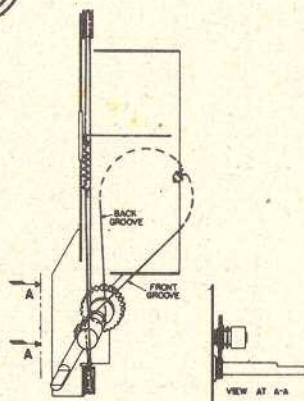
203



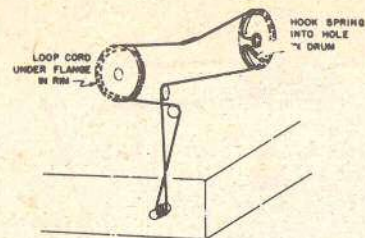
204



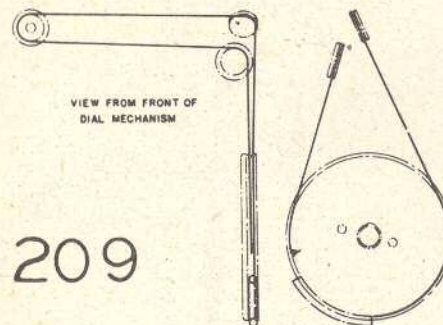
205



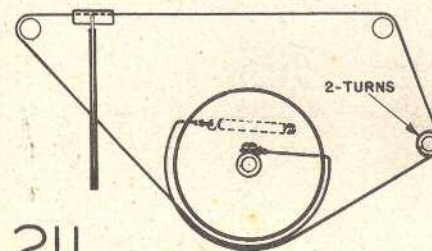
206



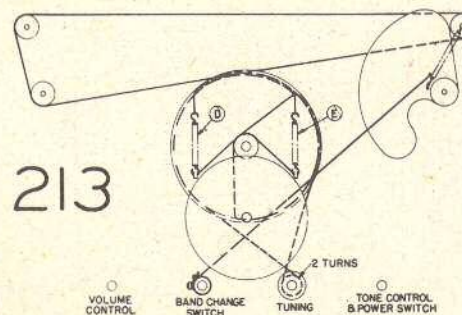
207



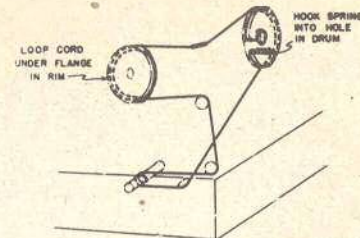
209



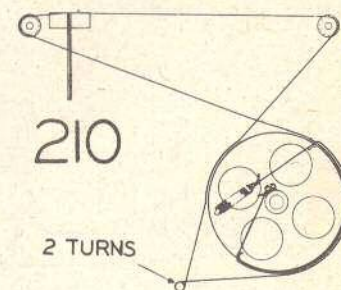
211



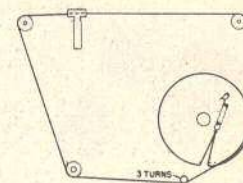
213



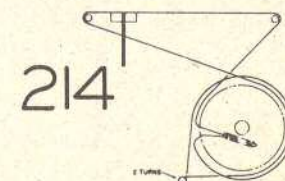
208



210

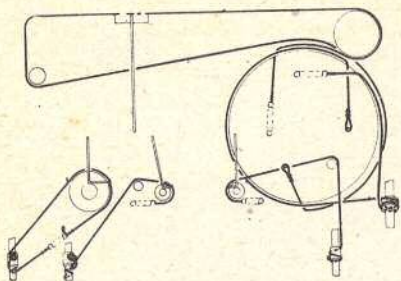


212

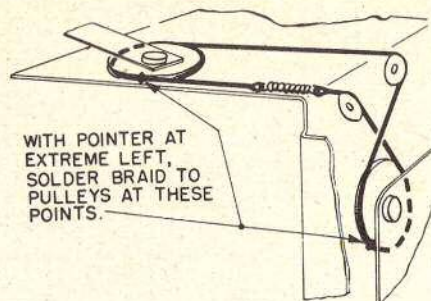


214



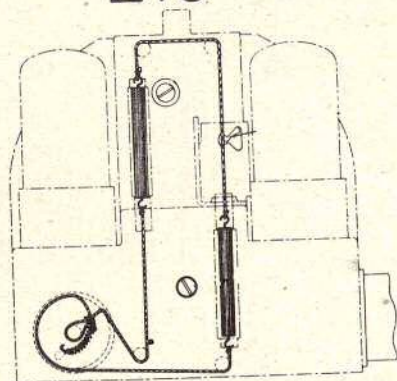


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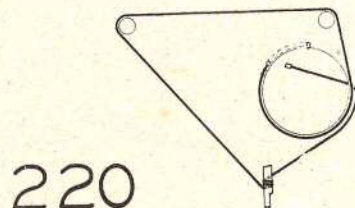


WITH POINTER AT  
EXTREME LEFT,  
SOLDER BRAID TO  
PULLEYS AT THESE  
POINTS.

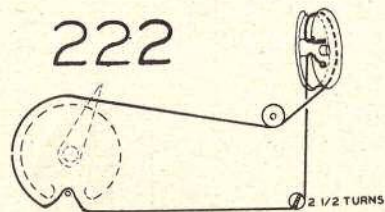
216



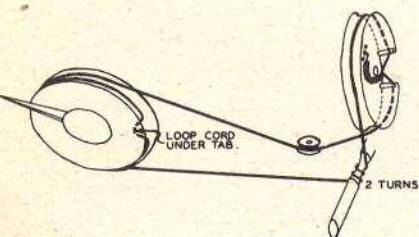
218



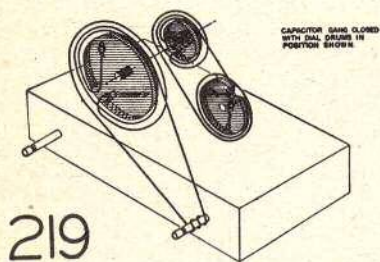
220



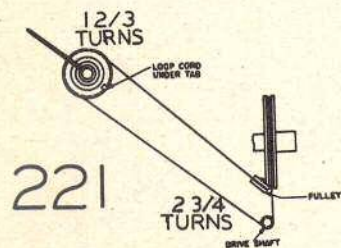
222



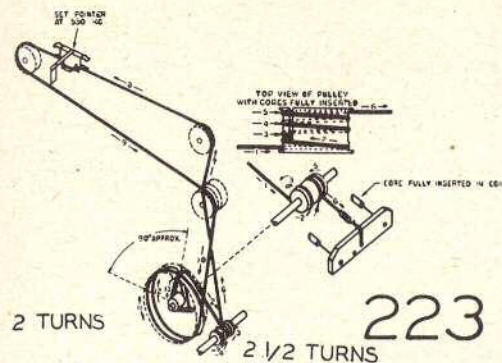
217



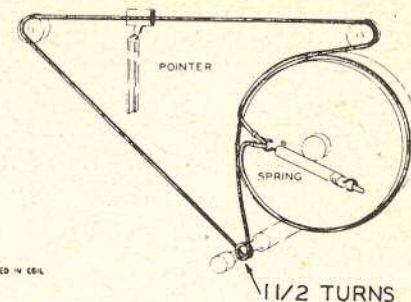
219



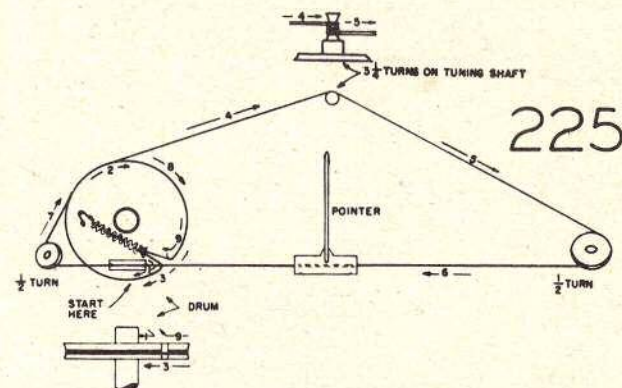
221



223

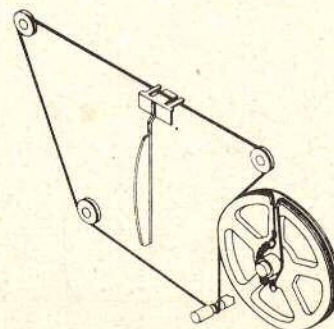


224

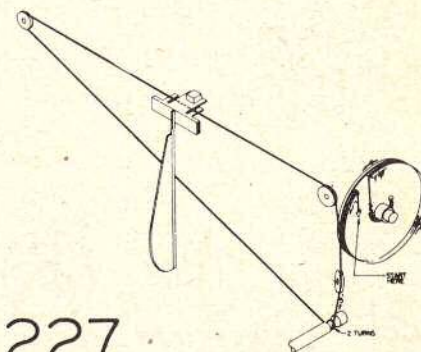


225

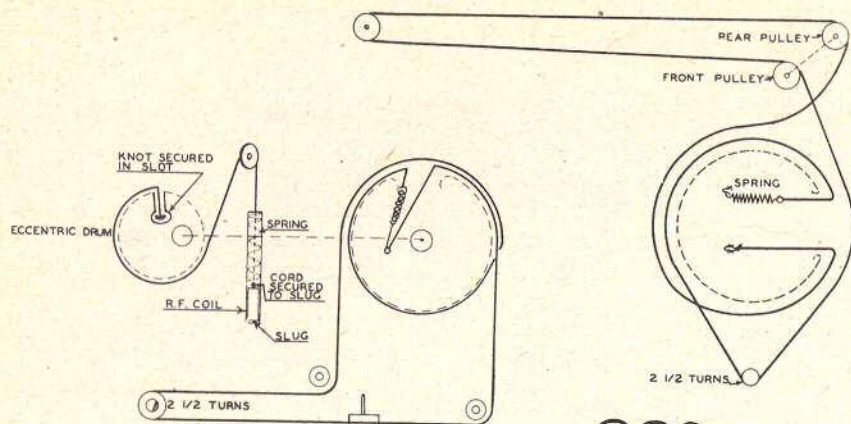
226



227

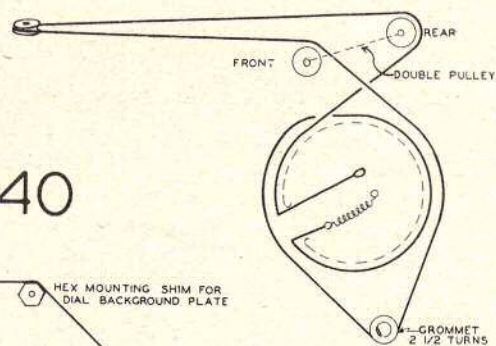




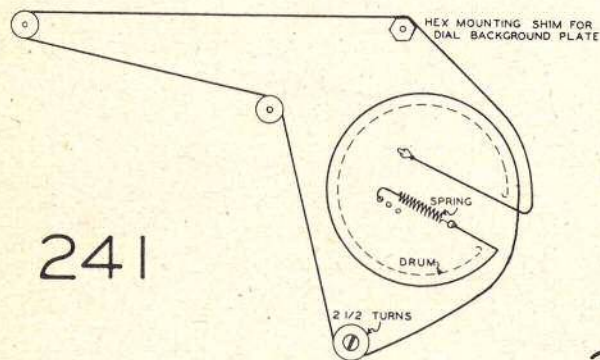


238

239

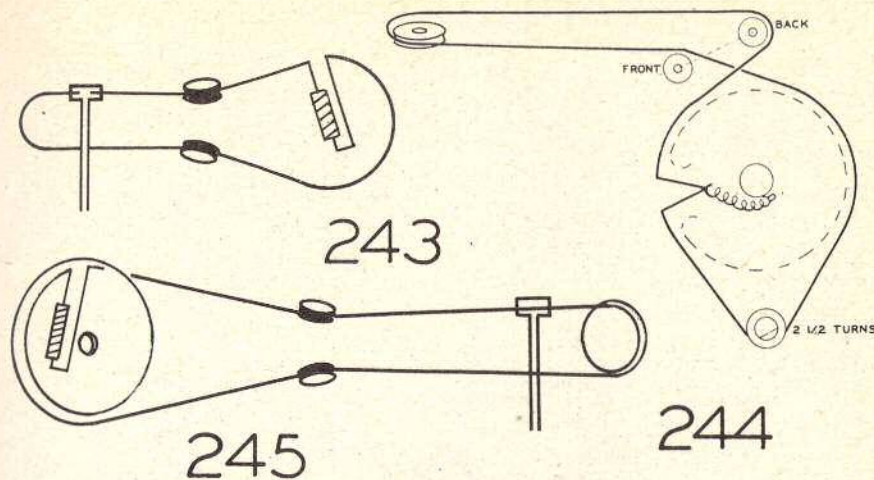
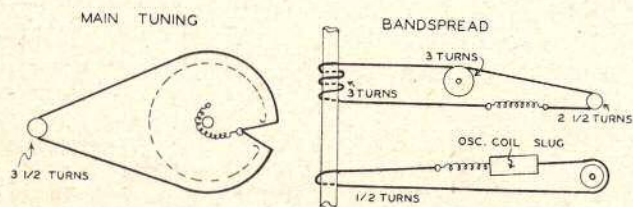


