

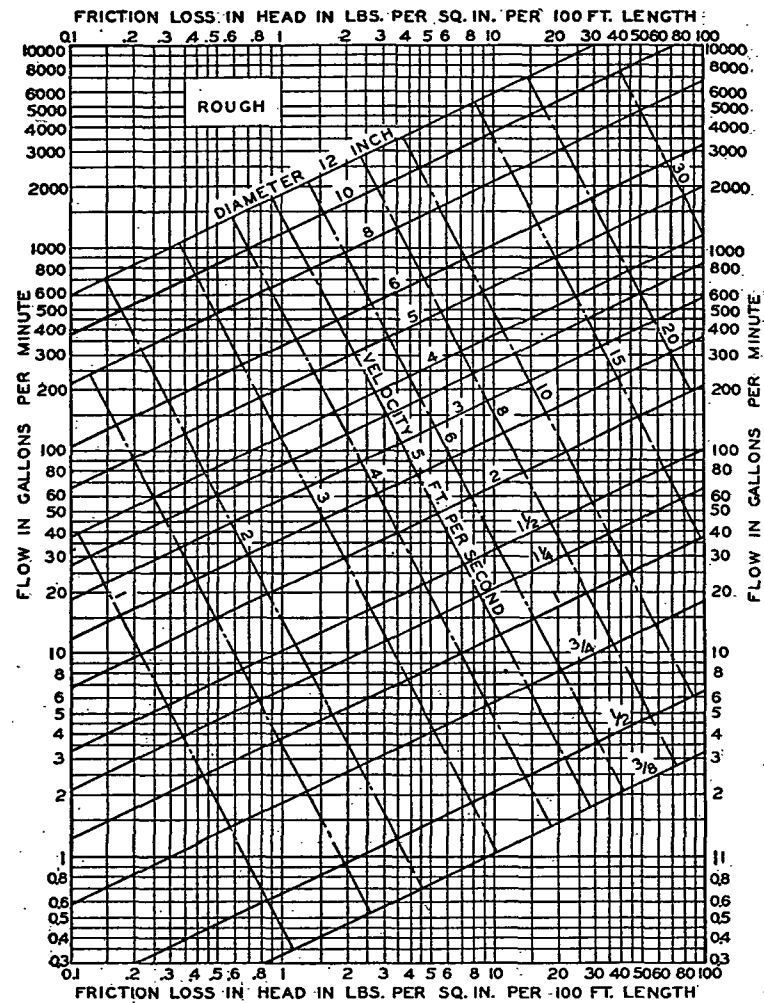


FIG. 5. FLOW CHART FOR ROUGH PIPE

read 4.5 psi friction loss per 100 ft of pipe length. Then the total friction loss will be $2 \times 4.5 = 9$ psi.

The pressure losses in the distributing system will consist of the pressure losses in the piping itself, plus the pressure losses in the pipe fittings, valves and the water meter, if any. Estimated pressure losses for disc-type meters for various rates of flow are given in Fig. 6.

Fig. 7 shows the variation of pressure loss with rate of flow for various

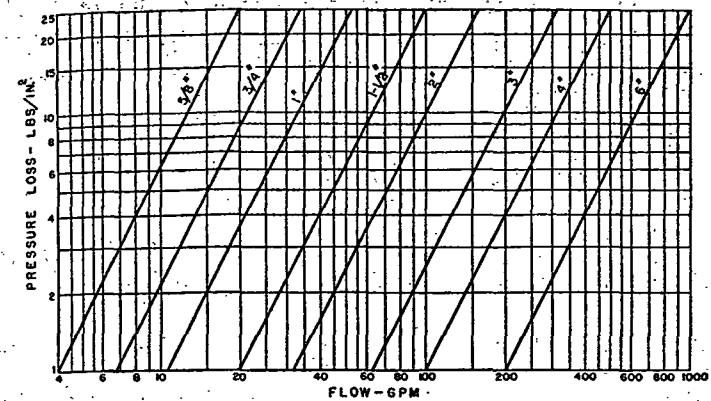


FIG. 6. PRESSURE LOSSES IN WATER METERS

types of faucets and cocks, based on experimental data obtained at the University of Iowa.

Flow limits for disc-type meters, which may be regarded as the limits of recommended ranges in capacities, are given in Table 3. For information on other types of meters, the manufacturers should be consulted.

The loss of pressure through any fitting or valve can be expressed in pounds per square inch for any given rate of flow. Experience has shown, however, that the simplest method of expressing losses in fittings and valves is to use the concept of an equivalent length of straight pipe. Thus it has been found that a 1 in., 90 deg elbow introduces a loss equivalent

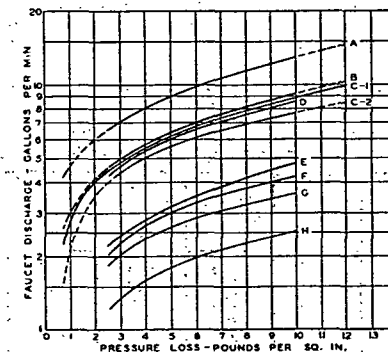


FIG. 7. VARIATION OF PRESSURE LOSS WITH RATE OF FLOW FOR VARIOUS FAUCETS AND COCKS

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|--|---|
| A. 1/2 in. laundry bibb (old style). | E. Combination compression sink faucet. |
| B. Laundry compression faucet. | F. Basin faucet. |
| C-1. 1/2 in. compression sink faucet (Mfr. 1). | G. Spring self-closing faucet. |
| C-2. 1/2 in. compression sink faucet (Mfr. 2). | H. Slow self-closing faucet. |
| D. Combination compression bath tub faucets (both open). | |