

WATER-TYPE FIRE EXTINGUISHERS

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1. GENERAL

1.01 The water-type fire extinguisher is used on fires in telephone equipment which have made some headway and which are beyond the scope of the carbon dioxide type due to insufficient range of discharge of this extinguisher or to the lack of cooling action of the gas on deep seated masses of burning material. The water-type extinguisher is not suitable for use on fires involving flammable liquids, oils, or greases or live electrical equipment such as power boards, power plant apparatus, billing and computing machines used in accounting centers, CAMA or AMA equipment, radio and carrier equipment, or elevator machinery.

1.02 The water-type extinguisher replaces the soda-acid extinguisher in equipment space and supplements the carbon dioxide extinguisher.

1.03 This section is reissued to include the latest design of water-type extinguisher with newly designed label, and to list additional areas where this type of extinguisher should not be used.

1.04 Arrows in the margin indicate changes in the text.

2. DESCRIPTION

2.01 The extinguisher consists of a lead lined copper or brass tank of about 2-1/2 gallons capacity and uses plain water, which is expelled by the expansion of carbon dioxide from a metal

cartridge located within the tank. The cartridge is attached to the underside of the extinguisher cap and is removable with the cap. A grooved puncturing pin attached to a plunger extends through the extinguisher cap and is directly above and at right angles to a disc in the top of the cartridge. The details of the latest design of extinguisher are shown in Fig. 1, and similar details of former designs in Figs. 2 and 3.

2.02 To discharge the extinguisher, the safety guard is pushed aside and the tank turned bottom up and bumped on the floor. The safety guard is omitted from the latest design, thus eliminating the first step. This causes the plunger to be forced in and the grooved pin to puncture the disc in the cartridge and releases the carbon dioxide into the extinguisher tank. The water in the tank is expelled with sufficient force to throw an effective stream some 30 to 40 feet horizontally and continues for about 60 seconds, after which gas is emitted for a few seconds. The discharge of liquid ceases when the extinguisher is turned right side up, but the gas continues to escape and can not be stopped until it is exhausted. A new pressure cartridge must be inserted and the tank refilled before the extinguisher can be used again.

2.03 On previously designed models, but omitted from the latest design, a "U" shaped hinged guard is placed over the outside end of the plunger to prevent accidental puncturing of the cartridge disc. When the extinguisher is to be discharged, this guard is pushed back and becomes fixed in the open position.

2.04 In case the guard is not pushed back when the extinguisher is to be used, the plunger will not be obstructed since the guard is of metal light enough to collapse when crushed to the floor under the weight of the extinguisher.

2.05 *Rubber Jacket:* A rubber jacket is provided over the grenade-shaped cartridge for the purpose of preventing possible electrolytic corrosion. This rubber jacket has been

