



# INSTALLATION • OPERATION • MAINTENANCE INSTRUCTIONS

## TYPE WSB NO-LOAD TAP CHANGER

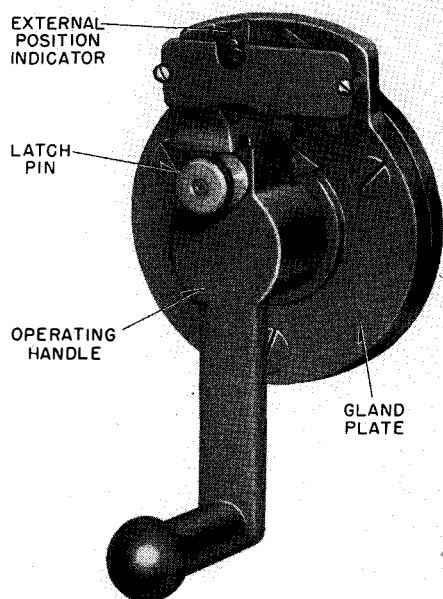


FIG. 1. Operating Mechanism and Position Indicator.

**THE TYPE WSB TAP CHANGER** provides an adequate and convenient method for changing transformer tap connections from outside the transformer case. The tap changer is mounted under oil in the transformer case and is intended for operation only when the transformer is disconnected from the line.

**Important.** No-load tap changers must not be operated with the transformer energized; the transformer must not be energized unless the tap changer is locked on an operating position (see transformer nameplate).

The Type WSB Tap Changers are made in a variety of sizes and arrangements to meet voltage and current requirements. When more than one tap changer deck is operated from a single mechanism, the individual decks are mounted axially with a micarta shaft passing through each deck. The stationary contacts, with provision on the opposite end for connecting the leads, are through-type studs molded into a thermoset plastic base,

and are arranged on a radius equal to that of the rotating element. Good connections are assured by silver plated wiping contact surfaces and by high pressure indentation of the stud into the tap leads. See Fig. 2.

### INSTALLATION

Tap changers are usually shipped mounted on the core and coil assembly and connected to the external operating mechanism. Hence, when shipment of the core and coil assembly is made separately from the tank and fittings, it is necessary to make the connection of the tap changer drive shaft to the external operating mechanism on assembly in the field. Care should be taken to see that the position indicated on the external indicator corresponds to the position indicated on the tap changer housing, and that the internal operating cam is positioned as shown in Fig. 3.

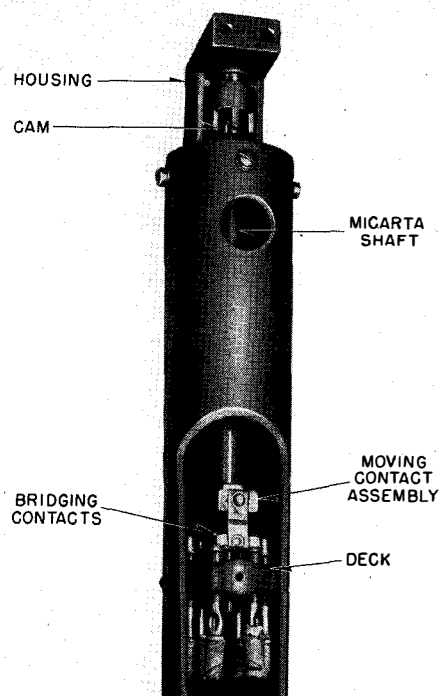


FIG. 2. Cutaway View of Single Deck, 100-Ampere, WSB Tap Changer.

# TYPE WSB NO-LOAD TAP CHANGER

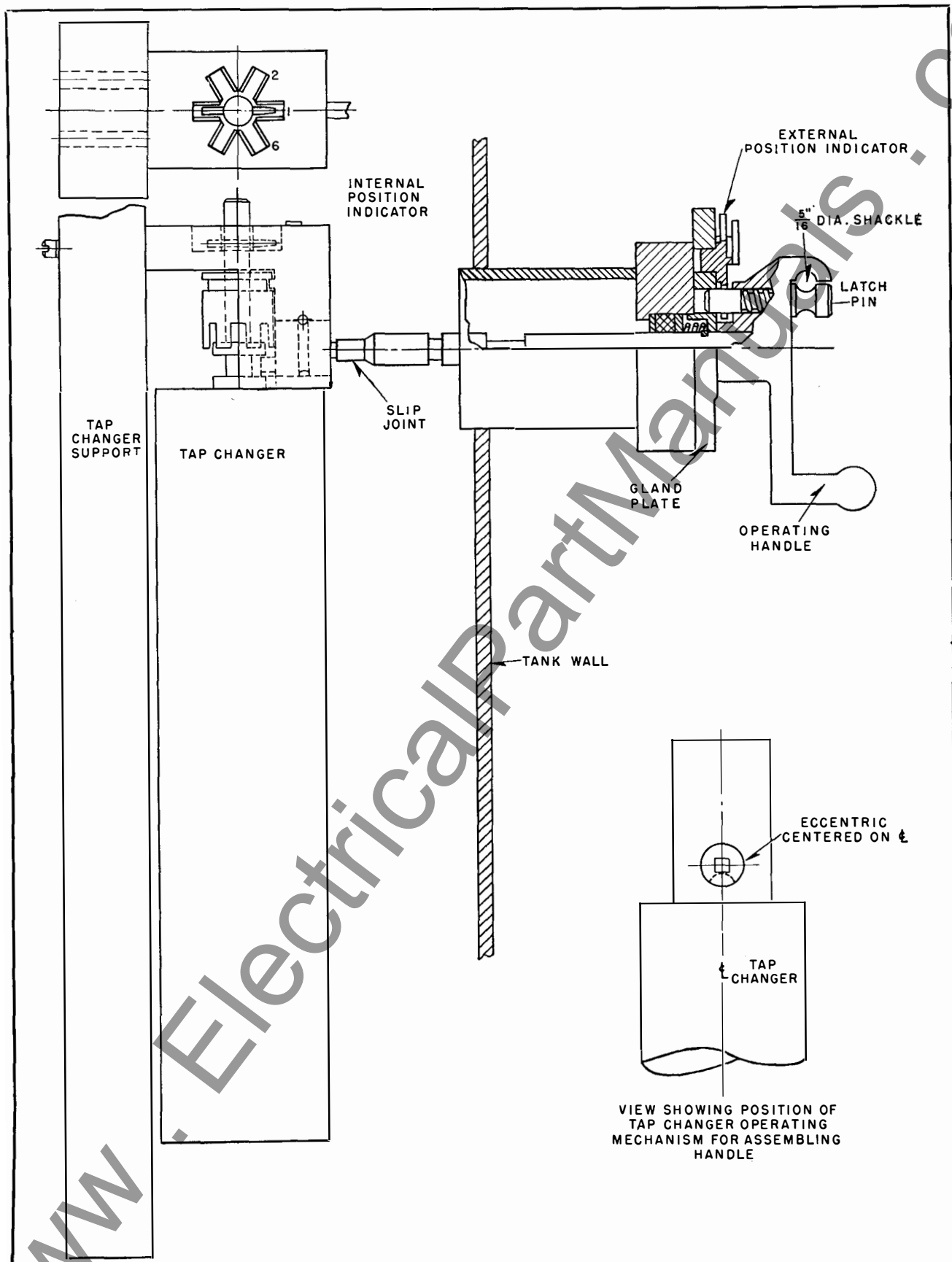


FIG. 3. Outline of Type WSB No-Load Tap Changer Mounted on Transformer.  
(In Top View, Looking Down, Internal Position Indicator is on Position One).

## TYPE WSB NO-LOAD TAP CHANGER

The external operating mechanism is connected to the tap changer drive shaft through a flexible shaft and slip joint. This arrangement permits tank expansion and slight shaft misalignments without hindrance to operation. When a tap changer or external operating mechanism is installed in the field, a check of the slip joint for free operation should be made.

### OPERATION

One tap change is made by one complete revolution of the external operating handle which is connected to a flexible shaft assembly for transfer into the transformer case through an oil-and-gas-tight stuffing gland. A position indicator is geared to the operating handle and provision is made for locking the mechanism on each position. (See Fig. 3).

Motion of the tap changer operating handle is transmitted through the flexible shaft assembly to the ninety degree Geneva gearing in the internal tap changer housing. This gearing provides the motion which lifts the moving contacts and rotates them to a new tap position. Cam action in the gearing maintains a closed circuit condition through thirty degrees rotation of the operating shaft, thus eliminating extreme accuracy in pinning the handle to the operating shaft as required in cases of field

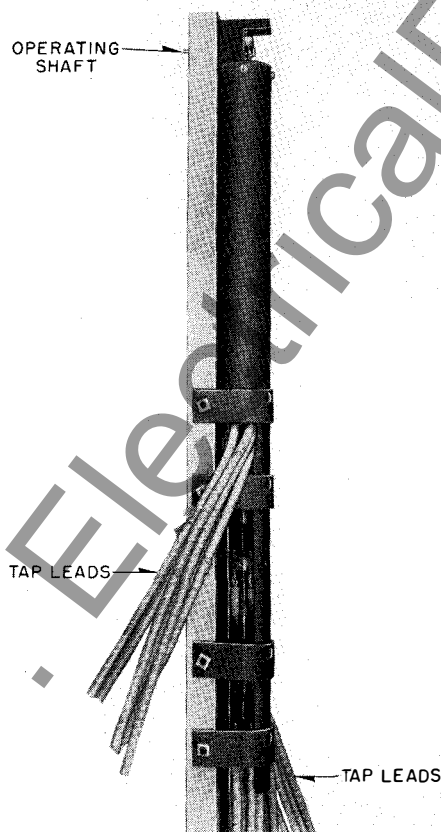


FIG. 4. Three Deck 100-Ampere Type WSB No-Load Tap Changer.

