



## LAYCOCK SYSTEMS, INC.

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### INSTRUCTIONS FOR "UNIVERSAL" COIL WINDING HEAD

#### CROWN MODEL 2101

#### PURPOSE

The Crown "Universal" Coil Winding Head is designed to simplify the forming of many types and sizes of coils including field, mush, armature, transformer, and motor coils. Coils can be made with diamond, round, rectangular, or square cores. Coils are wound quickly and neatly from one wire - no soldering is required.

#### ASSEMBLY

The "Universal Coil Winding Head comes in three (3) parts, consisting of one long main arm or base, and two short cross arms. Each is completely assembled with locking pins, sleeves, and spacing washers. Side wall retainers and extra spacing washers are also included.

For easier handling in assembly, slide the sleeves on which the spacing washers are mounted off the pins. Using the nuts and bolts provided, secure the cross arms to the main member at right angles placing one on each side of the center. The scale on each cross arm should face outside.

When assembled, mount the Coil Winding Head by its base plate to a Crown Coil Winding Machine or the face of a lathe head or other turning device. It should be fastened securely so that there is no side play or wobble.

Slide sleeves with the spacing washers (or side wall retainers, if required) onto the pins. Nine (9) extra spacing washers are furnished for use in winding diamond or mush coils. The eight (8) side wall retainers are for use in winding field or transformer coils. Spacing washers and side wall retainers are held in place by set screws.

**CAUTION:** In case a coil is made of extra heavy wire or under unusual heavy tension, brace the ends of the pins with wood blocks to prevent them from springing in.

## OPERATION

### ***DIAMOND OR MUSH COILS:***

The Coil Winding Head is shipped with spacing washers set at 3/4" centers. In most cases, it is not necessary to change these spacing washers.

A Diamond coil can be made with this coil winding head within the following minimum and maximum dimensions:

Maximum Overall Length:	16-1/2"
Minimum Overall Length:	6-1/2"
Maximum Width of Spread:	13"
Minimum Width of Spread:	3-1/8"
Maximum Length of Lamination:	12-7/8"
Minimum Length of Lamination:	2-7/8"

### ***SET THE COIL PINS:***

1. To proper overall length.
2. To proper overall length of lamination.
3. To proper width of spread.

Secure a 3/4" rod of sufficient length and mount it horizontally 15" from the center of the head and 5" above the center line.

Mount the nine (9) extra spacing washers on this rod, spacing them the same as those on the Coil Winding Head. Because of the varying conditions under which coils are wound, the 3/4" rod to be used is NOT supplied.

### ***DO NOT ATTEMPT TO MAKE DIAMOND COILS WITHOUT THIS GUIDE:***

It prevents crossing wires and uneven layers.

Secure the wire to one of the arms of the Coil Winding Head. Start the machine and wind a coil. When one coil is finished, do NOT cut the wire to start the second coil.

See that the jumper wire has plenty of slack so that it will have sufficient length to permit the coils to be placed in the stator easily when finished. This eliminates the necessity of soldering the leads of one coil to another and assures a perfect connection.

## **MAINTENANCE and STORAGE**

When not in use, store unit within a plastic bag.

## **WARRANTY**

Crown's Motor Repair Equipment is warranted to the original owner against defects in materials and workmanship for ninety (90) days from date of purchase. Any part found to be defective (except by overloading, misuse, neglect, fire, accident, tampering with by unauthorized serviceman, or other cause beyond the manufacturer's control), will be replaced or repaired free of charge.

## **SPECIFICATIONS FOR "UNIVERSAL" COIL WINDING HEAD**

### **CROWN MODEL 2101**

#### **Construction:**

Cast iron base and cross slides, with steel uprights and aluminum spacers.

Corrosion protected.

#### **Purpose:**

Winds diamond shaped and mush coils.

Group winding up to eight (8) coils.

(Diamond shaped coils tip to tip= 6-1/2" ~ 16-1/2" and widths 3-1/8" ~ 13")

For winding armature and stator field coils and transformers.

#### **Specifications:**

Six (6) adjustable spindles with removable sleeves (each sleeve has nine (9) aluminum spacing washers which are adjustable for coil thickness. One (1) extra spool assembly is included for use as a wire guide).

