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Kellogg Repeating Coils Bulletin No. 27

Cir. 1920

A bulletin issued to show the various repeating coils available from Kellogg. The date of this document is assumed because it was in a loose leaf booklet with other documents dated 1918-1922. The original is in color but because of website size constraints only the greyscale version is available.

Printed using the letterpress method, 7 ¾ by 10 inches saddle stitched on 20# coated stock in four colors. The cover printed on 60# brown stock in black and embossed for effect.

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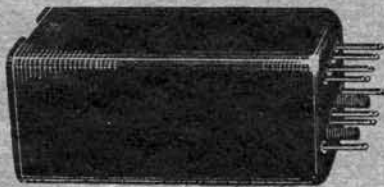
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KELLOGG

REPEATING COILS



BULLETIN
No. 27

Kellogg Switchboard & Supply Co.

Chicago

Kansas City

Columbus

San Francisco

Kellogg Repeating Coils

Bulletin No. 27

Kellogg Switchboard & Supply Co.
Chicago

Kellogg Repeating Coils



General

THE use to which a repeating coil is subjected in a telephone circuit is the determining factor of its design. It, therefore, becomes necessary to select a repeating coil properly designed to meet the conditions as required for that particular part of the telephone circuit in which it is used.

In general, all the Kellogg repeating coils are wound on a laminated silicon steel core properly treated and shaped to give the least possible loss to which a transformer is subject, and yet be consistent in bringing out the proper qualifications and characteristics of the coil. Up to the present time silicon steel properly treated and of proper thickness gives better results than any other grade of magnetic substance, for transforming high ^{frequency} efficiency current both in quality and quantity of transformation.

Another important factor in the design is to get the proper amount of steel in the core and to shape the laminations so that the magnetic circuit will be properly proportioned.

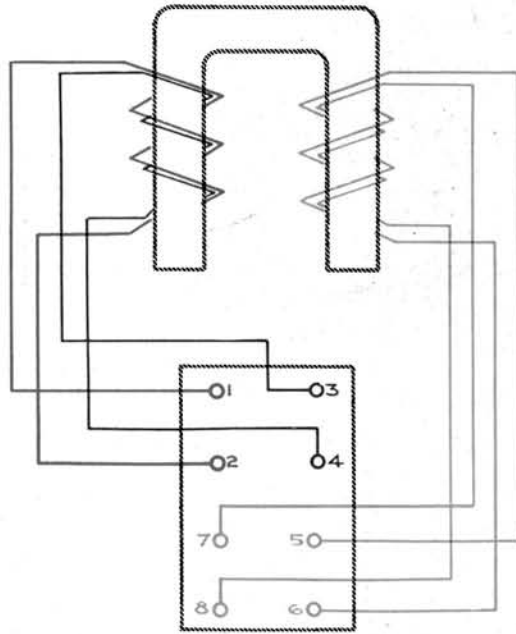
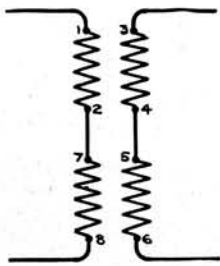
The winding of the coil is another very important factor. The manner of winding, number of turns, resistance, and size of wire depend upon the nature of the use of the coil in the circuit.

After the coil is built, it must be housed in such a manner that cross-talk will be eliminated and treated to prevent damage from moisture.

All the above points have a direct relation to one another and they all must be considered collectively when designing a particular type of coil.

The following pages give a brief description of the repeating coils of Kellogg manufacture; their characteristics and their use.