240

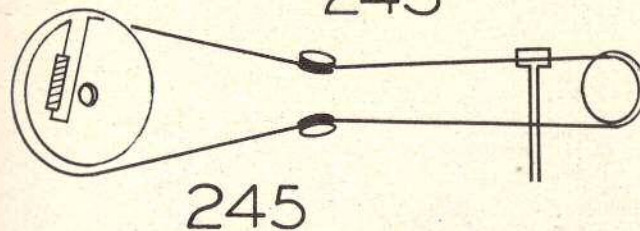


241

242

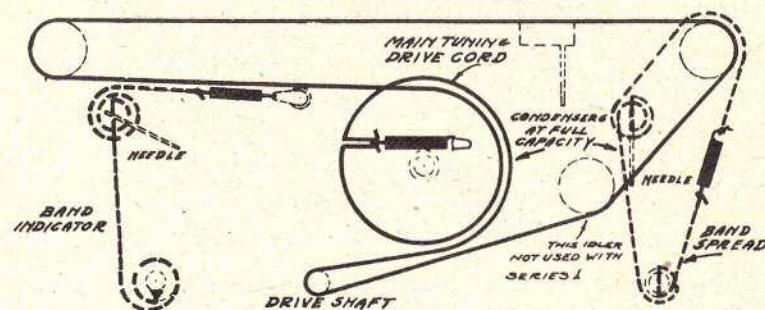


243



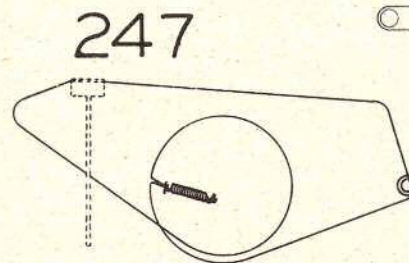
245

244



246

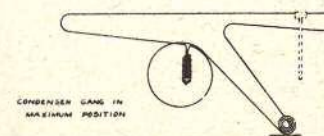
248



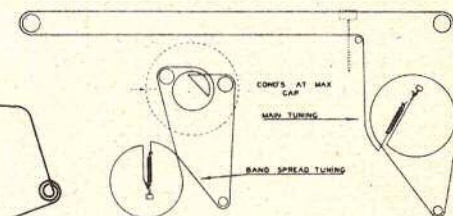
247

CONDENSER GANG IN  
MAXIMUM POSITION

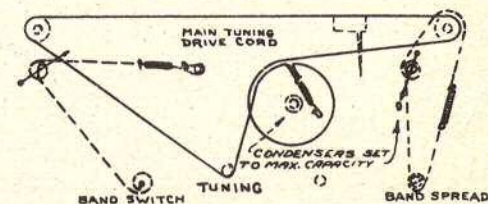
249



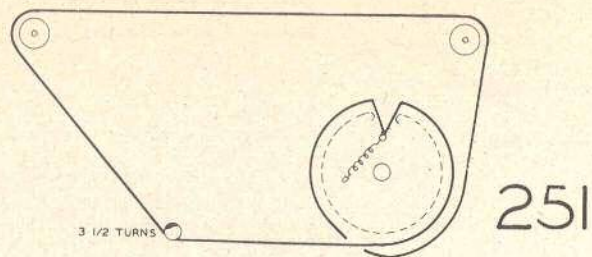
CONDENSER GANG IN  
MAXIMUM POSITION



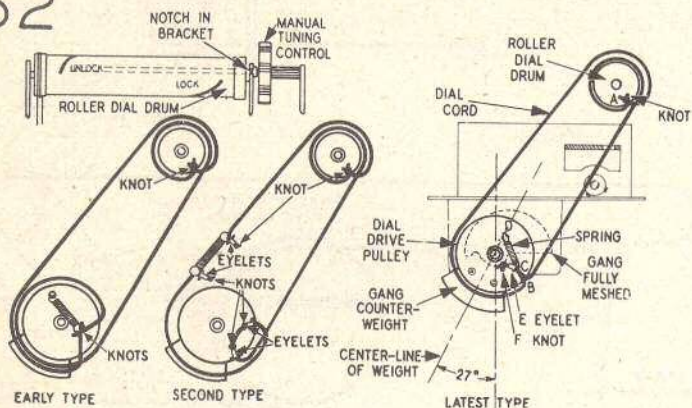
250



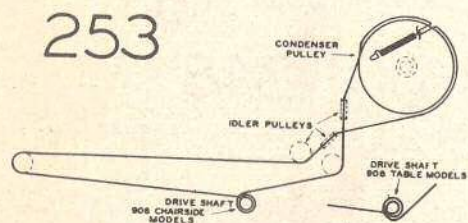




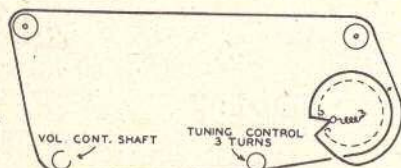
252



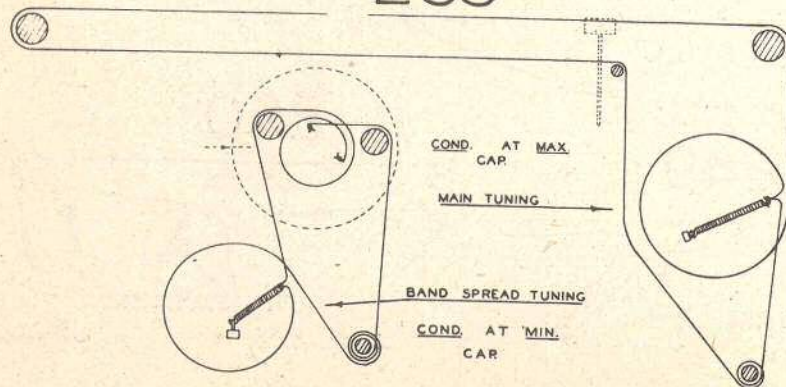
253



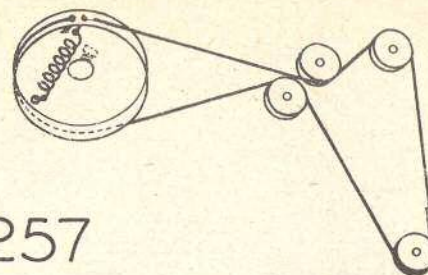
254



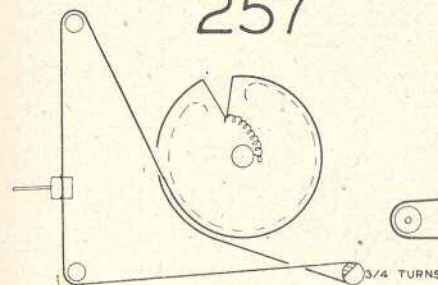
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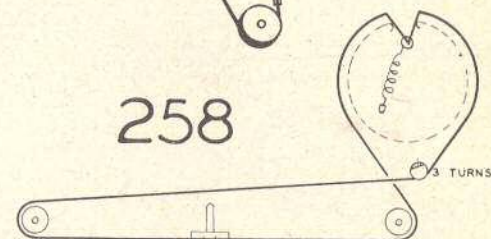
256



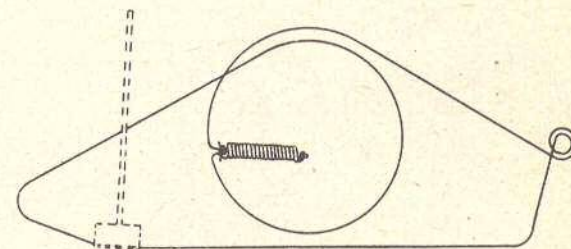
257



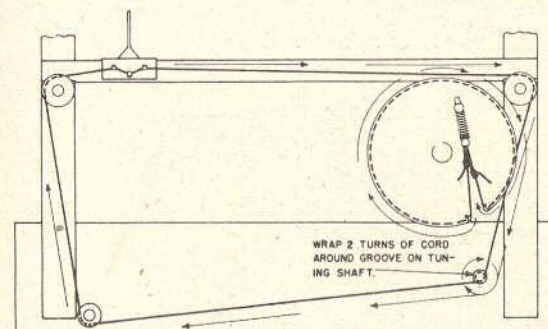
258



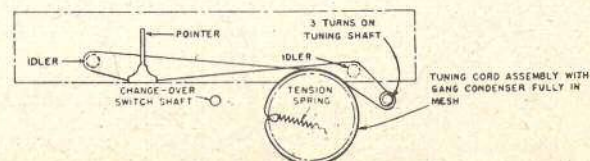
259



260

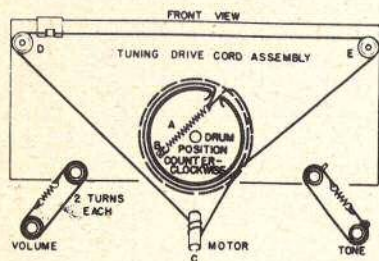


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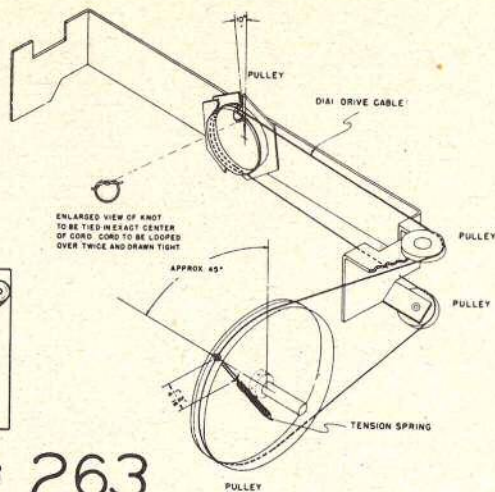




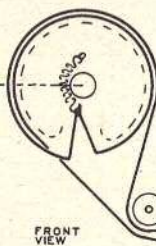
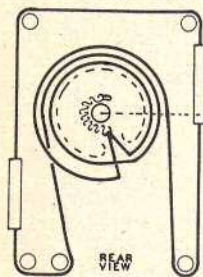
262



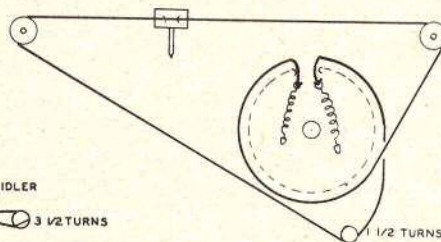
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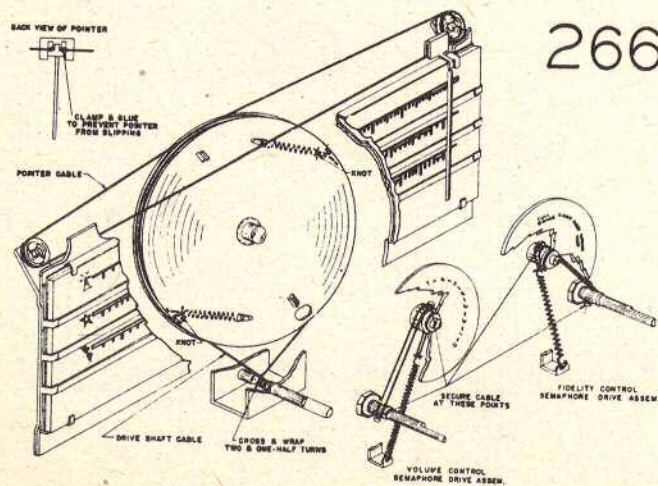
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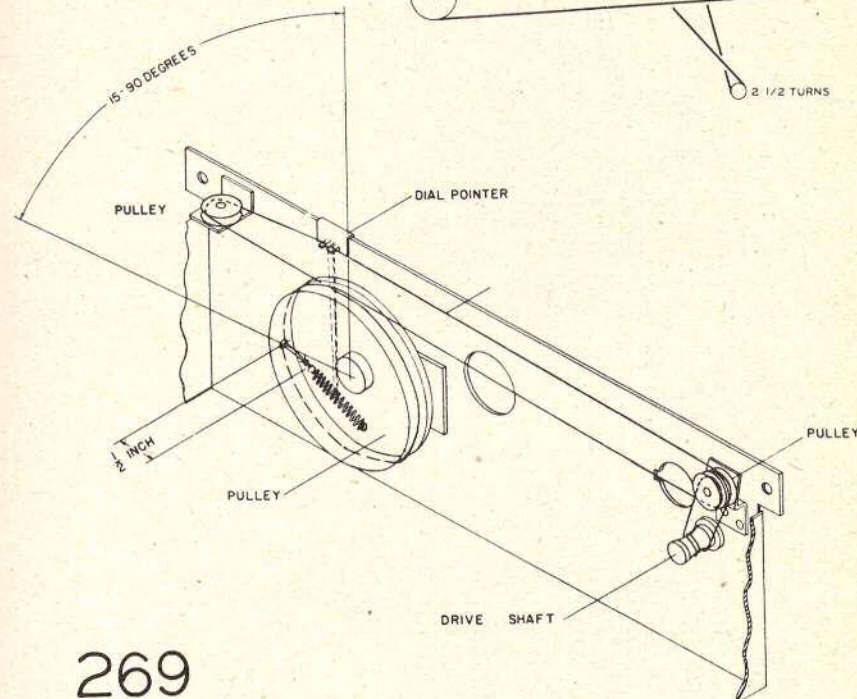
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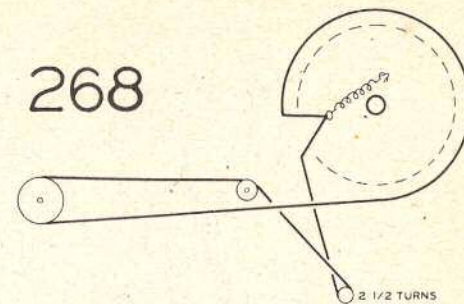
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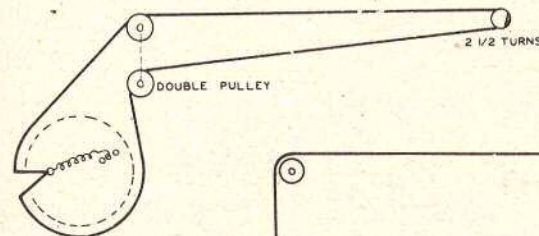
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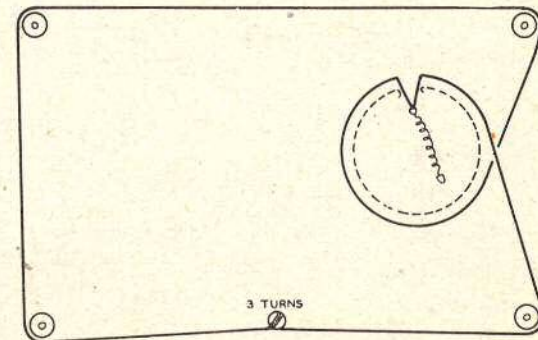
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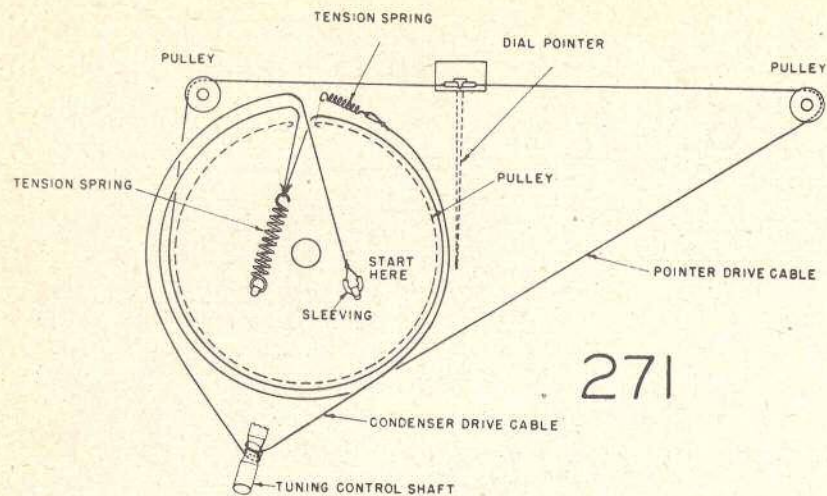
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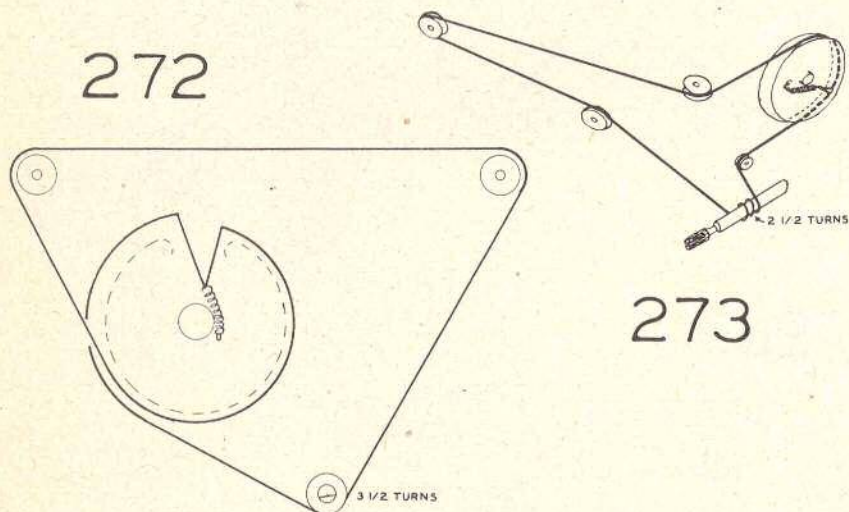
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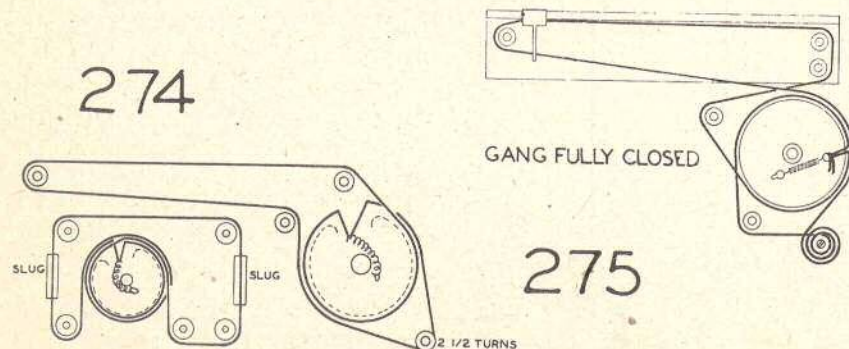




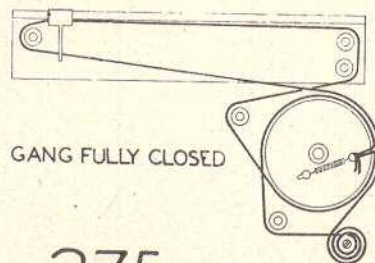
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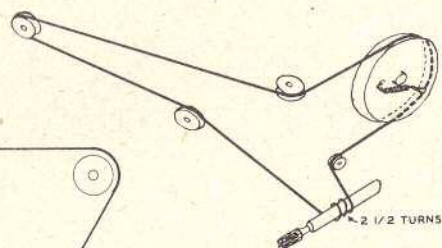
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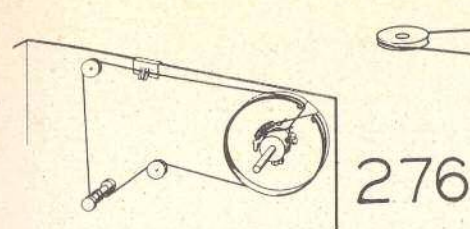
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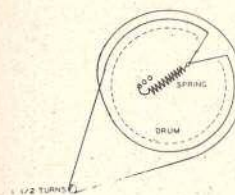
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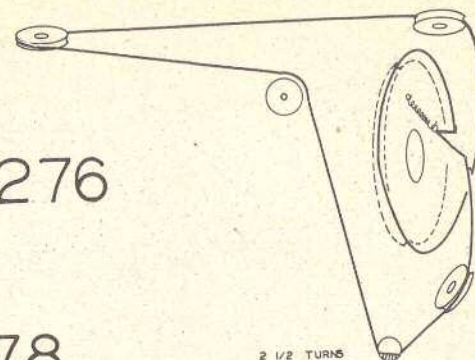
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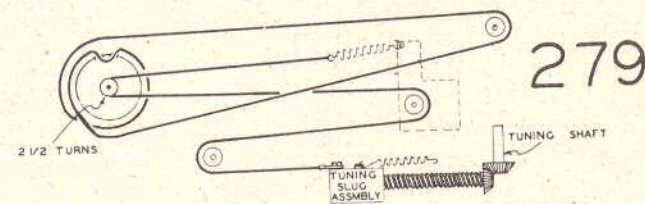
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278

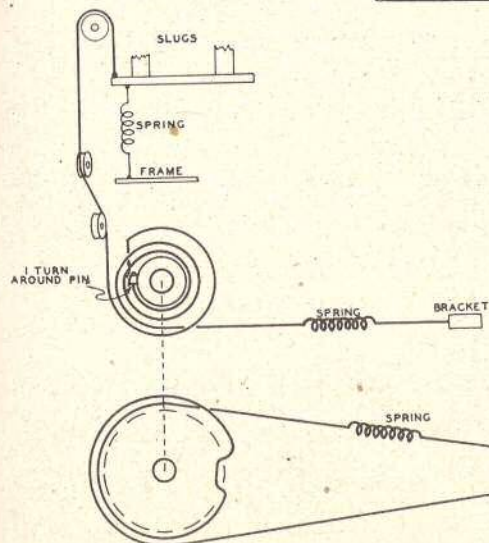


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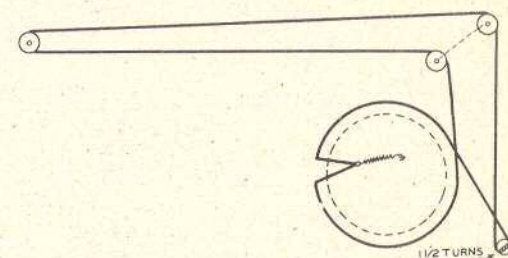