For transformer and extra large coils, remove the spools and replace them with the enclosed sidewall retainers, which are also adjustable for various coil sizes.

Easy to read scales (calibrated in 1/2" increments) for easy setups.

#### **Accessories:**

All supplied (see above).

#### **Spare parts:**

To be recommended on request.

#### **Enclosures:**

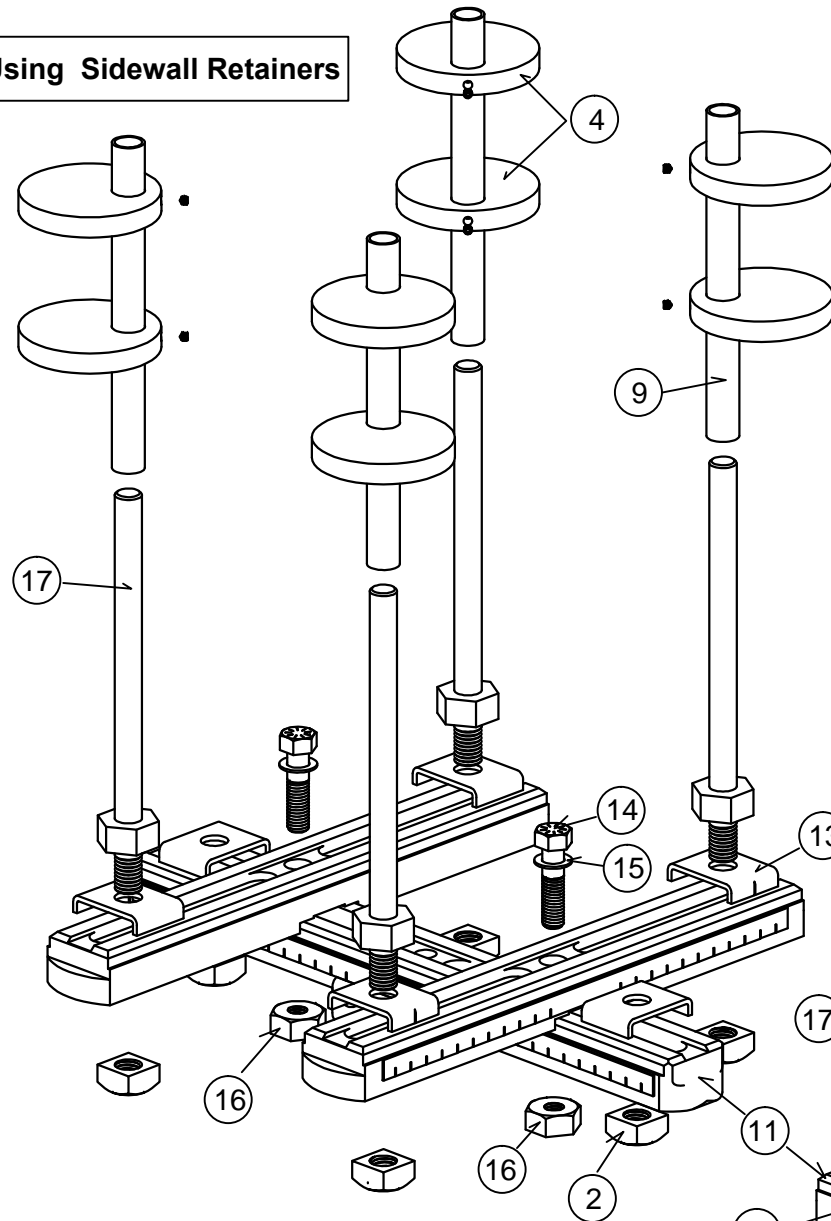
Operating instructions and equipment repair/replacement parts list.

