
The Agricultural Experiment Station

OF THE

Colorado Agricultural College

DIVISORS

(For the Measurement of Irrigation Water)

By

V. M. CONE, Irrigation Engineer
U. S. Office of Public Roads and Rural Engineering



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DIVISORS

(For the Measurement of Irrigation Water)

By V. M. CONE, Irrigation Engineer
U. S. Office of Public Roads and Rural Engineering

Many of the canal companies of the West are co-operative stock companies in which the individual water users have rights to proportional parts of the supply of water furnished by their canal, the divisions being in the ratio of the stock owned in the canal company. Even a few rivers have their waters divided into proportional parts among the canals, regardless of the flow in the stream at any time. Under this system it is often considered unnecessary to have the water actually measured, so long as each gets his proportionate part of all the water available in the ditch or stream. This led to the use of the divisor, division box, or proportional divisor, which are different names for a device placed in a channel for the purpose of dividing the flow into two or more parts, as might be desired.

Divisors are made in many forms and sizes. In all of them the division is made in accordance with the cross-sectional area of the box, the assumption being that the rate of flow is the same in all parts of a section across the box. This assumption is incorrect to a greater or less degree, depending upon conditions as indicated in the tables contained in this bulletin, but they are convenient devices because when they have once been set, they will give approximately the same division of the flow regardless of the later increase or decrease in the main supply. However, they are inaccurate and unreliable unless constructed and operated under definite conditions and, therefore, they should not be used as measuring devices where any considerable reliability is required.

Divisors are used extensively in some districts in Colorado and Utah, but are not known in others. As early as 1867 a divisor patterned somewhat after an Italian device was used near Greeley, Colorado, by Hon. J. Max Clark.* The Max Clark box, as it is known, is used to both measure and make a fair division of the water. Its characteristic feature is an enlargement on the upstream side of the box, which reduces the velocity of the water

*Colorado Station Bulletin 27, p. 8, and U. S. G. S. Water Supply Paper 9, p. 70.

and thereby improves the value of the measurement.

Divisors are not generally applicable to use on rivers or large canals because of the difficulty in operating them. They are principally used on the smaller laterals.

The greater number of them are built to divide the flow in the ditch into two ditches, but they are made sometimes as a single structure to divide the stream into four parts or more. The divisor consists essentially of a flume or box placed in the ditch with one or more openings for side ditches and a partition board, or divisor board, which may be either fixed or movable. Movable partition boards are either hinged, as shown in Figures 1 to 6, or are made to move parallel to the side of the flume as shown in Figures 7 and 8. Provision is usually made for fastening the divisor board to a timber across the top of the box when the desired set has been made. Fixed divisor boards are used where the division of the flow is not often changed, but when a change in the division of the water between the two channels is desired, it is usually accomplished with this type of divisor by placing boards in a vertical position in one or the other of the channels. This method gives only approximate accuracy because it reduces the total available width of opening in the two channels and also changes the freedom of discharge.

When the proportional division of the flow gives a quantity too small for economical use, such as during a shortage of water late in the season, or when for any reason the supply is not sufficient to meet the demands of all the irrigators, it is better to give each user in turn a greater flow than his share, but for a proportionately shorter time. This amounts to dividing the total water available in a period of time rather than a division of the flow at a certain time.

To cover the full range of variations in sizes and methods of building boxes, and conditions of flow in the different channels would take an endless number of experiments. The tests on divisors were, therefore, confined to the forms shown in Figures 1 to 8, inclusive, and the accompanying tables are based upon the results of these 341 tests. In the table headings the word "divisor" means the channel or ditch which is taken out from the side of the main ditch; "width of divisor opening" is the distance from the upstream end of the partition board to the "divisor" side of the flume; "channel" is part of the box which carries the remainder of the flow of the main ditch; "head" is difference between the elevation of the water surface in the main ditch, taken 3 feet upstream from the end of the divisor board, and the top of the dam, or the floor of the box if no dam was used; and "effective head"

is the difference between the "head" in the main ditch and the depth of water in the "divisor" taken 3 feet downstream from the point of the divisor board.

