# COMMON WIRE SPLICES AND JOINTS

## Introduction

As a student in Electrical Installation and Maintenance you should acquire the important knowledge and skills in wire splices and joints and should be familiar with the actual application of every splice and joint. This will serve as your tool in performing actual wiring installation. Of course, another factor is the knowledge in interpreting and analyzing the wiring diagram especially if the circuit is complicated.

The following are the Common Electrical Wire Splices and Joints.

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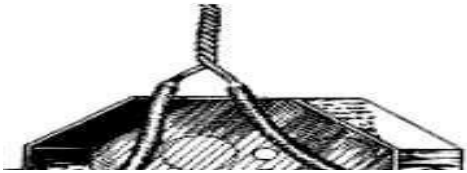
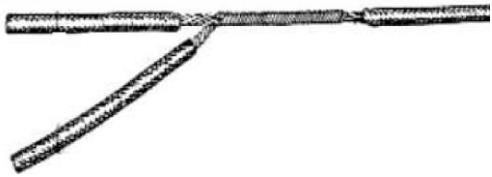
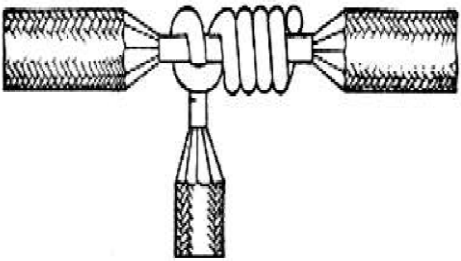
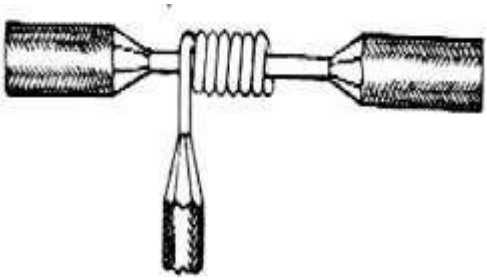
|  |  |
| **Rat Tail or Pig Tail**. This kind of joint is commonly used to join two or more conductors inside the junction box. It is suitable for service where there is no mechanical stress when wires are to be connected in an outlet box, switch, or conduit fitting | **Y-splice.** This method of wrapping is generally used on small cables because the strands are flexible and all can be wrapped in one operation. |

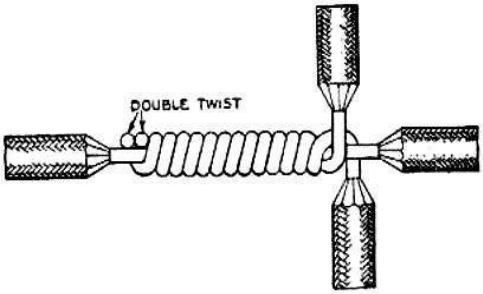


**Knotted tap**.
This is used where the tap wire is under heavy tensile stress.



**Plain tap joint**.
This is used where the tap wire is under considerable tensile stress circuit.

**Aerial tap**.
This is used as a temporary tap usually done in constructions sites. The easy twist will facilitate tap wire movement



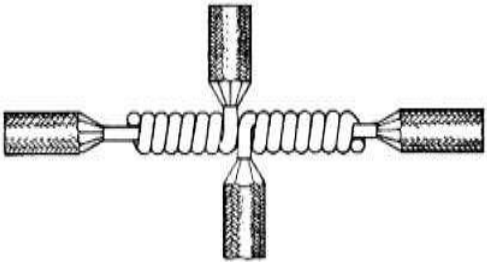

**Duplex cross joint**.
This is a two-tap wire turned simultaneously and is used where the two tap wire is under heavy tensile stress.

**Western Union Short-tie Splice.**

This is the most widely used splice or joint in interior wiring installation to extend the length of wire from one point to another.

**Western Union Long Tie**.

This is used extensively for outside wiring to extend the length of wire from one end to another.



**Cross joint**.

The same application is done as in plain tap and the only difference is that this tap is a combination of two plain taps place side by side with each other.

**Wrapped Tap or Tee Joint.**

This is used on large solid conductors where it is difficult to wrap the heavy tap wire around the main wire.