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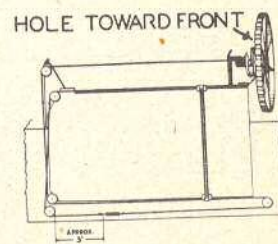
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281

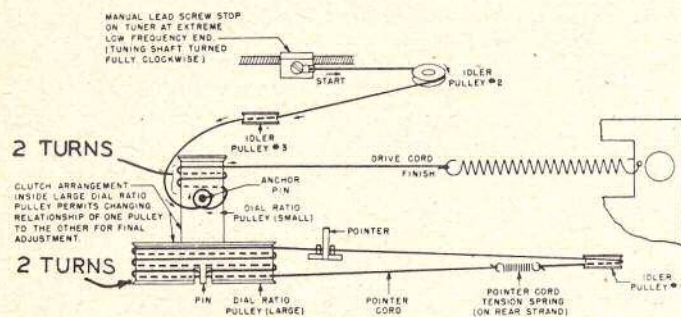
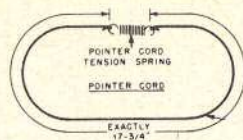


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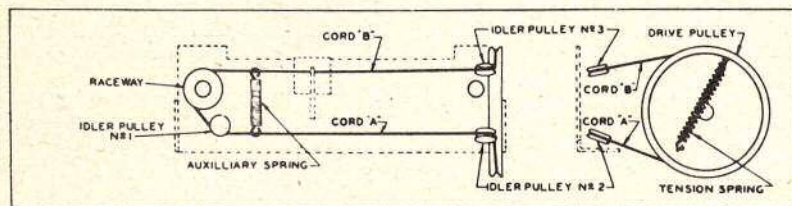




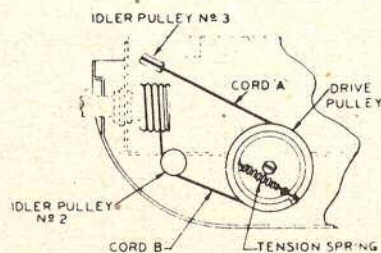
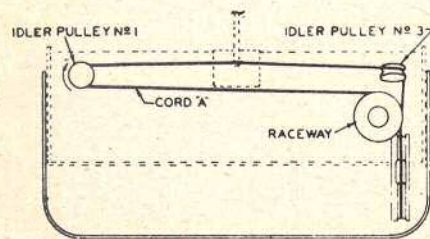
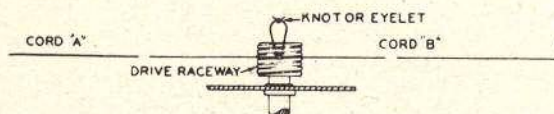
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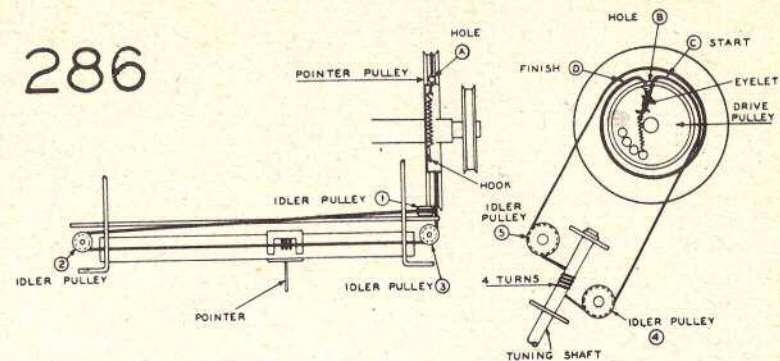
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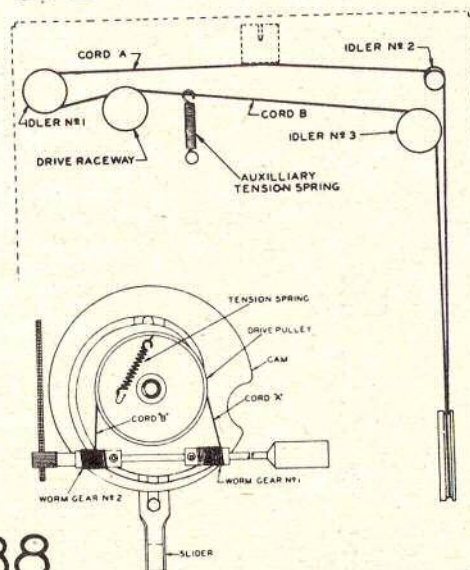
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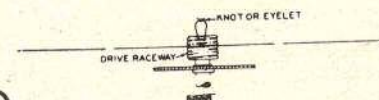
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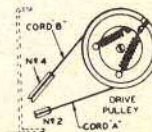
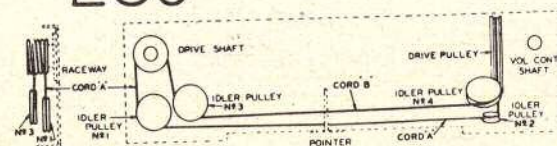
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288



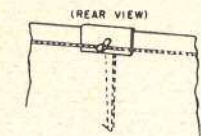
289











#### TO ADJUST POINTER

- 1 OPEN GANG FULLY.
- 2 SET POINTER TO FIRST MARK AT HIGH FREQUENCY END OF DIAL SCALE.
- 3 FASTEN POINTER TO CORD AS SHOWN ABOVE.
- 4 FIX POINTER TO CORD WITH DROP OF SHELLAC.

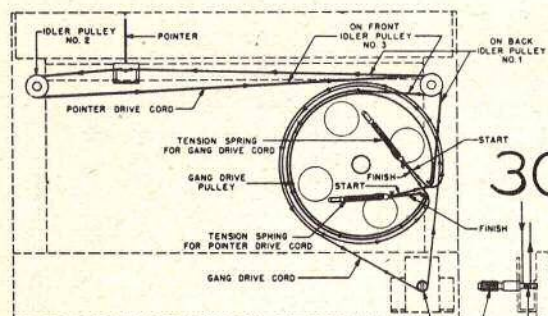
FRONT VIEW OF CHASSIS

#### TO RESTRING DIAL

- 1 CLOSE GANG FULLY.
- 2 ADJUST PULLEY SO THAT HOLE IN RIM IS IN POSITION SHOWN.

3 1/2 TURNS  
AROUND TUNING  
SHAFT

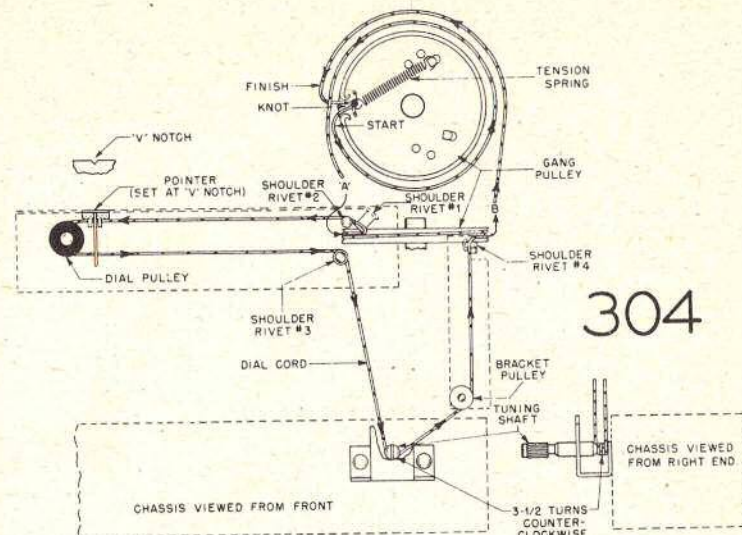
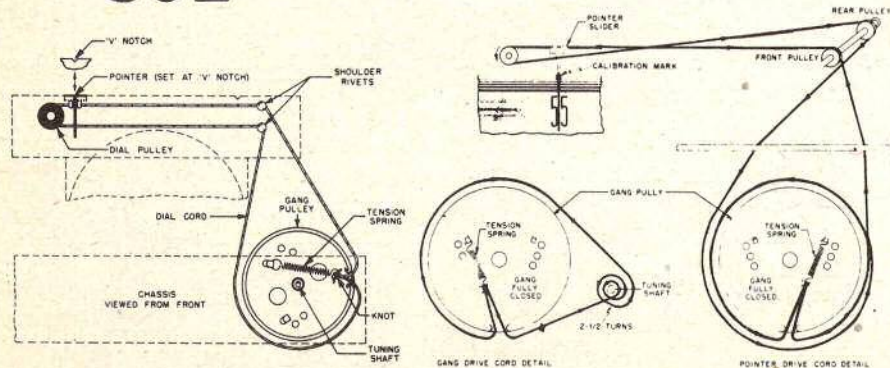
300



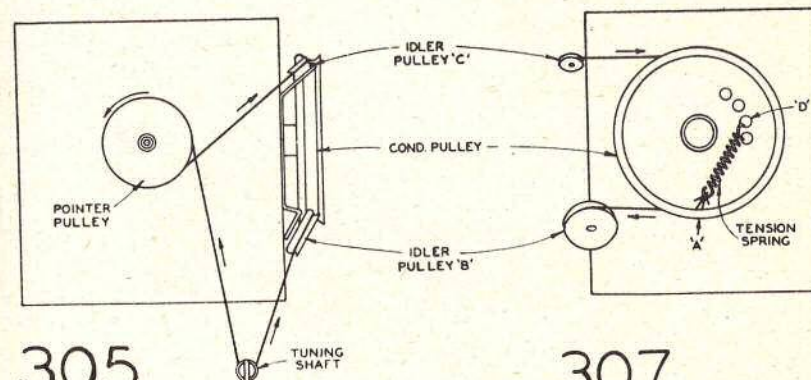
301

302

303

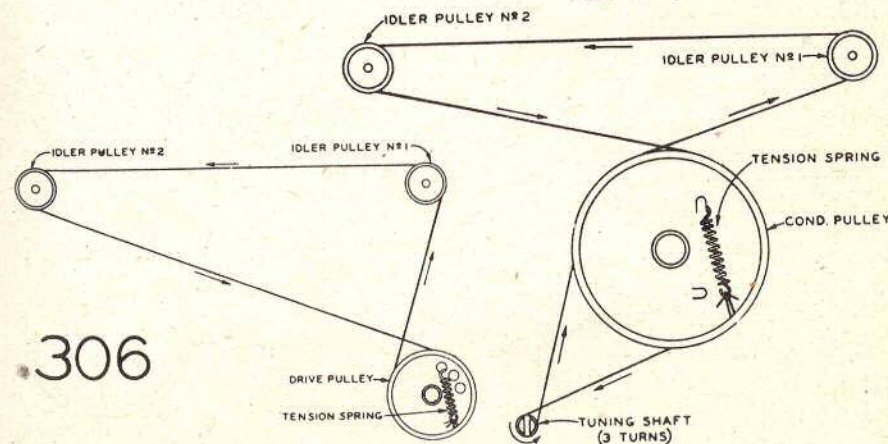


304



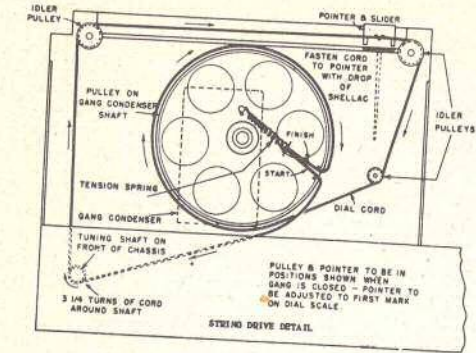
305

307

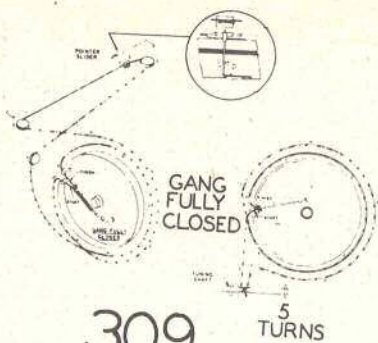


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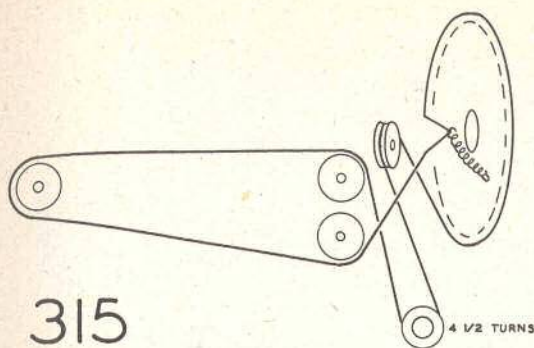


308

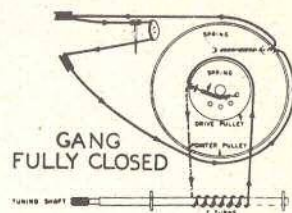


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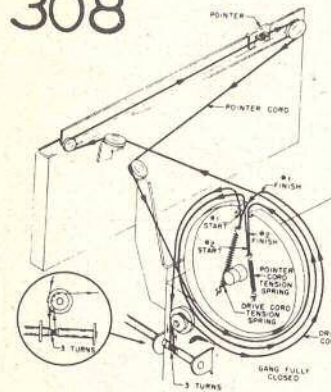
5 TURNS



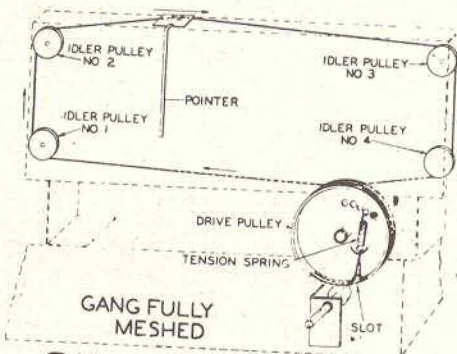
315



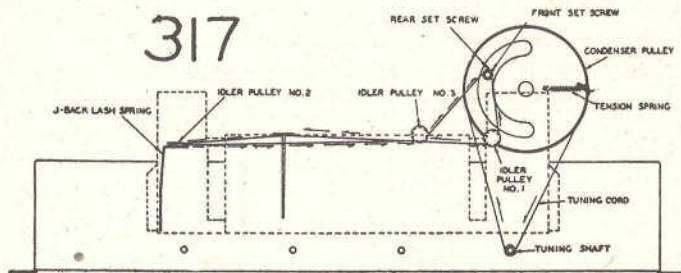
316



310

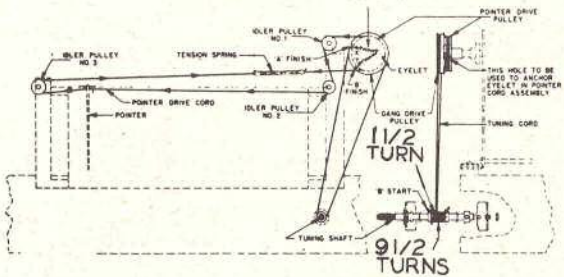


311



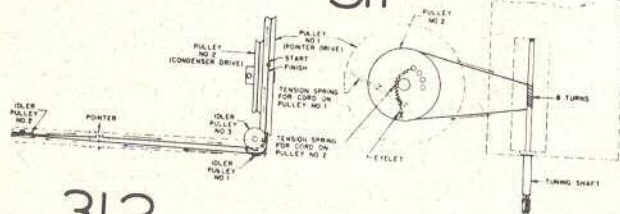
317

TENSION SPRINGS

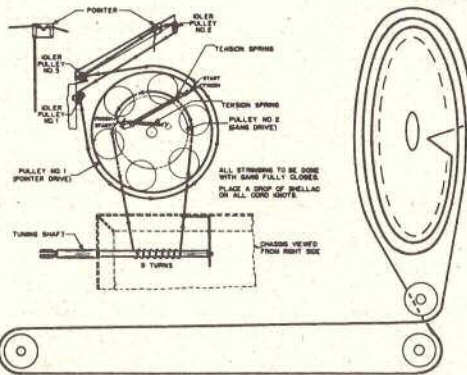


318

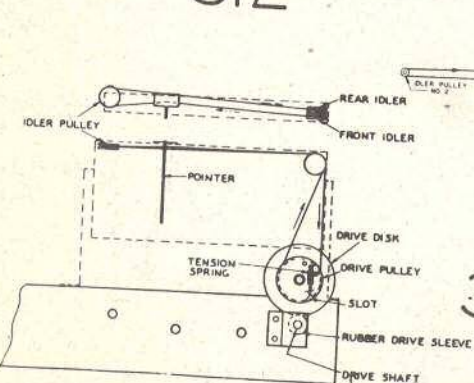
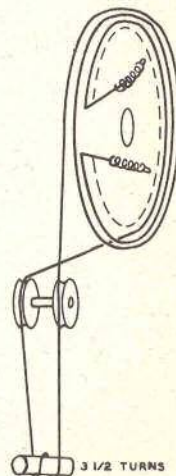
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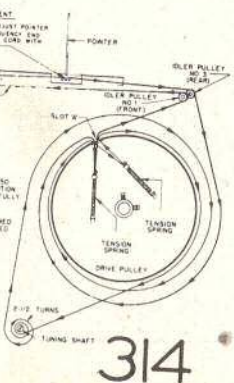
319



320



313



314

POINTER ADJUSTMENT

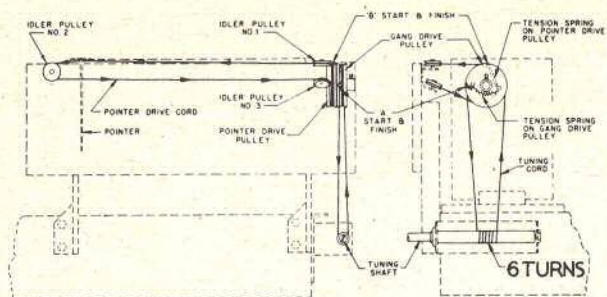
WITH GANG FULLY CLOSED ADJUST POINTER TO FIRST MARK ON DIAL. REAR - FASTER TO CORD WITH A DROP OF SHELLAC.