In the experimental work the divisor board was given a bevel of 1 to 4 on the "divisor" side, leaving the end about $\frac{1}{8}$ inch thick. Rubber packing was placed under the divisor board and the board screwed to the floor of the box to insure against leakage. The flow through the "divisor" and "channel" was measured volumetrically in every experiment.

As used in the field, sometimes a drop is placed in the ditch immediately below the box, depending on which, if either, of the ditches has an excessive grade. The ditch with the drop will have the "fastest" flow, as it is commonly expressed, and, therefore, get the lion's share of the water. Since the conditions in the two ditches may be such as to produce a combination of velocities varying from slow to fast, it is evident that the divisor box cannot be classed as an accurate measuring device, and this is proved in the accompanying tables. Different types of boxes, settings of divisor board, depths of water and conditions of flow in the two ditches, are given in the tables with the hope that irrigators may know some of the facts connected with their own divisor boxes and apply the information.

A comparison of columns 2 and 3 in the tables will give the error caused by assuming the discharge to be proportional to the distances from the point of the divisor board to the sides of the flume; column 4 gives the per cent of the flow in the main ditch which will flow through the "divisor" for the corresponding width of "divisor opening" shown in column 5; and columns 6, 7 and 8 give the discharge of the "divisor", "channel", and the main ditch, respectively. To convert the discharge in second-feet, as given in columns 6, 7 and 8 into "inches" of water, multiply those values by the number of "inches" equivalent to a second-foot under the conditions in question. The quantity of water which an "inch" represents is sometimes different under neighboring canal systems.*

A dam placed across the divisor box at the point of the partition board increases the accuracy of the division of the water, its effect being most decided for low heads. When the velocity of flow was practically the same in both ditches, an effect on the division of a maximum of only approximately 1 or 2 per cent was caused by substituting a 6-inch dam for a 4-inch dam. A long box is more accurate than a short box, because the long box tends to equalize the velocities across the width of the flume be-

*See Colorado Experiment Station Bulletin No. 207.

DIVISORS

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TABLE I
For Divisor Box Shown in Figure 1
Long box; 4-inch dam; divisor board hinged
24 inches from side of flume; free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.2 ft. or 2¾ inches				
1	2.1	2.8	2	1	...	...	...
2	4.2	4.9	4	2	0.1	1.2	1.3
3	6.3	6.9	6	3	0.1	1.2	1.3
4	8.3	8.9	8	4	0.1	1.1	1.2
5	10.4	10.9	10	5	0.1	1.1	1.2
6	12.5	12.9	12	6	0.2	1.1	1.3
7	14.6	14.9	15	7	0.2	1.1	1.3
8	16.7	16.9	17	8	0.2	1.0	1.2
9	18.8	19.0	19	9	0.2	1.0	1.2
10	20.8	21.0	21	10	0.3	1.0	1.3
11	22.9	23.0	23	11	0.3	1.0	1.3
12	25.0	25.1	25	12	0.3	0.9	1.2
13	27.1	27.1	27	13	0.3	0.9	1.2
14	29.2	29.1	29	14	0.4	0.9	1.3
15	31.2	31.1	31	15	0.4	0.9	1.3
16	33.4	33.2	33	16	0.4	0.8	1.2
17	35.4	35.2	35	17	0.4	0.8	1.2
18	37.5	37.2	38	18	0.5	0.8	1.3
19	39.6	39.2	40	19	0.5	0.8	1.3
20	41.7	41.2	42	20	0.5	0.7	1.2
21	43.8	43.3	44	21	0.5	0.7	1.2
22	45.8	45.3	46	22	0.6	0.7	1.3
23	47.9	47.3	48	23	0.6	0.7	1.3
24	50.0	49.3	50	24	0.6	0.6	1.2
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	2.9	2	..	...	...	...
2	4.2	5.5	4	1¾	0.1	3.1	3.2
3	6.3	8.0	6	2¼	0.2	3.1	3.3
4	8.3	10.3	8	3	0.2	3.1	3.3
5	10.4	12.3	10	3¾	0.3	3.1	3.4
6	12.5	14.4	12	4¾	0.4	3.1	3.5
7	14.6	16.5	15	6¼	0.5	3.0	3.5
8	16.7	18.5	17	7¼	0.6	3.0	3.6
9	18.8	20.5	19	8¼	0.7	3.0	3.7
10	20.8	22.4	21	9¼	0.7	3.0	3.7
11	22.9	24.3	23	10¼	0.8	2.9	3.7
12	25.0	26.3	25	11¼	0.9	2.9	3.8
13	27.1	28.2	27	12¾	1.0	2.9	3.9
14	29.2	30.2	29	13¾	1.1	2.8	3.9
15	31.2	32.1	31	14½	1.1	2.8	3.9
16	33.4	33.9	33	15½	1.2	2.7	3.9
17	35.4	35.8	35	16½	1.3	2.6	3.9
18	37.5	37.7	38	18½	1.4	2.5	3.9