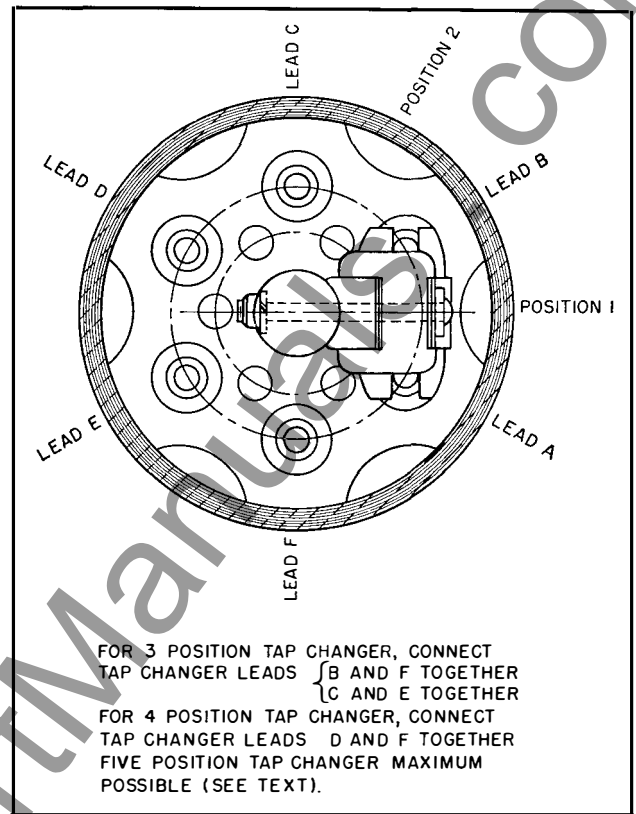


FIG. 5. Connection Diagram.

assembly. A pin and slot locking arrangement in the tap changer housing locks the micarta shaft against rotation, except when it is lifted to change position.

Copper bridging contacts which move around the circle of fixed contacts provide a connection between any two adjacent contact points. The bridging contacts are spring loaded and supported from a riveted assembly. This assembly is attached to the micarta shaft which passes through the center of each deck. Fig. 4 shows a typical mounting of both tap changer and operating mechanism.

As indicated in Fig. 5 all leads of this tap changer are connected regardless of the number of taps for the transformer. This assures that no damage will result from accidental operation on positions not shown on the transformer nameplate.

Position "6" is indicated on both operating mechanisms, but is not used as a tap position on the tap changer. Accidental operation on position "6" will produce a voltage corresponding to one of the other tap positions, and will give an unbalance of the two legs of the transformer winding. This unbalance may affect the impedance or magnetic forces, but would not be detrimental to the transformer.

## TYPE WSB NO-LOAD TAP CHANGER

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### MAINTENANCE

The Type WSB Tap Changer is designed to operate without maintenance; therefore provision for dismantling is not made. Unit replacement is recommended in case of breakdown.

If replacement of a tap changer or a high voltage coil is necessary, the connection should be made

by cutting the tap leads adjacent to the tap changer and brazing the leads from the new tap changer at this point. The replacement tap changer leads are marked from A to F, and may be identified with each tap changer position as shown in Fig. 5. Corresponding winding taps are indicated on the transformer nameplate.



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## NO-LOAD TAP CHANGER TYPE WSB

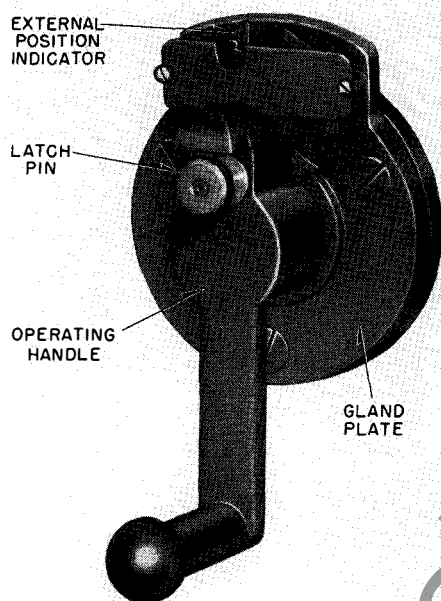


FIG. 1. Operating Mechanism and Position Indicator.

**THE TYPE WSB TAP CHANGER** provides an adequate and convenient method for changing transformer tap connections from outside the transformer case. The tap changer is mounted under oil in the transformer case and is intended for operation only when the transformer is disconnected from the line.

**Important.** No-load tap changers must not be operated with the transformer energized; the transformer must not be energized unless the tap changer is locked on an operating position (see transformer nameplate).

The Type WSB Tap Changers are made in a variety of sizes and arrangements to meet voltage and current requirements. When more than one tap changer deck is operated from a single mechanism, the individual decks are mounted axially with a micarta shaft passing through each deck. The stationary contacts, with provision on the opposite end for connecting the leads, are through type studs mounted in a thermoset plastic base, and are arranged on a radius equal to that of

the moving contacts. Good connections are assured by silver plated wiping contact surfaces, and by either high pressure indentation or swaging of the stud onto the tap leads. See Figs. 2 & 3.

### INSTALLATION

Tap changers are usually shipped mounted on the core and coil assembly and connected to the external operating mechanism. Hence, when shipment of the core and coil assembly is made separately from the tank and fittings, it is necessary to make the connection of the tap changer drive shaft to the external operating mechanism on assembly in the field. Care should be taken to see that the position indicated on the external indicator corresponds to the position indicated on the tap changer housing, and that the internal operating cam is positioned as shown in Fig. 5.

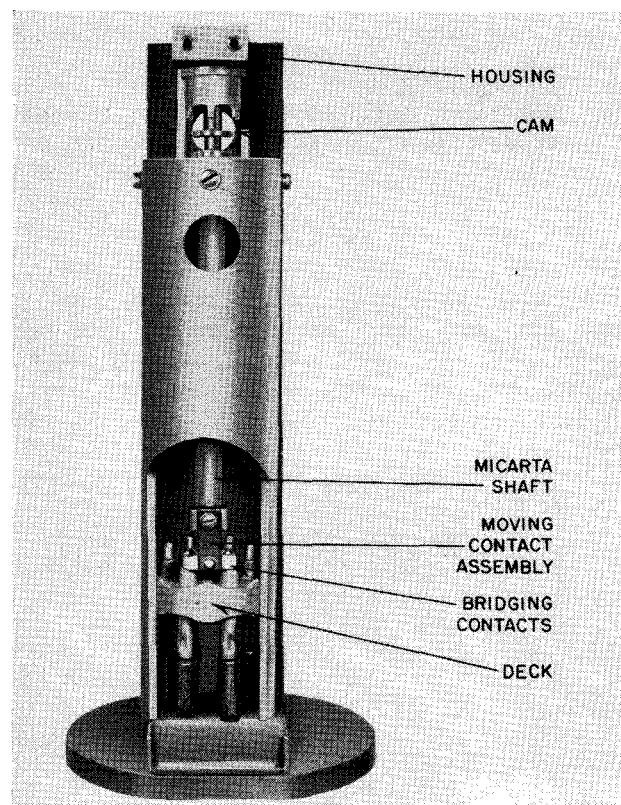


FIG. 2. Cutaway View of Single Deck, 100-Ampere, WSB Tap Changer.

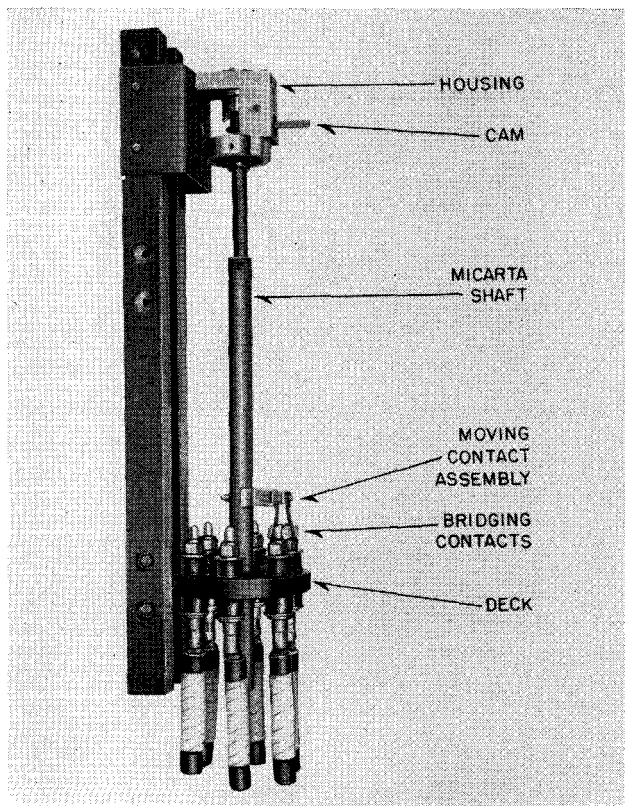


FIG. 3. Single Deck 200 Ampere WSB Tap Changer

The external operating mechanism is connected to the tap changer drive shaft through a flexible shaft and slip joint. This arrangement permits tank expansion and slight shaft misalignments without hindrance to operation. When a tap changer or external operating mechanism is installed in the field, a check of the slip joint for free operation should be made (see Fig. 5).

## OPERATION

One tap change is made by one complete revolution of the external operating handle which is connected to a flexible shaft assembly for transfer into the transformer case through an oil-and-gas-tight stuffing gland. A position indicator is geared to the operating handle and provision is made for locking the mechanism on each position. (See Fig. 5).

Motion of the tap changer operating handle is transmitted through the flexible shaft assembly to the ninety degree Geneva gearing in the internal tap changer housing. This gearing provides the motion which lifts the moving contacts and rotates them to a new tap position. Cam action in the gearing maintains a closed circuit condition through thirty degrees rotation of the operating shaft, thus eliminating extreme accuracy in pinning the handle to the operating shaft as required in cases of field assembly. A pin and slot locking arrangement in

the tap changer housing locks the micarta shaft against rotation, except when it is lifted to change position.

Silver plated copper bridging contacts which move around the circle of fixed contacts provide a connection between any two adjacent contact points. The bridging contacts are spring loaded and supported from an overhead assembly. This assembly is attached to the micarta shaft which passes through the center of each deck.