ADJUST DRIVE PULLEY SO THAT SLOT A IS IN POSITION SHOWN WHEN GANG IS FULLY OPENED.

ALL STRINGING PERFORMED WITH GANG FULLY OPENED.

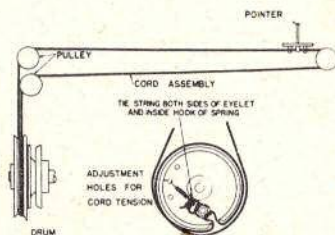
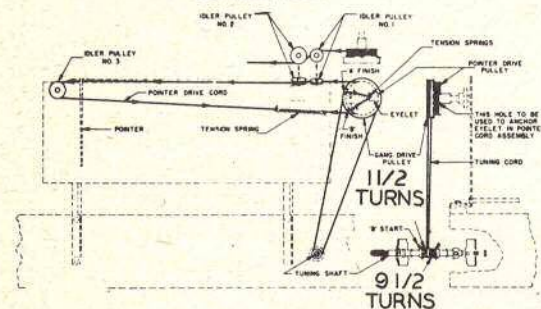


321

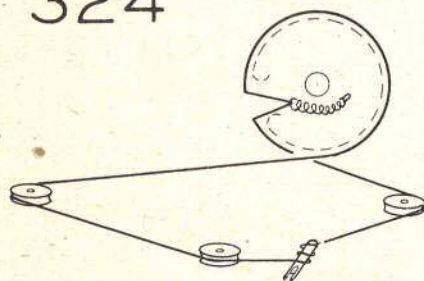


322

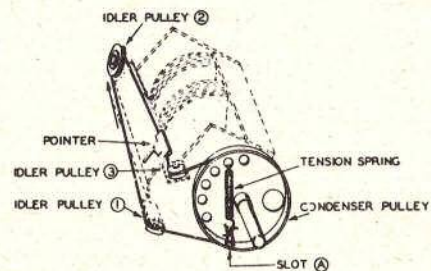
323



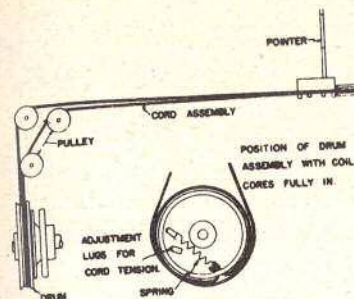
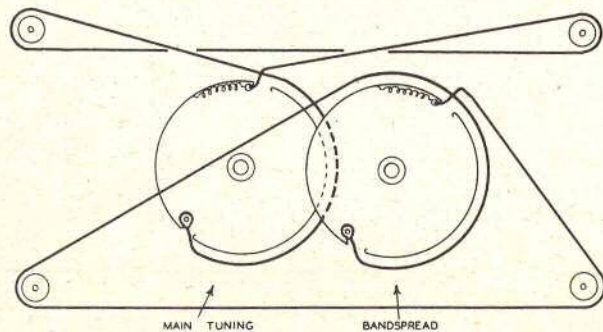
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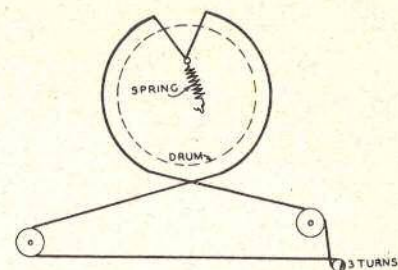
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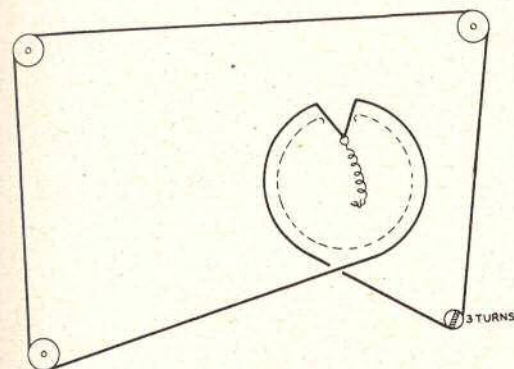
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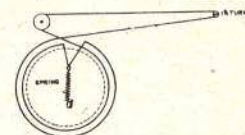
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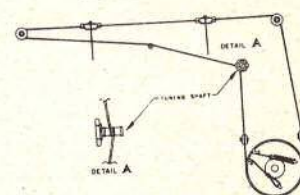
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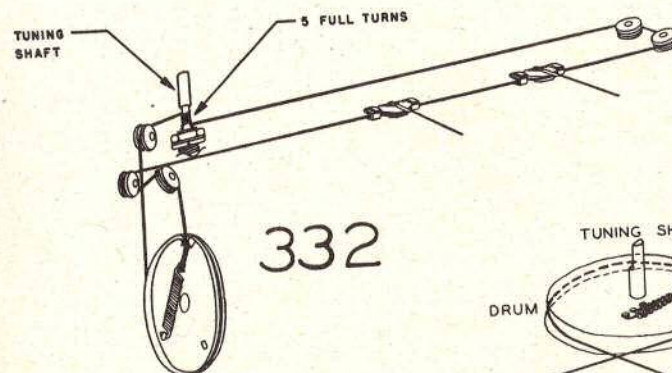
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330

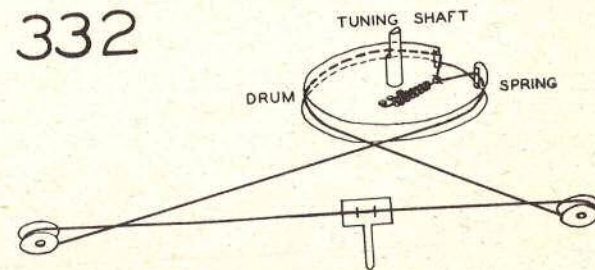


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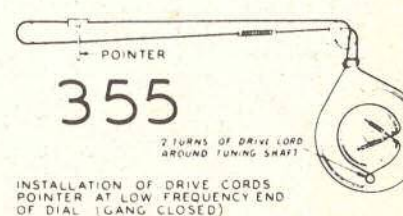
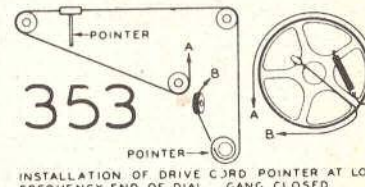
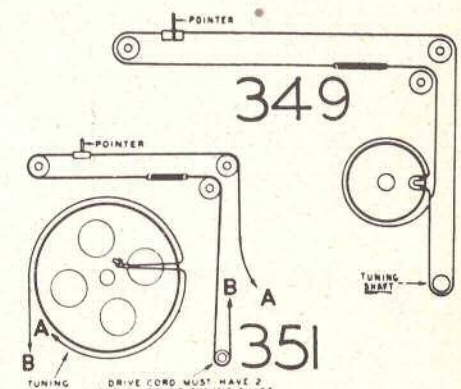
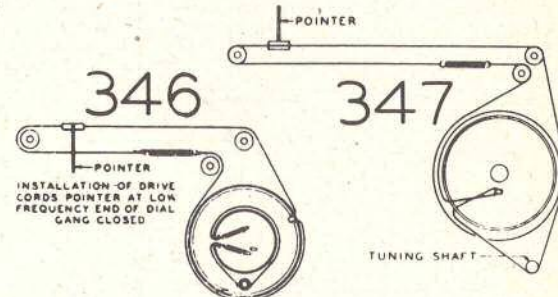
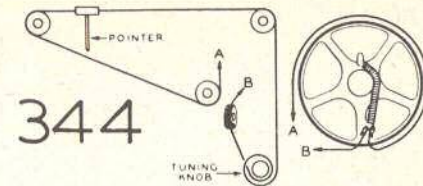
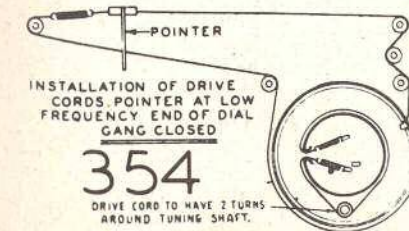
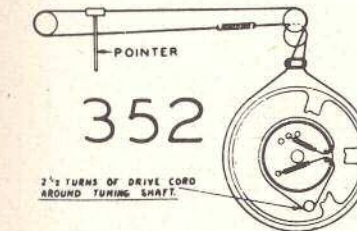
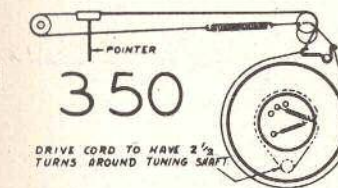
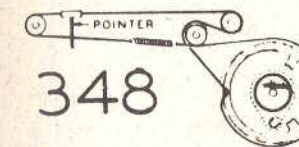
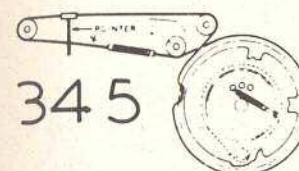
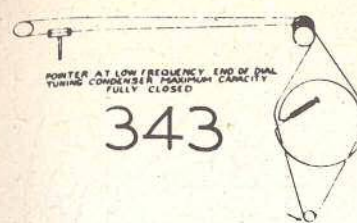
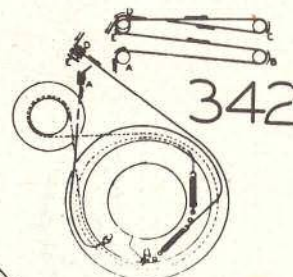
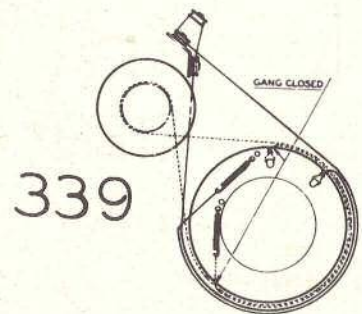
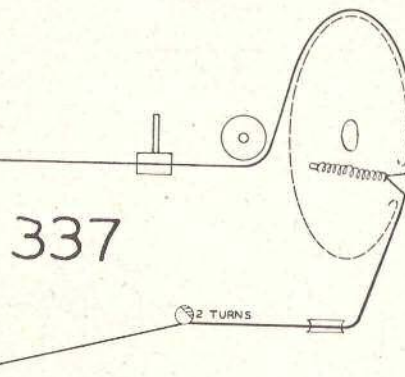
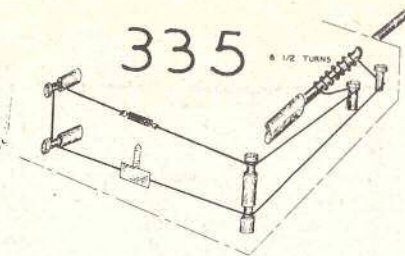
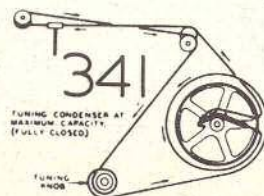
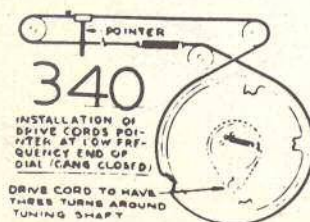
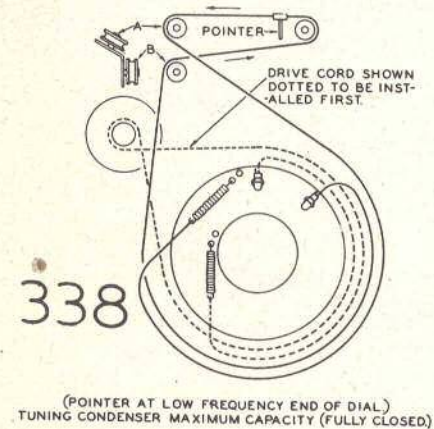
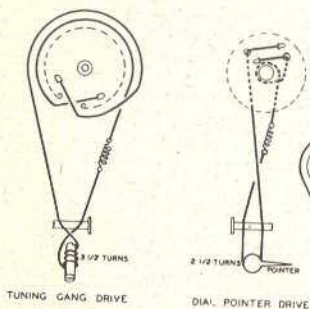
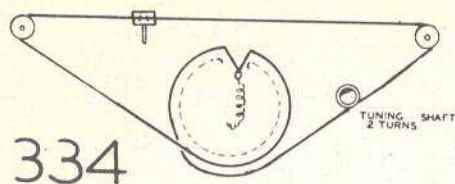