# Universal Head

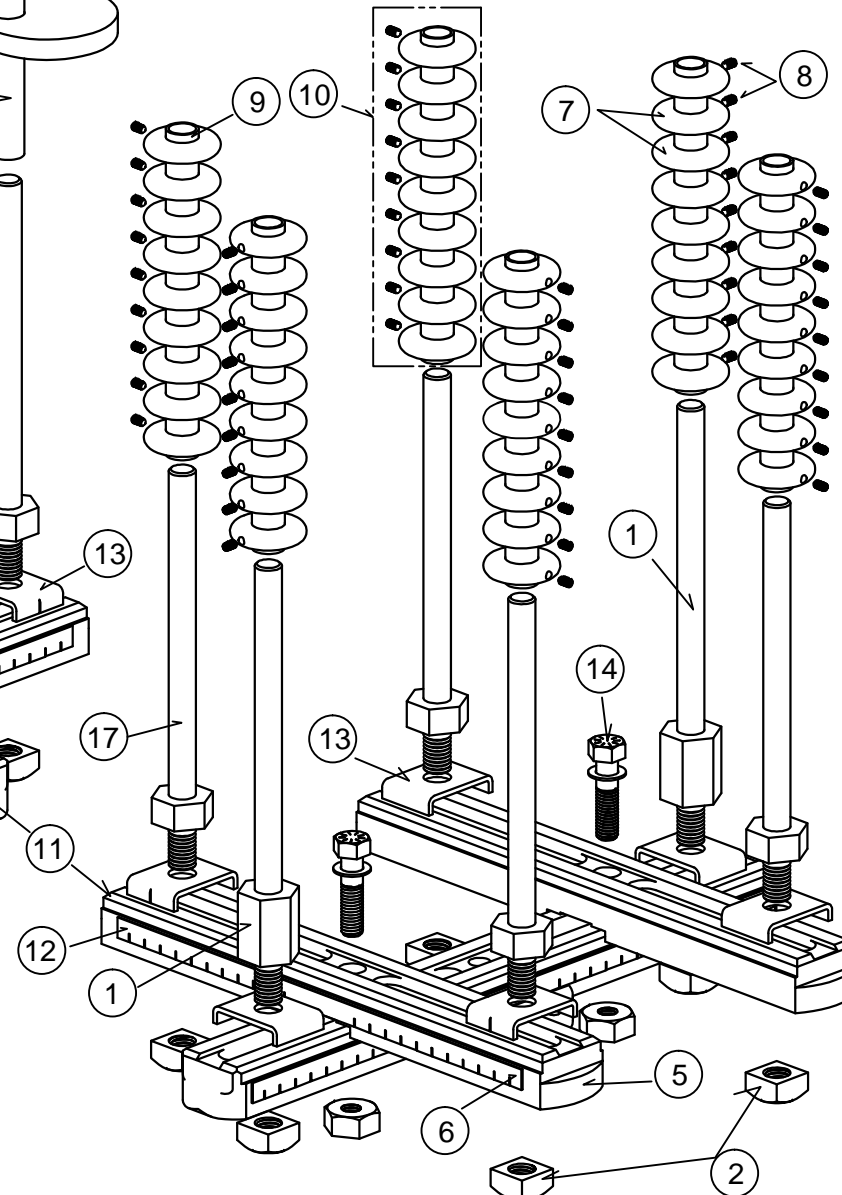
## Model: 2101

PART LIST MODEL 2101			
ITEM	PART#	DESCRIPTION	QTY
1	C808053	Long Stud Assy.	2
2	C808054	Square Nut 5/8"x11"	6
3	C808037	Retainer Setscrew, 10-24x3/16"	8
4	C808055	Side Wall Retainer	8
5	C808051	Cross Slide	2
6	C808052	Cross Slide Scale	2
7	C808057	Aluminum Spacer	54
8	C808058	Setscrew, 10-24x3/8"	54
9	C808059	Sleeve Spool Assy., 8"	6
10	C808060	Spool Assy., complete	6
11	C808049	Base	1
12	C808050	Base Scale	1
13	C808061	Clamp Plate	6
14	C808062	Capscrew, 1/2"-13x2"	2
15	C808063	Washer, Flat 1/2"	2
16	C808124	Hex Nut, 1/2"-13, special	2
17	C808065	Short Stud Assy.	4

### Using Sidewall Retainers



### Using Winding Spool



Note: This model has six adjustable spindles with removable sleeves, each with 9 aluminum spacing washers. The winding spools are removable and replaceable with sidewall retainers (4 pairs included) for deep coil winding.