As indicated in Fig. 5 all leads of the 100 amp tap changer are connected regardless of the number of taps for the transformer. This assures that no damage will result from accidental operation on positions not shown on the transformer nameplate.

This arrangement is necessary because the studs are molded into the deck.

The connection diagram of the 200 amp. T.C. is shown in Fig. 6. For this size Tap Changer the studs are bolted to the molded deck, and it is not necessary to bring leads into all six studs. When less than the standard number of six taps and five positions are supplied, adequate means will be provided on the external operating mechanism to prevent operating the tap changer on unconnected positions.

Position "6" is indicated on both operating mechanisms, but is not used as a tap position on

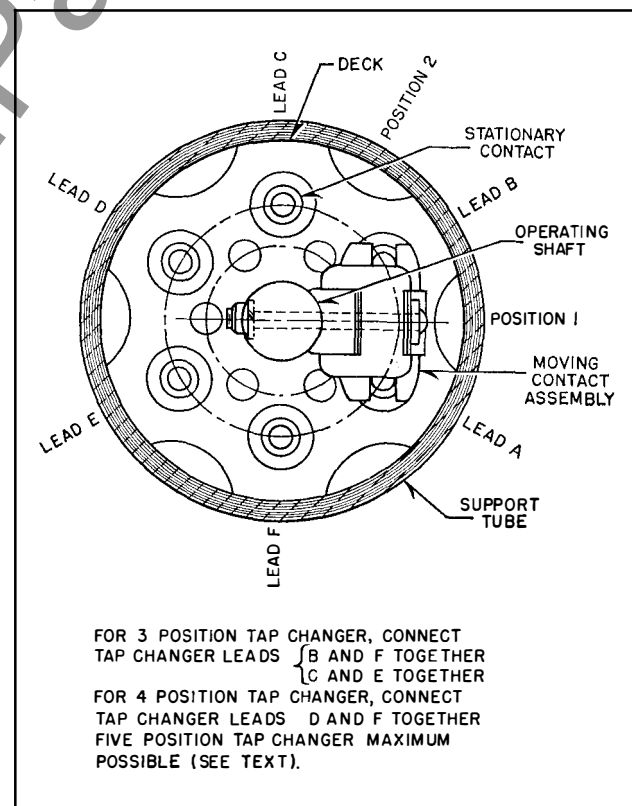


FIG. 4. Connection Diagram for 100 Amp Tap Changer

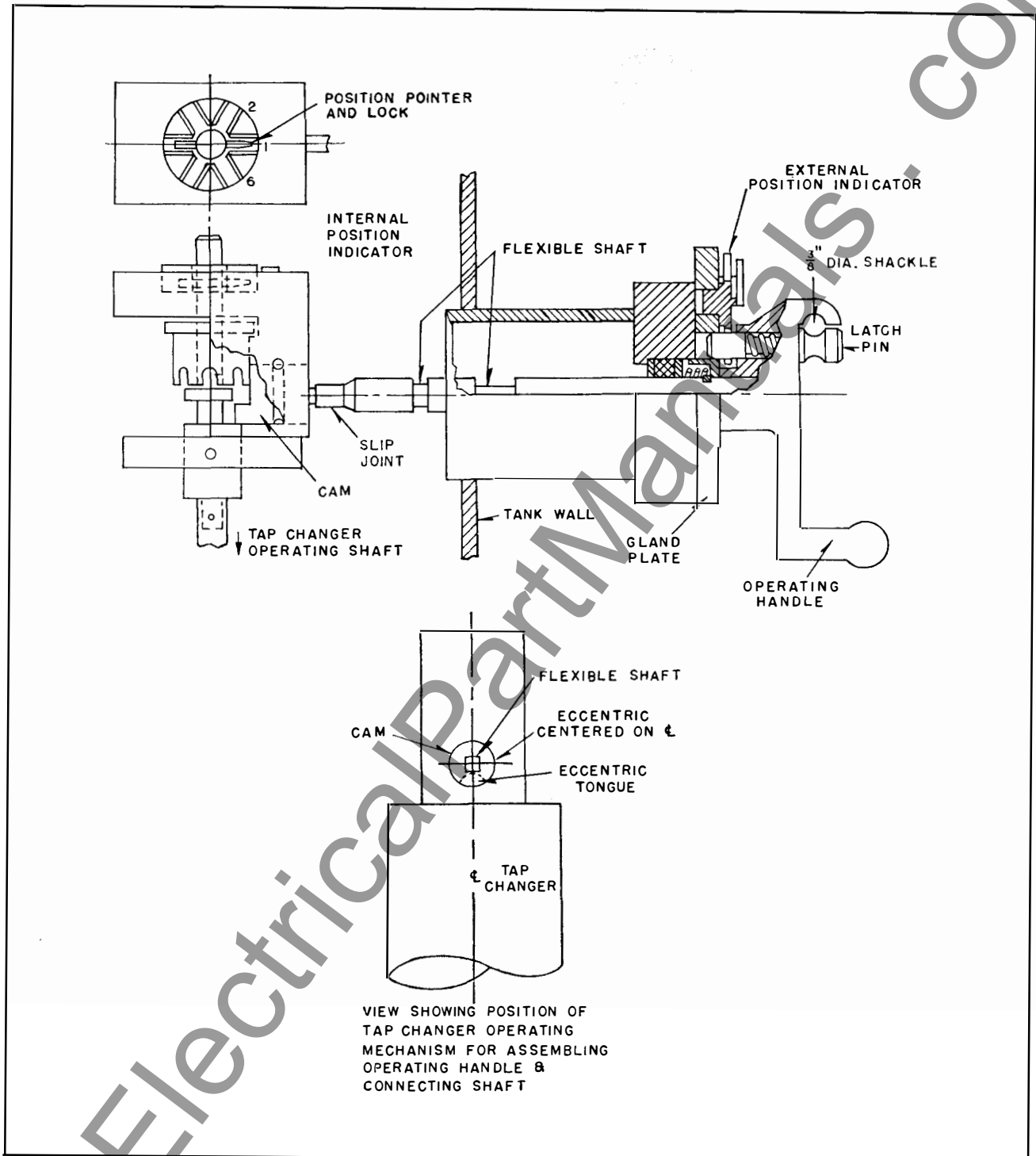


FIG. 5. Outline of Type WSB No-Load Tap Changer Operating Mechanisms Mounted on Transformer. (In Top View, Looking Down, Internal Position Indicator is on Position One).

the tap changer. Accidental operation on position "6" will produce a voltage corresponding to one of the other tap positions, and will give an unbalance of the two legs of the transformer winding. This unbalance may affect the impedance or magnetic forces, but would not be detrimental to the transformer.

## MAINTENANCE

**1. 100 Amp Tap Changer.** The Tap Changer is designed to operate without maintenance; therefore provision for dismantling is not made. Unit replacement is recommended in case of breakdown.

## NO-LOAD TAP CHANGER TYPE WSB

If replacement of a tap changer or a high voltage coil is necessary, the connection should be made by cutting the tap leads adjacent to the tap changer and brazing the leads from the new tap changer at this point. The replacement tap changer leads are marked from A to F, and may be identified with each tap changer position as shown in Fig. 4. Corresponding winding taps are indicated on the transformer nameplate.

**2. 200 Amp Tap Changer.** The Tap Changer is designed to operate without maintenance; however, the moving and/or stationary contacts may be removed for replacement or repair in case of minor damage. Unit replacement is recommended in case of breakdown.

The Tap Changer may be replaced in a manner similar to the 100 amp tap changer (except refer to Fig. 6 for connection diagram).

### RENEWAL PARTS

Order renewal parts from the nearest Westinghouse office. Include a complete description of the part wanted along with the data on the nameplate attached to the transformer tank wall.

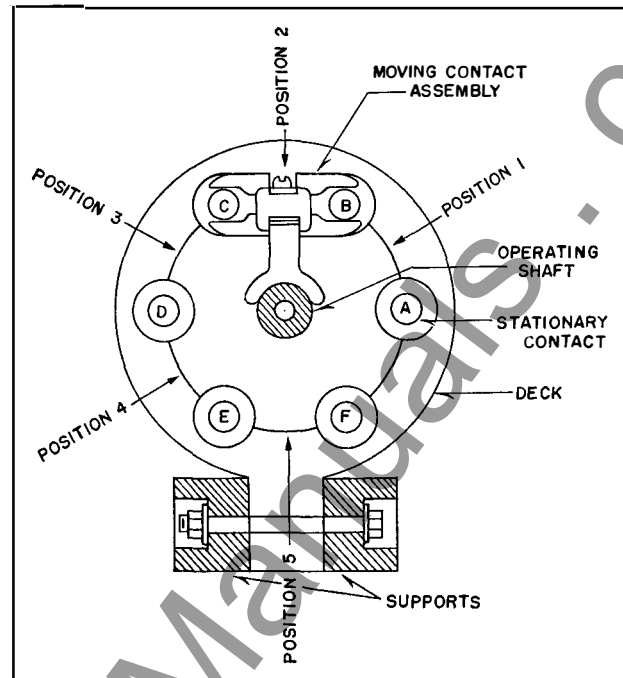


FIG. 6. Connection Diagram for 200 Amp Changer



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## NO-LOAD TAP CHANGER TYPE WSB

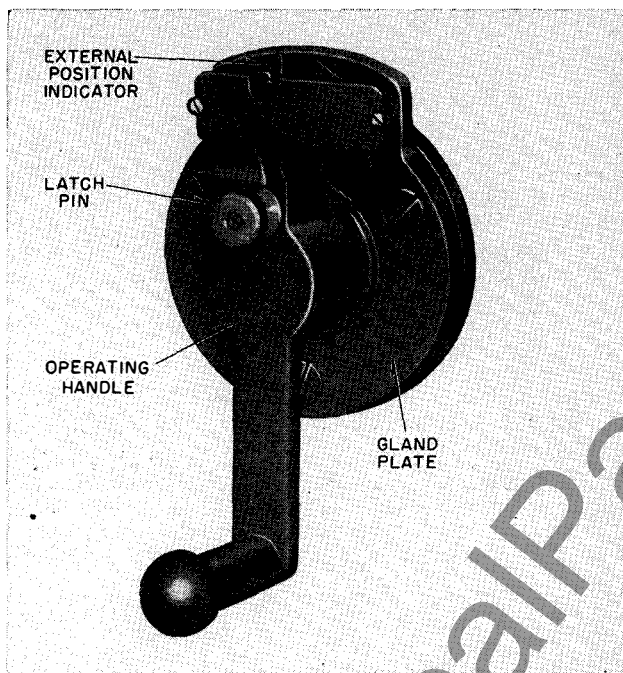


FIG. 1. Operating Mechanism and Position Indicator.