TABLE I (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
19	39.6	39.7	40	19¼	1.5	2.4	3.9
20	41.7	41.5	42	20¼	1.6	2.3	3.9
21	43.8	43.4	44	21¼	1.7	2.2	3.9
22	45.8	45.3	46	22¾	1.8	2.1	3.9
23	47.9	47.3	48	23¾	1.9	2.0	3.9
24	50.0	49.2	50	24½	1.9	1.9	3.8
Head = 0.8 ft. or 9% inches							
1	2.1	3.6	2	..	...	...	...
2	4.2	6.7	4	1⅛	0.3	7.2	7.5
3	6.3	9.4	6	1¾	0.4	7.2	7.6
4	8.3	11.8	8	2½	0.6	7.2	7.8
5	10.4	14.1	10	3¼	0.8	7.2	8.0
6	12.5	16.2	12	4⅞	1.0	7.2	8.2
7	14.6	18.2	15	5½	1.3	7.2	8.5
8	16.7	20.2	17	6¾	1.5	7.2	8.7
9	18.8	22.1	19	7¾	1.7	7.2	8.9
10	20.8	23.9	21	8½	2.0	7.1	9.1
11	22.9	25.7	23	9½	2.2	7.1	9.3
12	25.0	27.5	25	10⅞	2.5	7.1	9.6
13	27.1	29.3	27	11¾	2.7	7.0	9.7
14	29.2	31.1	29	12¾	2.9	7.0	9.9

TABLE II

For Divisor Box Shown in Figure 1
 Long box; 4-inch dam; divisor board hinged
 24 inches from side of flume; 0.1 foot or 1 3-16 inches
 effective head in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	2.2	2	..	...	...	...
2	4.2	4.6	4	1¾	0.1	2.3	2.4
3	6.3	6.9	6	2⅝	0.2	2.3	2.5
4	8.3	9.2	8	3½	0.2	2.3	2.5
5	10.4	11.4	10	4¾	0.3	2.2	2.5
6	12.5	13.6	12	5¼	0.3	2.2	2.5

