

## CONCEALING WIRE AND CABLE WITHOUT CONDUITS OR RACEWAYS

### 1.00 INTRODUCTION

This section covers the general factors to be considered in concealing wire and cable without conduits or raceways. Due to extensive changes marginal arrows have been omitted.

### 2.00 FISHING WIRE AND CABLE IN WALLS

#### 2.01 General



*Consider making runs on the outside of the building rather than fishing walls. Fish wire and cable only where appearance will not permit exposed runs, in accordance with local instructions.*

- Consider runs through closets, cupboards, etc, rather than fish.
- Do not place plastic cable in shafts without baffles, because of fire hazards.
- Generally, outside walls are easier to fish than partitions.
- Where customer will not permit an exposed run and excessive time is required to conceal the run, consult your supervisor.

#### 2.02 Fishing from Upper Floor to Basement

- When fishing from the upper floor to the basement, consider the type of construction used in the building.
- Consider the location of obstructions.
- Never fish between two studdings when electric light wiring is present. Presence of electric wiring is generally indicated by light switches, fixtures, or outlets.

- In order to drill through obstructions between floors, the molding at baseboard and floor should be loosened. Consider the following procedure in loosening and replacing molding:

1. Place a wood chisel under or in back of the molding and pry up or out.
2. Then place a screw driver between molding and baseboard. (See Fig. 1.)

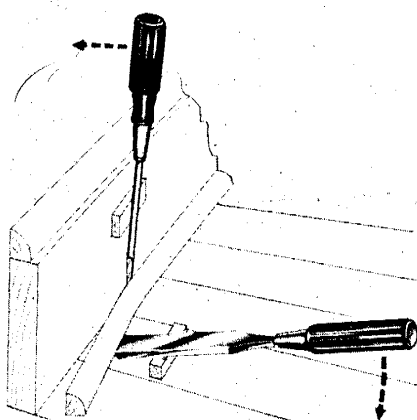
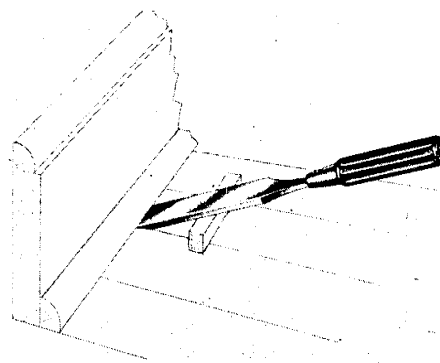


Fig. 1 — Procedure for Removing Molding

3. Pry carefully with chisel and screw driver to loosen nails which have been driven in diagonally.
  4. Move tools forward as the molding is loosened and keep tools as near nail locations as possible.
  5. Loosen molding only as far as necessary to provide room for boring.
  6. Withdraw nails from molding by pulling the head through to the underside with diagonal pliers.
  7. Removing nails this way leaves the paint and putty undisturbed on the face of the molding.
  8. When replacing the molding, remove all dirt and chips from behind the molding and press the molding back into position, starting at the unloosened end.
  9. Fasten molding with thin wire finishing nails.
- In general, no obstructions will be found in fishing brick or balloon (no obstructions between studs) frame houses (see Fig. 2).
  - When fishing walls with obstructions, proceed as follows:
    1. Loosen molding above baseboard on upper floor and drill hole downward through wall and plates above joist.
    2. Loosen molding at baseboard on upper floor and drill hole downward through floor and plates below joist.
    3. Loosen molding above baseboard on first floor and bore downward through wall and plates.