THE TYPE WSB TAP CHANGER provides an adequate and convenient method for changing transformer tap connections from outside the transformer case. The tap changer is mounted under oil in the transformer case and is intended for operation only when the transformer is disconnected from the line.

**Important.** No-load tap changers must not be operated with the transformer energized; the transformer must not be energized unless the tap changer is locked on an operating position (see transformer nameplate).

The Type WSB Tap Changers are made in a variety of sizes and arrangements to meet voltage and current requirements. When more than one tap changer deck is operated from a single mechanism, the individual decks are mounted axially with a micarta shaft passing through each deck. The stationary contacts, with provision on the opposite end for connecting the leads, are through type studs mounted in a thermoset plastic base, and are arranged on a radius equal to that of

the moving contacts. Good connections are assured by silver plated wiping contact surfaces, and by either high pressure indentation or swaging of the stud onto the tap leads. See Figs. 2 & 3.

### INSTALLATION

Tap changers are usually shipped mounted on the core and coil assembly and connected to the external operating mechanism. Hence, when shipment of the core and coil assembly is made separately from the tank and fittings, it is necessary to make the connection of the tap changer drive shaft to the external operating mechanism on assembly in the field. Care should be taken to see that the position indicated on the external indicator corresponds to the position indicated on the tap changer housing, and that the internal operating cam is positioned as shown in Fig. 5.

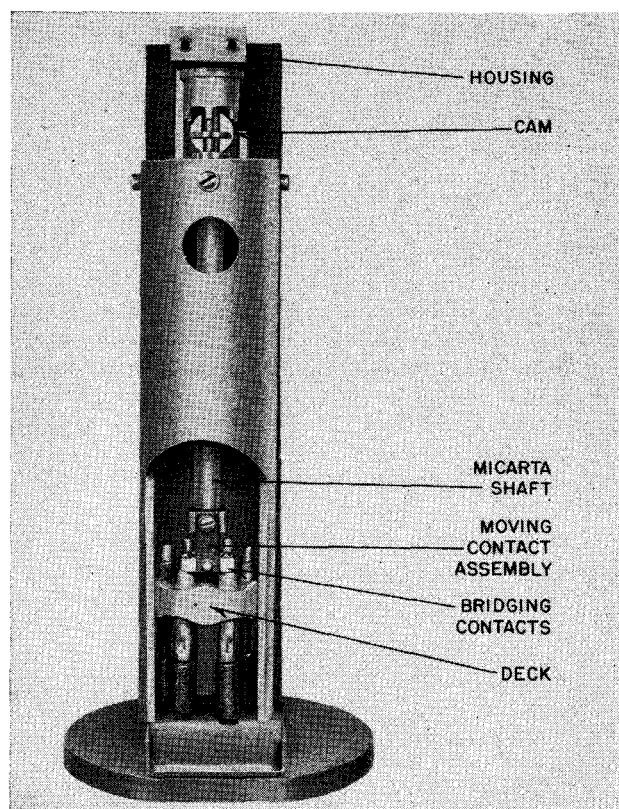


FIG. 2. Cutaway View of Single Deck, 100-Ampere, WSB Tap Changer.

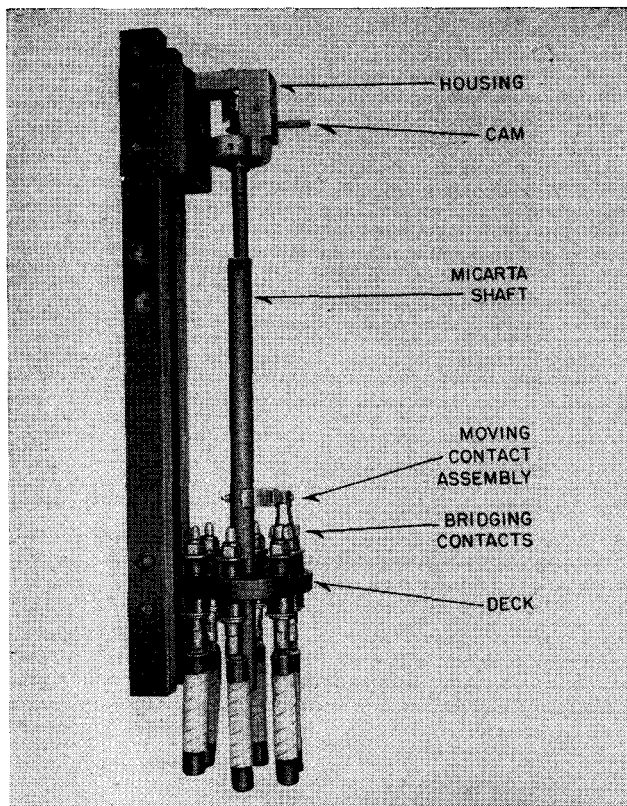


FIG. 3. Single Deck 200 and 400 Ampere WSB Tap Changer

The external operating mechanism is connected to the tap changer drive shaft through a flexible shaft and slip joint. This arrangement permits tank expansion and slight shaft misalignments without hindrance to operation. When a tap changer or external operating mechanism is installed in the field, a check of the slip joint for free operation should be made (see Fig. 5).

## OPERATION

One tap change is made by one complete revolution of the external operating handle which is connected to a flexible shaft assembly for transfer into the transformer case through an oil-and-gas-tight stuffing gland. A position indicator is geared to the operating handle and provision is made for locking the mechanism on each position. (See Fig. 5).

Motion of the tap changer operating handle is transmitted through the flexible shaft assembly to the ninety degree Geneva gearing in the internal tap changer housing. This gearing provides the motion which lifts the moving contacts and rotates them to a new tap position. Cam action in the gearing maintains a closed circuit condition through thirty degrees rotation of the operating shaft, thus eliminating extreme accuracy in pinning the handle to the operating shaft as required in cases of field assembly. A pin and slot locking arrangement in

the tap changer housing locks the micarta shaft against rotation, except when it is lifted to change position.

Silver plated copper bridging contacts which move around the circle of fixed contacts provide a connection between any two adjacent contact points. The bridging contacts are spring loaded and supported from an overhead assembly. This assembly is attached to the micarta shaft which passes through the center of each deck.

As indicated in Fig. 5 all leads of the 100 amp tap changer are connected regardless of the number of taps for the transformer. This assures that no damage will result from accidental operation on positions not shown on the transformer nameplate.

This arrangement is necessary because the studs are molded into the deck.

The connection diagram of the 200 and 400 amp. T.C. is shown in Fig. 6. For this size Tap Changer the studs are bolted to the molded deck, and it is not necessary to bring leads into all six studs. When less than the standard number of six taps and five positions are supplied, adequate means will be provided on the external operating mechanism to prevent operating the tap changer on unconnected positions.

Position "6" is indicated on both operating mechanisms, but is not used as a tap position on