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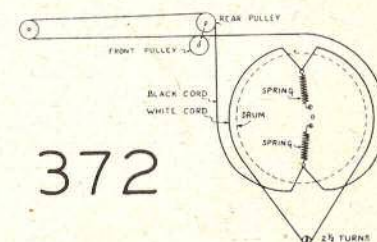
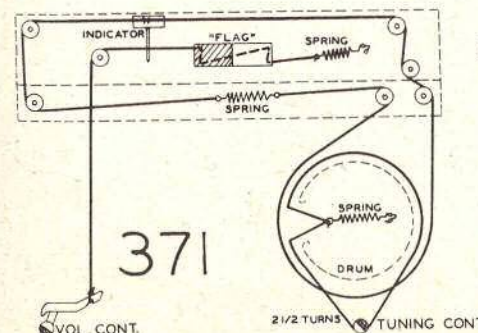
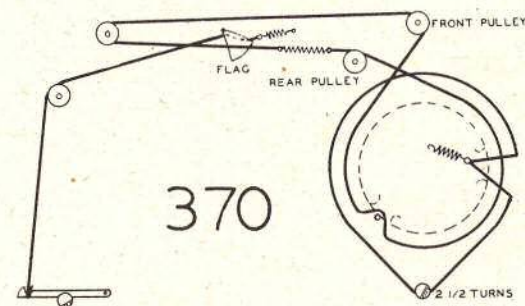
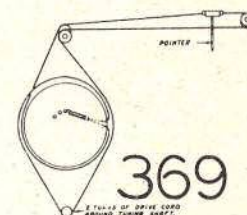
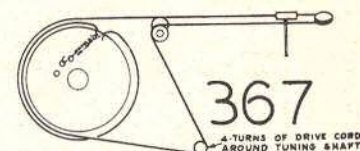
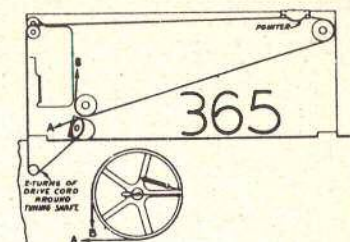
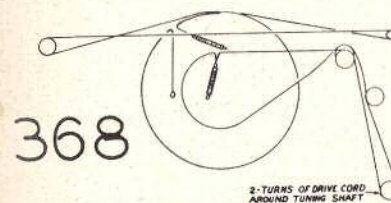
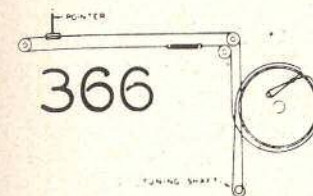
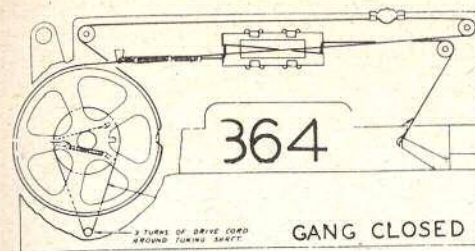
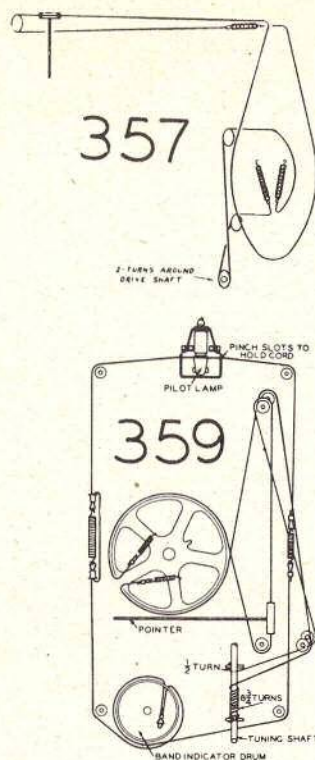
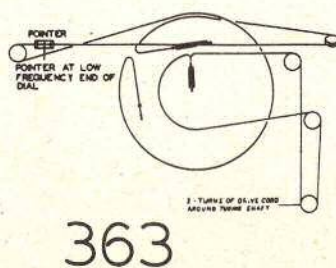
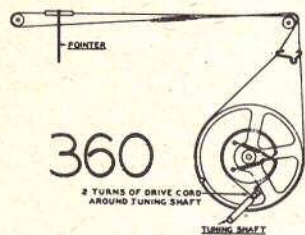
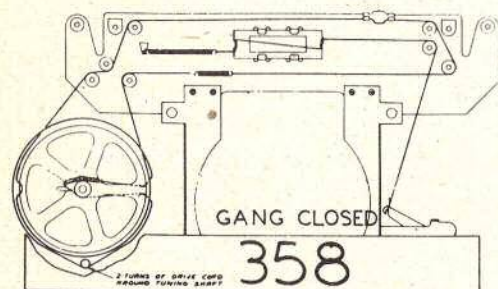
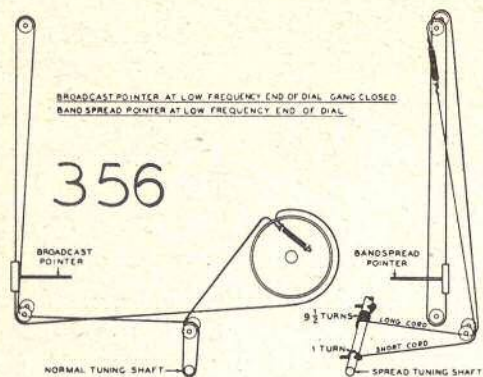
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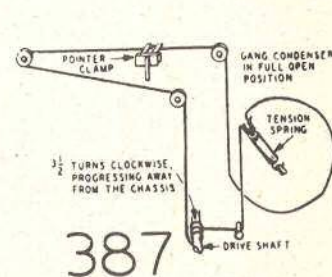
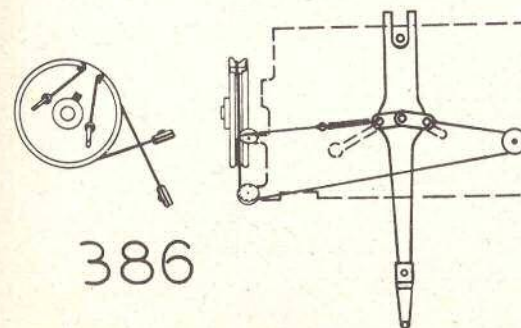
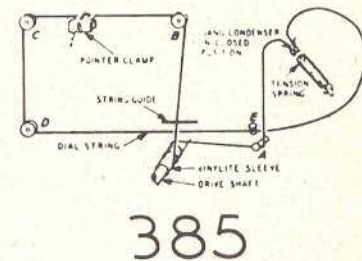
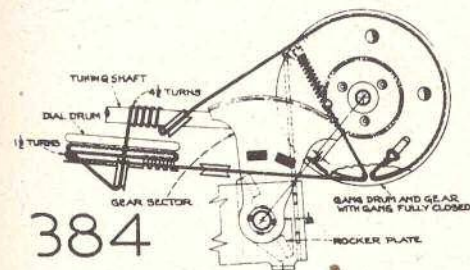
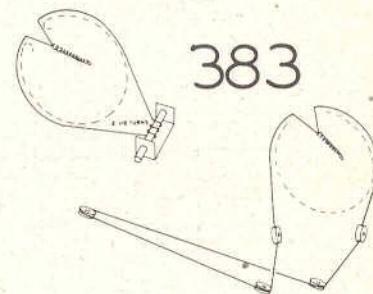
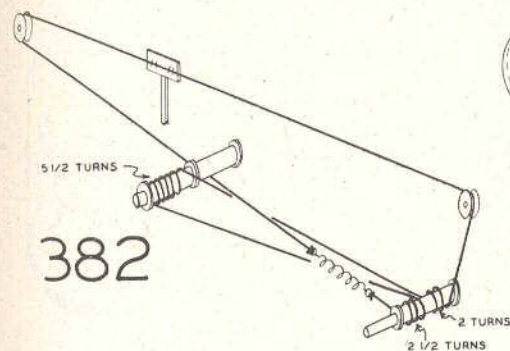
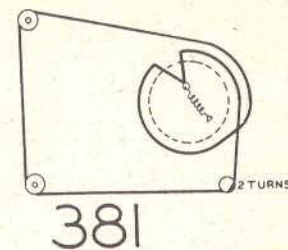
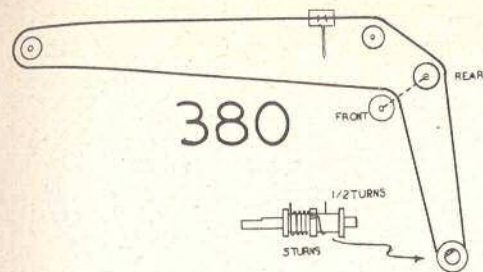
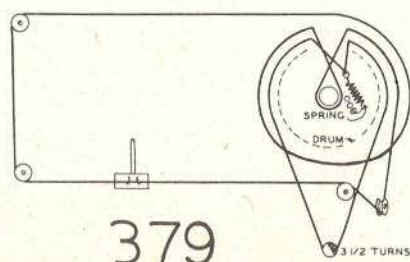
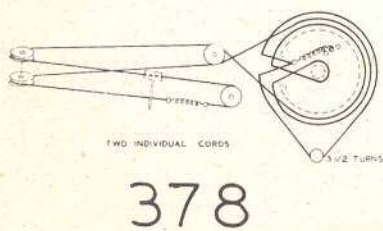
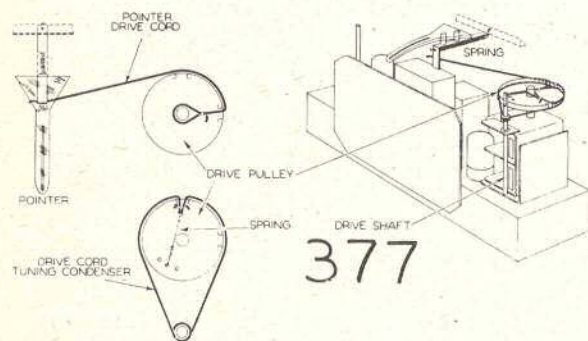
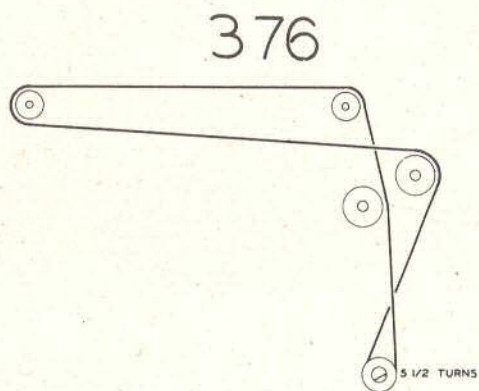
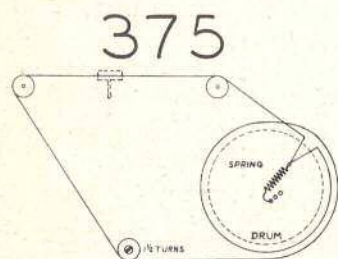
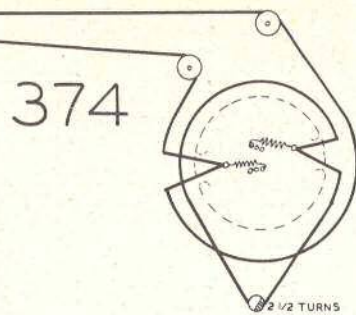
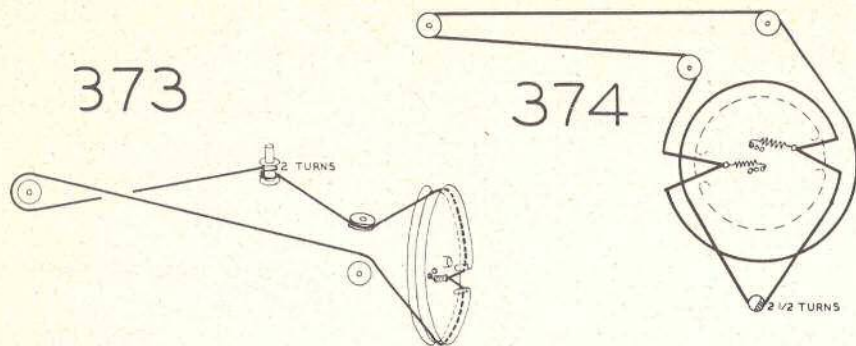






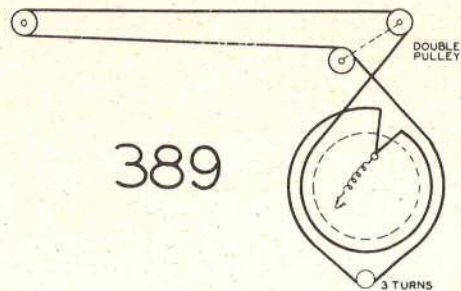
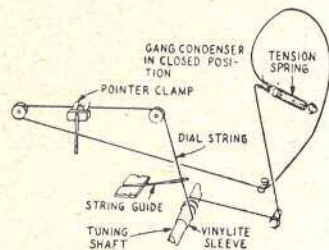




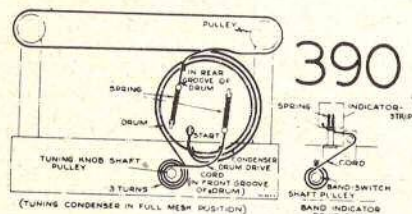




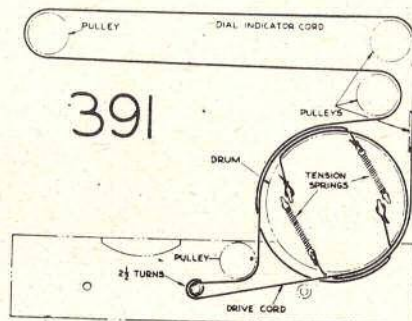
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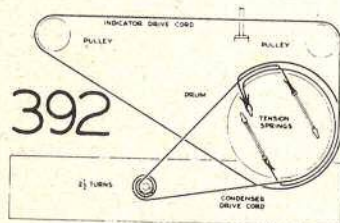
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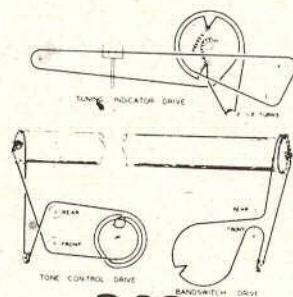
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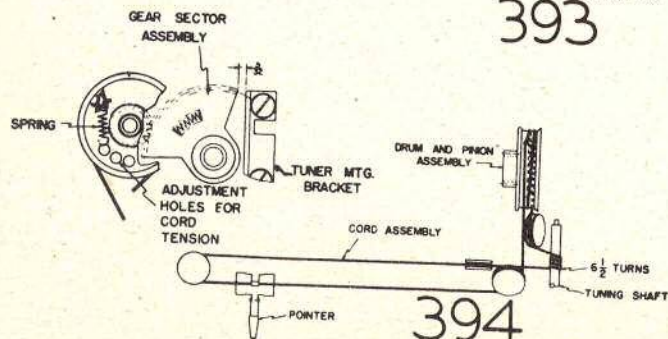
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392

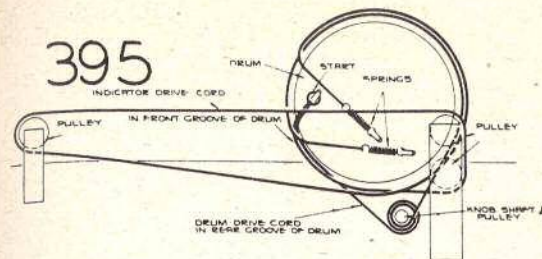


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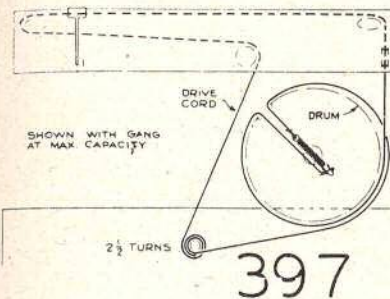
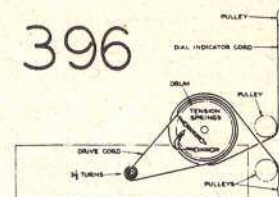


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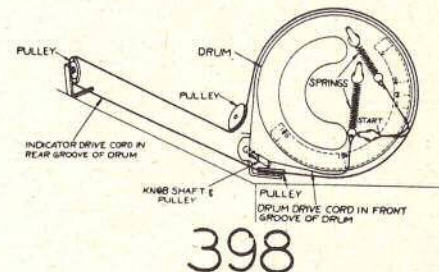
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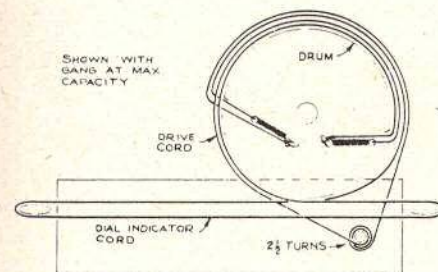
396



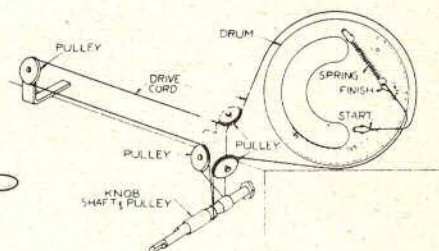
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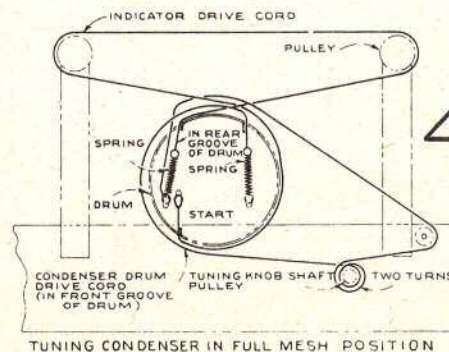
398



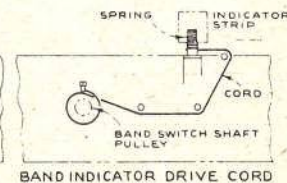
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400



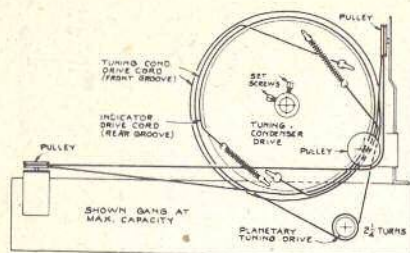
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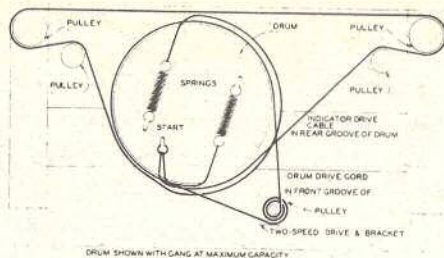
TUNING CONDENSER IN FULL MESH POSITION

BAND INDICATOR DRIVE CORD

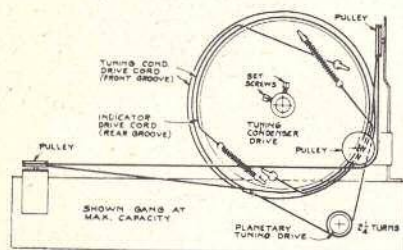




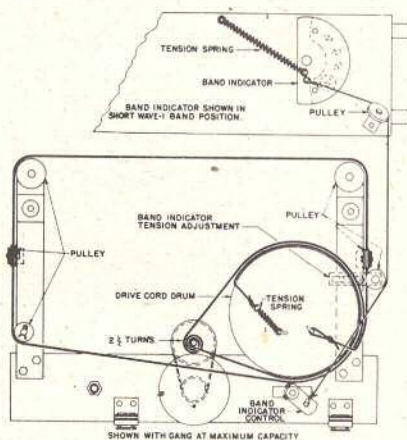
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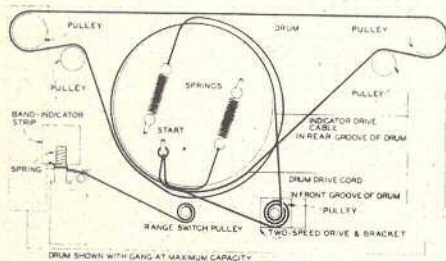
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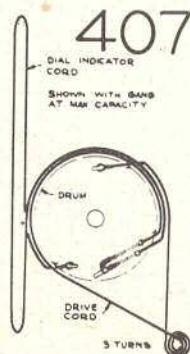
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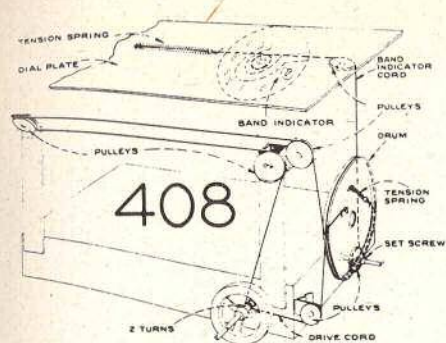
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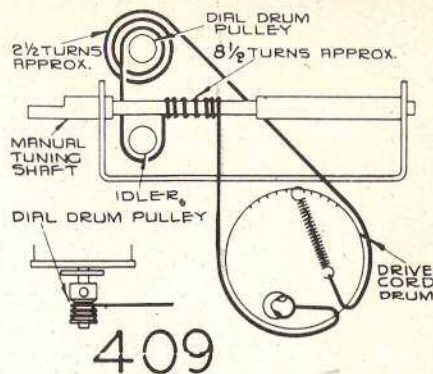
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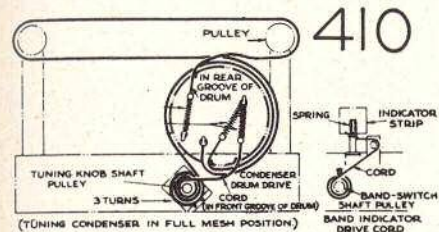
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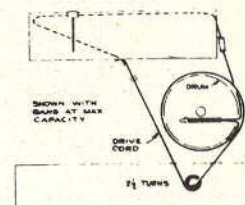
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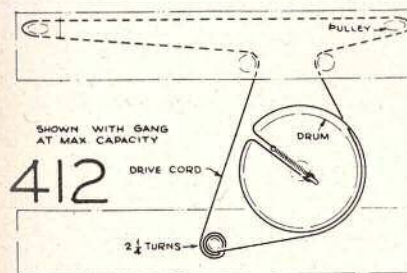
409