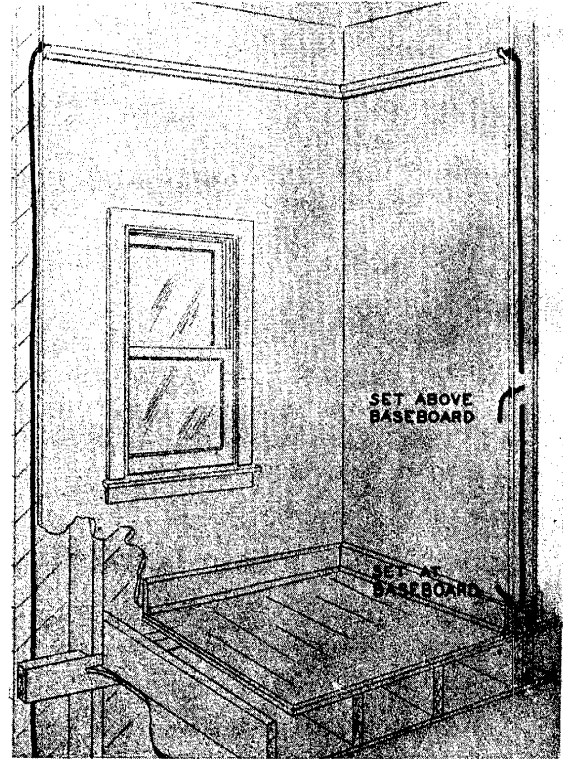
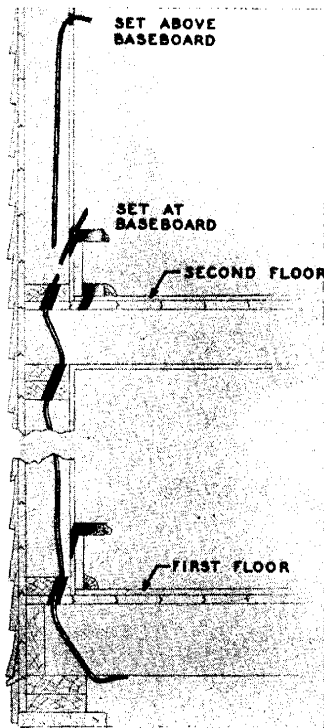


Fig. 2 — Locating on Inside Wall

4. On upper floor, pass fishing chain with twine attached through hole above baseboard; and with a piece of wire, hook chain through hole at baseboard and pass it through plates.
  5. On first floor, find fishing chain through hole above baseboard and pass it through plates.
  6. If basement has a ceiling, drill hole upward at location of chain and fish it out into basement.
  7. Tie on wire and pull it up to upper floor by use of twine.
- Fig. 3 shows a method of fishing walls.
  - When location of set, connecting block, etc, is some distance above baseboard, drill hole



**Fig. 3 — Fishing Outside Walls**

at location and fish from there down, proceeding as outlined in 2.02.

- When drilling plates, locate them by feeling with the bit to determine proper position for drilling as shown in Fig. 4.
- In locating the set, connecting block, etc, on an inside wall, proceed as shown in Fig. 2.
- Some of the obstructions which may be encountered are shown in Fig. 5.



*If locations of obstructions are not known or cannot be determined readily, bore hole with search bit to locate them.*

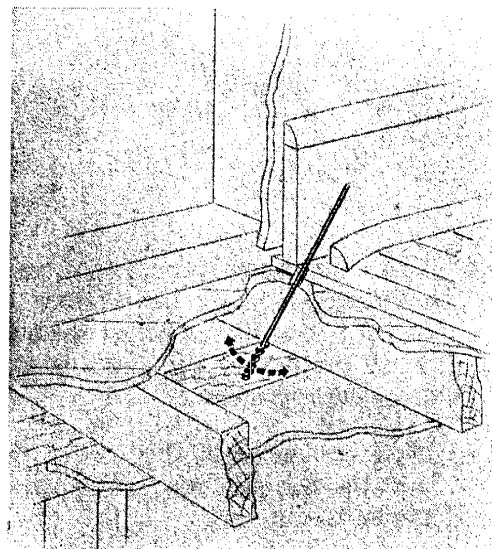
### **2.03 Fishing Walls on the Same Floor**

- In general, only outside walls should be fished, and then only when necessary.