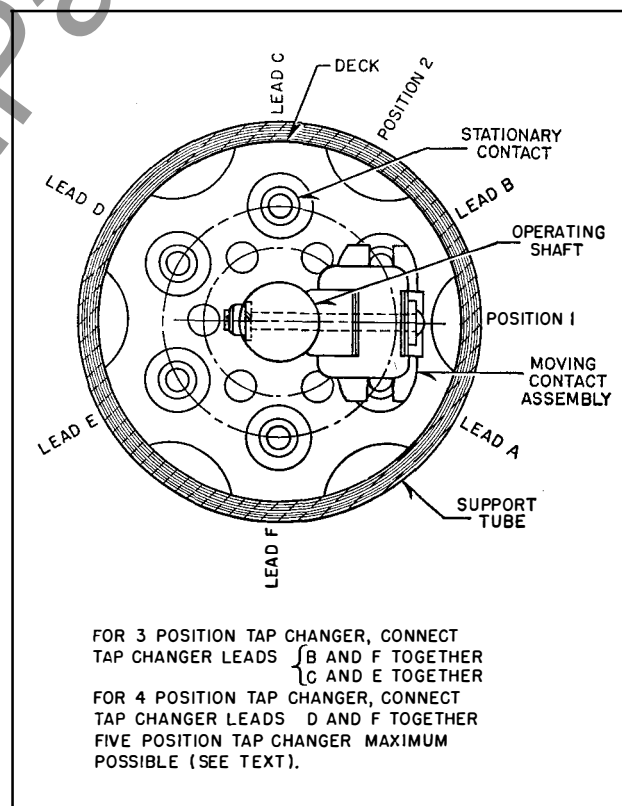


FIG. 4. Connection Diagram for 100 Amp Tap Changer

## NO-LOAD TAP CHANGER TYPE WSB

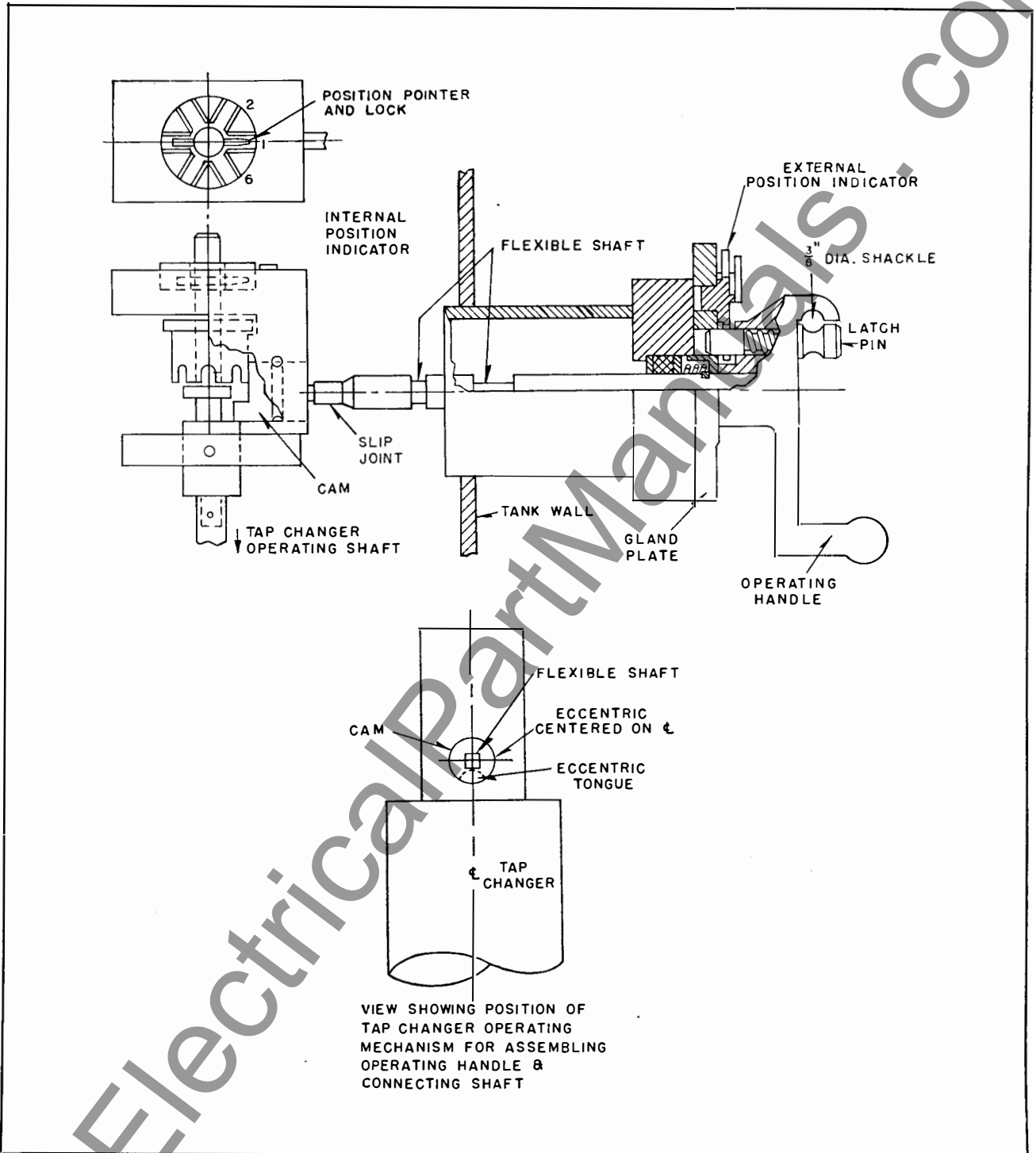


FIG. 5. Outline of Type WSB No-Load Tap Changer Operating Mechanisms Mounted on Transformer. (In Top View, Looking Down, Internal Position Indicator is on Position One).

the tap changer. Accidental operation on position "6" will produce a voltage corresponding to one of the other tap positions, and will give an unbalance of the two legs of the transformer winding. This unbalance may affect the impedance or magnetic forces, but would not be detrimental to the transformer.

### MAINTENANCE

**1. 100 Amp Tap Changer.** The Tap Changer is designed to operate without maintenance; therefore provision for dismantling is not made. Unit replacement is recommended in case of breakdown

## NO-LOAD TAP CHANGER TYPE WSB

If replacement of a tap changer or a high voltage coil is necessary, the connection should be made by cutting the tap leads adjacent to the tap changer and brazing the leads from the new tap changer at this point. The replacement tap changer leads are marked from A to F, and may be identified with each tap changer position as shown in Fig. 4. Corresponding winding taps are indicated on the transformer nameplate.

**2. 200 and 400 Amp Tap Changer.** The Tap Changer is designed to operate without maintenance; however, the moving and/or stationary contacts may be removed for replacement or repair in case of minor damage. Unit replacement is recommended in case of breakdown.

The Tap Changer may be replaced in a manner similar to the 100 amp tap changer (except refer to Fig. 6 for connection diagram).

### RENEWAL PARTS

Order renewal parts from the nearest Westinghouse office. Include a complete description of the part wanted along with the data on the nameplate attached to the transformer tank wall.

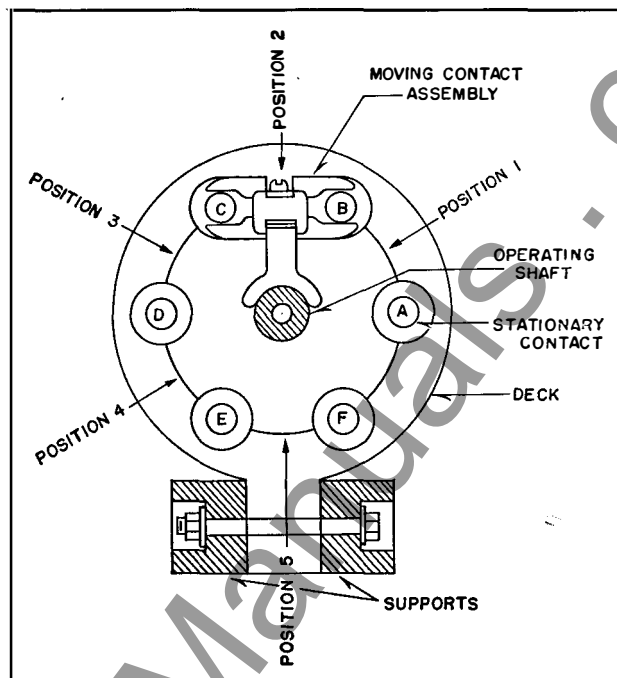


FIG. 6. Connection Diagram for 200 Amp Changer



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## NO-LOAD TAP CHANGER TYPE WSB

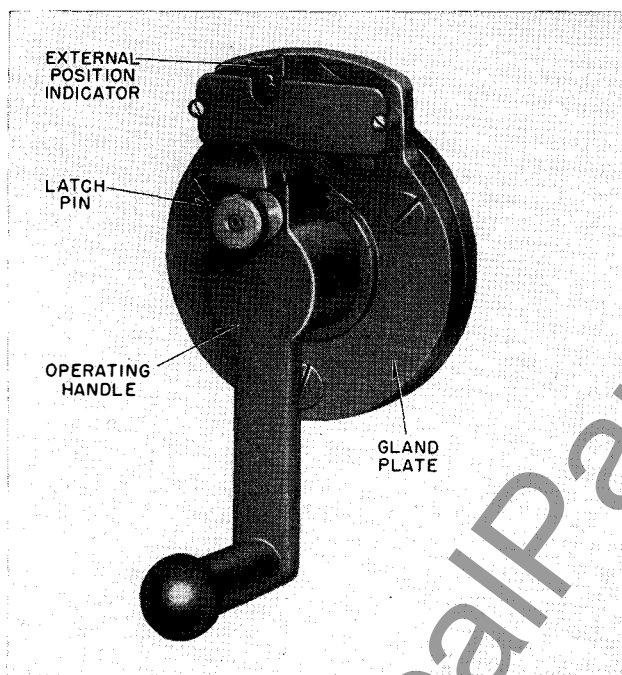


FIG. 1. Operating Mechanism and Position Indicator.

**THE TYPE WSB TAP CHANGER** provides an adequate and convenient method for changing transformer tap connections from outside the transformer case. The tap changer is mounted under oil in the transformer case and is intended for operation only when the transformer is disconnected from the line.

**Important.** No-load tap changers must not be operated with the transformer energized; the transformer must not be energized unless the tap changer is locked on an operating position (see transformer nameplate).

The Type WSB Tap Changers are made in a variety of sizes and arrangements to meet voltage and current requirements. When more than one tap changer deck is operated from a single mechanism, the individual decks are mounted axially with a micarta shaft passing through each deck. The stationary contacts, with provision on the opposite end for connecting the leads, are through type studs mounted in a thermoset plastic base, and are arranged on a radius equal to that of

the moving contacts. Good connections are assured by silver plated wiping contact surfaces, and by either high pressure indentation or swaging of the stud onto the tap leads. See Figs. 2 & 3.

### INSTALLATION

Tap changers are usually shipped mounted on the core and coil assembly and connected to the external operating mechanism. Hence, when shipment of the core and coil assembly is made separately from the tank and fittings, it is necessary to make the connection of the tap changer drive shaft to the external operating mechanism on assembly in the field. Care should be taken to see that the position indicated on the external indicator corresponds to the position indicated on the tap changer housing, and that the internal operating cam is positioned as shown in Fig. 5.

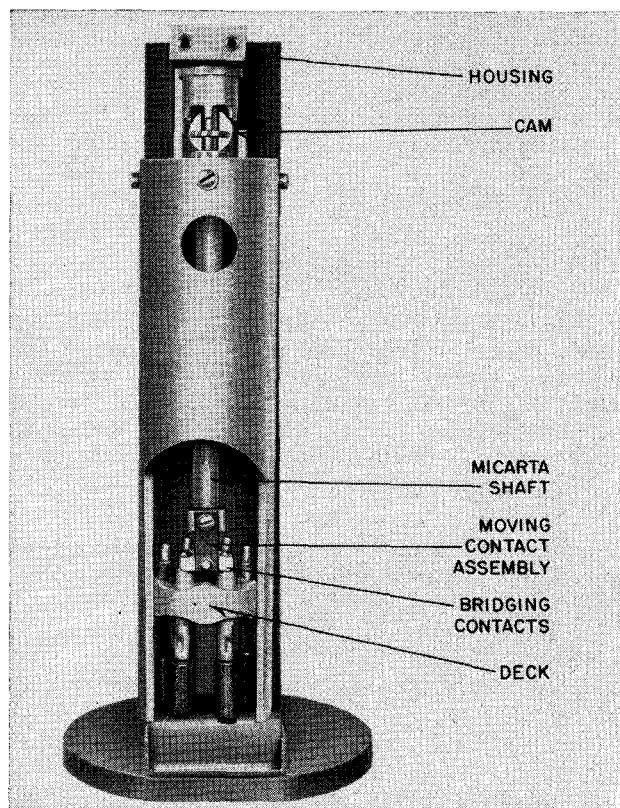


FIG. 2. Cutaway View of Single Deck, 100-Ampere, WSB Tap Changer.