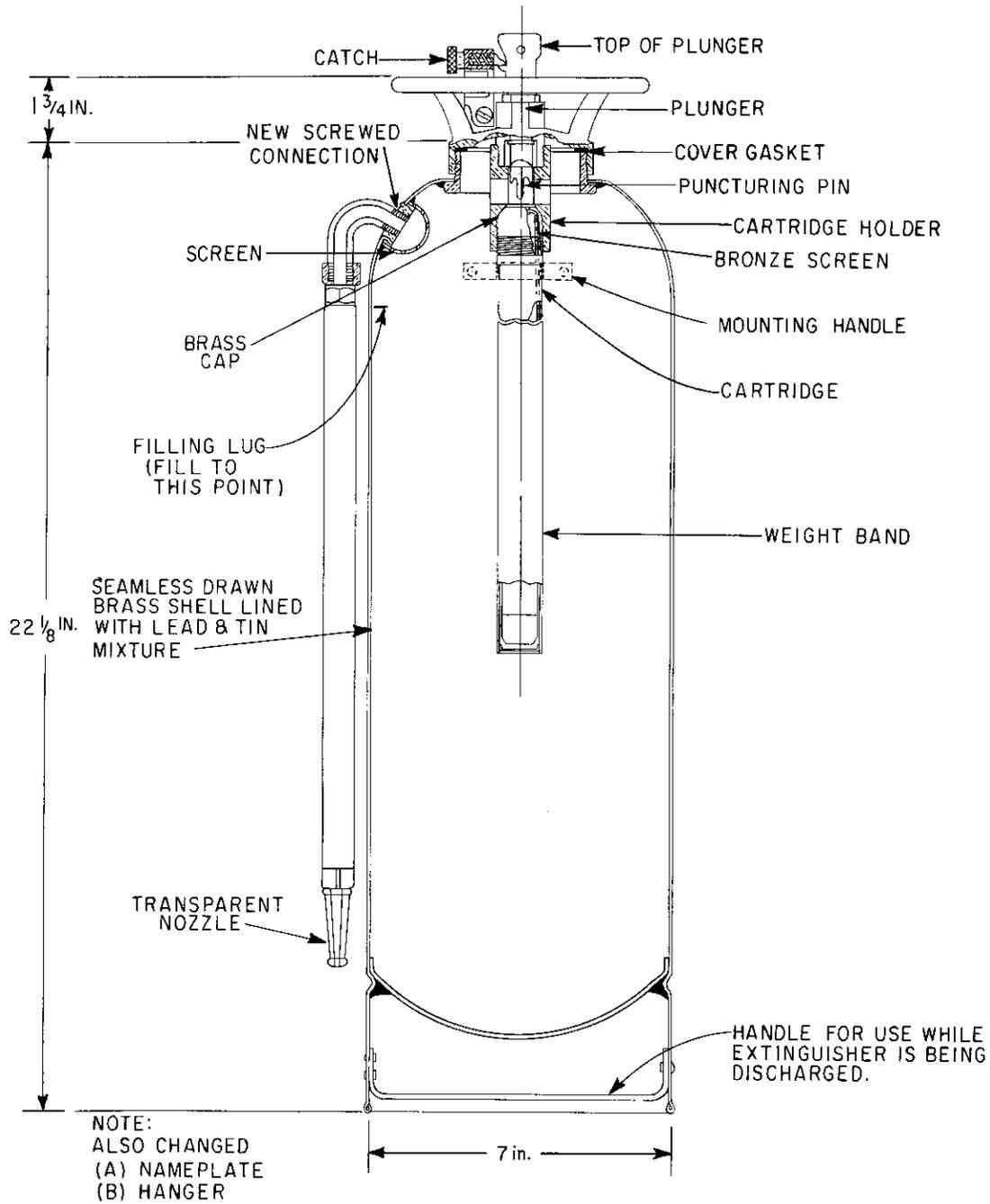


Fig. 1 - Latest Design with Cylindrical Cartridge

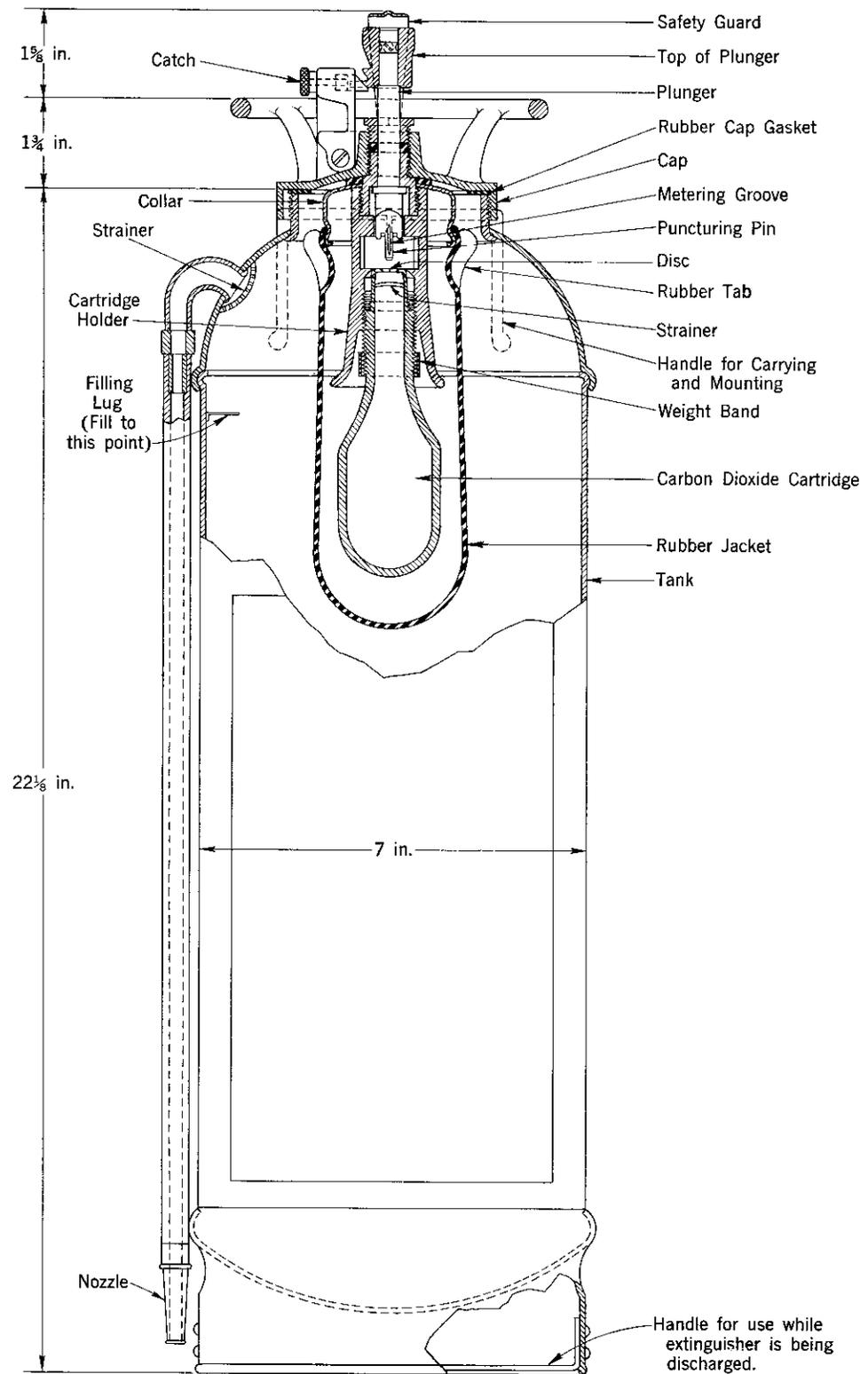


Fig. 2 - Design with Long Rubber Jacket

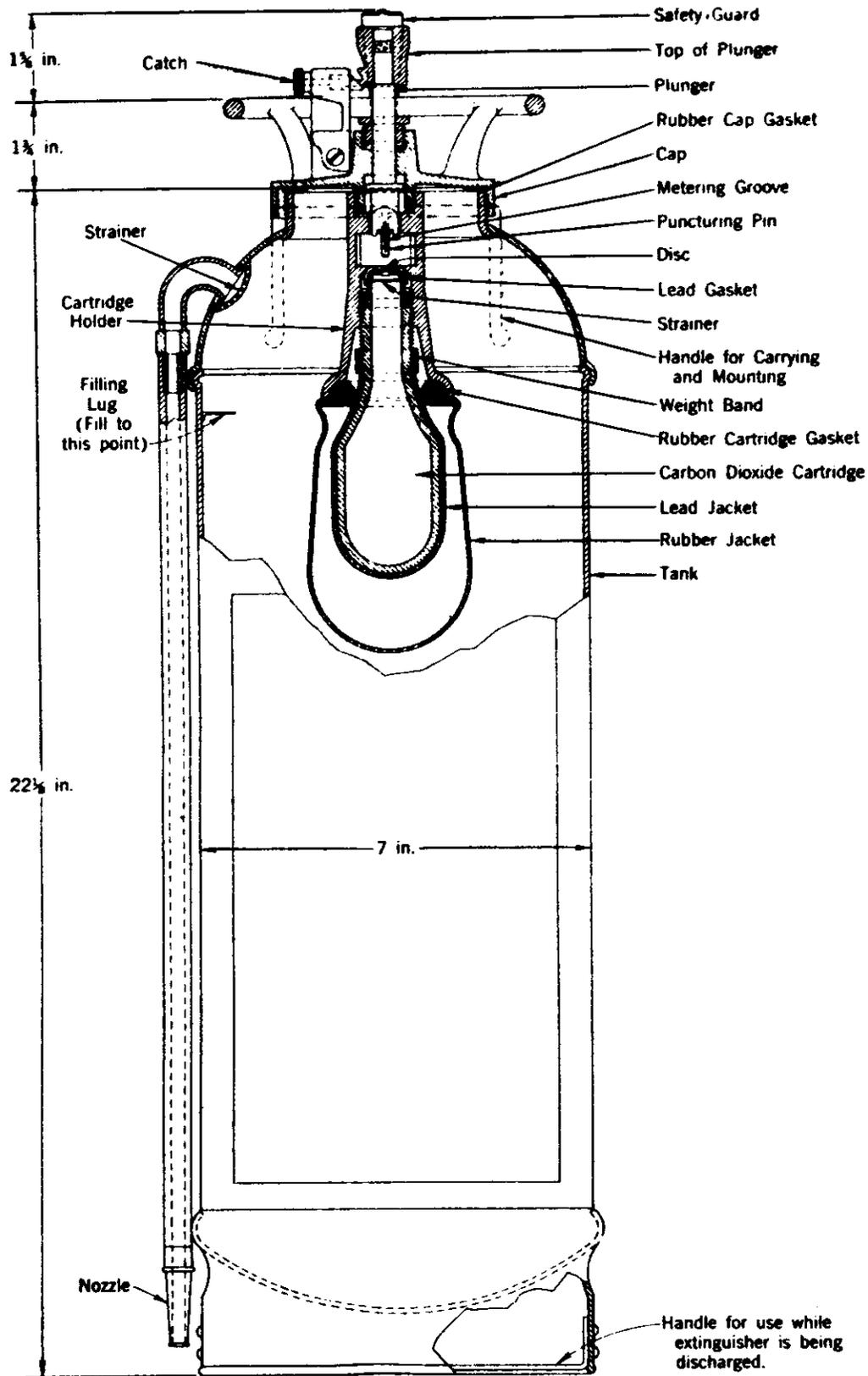


Fig. 3 - Design with Short Rubber Jacket

eliminated as unnecessary in the latest cylindrical design because the steel cartridge is enclosed in a brass jacket and then tin coated which prevents electrolytic corrosion.