No. 16-A Repeating Coil

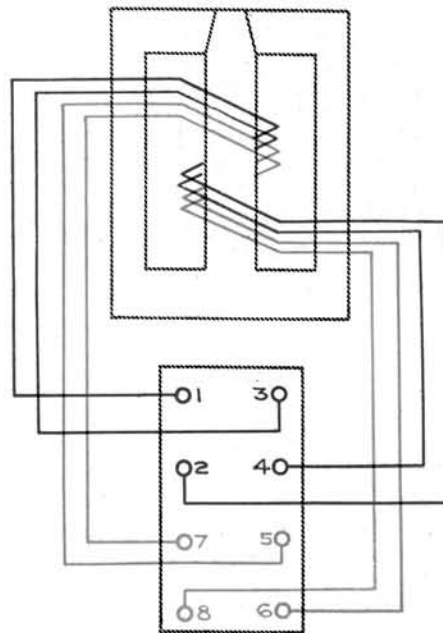
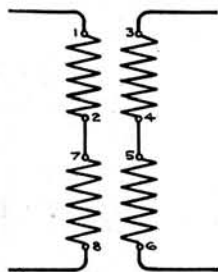


The No. 16-A repeating coil is designed for talk through only. It is suitable only for use in the cord circuits and trunk circuits where the ring through coil is not necessary. It is high in transmission efficiency, having approximately five-tenths mile loss. It is made up of two concentric wound coils, each coil being placed upon one leg of a horseshoe lamination.

The coil is housed in a pressed steel shell, which prevents the possibility of cross-talk. It is suitable for mounting either vertically or horizontally on a wood mounting.

Dimensions—Length $2\frac{1}{8}$ in., Height $3\frac{3}{2}$ in., Width 2.166 in.

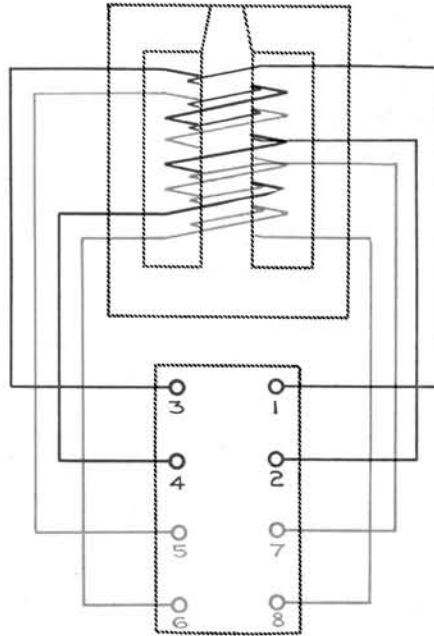
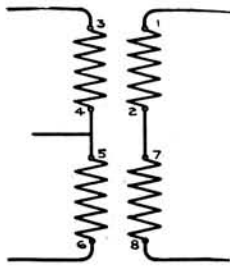
No. 17-A Repeating Coil



The No. 17-A repeating coil is an all around ring and talk through coil. The winding consists of four parallel windings wound on a closed magnetic circuit. It is suitable for use on toll lines, phantom and simplex circuits, and in cord circuits where ring through features are desired. It is high in both talking and ringing efficiency. It is suitable for mounting either vertically or horizontally on a wood mounting.

Dimensions—Length $3\frac{3}{4}$ in., Height $3\frac{1}{2}$ in., Width $3\frac{1}{2}$ in.