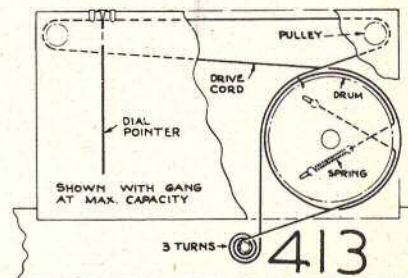
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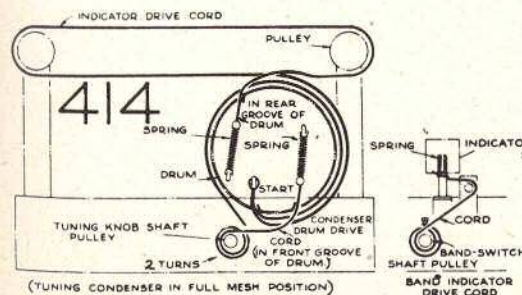
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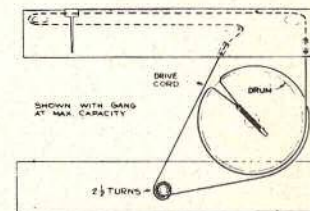
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413

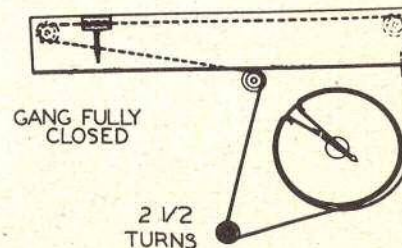
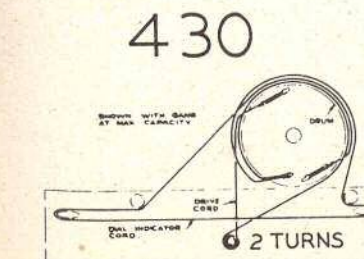
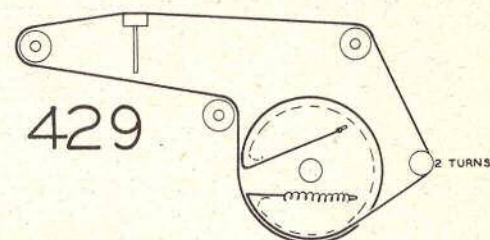
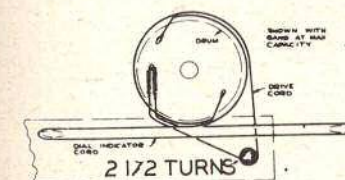
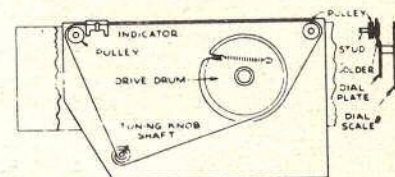
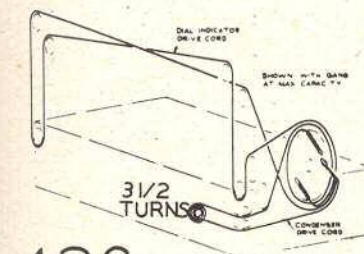
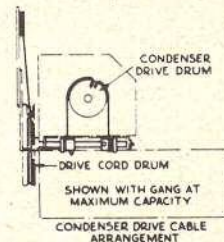
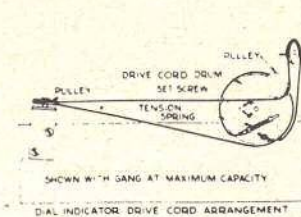
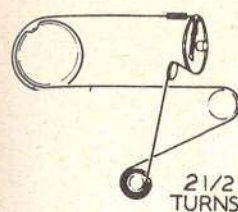
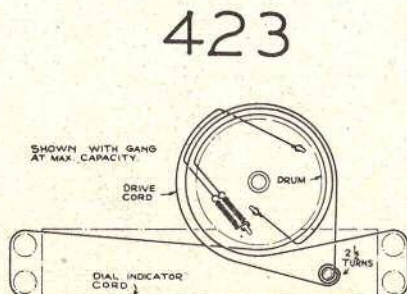
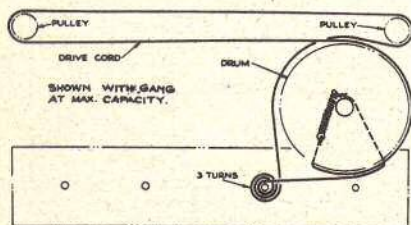
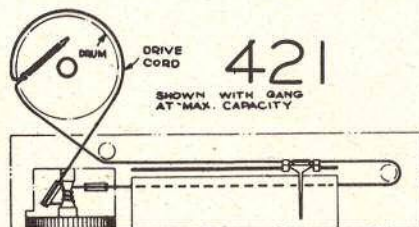
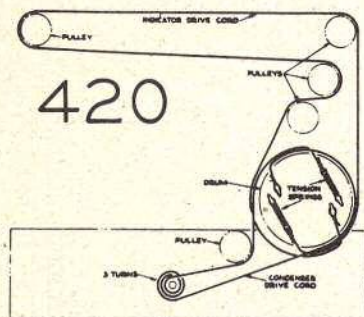
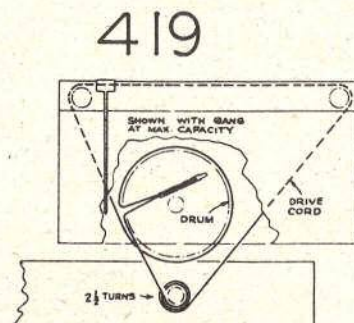
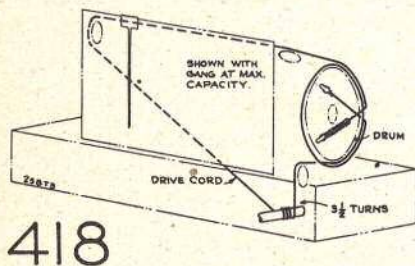
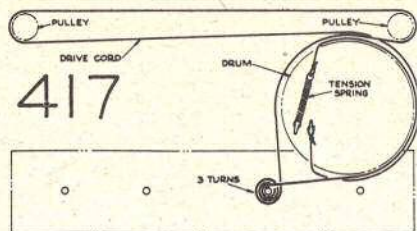
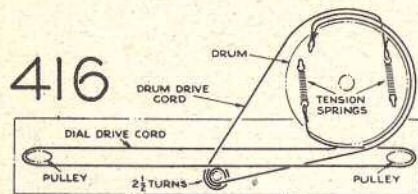


414

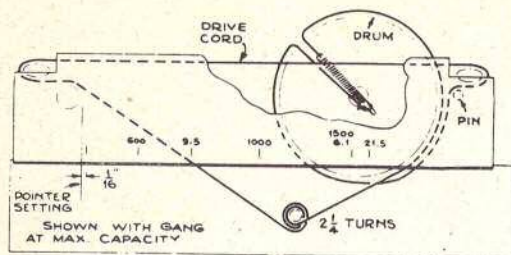


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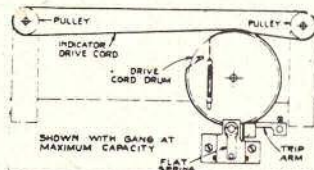
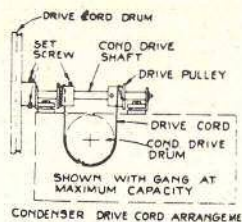




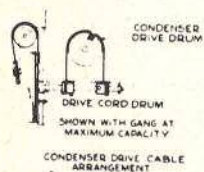




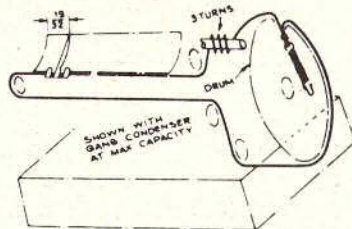
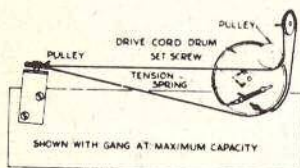
432



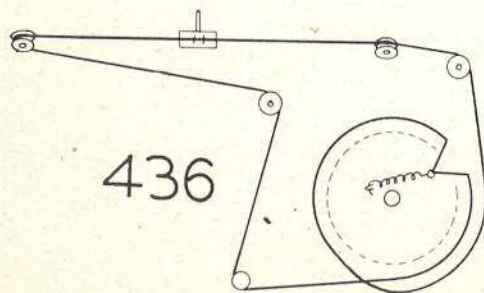
434



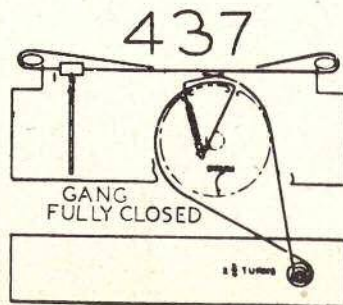
433



435

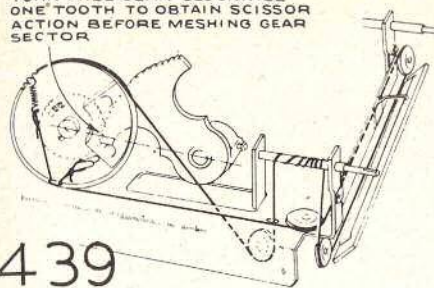


436

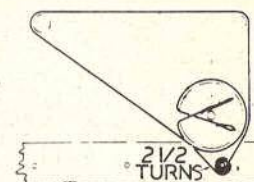


437

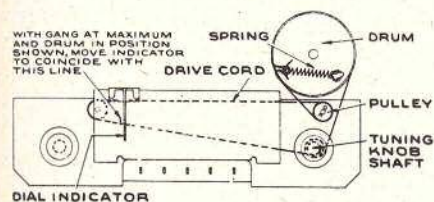
TURN FREE GEAR CLOCKWISE ONE TOOTH TO OBTAIN SCISSOR ACTION BEFORE MESHING GEAR SECTOR



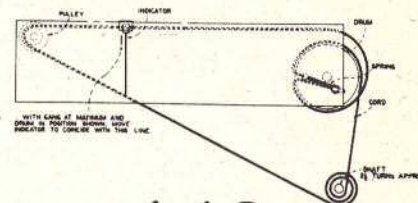
439



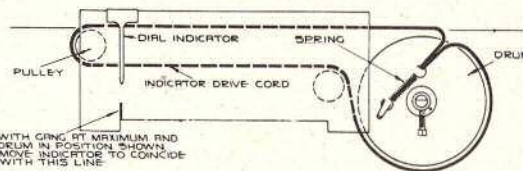
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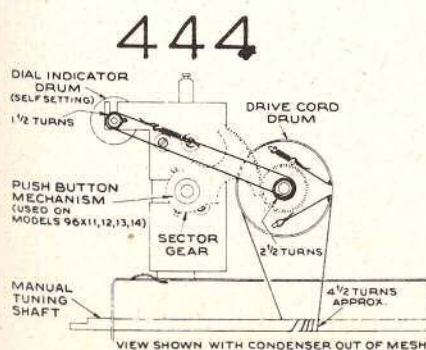
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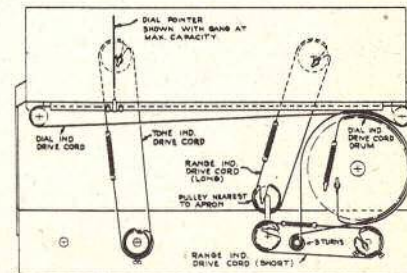
442



443

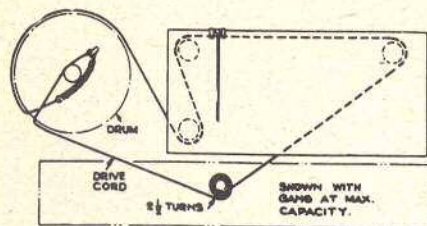


444

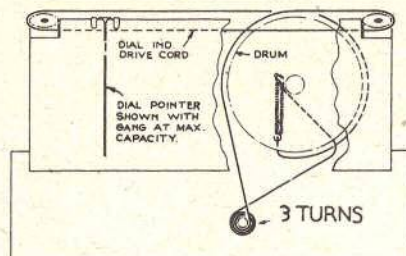


445

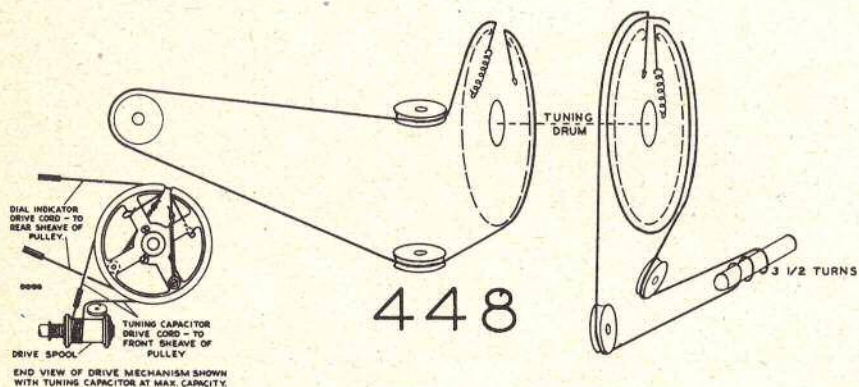




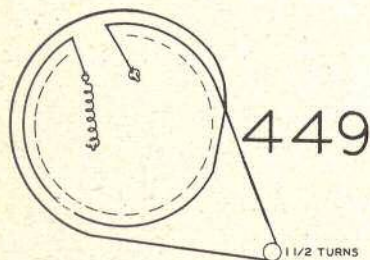
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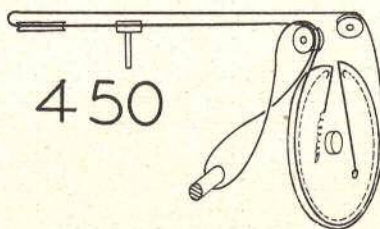
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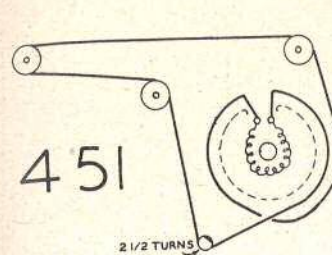
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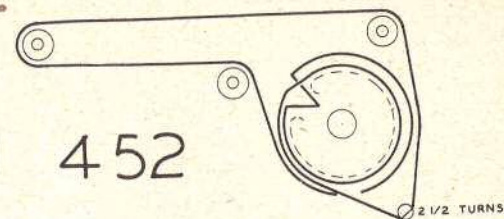
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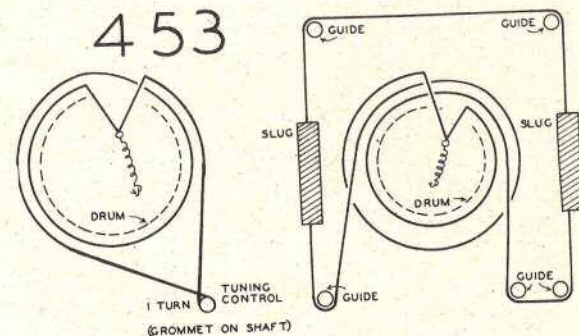
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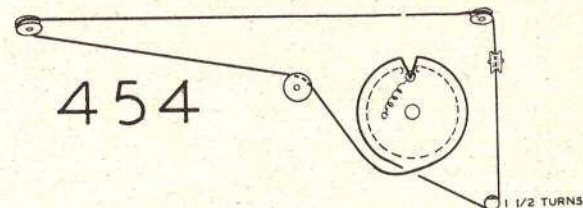
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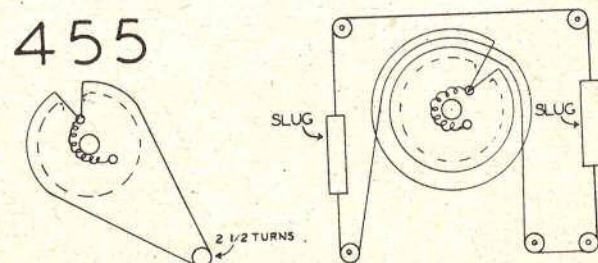
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453

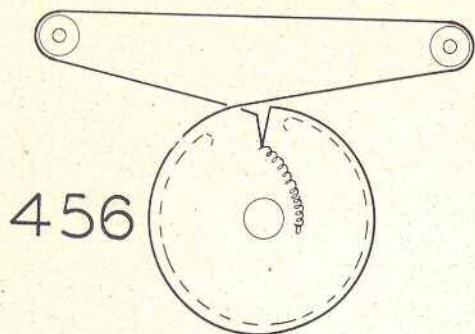


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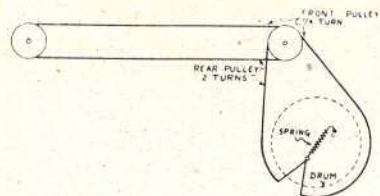
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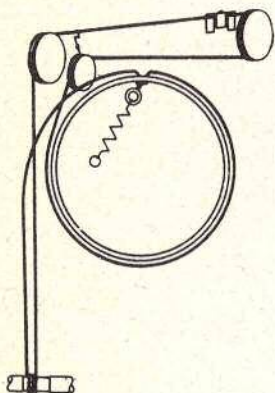
456

NOTE: Dial cord material is bronze wire - .033 diameter.