2.06 Cartridge: A newly developed cylindrical shaped cartridge (WF75) approximately 12 inches long and 1-1/8 inches in diameter replaces the present zinc coated grenade-shaped cartridge (WF53). The new cartridge is designed without a screw-type safety cap and can be used in any Bell System standard water-type fire extinguisher.

3. LOCATION

3.01 Water-type extinguishers are subject to freezing and, therefore, should not be located in spaces where freezing temperatures may be encountered. If, however, it is considered necessary to place the water-type fire extinguisher in locations where freezing temperatures are encountered, antifreeze solutions should be added to the water. It is important in these cases to make sure that a properly labeled tank is selected and that the solutions used conform with the manufacturers' specifications. The Bell System standard extinguisher is not suitable for antifreeze solutions (not labeled properly). Water-type fire extinguishers suitable for antifreeze solutions are available only through local purchase.

3.02 The carbon dioxide which is held under pressure in the cartridge is subject to a rapid rise in pressure where temperatures above normal are experienced. It is desirable, therefore, to locate these extinguishers away from hot surfaces and out of the direct rays of the sun. In general, the clearance between extinguishers and radiators or uncovered heating pipes should be at least two feet. This distance may be reduced to six inches in the case of covered pipes.

3.03 Extinguishers should not be located where they are subject to mechanical injury from moving objects.

4. MOUNTING

4.01 Extinguishers should be mounted as shown in Fig. 4.

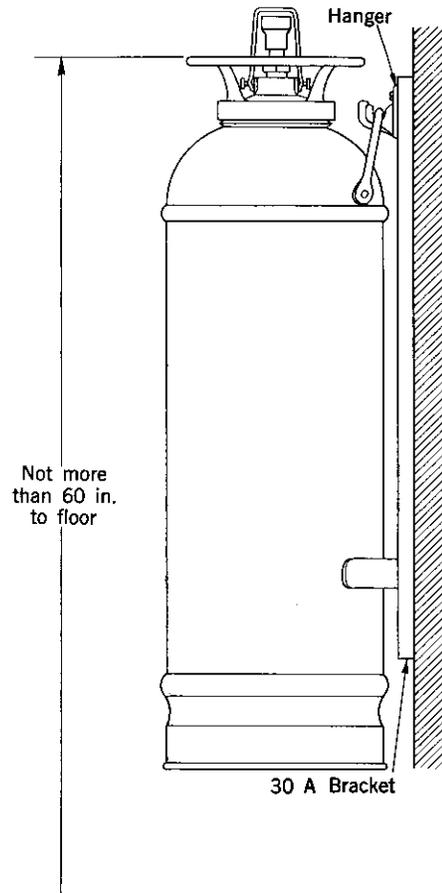


Fig. 4

4.02 Where extinguishers are placed on free standing columns, arrangements for mounting may include metal bands encircling the column or if it has been predetermined in what locations they will be required, consideration should be given to include mounting arrangements when the columns are constructed.

4.03 The extinguisher should be mounted so it will hang in a vertical position.

5. METHOD OF OPERATION

5.01 To operate the extinguisher, proceed as follows:

- (1) Remove extinguisher from mounting bracket and carry to the fire in an upright position.
- (2) Invert tank after pushing aside the safety guard on those extinguishers so equipped.

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- (3) Hold tank by handle in the bottom with hose in other hand.
- (4) Bump plunger in tank cap on floor.
- (5) Direct discharge at fire from a distance of about 5 feet if possible. If not possible, move away as the stream is effective up to about 30 or 40 feet horizontally.
- (6) Play stream from top down with side-to-side motion. For other than equipment fires, play stream at base of flames and follow flames with stream.
- (7) Stop liquid discharge by inverting tank to normal position when fire is completely extinguished.
- (8) Do not use water-type extinguishers on fires involving flammable liquids, oils, or greases.

- (9) Do not use water-type extinguishers on fires involving live electrical equipment such as power boards, power plant apparatus, billing and computing machines used in accounting centers, CAMA or AMA equipment, radio and carrier equipment, or elevator machinery.
- (10) Do not return discharged or partially discharged extinguishers to their mounting brackets.
- (11) Return plunger to normal position before unscrewing cartridge to avoid possibility of edges of metering groove picking up scrapings from cartridge disc.

6. MAINTENANCE

- 6.01 Maintenance of the water-type fire extinguisher is covered in Section H54.610 (H44.210).