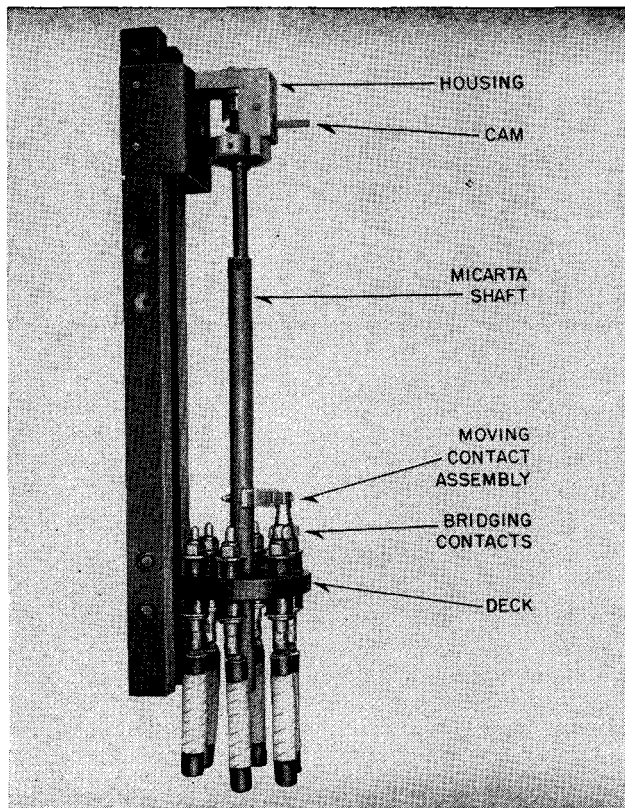


FIG. 3. Single Deck 200 and 400 Ampere WSB Tap Changer

The external operating mechanism is connected to the tap changer drive shaft through a flexible shaft and slip joint. This arrangement permits tank expansion and slight shaft misalignments without hindrance to operation. When a tap changer or external operating mechanism is installed in the field, a check of the slip joint for free operation should be made (see Fig. 5).

## OPERATION

One tap change is made by one complete revolution of the external operating handle which is connected to a flexible shaft assembly for transfer into the transformer case through an oil-and-gas-tight stuffing gland. A position indicator is geared to the operating handle and provision is made for locking the mechanism on each position. (See Fig. 5).

Motion of the tap changer operating handle is transmitted through the flexible shaft assembly to the ninety degree Geneva gearing in the internal tap changer housing. This gearing provides the motion which lifts the moving contacts and rotates them to a new tap position. Cam action in the gearing maintains a closed circuit condition through thirty degrees rotation of the operating shaft, thus eliminating extreme accuracy in pinning the handle to the operating shaft as required in cases of field assembly. A pin and slot locking arrangement in

the tap changer housing locks the micarta shaft against rotation, except when it is lifted to change position.

Silver plated copper bridging contacts which move around the circle of fixed contacts provide a connection between any two adjacent contact points. The bridging contacts are spring loaded and supported from an overhead assembly. This assembly is attached to the micarta shaft which passes through the center of each deck.

As indicated in Fig. 5 all leads of the 100 amp tap changer are connected regardless of the number of taps for the transformer. This assures that no damage will result from accidental operation on positions not shown on the transformer nameplate.

This arrangement is necessary because the studs are molded into the deck.

The connection diagram of the 200 and 400 amp. T.C. is shown in Fig. 6. For this size Tap Changer the studs are bolted to the molded deck, and it is not necessary to bring leads into all six studs. When less than the standard number of six taps and five positions are supplied, adequate means will be provided on the external operating mechanism to prevent operating the tap changer on unconnected positions.

Position "OFF" is indicated on both operating mechanisms, but is not used as a tap position on

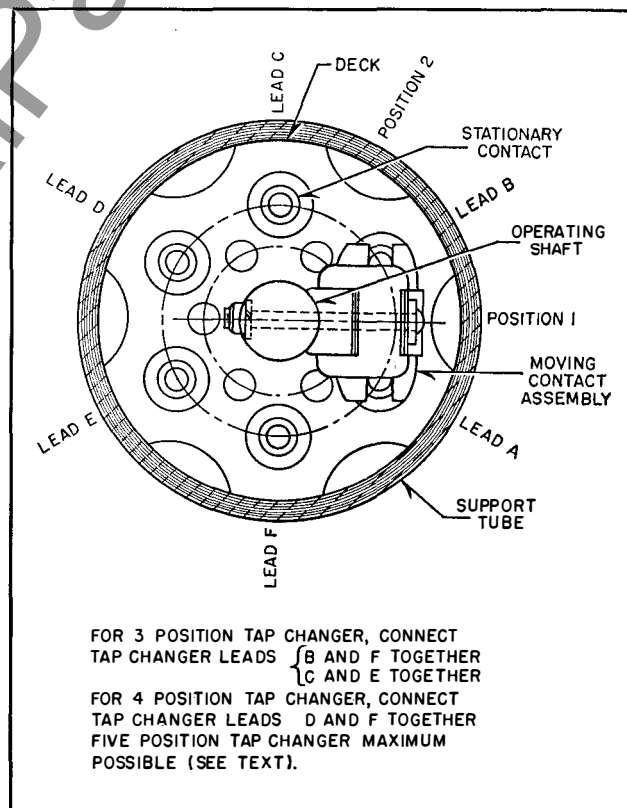


FIG. 4. Connection Diagram for 100 Amp Tap Changer



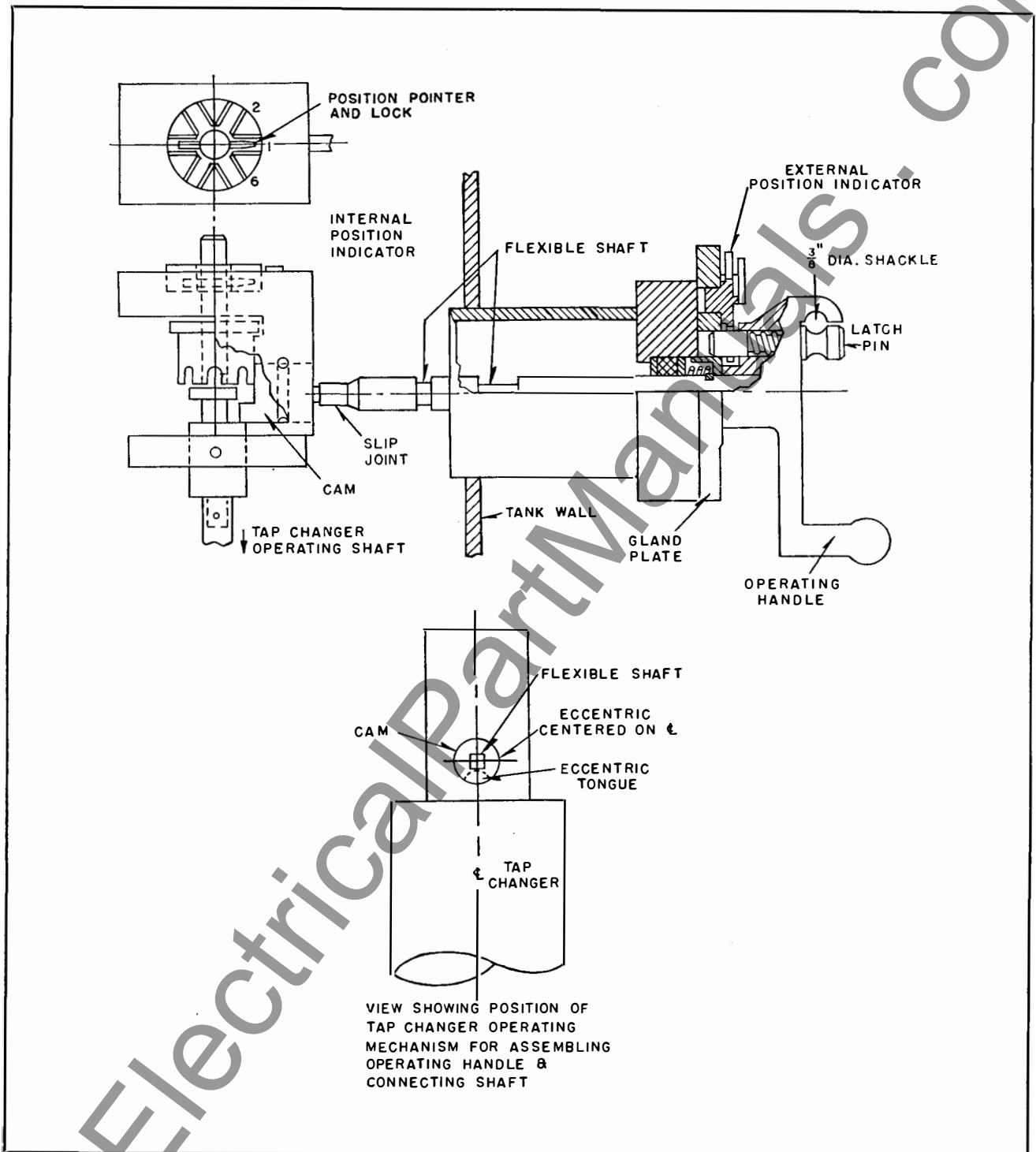


FIG. 5. Outline of Type WSB No-Load Tap Changer Operating Mechanisms Mounted on Transformer. (In Top View, Looking Down, Internal Position Indicator is on Position One).

the tap changer. Accidental operation on position "OFF" will produce a voltage corresponding to one of the other tap positions, and will give an unbalance of the two legs of the transformer winding. This unbalance may affect the impedance or magnetic forces, but would not be detrimental to the transformer.