TABLE II (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
7	14.6	15.8	15	6%	0.4	2.2	2.6
8	16.7	17.9	17	7½	0.4	2.2	2.6
9	18.8	20.0	19	8½	0.5	2.1	2.6
10	20.8	22.0	21	9½	0.6	2.1	2.7
11	22.9	24.1	23	10½	0.6	2.1	2.7
12	25.0	26.0	25	11½	0.7	2.0	2.7
13	27.1	28.1	27	12½	0.7	2.0	2.7
14	29.2	30.1	29	13½	0.8	2.0	2.8
15	31.2	32.0	31	14½	0.9	1.9	2.8
16	33.4	34.0	33	15½	1.0	1.9	2.9
17	35.4	36.0	35	16½	1.1	1.9	3.0
18	37.5	38.0	38	18	1.2	1.8	3.0
19	39.6	39.9	40	19	1.2	1.8	3.0
20	41.7	41.9	42	20	1.3	1.7	3.0
21	43.8	43.9	44	21	1.3	1.7	3.0
22	45.8	45.8	46	22	1.4	1.7	3.1
23	47.9	47.7	48	23½	1.5	1.6	3.1
24	50.0	49.7	50	24½	1.6	1.6	3.2
Head = 0.8 ft. or 9% inches							
1	2.1	3.3	..	..	...	...	...
2	4.2	6.7	4	1½	0.2	4.8	5.0
3	6.3	9.7	6	1¾	0.3	4.5	4.8
4	8.3	12.4	8	2½	0.4	4.3	4.7
5	10.4	15.0	10	3½	0.5	4.2	4.7
6	12.5	17.6	12	3¾	0.6	4.1	4.7
7	14.6	20.0	15	5	0.7	3.9	4.6
8	16.7	22.3	17	5¾	0.8	3.8	4.6
9	18.8	24.6	19	6%	0.9	3.8	4.7
10	20.8	26.8	21	7%	1.0	3.8	4.8
11	22.9	28.9	23	8¼	1.1	3.8	4.9
12	25.0	31.0	25	9¼	1.3	3.8	5.1
13	27.1	33.0	27	10½	1.4	3.8	5.2
14	29.2	35.0	29	11½	1.6	3.8	5.4

TABLE III

For Divisor Box Shown in Figure 1

Long box; 4-inch dam; divisor board hinged

24 inches from side of flume; free flow in main channel;

0.1 foot or 1 13-16 inches effective head in divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	1.0	2	1%	0.1	3.1	3.2
2	4.2	2.7	4	2%	0.2	3.1	3.3
3	6.3	4.4	6	4	0.2	3.1	3.3
4	8.3	6.1	8	5 ½	0.3	3.1	3.4
5	10.4	7.8	10	6 ¼	0.4	3.0	3.4
6	12.5	9.6	12	7%	0.4	3.0	3.4
7	14.6	11.3	15	9 ½	0.5	3.0	3.5
8	16.7	13.1	17	10 ½	0.6	2.9	3.5
9	18.8	14.9	19	11 ¼	0.7	2.9	3.6
10	20.8	16.7	21	12 ¼	0.7	2.9	3.6
11	22.9	18.5	23	13%	0.8	2.8	3.6
12	25.0	20.4	25	14%	0.9	2.8	3.7
13	27.1	22.3	27	15 ½	1.0	2.7	3.7
14	29.2	24.2	29	16 ½	1.0	2.7	3.7
15	31.2	26.2	31	17 ½	1.1	2.6	3.7
16	33.4	28.1	33	18%	1.2	2.5	3.7
17	35.4	30.0	35	19%	1.2	2.4	3.6
18	37.5	31.9	38	21 ½	1.3	2.3	3.6
19	39.6	33.8	40	22 ½	1.4	2.2	3.6
20	41.7	35.8	42	23	1.5	2.1	3.6
21	43.8	37.8	44	24	1.6	2.0	3.6
22	45.8	39.8	..	..	...	...	...
23	47.9	41.8	..	..	...	...	...
24	50.0	43.9	..	..	...	...	...
Head = 0.8 ft. or 9% inches							
1	2.1	1.4	2	1 ¼	0.1	7.2	7.3
2	4.2	3.2	4	2 ½	0.3	7.2	7.5
3	6.3	5.0	6	3%	0.4	7.2	7.6
4	8.3	6.8	8	4 ¾	0.6	7.2	7.8
5	10.4	8.5	10	5%	0.8	7.2	8.0
6	12.5	10.2	12	7	1.0	7.2	8.2
7	14.6	12.0	15	8%	1.2	7.1	8.3
8	16.7	13.8	17	9%	1.5	7.1	8.6
9	18.8	15.6	19	10%	1.7	7.1	8.8
10	20.8	17.4	21	11%	1.9	7.0	8.9