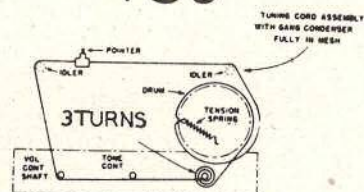


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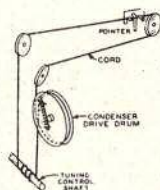
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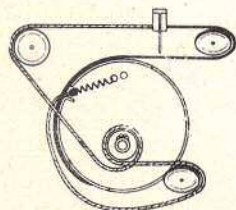
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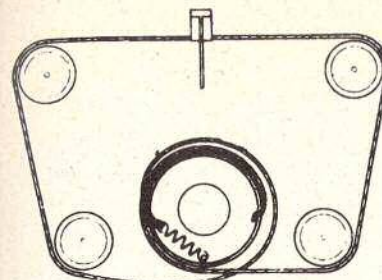
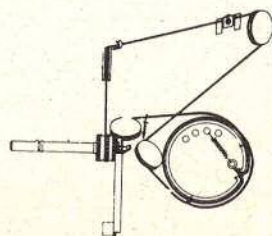
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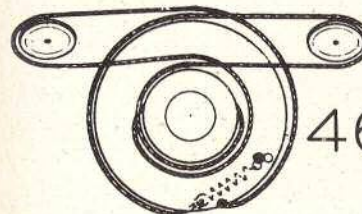
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462

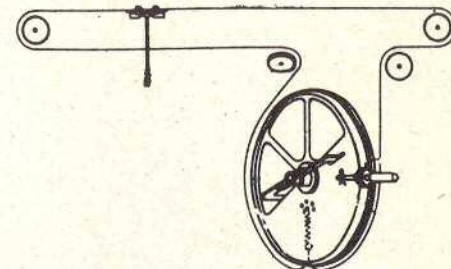


POINTER DRIVE HOOKUP

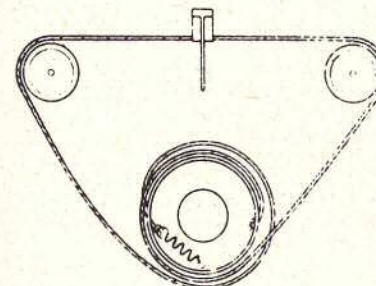


463

CONDENSER DRIVE HOOKUP

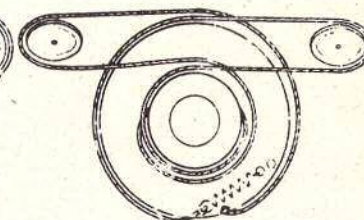


464



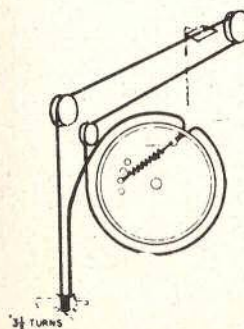
POINTER DRIVE HOOKUP

465

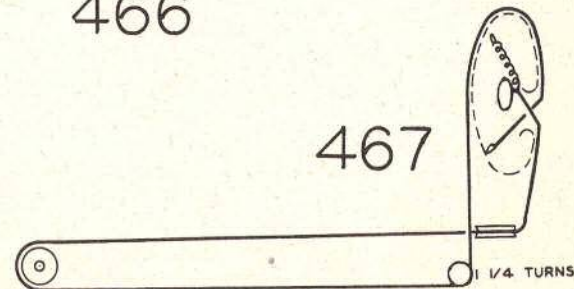


CONDENSER DRIVE HOOKUP

466

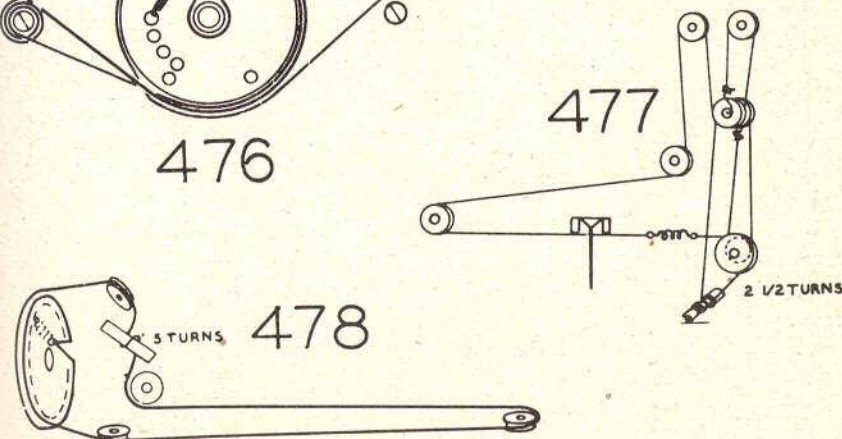
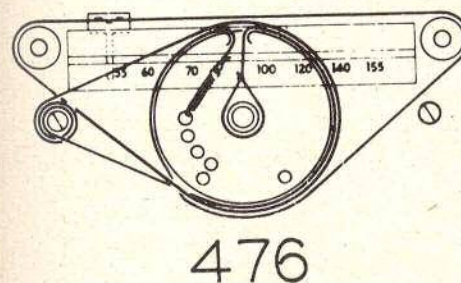
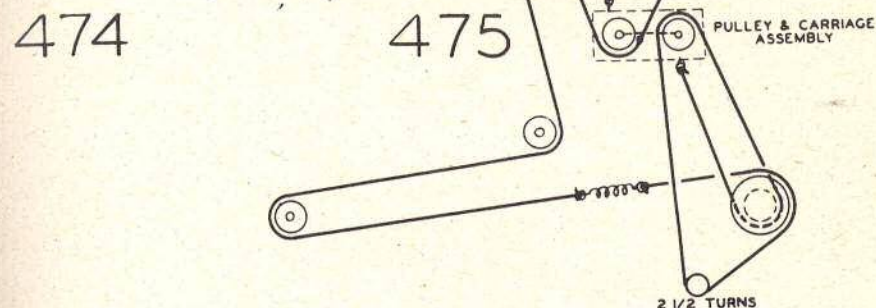
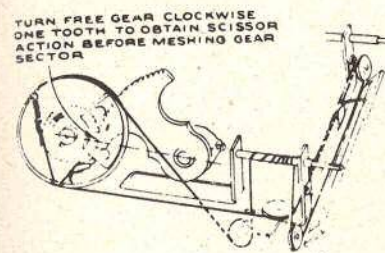
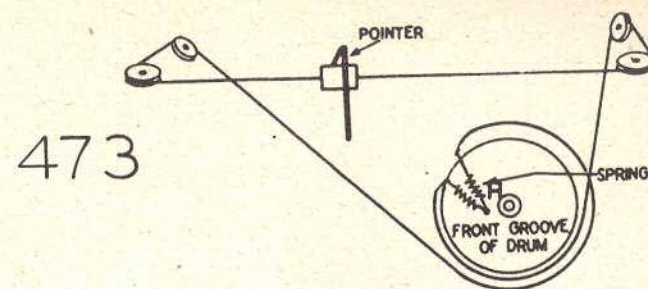
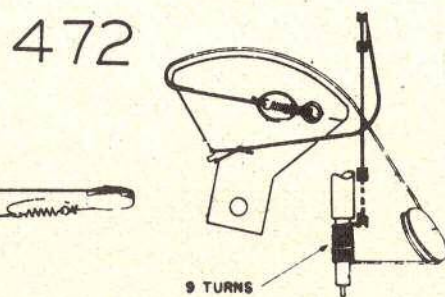
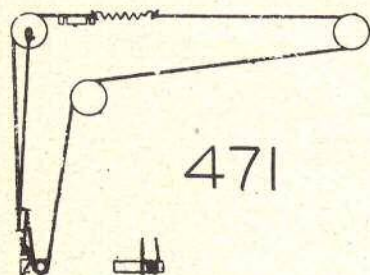
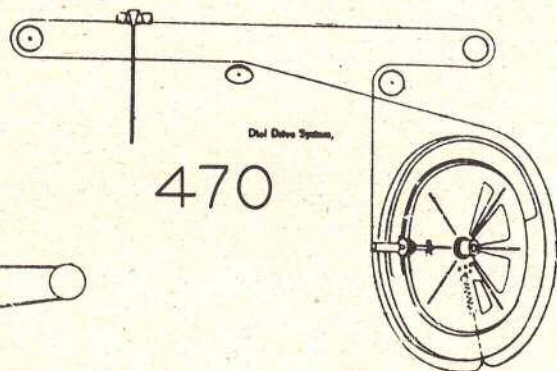
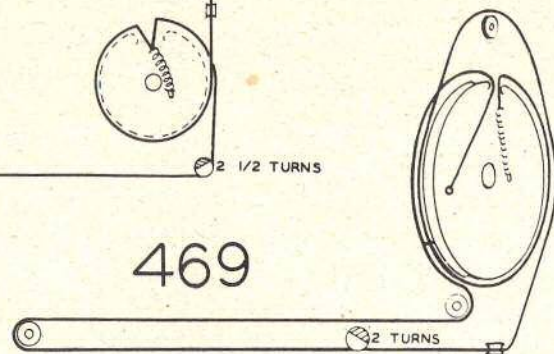
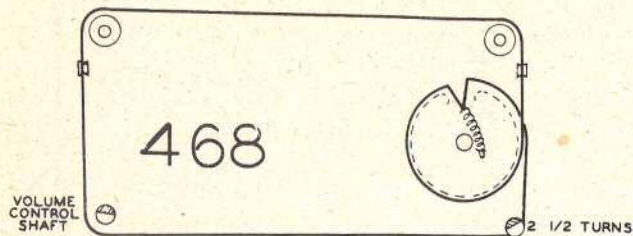


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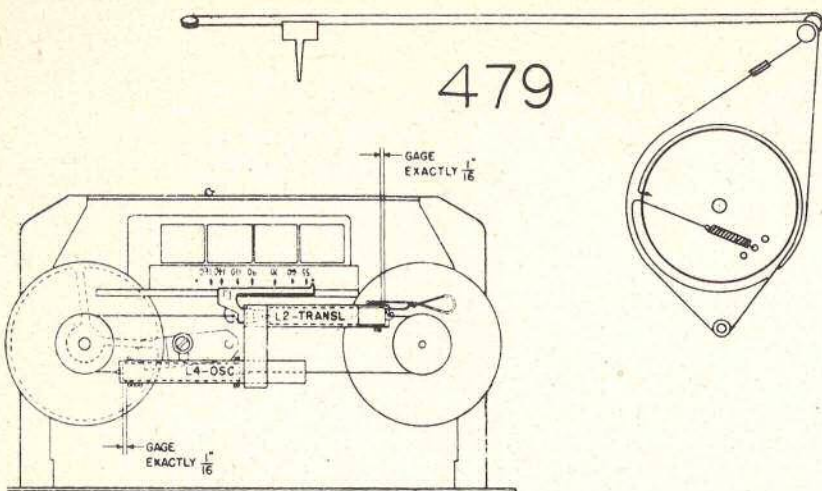


1 1/4 TURNS



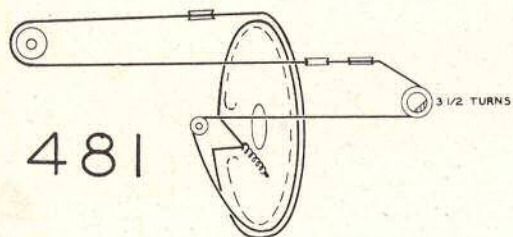






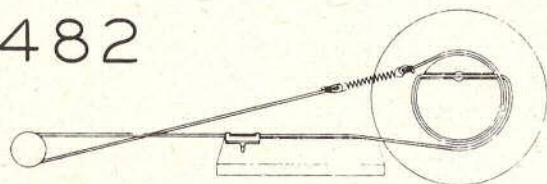
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480

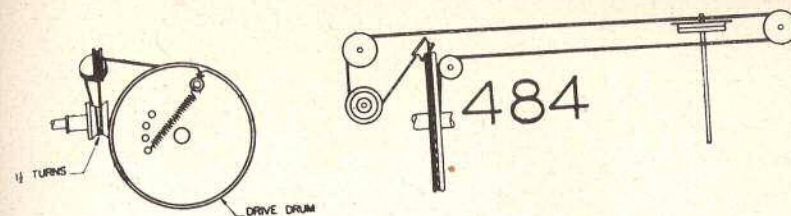
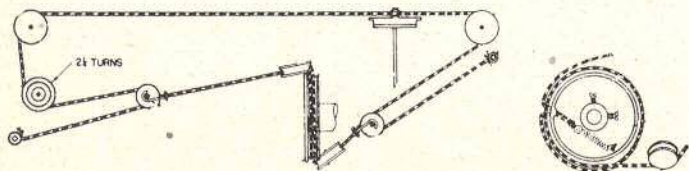


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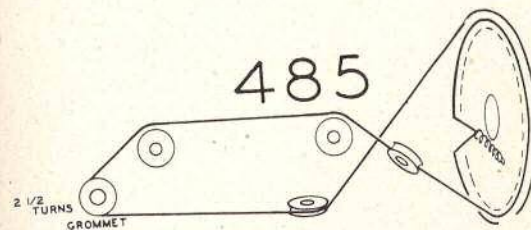
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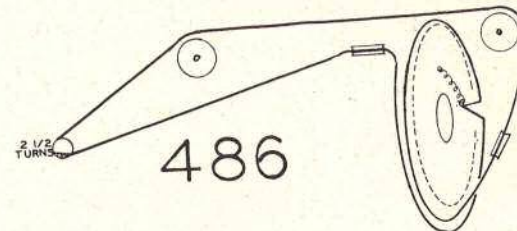
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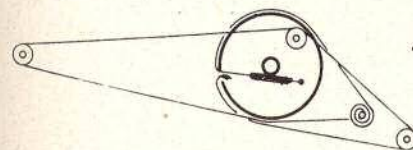
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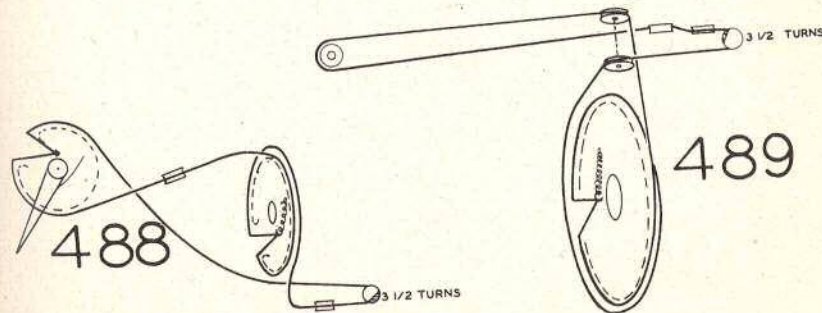
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486