## MAINTENANCE

**1. 100 Amp Tap Changer.** The Tap Changer is designed to operate without maintenance; therefore provision for dismantling is not made. Unit replacement is recommended in case of breakdown.

## NO-LOAD TAP CHANGER TYPE WSB

If replacement of a tap changer or a high voltage coil is necessary, the connection should be made by cutting the tap leads adjacent to the tap changer and brazing the leads from the new tap changer at this point. The replacement tap changer leads are marked from A to F, and may be identified with each tap changer position as shown in Fig. 4. Corresponding winding taps are indicated on the transformer nameplate.

**2. 200 and 400 Amp Tap Changer.** The Tap Changer is designed to operate without maintenance; however, the moving and/or stationary contacts may be removed for replacement or repair in case of minor damage. Unit replacement is recommended in case of breakdown.

The Tap Changer may be replaced in a manner similar to the 100 amp tap changer (except refer to Fig. 6 for connection diagram).

### RENEWAL PARTS

Order renewal parts from the nearest Westinghouse office. Include a complete description of the part wanted along with the data on the nameplate attached to the transformer tank wall.

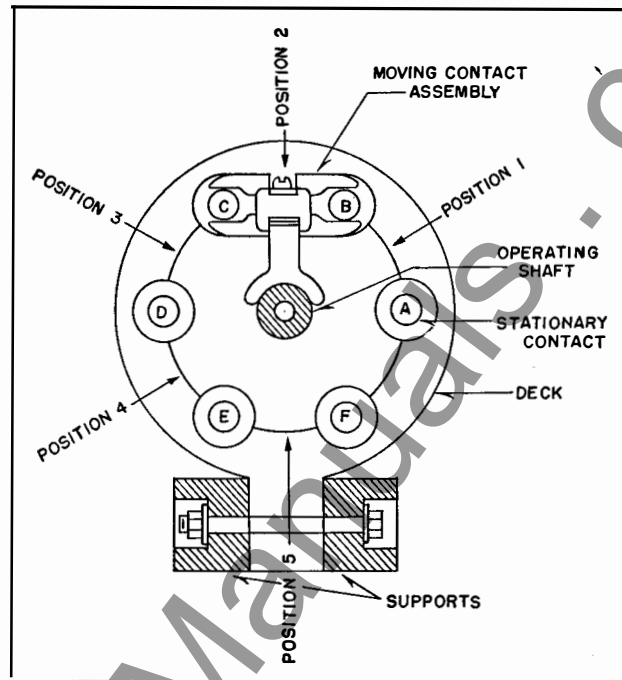


FIG. 6. Connection Diagram for 200 Amp Changer



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## NO-LOAD TAP CHANGER TYPE WSB

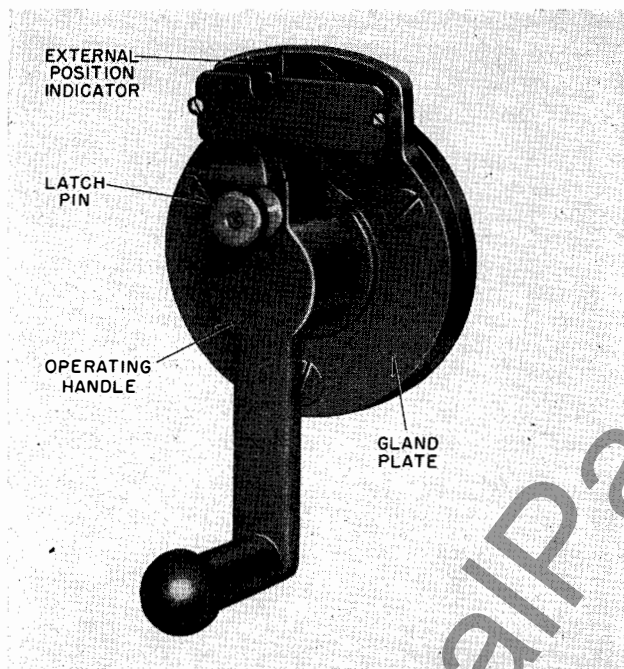


FIG. 1. Operating Mechanism and Position Indicator

**THE TYPE WSB TAP CHANGER** provides an adequate and convenient method for changing transformer tap connections from outside the transformer case. The tap changer is mounted under oil in the transformer case and is intended for operation only when the transformer is disconnected from the line.

**Important.** No-load tap changers must not be operated with the transformer energized; the transformer must not be energized unless the tap changer is locked on an operating position (see transformer nameplate).

The Type WSB Tap Changers are made in a variety of sizes and arrangements to meet voltage and current requirements. When more than one tap changer deck is operated from a single mechanism, the individual decks are mounted axially with a MICARTA® shaft passing through each deck. The stationary contacts, with provision on the opposite end for connecting the leads, are through type studs mounted in a thermoset plastic base, and are arranged on a radius equal to that of

the moving contacts. Good connections are assured by silver plated wiping contact surfaces, and by either high pressure indentation or swaging of the stud onto the tap leads. See Figs. 2 & 3.

### INSTALLATION

Tap changers are usually shipped mounted on the core and coil assembly and connected to the external operating mechanism. Hence, when shipment of the core and coil assembly is made separately from the tank and fittings, it is necessary to make the connection of the tap changer drive shaft to the external operating mechanism on assembly in the field. Care should be taken to see that the position indicated on the external indicator corresponds to the position indicated on the tap changer housing, and that the internal operating cam is positioned as shown in Fig. 5.

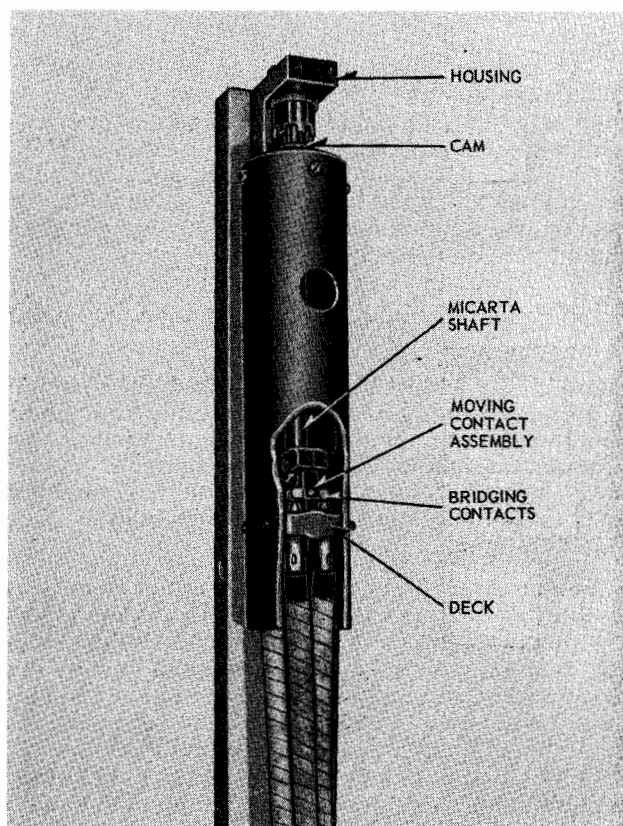
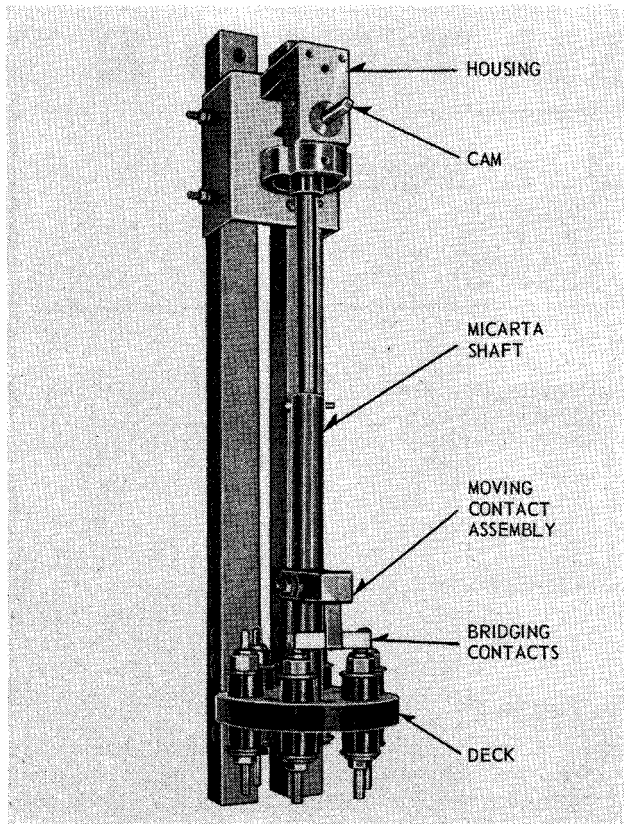


FIG. 2. Cutaway View of Single Deck, 100-Ampere, WSB Tap Changer



**FIG. 3. Single Deck 200 and 400 Ampere WSB Tap Changer**

The external operating mechanism is connected to the tap changer drive shaft through a flexible shaft and slip joint. This arrangement permits tank expansion and slight shaft misalignments without hindrance to operation. When a tap changer or external operating mechanism is installed in the field, a check of the slip joint for free operation should be made (see Fig. 5).

### OPERATION

One tap change is made by one complete revolution of the external operating handle which is connected to a flexible shaft assembly for transfer into the transformer case through an oil-and-gas-tight stuffing gland. A position indicator is geared to the operating handle and provision is made for locking the mechanism on each position. (See Fig. 5).