TABLE III (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9½ inches				
11	22.9	19.3	23	13	2.1	7.0	9.1
12	25.0	21.2	25	14½	2.4	6.9	9.3
13	27.1	23.0	27	15½	2.6	6.9	9.5
14	29.2	24.9	29	16½	2.8	6.8	9.6

TABLE IV

For Divisor Box Shown in Figure 1

Long box; 4-inch dam; divisor board hinged

24 inches from side of flume; free flow in divisor channel

and 0.1 foot or 1 3-16 inches effective head in main channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	5.0	2	..	...	...	...
2	4.2	8.1	4	0¾	0.1	2.3	2.4
3	6.3	11.0	6	1¾	0.1	2.3	2.4
4	8.3	13.8	8	2	0.2	2.3	2.5
5	10.4	16.6	10	2½	0.2	2.3	2.5
6	12.5	19.3	12	3¾	0.3	2.3	2.6
7	14.6	21.8	15	4¾	0.4	2.2	2.6
8	16.7	24.3	17	5½	0.5	2.2	2.7
9	18.8	26.5	19	5¾	0.5	2.2	2.7
10	20.8	28.7	21	6¼	0.6	2.2	2.8
11	22.9	30.9	23	7½	0.6	2.2	2.8
12	25.0	33.0	25	8¾	0.7	2.1	2.8
13	27.1	34.9	27	9¼	0.8	2.1	2.9
14	29.2	36.8	29	10½	0.9	2.1	3.0
15	31.2	38.7	31	11	0.9	2.1	3.0
16	33.4	40.6	33	12	1.0	2.0	3.0
17	35.4	42.4	35	13	1.1	2.0	3.1
18	37.5	44.2	38	14½	1.2	1.9	3.1

THE COLORADO EXPERIMENT STATION

TABLE IV (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
19	39.6	46.0	40	15¾	1.3	1.9	3.2
20	41.7	47.8	42	16¾	1.4	1.9	3.3
21	43.8	49.6	44	17¾	1.5	1.8	3.3
22	45.8	51.3	46	19	1.6	1.8	3.4
23	47.9	53.0	48	20½	1.7	1.7	3.4
24	50.0	54.7	50	21¼	1.7	1.7	3.4
Head = 0.8 ft. or 9% inches							
1	2.1	5.2	..	..	...	...	...
2	4.2	10.0	4	0¾	0.2	4.9	5.1
3	6.3	14.3	6	1½	0.3	4.7	5.0
4	8.3	18.3	8	1¾	0.4	4.6	5.0
5	10.4	22.0	10	2	0.5	4.5	5.0
6	12.5	25.4	12	2½	0.6	4.3	4.9
7	14.6	28.3	15	3½	0.7	4.2	4.9
8	16.7	31.0	17	3¾	0.8	4.1	4.9
9	18.8	33.5	19	4¼	0.9	4.0	4.9
10	20.8	35.7	21	4¾	1.0	3.9	4.9
11	22.9	37.8	23	5¼	1.1	3.9	5.0
12	25.0	39.7	25	5¾	1.3	3.8	5.1
13	27.1	41.5	27	6½	1.4	3.8	5.2
14	29.2	43.2	29	7¼	1.5	3.8	5.3

TABLE V

For Divisor Box Shown in Figure 2

Long box; no dam; divisor board hinged 24
inches from side of flume; free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.2 ft. or 2¾ inches				
1	2.1	8.9	2	..	...	...	...
2	4.2	11.7	4
3	6.3	14.4	6
4	8.3	17.2	8
5	10.4	19.7	10	1%	0.1	0.6	0.7
6	12.5	22.2	12	2½	0.1	0.6	0.7

