1 Install a substantial guard over the cupola charging door to protect workmen against falling objects Such a guard should be constructed of not less than 1½ by 1½ by ¼-in angle iron It should be covered with a screen equivalent in strength to a 1-in mesh of 3/16-in wire or with not less than No 16 U S gage solid sheet steel The guard should be securely supported by means of overhead slings or underpinning to resist falling objects (Fig 33–8) An alternate method is to place a solid steel plate on the bucket ring in the cupola at charging door level

2 Require all workers who enter a cupola to wear hard hats

3 Provide approved respiratory equipment



Fig 33–7 —Wire rope with hook being secured to solid prop beneath cupola doors

Courtesy International Harvester Co

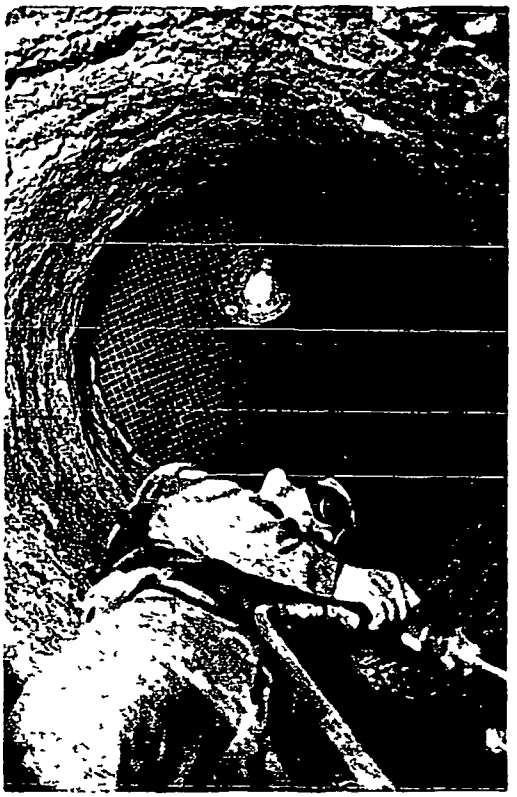


Fig 33–8 —A screen placed over the charging door prevents falling objects from dropping on worker who is repairing cupola lining

Courtesy Hamilton Foundry & Machinery Co

for the men relining the cupola, or place a blower fan in the bottom to keep the dust moving away from them Dust should be exhausted out the stack

4 Place warning signs or crossbars at the charging door to indicate that men are working in a cupola

5 Before relining of a cupola is begun, break all loose slag and bridges and allow them to drop to the bottom of the cupola

6 Check the condition of the shell and riveting while the cupola is down for relining A weak shell is likely to increase the risk of a gas explosion

7 Leave ample clearance (at least ¼ in)