Motion of the tap changer operating handle is transmitted through the flexible shaft assembly to the ninety degree Geneva gearing in the internal tap changer housing. This gearing provides the motion which lifts the moving contacts and rotates them to a new tap position. Cam action in the gearing maintains a closed circuit condition through thirty degrees rotation of the operating shaft, thus eliminating extreme accuracy in pinning the handle to the operating shaft as required in cases of field assembly. A pin and slot locking arrangement in

the tap changer housing locks the MICARTA shaft against rotation, except when it is lifted to change position.

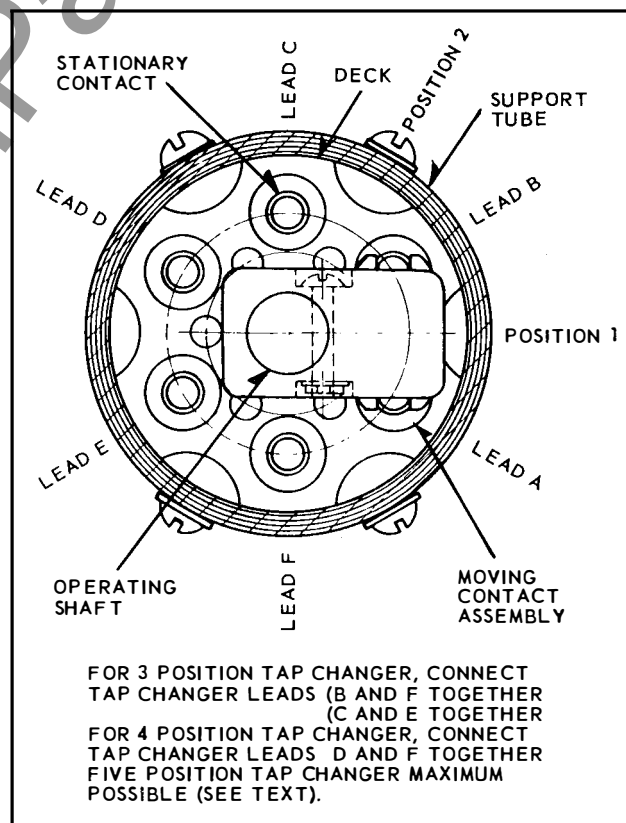
Silver plated copper bridging contacts which move around the circle of fixed contacts provide a connection between any two adjacent contact points. The bridging contacts are spring loaded and supported from an overhead assembly. This assembly is attached to the micarta shaft which passes through the center of each deck.

As indicated in Fig. 5 all leads of the 100 amp. tap changer are connected regardless of the number of taps for the transformer. This assures that no damage will result from accidental operation on positions not shown on the transformer nameplate.

This arrangement is necessary because the studs are molded into the deck.

The connection diagram of the 200 and 400 amp. T.C. is shown in Fig. 6. For this size Tap Changer the studs are bolted to the molded deck, and it is not necessary to bring leads into all six studs. When less than the standard number of six taps and five positions are supplied, adequate means will be provided on the external operating mechanism to prevent operating the tap changer on unconnected positions.

Position "OFF" is indicated on both operating mechanisms, but is not used as a tap position on



**FIG. 4. Connection Diagram for 100 Ampere Tap Changer**

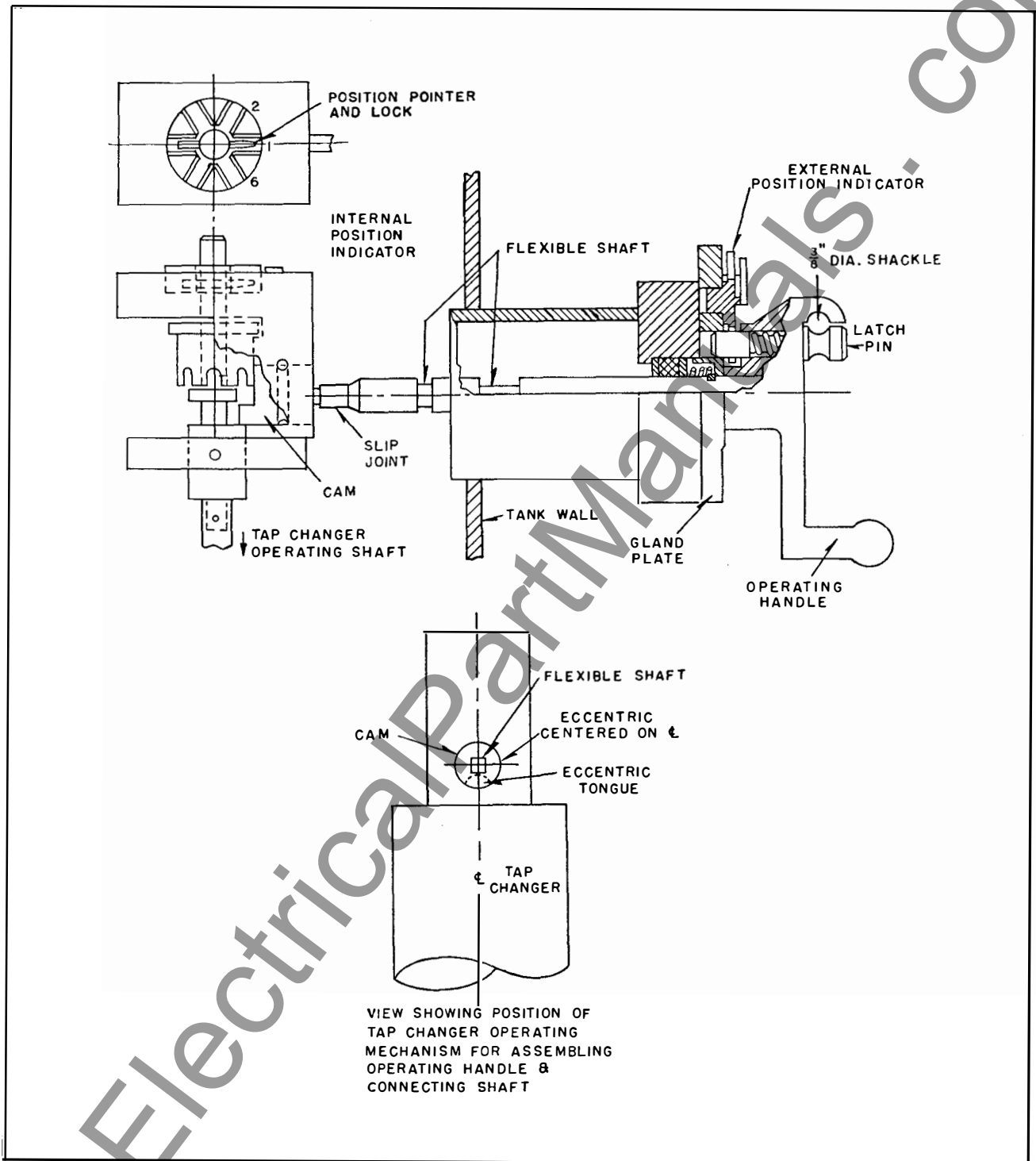


FIG. 5. Outline of Type WSB No-Load Tap Changer Operating Mechanisms Mounted on Transformer (In Top View, Looking Down, Internal Position Indicator is on Position One)

the tap changer. Accidental operation on position "OFF" will produce a voltage corresponding to one of the other tap positions, and will give an unbalance of the two legs of the transformer winding. This unbalance may affect the impedance or magnetic forces, but would not be detrimental to the transformer.

## MAINTENANCE

**1. 100 Amp. Tap Changer.** The Tap Changer is designed to operate without maintenance; therefore provision for dismantling is not made. Unit replacement is recommended in case of breakdown.

## NO-LOAD TAP CHANGER TYPE WSB

If replacement of a tap changer or a high voltage coil is necessary, the connection should be made by cutting the tap leads adjacent to the tap changer and brazing the leads from the new tap changer at this point. The replacement tap changer leads are marked from A to F, and may be identified with each tap changer position as shown in Fig. 4. Corresponding winding taps are indicated on the transformer nameplate.

**2. 200 and 400 Amp. Tap Changer.** The Tap Changer is designed to operate without maintenance; however, the moving and/or stationary contacts may be removed for replacement or repair in case of minor damage. Unit replacement is recommended in case of breakdown.

The Tap Changer may be replaced in a manner similar to the 100 amp tap changer (except refer to Fig. 6 for connection diagram).

### RENEWAL PARTS

Order renewal parts from the nearest Westinghouse office. Include a complete description of the part wanted along with the data on the nameplate attached to the transformer tank wall.

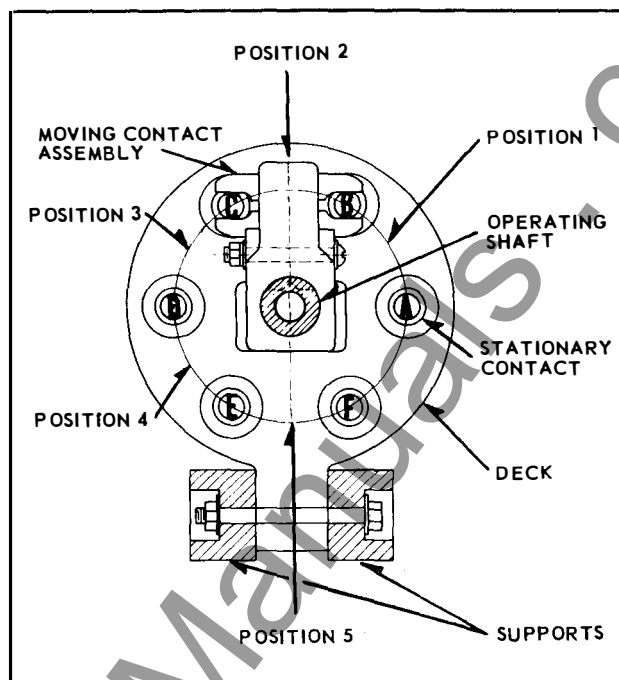


FIG. 6. Connection Diagram for  
200 Ampere Changer



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