DIVISORS

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TABLE V (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent Inches		Divisor	Channel	Total
			Head = 0.2 ft. or 2 3/8 inches				
7	14.6	24.6	15	3 1/4	0.1	0.6	0.7
8	16.7	26.7	17	4	0.1	0.6	0.7
9	18.8	28.7	19	4 3/4	0.1	0.6	0.7
10	20.8	30.6	21	5 1/2	0.2	0.6	0.8
11	22.9	32.4	23	6 3/8	0.2	0.6	0.8
12	25.0	34.1	25	7 1/4	0.2	0.6	0.8
13	27.1	35.6	27	8 1/8	0.2	0.6	0.8
14	29.2	37.1	29	9 1/8	0.3	0.6	0.9
15	31.2	38.4	31	10 1/4	0.3	0.6	0.9
16	33.4	39.7	33	11 3/8	0.3	0.6	0.9
17	35.4	40.8	35	12 5/8	0.3	0.6	0.9
18	37.5	41.9	38	14 5/8	0.4	0.7	1.1
19	39.6	42.8	40	16 1/4	0.4	0.7	1.1
20	41.7	43.6	42	18 3/8	0.5	0.7	1.2
21	43.8	44.3	44	20 5/8	0.5	0.7	1.2
22	45.8	44.9	46	24	0.6	0.7	1.3
23	47.9	45.4	..	..	...	...	...
24	50.0	45.9	..	..	...	...	...
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	6.8	2	..	...	...	...
2	4.2	9.6	4	..	...	...	...
3	6.3	12.4	6	0 3/4	0.1	1.6	1.7
4	8.3	15.1	8	1 1/2	0.1	1.6	1.7
5	10.4	17.9	10	2 1/8	0.2	1.7	1.9
6	12.5	20.6	12	2 3/4	0.2	1.7	1.9
7	14.6	22.9	15	3 7/8	0.3	1.7	2.0
8	16.7	25.2	17	4 5/8	0.4	1.7	2.1
9	18.8	27.4	19	5 3/8	0.4	1.7	2.1
10	20.8	29.5	21	6 1/4	0.5	1.7	2.2
11	22.9	31.4	23	7	0.5	1.8	2.3
12	25.0	33.3	25	7 7/8	0.6	1.8	2.4
13	27.1	35.0	27	8 3/4	0.6	1.8	2.4
14	29.2	36.6	29	9 3/4	0.7	1.8	2.5
15	31.2	38.0	31	10 3/4	0.8	1.8	2.6
16	33.4	39.3	33	11 7/8	0.9	1.9	2.8
17	35.4	40.5	35	13	1.0	1.9	2.9
18	37.5	41.6	38	15	1.1	1.9	3.0
19	39.6	42.5	40	16 1/2	1.2	2.0	3.2
20	41.7	43.3	42	18 1/2	1.4	2.0	3.4
21	43.8	44.1	44	21	1.6	2.0	3.6
22	45.8	44.7	45	22 1/2	1.7	2.1	3.8
23	47.9	45.3	..	..	...	...	...
24	50.0	45.8	..	..	...	...	...