No. 17-F Repeating Coil

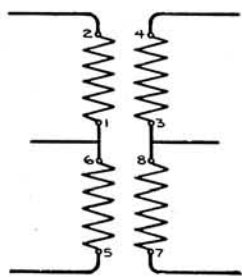
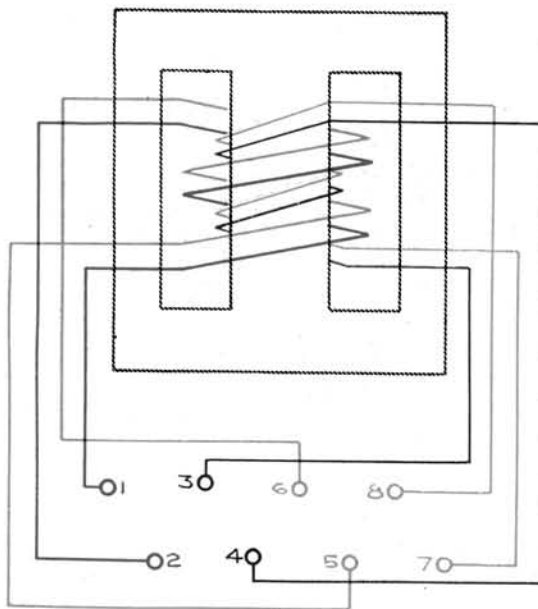
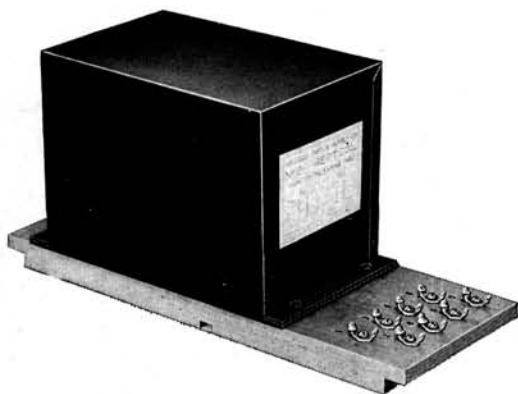


The No. 17-F repeating coil is similar in construction to the No. 17-A except that it has two windings in tandem and two in parallel. It is especially designed for phantom work and is particularly adaptable to grounded phantoms, due to the fact that since the windings are separated there is less possibility of the coil being subjected to the effects of lightning.

The talking and ringing efficiency of the coil is practically the same as No. 17-A.

Dimensions—Length $3\frac{3}{4}$ in., Height $3\frac{1}{2}$ in., Width $3\frac{1}{32}$ in.

No. 18-A Repeating Coil

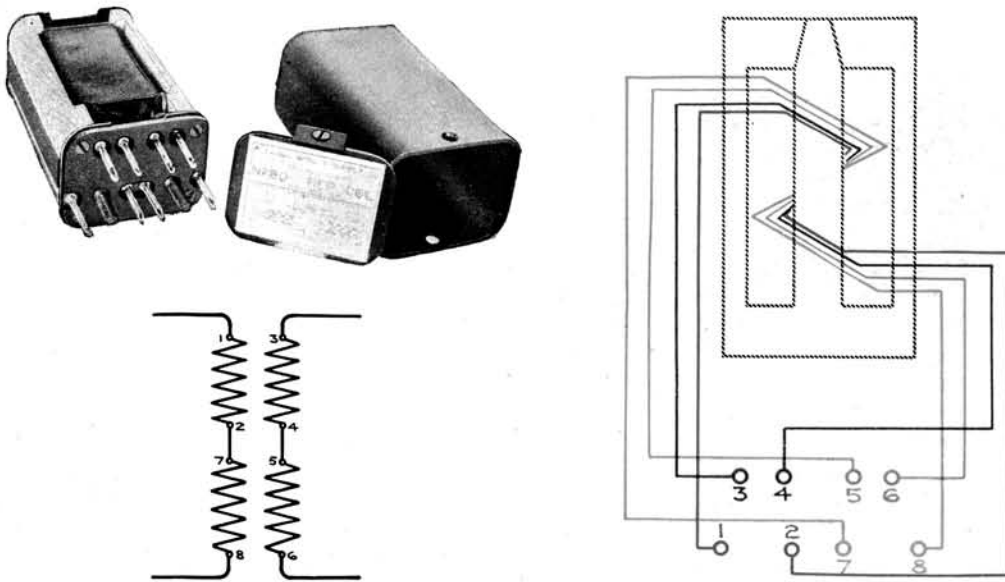


The No. 18-A repeating coil is a talk and ring through coil. It is very high in both talking and ringing efficiency. Due to the arrangement of the windings of this coil it is possible to work a split phantom with the use of one coil in each physical circuit at the point where the split phantom is cut in. Heretofore it has been necessary to cut in two repeating coils to accomplish this result, due to the capacity effect between the different windings. This fault has been overcome in the design of this coil and a practically balanced circuit is now obtained by its use.