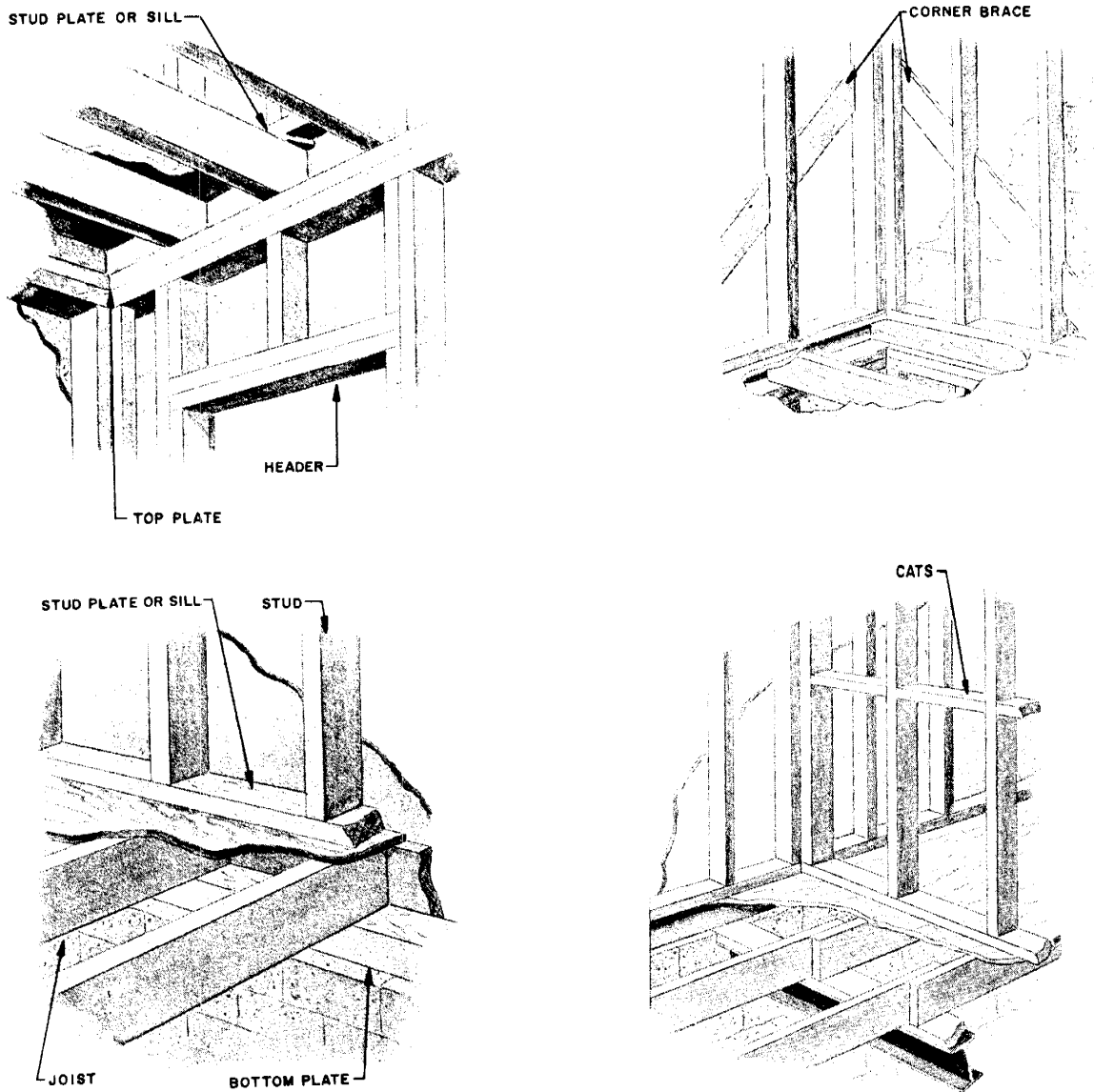
- Make runs on baseboards or around door and window frames where permissible.
- Sound out walls or partitions by tapping lightly before attempting to fish.

### **3.00 PLACING FLAT RUBBER CORDAGE**

- When it is necessary to put set on a desk or table which is located away from the wall, and no conduit has been provided, use flat rubber cordage under the rug or carpet, providing permission has been obtained from the customer.
1. Measure off sufficient cordage to reach from the terminating point on the desk to the rug.
  2. Make a butt mark on the cordage, allowing about a 10-inch slack.
  3. Strip conductors from the protective covering one at a time back to the butt marks and tape the four conductors together.

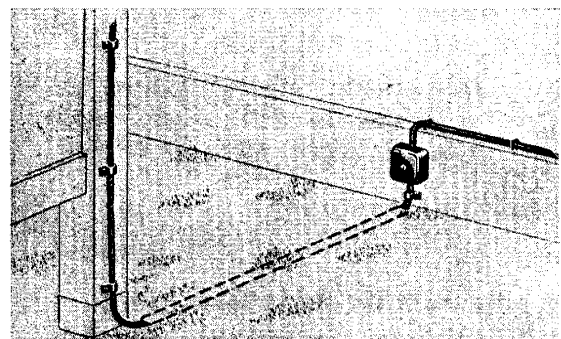


**Fig. 4 — Locating Plates**



**Fig. 5 – Wall Obstructions**

4. After obtaining permission from the customer, separate the threads of the carpet or rug with a pencil and push the taped portion of the cordage through from the underside.
5. Place cordage smoothly under the rug with the flat side against the floor, and extend to the wall.
6. Strip back, tape, and terminate conductors on a connecting block as shown in Fig. 6.



**Fig. 6 – Placing Flat Rubber Cordage**