# INSPECTING AND TESTING

# OF FIRE SHUTTERS

## 1. GENERAL

1.01 This section outlines the procedures to be followed for inspecting, testing and maintaining fire shutters provided on certain telephone buildings as a fire protective measure.

1.02 The two types of fire shutters used on telephone buildings are the "Automatic Rolling Fire Shutters" and "Manually Operated Fire Shutters."

1.03 Fire shutters are mounted on the exterior of certain telephone buildings while on others, where appearance is a factor, they are mounted on the interior.

1.04 The purpose of inspecting and testing fire shutters is to assure their unfailing operation in the event of exposure to fire in nearby property.

1.05 Every fire shutter should be inspected and tested at least once a year.

## 2. AUTOMATIC ROLLING FIRE SHUTTERS

### Description

2.01 This type fire shutter, see Figs. 1 and 2, consists of an interlocking steel curtain which coils on a steel tube in a housing above the window opening. The shutter when raised or dropped, travels in vertical steel guides which may be secured to the window frame or the face of the window opening.

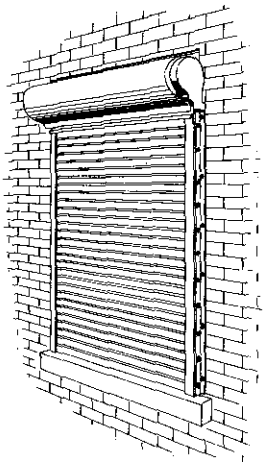

Fig. 1 - Exterior Mounted Automatic Rolling Fire Shutter

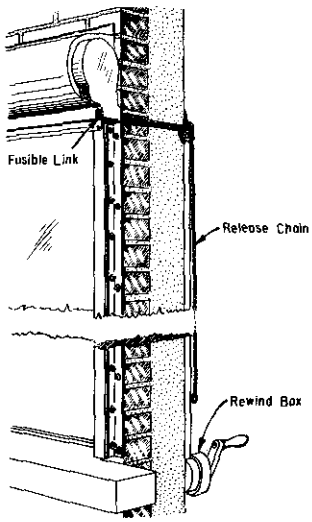


Fig. 2 - Cross Section of Exterior Mounted Automatic Rolling Fire Shutter

### Operation

2.02 The fire shutter is held in the open position by a locking device controlled by a fusible link. This fusible link melts at a comparatively low temperature, thereby, automatically releasing the lock and dropping the shutter to close the window opening.

### Testing

2.03 To test this type fire shutter, it may be manually dropped to the closed position by tripping the release chain located within reach on the inside of the window. When operating properly the entire window opening will be covered by the shutter when in the closed or dropped position. In the event the shutter does not operate properly, repairs should be made promptly.

### Inspection

2.04 An inspection of fire shutters is required to disclose the accumulation of dirt and/or other obstructions which would impede their proper functioning. This inspection should ascertain the following:

(a) That the working mechanism, where exposed, is free from accumulations of dirt and other foreign material. The material deposited by the nesting of birds in the space

between the interlocking curtain and the housing is a frequent cause of obstruction in the working mechanism.

(b) That the fusible link is properly connected and is not covered with paint or other material which would prevent its functioning at design temperature. Fusible links which are found covered with paint should be thoroughly cleaned or replaced with a new link. The use of a fusible link having a melting point of 165°F. is considered normal practice.

(c) That the vertical steel guides in which the fire shutters travel, are free from accumulations of paint or dirt which would impede their proper functioning.

## 3. MANUALLY OPERATED FIRE SHUTTERS

### Description

3.01 Manually operated fire shutters, see Figs. 3 and 4, sometimes known as the swinging type, are of metal construction. Each shutter is equipped with hinges and a suitable latch arrangement to secure it in the closed position.

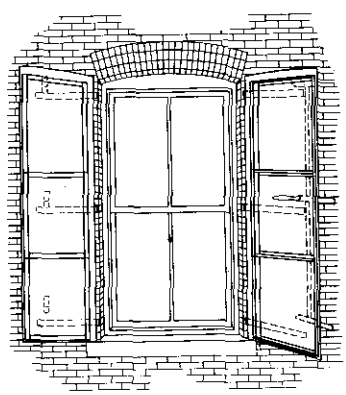

Fig. 3 - Manually Operated Fire Shutter - In Open Position

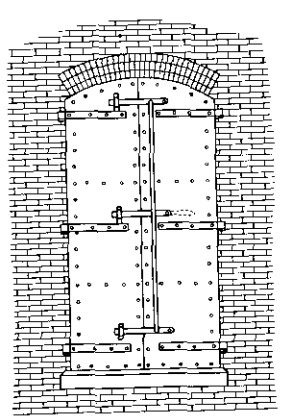

Fig. 4 - Manually Operated Fire Shutter - In Closed Position

### Operation

3.02 For normal operation of this type shutter, in the event of fire, manually place the shutter in fully closed position and set the latch arrangement.

### Testing

3.03 To test this type of shutter manually close and lock the shutter as in the event of fire.

### Inspecting

3.04 When inspecting this type of shutter, the following items should be checked:

(a) Openings are clear to permit a free and complete closing of the shutters.

(b) All exposed parts are free of dirt or other accumulations.

(c) Latch arrangement and hinges are properly lubricated, operate freely and hold the shutters securely against the opening when closed.

(d) All parts are free from corrosion.

## 4. REPAIRS AND MAINTENANCE

4.01 Defective fire shutters should be repaired promptly so that the exposed window opening will not be left unprotected in the event of fire.

4.02 Care should be exercised during building exterior maintenance painting, to avoid applying excess paint on the working parts of the fire shutter.

4.03 In the case of automatic rolling fire shutters, special attention should be given to the following:

(a) The fusible link should not be painted as a coating of paint prevents the link from parting at the temperature for which it was designed.

(b) Excess paint should not be applied to the vertical guides in which the fire shutters travel. A too heavy coat of paint on the guides will impede the automatic closing of the shutters.

(c) The interlocking steel curtain is usually protected from the elements when the fire shutter is in the open position and does not require repainting as often as the exposed metal parts.

(d) When interlocking steel curtains are painted only a thin coat should be applied. The paint should be thoroughly dry before the shutter is restored to the open position.

(e) After each painting the shutter should be tested as outlined in Paragraph 2.03.

4.04 On the manual type fire shutters, the latch arrangement and hinges should be lubricated twice a year to insure their proper operation.

4.05 A record should be maintained of all fire shutter locations in each building. Space on this record should be provided for posting the date each shutter is inspected and tested.