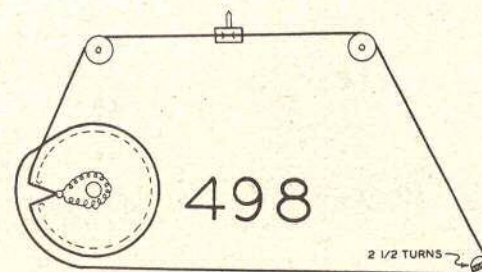
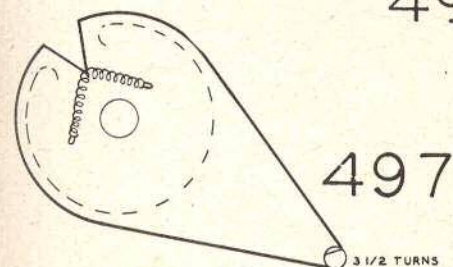
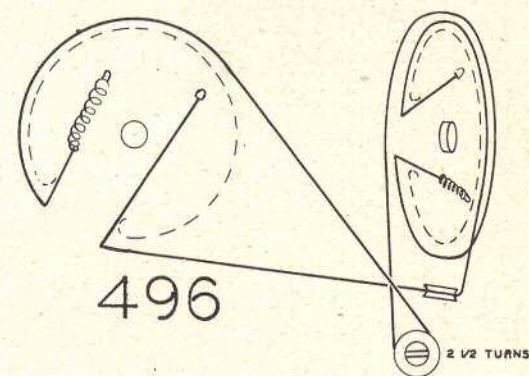
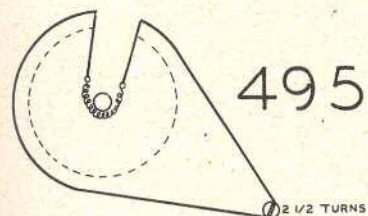
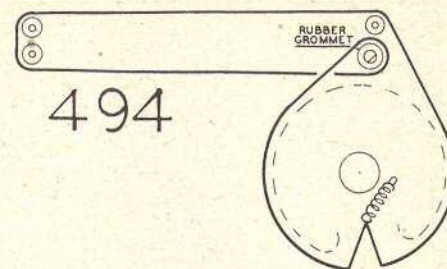
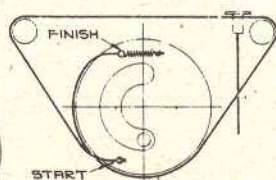
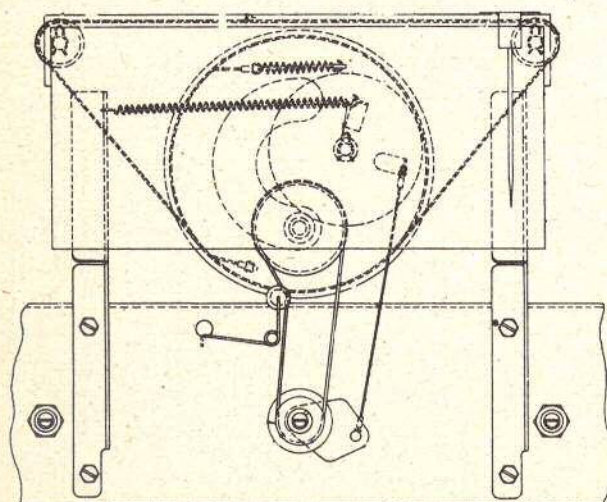
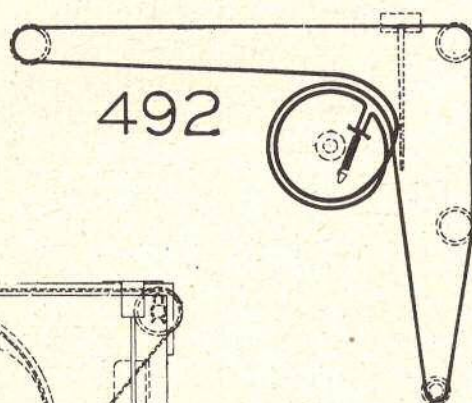
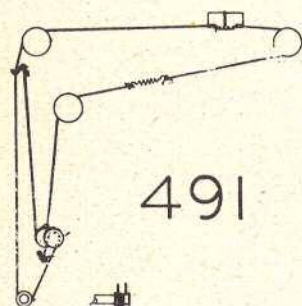
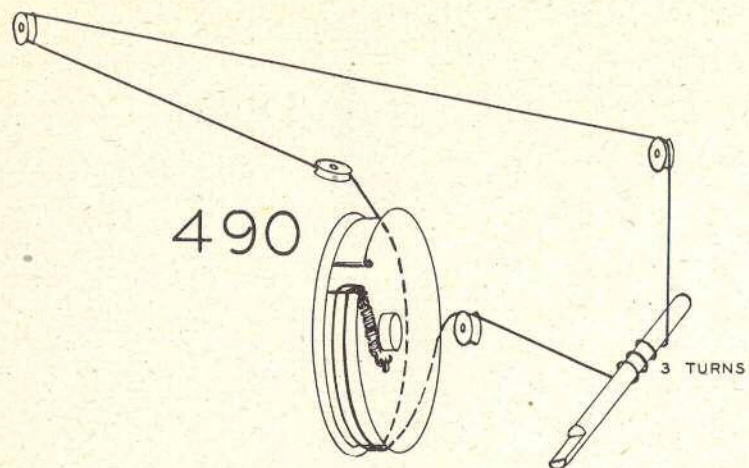
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488

489

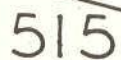




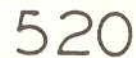




DRUM SHOWN WITH SLUGS IN  
FULL OUT POSITION



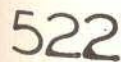
516



GANG CLOSED

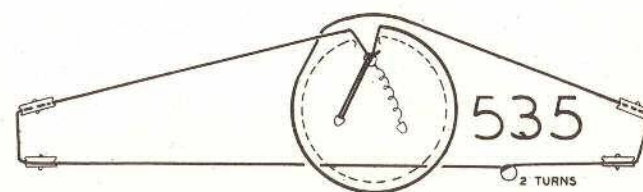
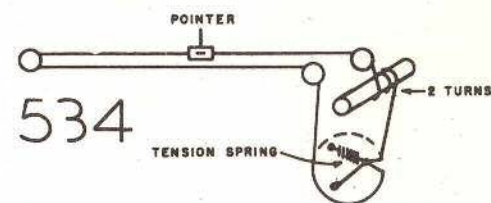
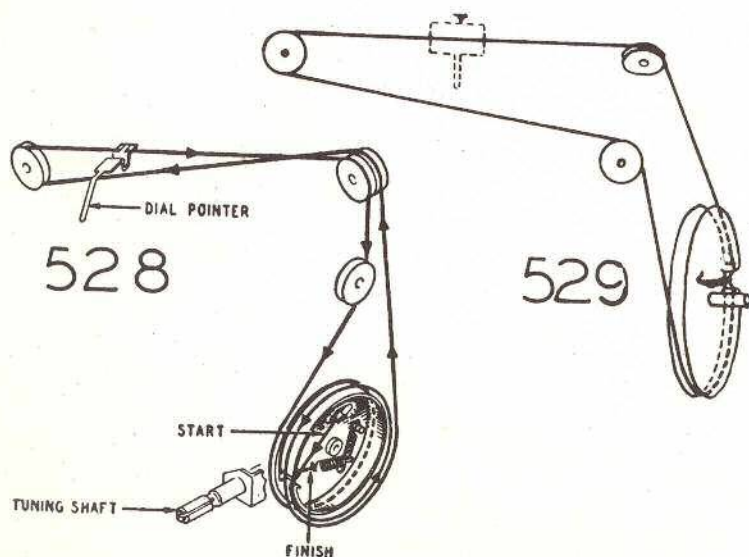
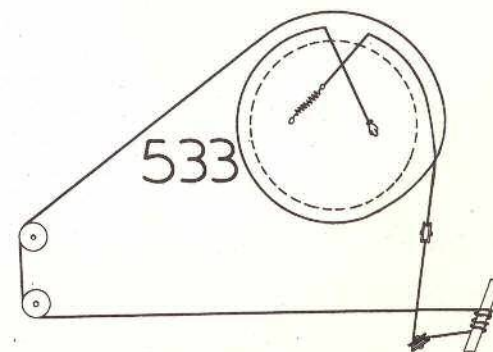
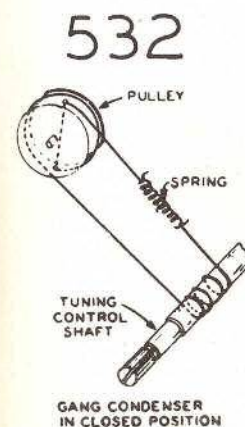
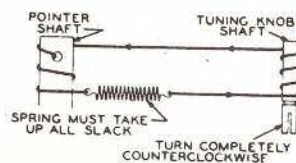
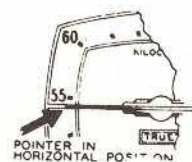
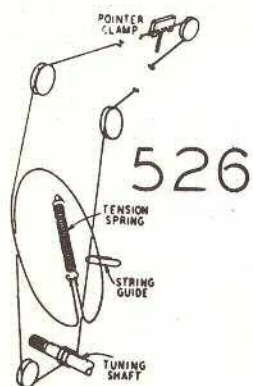
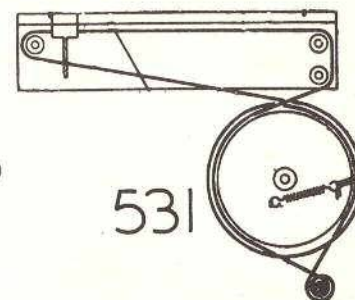
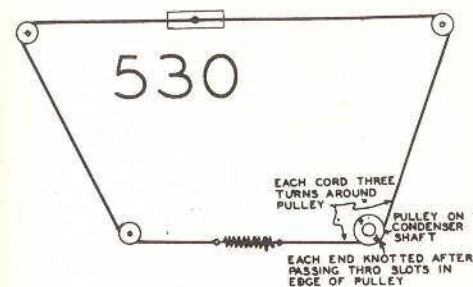
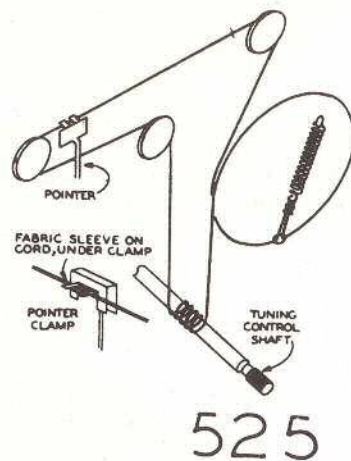
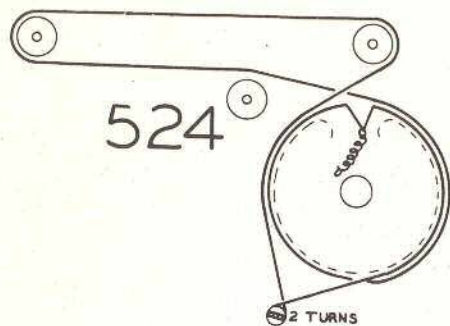


BOTTOM VIEW OF CHASSIS

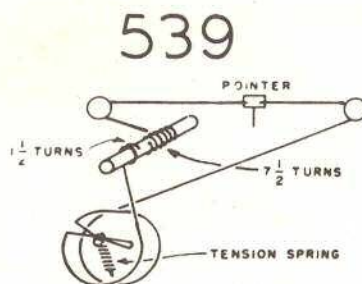
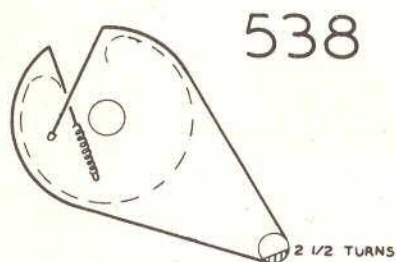
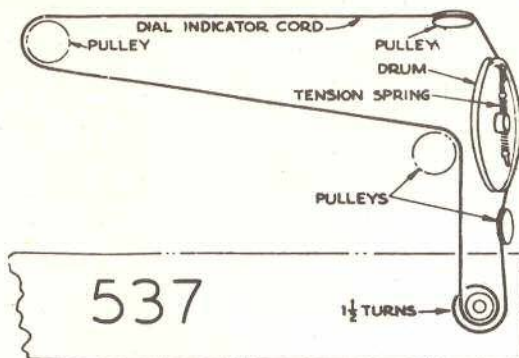
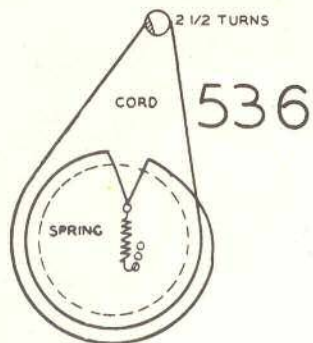


523



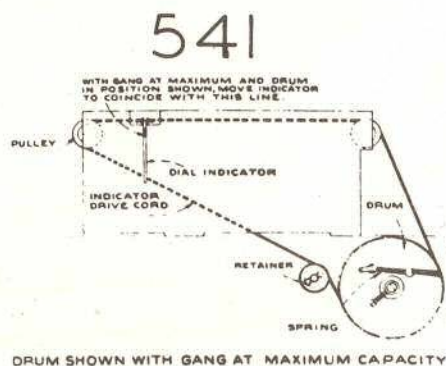
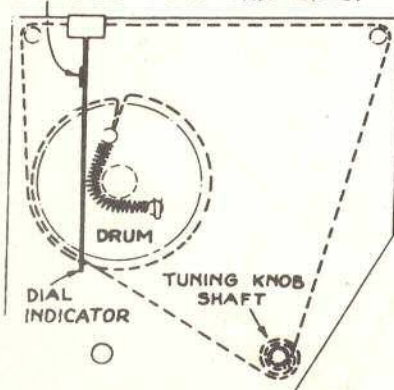




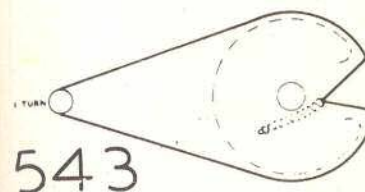
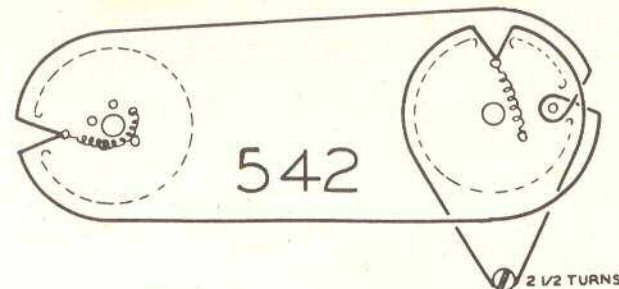


540

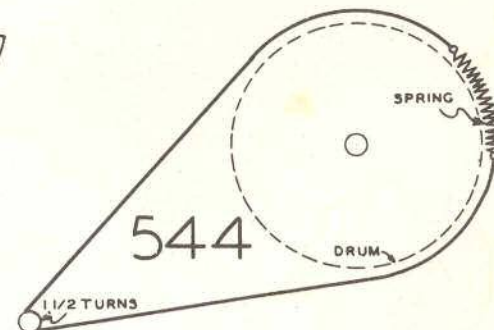
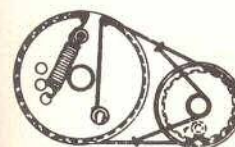
WITH CONDENSERS FULLY  
MESHED, AND DRUM IN POSITION  
SHOWN, INDICATOR SHOULD  
COINCIDE WITH THIS LINE.



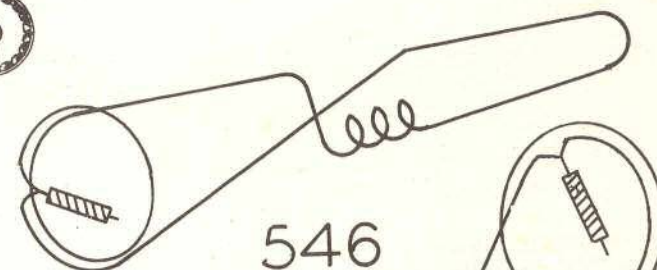
DRUM SHOWN WITH GANG AT MAXIMUM CAPACITY



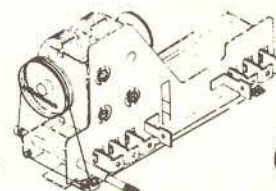
GANG MESHED DIAL  
AT 540 K.C.



545



547

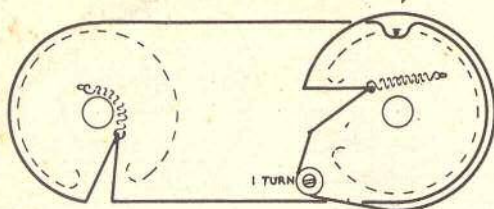


548

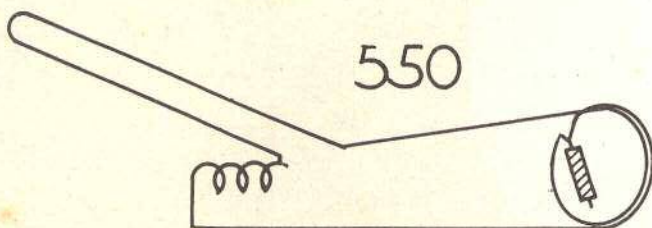




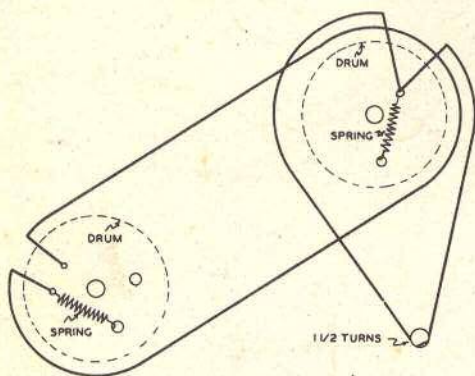




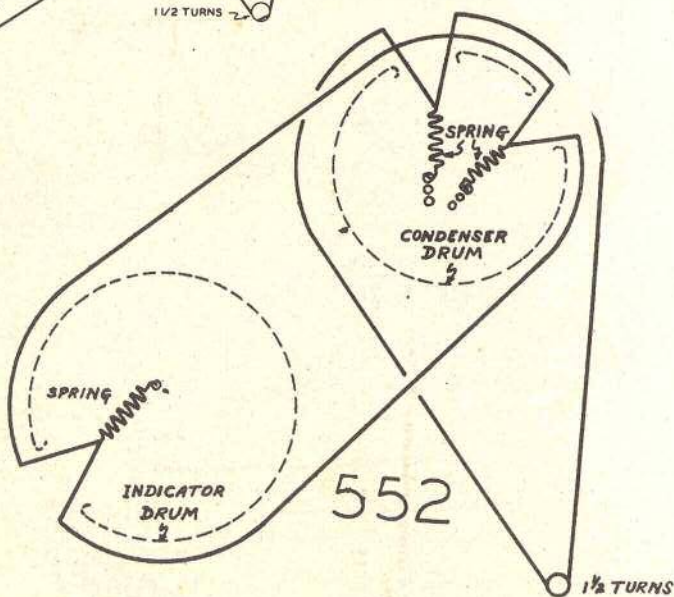
549



550



551



552