The ringing efficiency of this coil is extremely high and the transmission loss does not exceed one-half mile. The coil is also suitable for any circuit which requires a high efficiency talk and ring through coil.

Dimensions—Length $10\frac{3}{4}$ in., Height 5 in., Width 4 in.

No. 19-A Repeating Coil



The No. 19-A repeating coil is a talk and ring through coil designed to mount on a regular relay mounting strip occupying the same space as circuit relays.

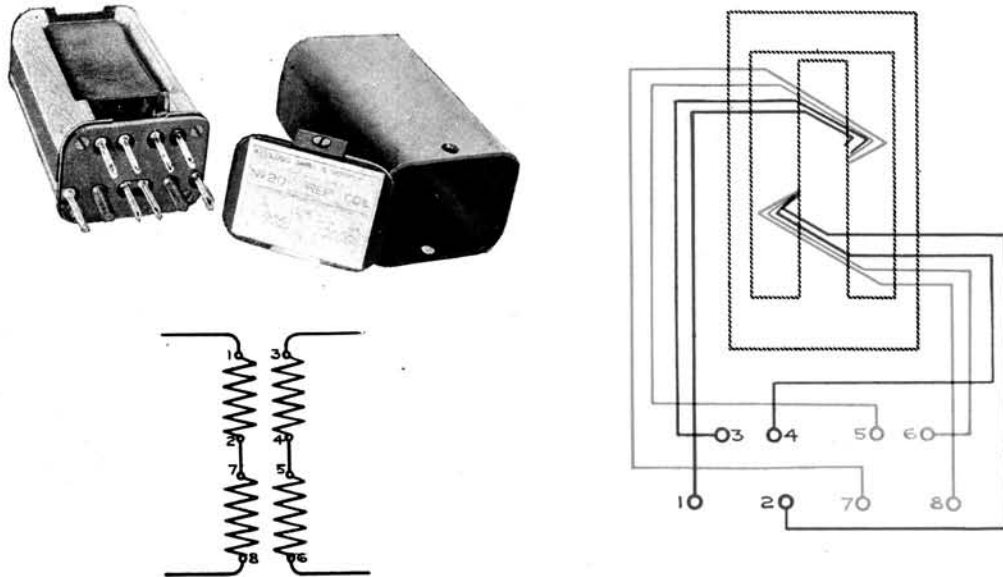
The coil is made up of four concentric windings wired on a closed magnetic circuit, and housed in a pressed steel cross-talk proof shell. The terminals are brought out in such a manner that the connections can be made similar to connecting up standard Kellogg relays.

The talking efficiency of this coil is very high and the ringing efficiency is also high considering the small amount of iron which is used in the core, due to the limited space which it occupies. The transmission loss does not exceed one-half mile.

The coil is suitable for use in cord circuits and P. B. X. trunk circuits where a ring through coil is required. The coil is not balanced for phantom or simplex work.

Dimensions—Length $3\frac{3}{8}$ in., Height $2\frac{1}{4}$ in., Width $1\frac{1}{16}$ in.

No. 20-A Repeating Coil



The No. 20-A repeating coil is a talk through only coil. The mounting and dimensions are the same as the No. 10-A repeating coil, but due to the peculiar shape of the lamination used, the coil is practically unaffected by low frequency current, thus becoming a strictly non-ring through coil.

It is particularly suitable for magneto and universal cord circuits where a non-ring through feature is required. It is also suitable for common battery cord circuits where the battery feed is through the windings of the repeating coil. It is also suitable for toll and local and P. B. X. trunks where ring through feature is not desired.

The coil is made up of four concentric windings wound on an open lamination. The transmission loss of the coil is less than five-tenths mile.

Dimensions—Length $3\frac{29}{32}$ in., Height $2\frac{1}{4}$ in., Width $1\frac{1}{16}$ in.