TABLE V (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.6 ft. or 7 3-16 inches							
1	2.1	6.3	2	..	...	...	...
2	4.2	9.2	4	..	...	...	...
3	6.3	12.1	6	0 7/8	0.2	3.0	3.2
4	8.3	14.8	8	1 5/8	0.2	3.0	3.2
5	10.4	17.5	10	2 1/4	0.3	3.0	3.3
6	12.5	20.2	12	3	0.4	3.0	3.4
7	14.6	22.6	15	4	0.5	3.1	3.6
8	16.7	24.9	17	4 3/4	0.7	3.1	3.8
9	18.8	27.1	19	5 1/2	0.8	3.1	3.9
10	20.8	29.2	21	6 3/8	0.9	3.1	4.0
11	22.9	31.1	23	7 1/4	1.0	3.2	4.2
12	25.0	32.9	25	8	1.1	3.2	4.3
13	27.1	34.7	27	9	1.3	3.2	4.5
14	29.2	36.3	29	10	1.4	3.2	4.6
15	31.2	37.7	31	11	1.5	3.3	4.8
16	33.4	39.1	33	12	1.7	3.3	5.0
17	35.4	40.2	35	13 1/4	1.9	3.3	5.2
18	37.5	41.3	38	15 1/4	2.1	3.4	5.5
19	39.6	42.2	40	16 3/4	2.3	3.4	5.7
20	41.7	43.1	42	18 3/8	2.6	3.5	6.1
21	43.8	43.8	44	21 1/4	2.9	3.5	6.4
22	45.8	44.5	45	22 7/8	3.1	3.6	6.7
23	47.9	45.1	..	..	...	...	...
24	50.0	45.7	..	..	...	...	...
Head = 0.8 ft. or 9 5/8 inches							
1	2.1	6.3	2	..	...	...	...
2	4.2	8.8	4	..	...	...	...
3	6.3	11.7	6	1	0.3	4.6	4.9
4	8.3	14.6	8	1 5/8	0.4	4.6	5.0
5	10.4	17.2	10	2 3/8	0.5	4.7	5.2
6	12.5	19.8	12	3 1/8	0.7	4.7	5.4
7	14.6	22.2	15	4 3/8	0.9	4.8	5.7
8	16.7	24.6	17	5	1.1	4.8	5.9
9	18.8	26.8	19	5 3/4	1.2	4.8	6.0
10	20.8	28.8	21	6 1/2	1.3	4.9	6.2
11	22.9	30.8	23	7 1/4	1.5	4.9	6.4
12	25.0	32.7	25	8 3/8	1.7	5.0	6.7
13	27.1	34.4	27	9 3/8	1.9	5.0	6.9
14	29.2	36.1	29	10 3/8	2.1	5.1	7.2
15	31.2	37.6	31	11 1/8	2.3	5.1	7.4
16	33.4	38.8	33	12 3/8	2.5	5.2	7.7

TABLE V (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 1.0 ft. or 12 inches				
1	2.1	5.7	2	..	...	...	...
2	4.2	8.7	4	..	...	...	...
3	6.3	11.5	6	1½	0.4	6.4	6.8
4	8.3	14.2	8	1¾	0.6	6.5	7.1
5	10.4	16.9	10	2½	0.7	6.5	7.2
6	12.5	19.5	12	3¼	0.9	6.6	7.5
7	14.6	22.0	15	4¼	1.2	6.7	7.9
8	16.7	24.4	17	5	1.4	6.8	8.2
9	18.8	26.6	19	5¾	1.7	6.8	8.5
10	20.8	28.7	21	6⅝	1.9	6.9	8.8
11	22.9	30.7	23	7⅞	2.1	7.0	9.1
12	25.0	32.5	25	8¼	2.4	7.1	9.5

TABLE VI

For Divison Box Shown in Figure 2
Long box; no dam; divisor board hinged 24
inches from side of flume; 0.1 ft. or 1 3-16
inch effective head in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	4.0	2	..	...	...	...
2	4.2	7.3	4	1	0.1	1.5	1.6
3	6.3	10.6	6	1½	0.1	1.5	1.6
4	8.3	13.8	8	2¼	0.2	1.6	1.8
5	10.4	16.7	10	2¾	0.2	1.6	1.8
6	12.5	19.5	12	3¾	0.2	1.6	1.8
7	14.6	22.1	15	4¾	0.3	1.6	1.9
8	16.7	24.5	17	5½	0.4	1.6	2.0
9	18.8	26.8	19	5¾	0.4	1.6	2.0
10	20.8	28.9	21	6½	0.5	1.7	2.2
11	22.9	31.0	23	7¾	0.5	1.7	2.2
12	25.0	33.0	25	8¼	0.6	1.7	2.3
13	27.1	34.8	27	9¼	0.7	1.7	2.4
14	29.2	36.6	29	10	0.7	1.7	2.4
Head = 0.8 ft. or 9¾ inches							
1	2.1	4.0	2	..	...	...	...
2	4.2	7.7	4	1	0.1	3.2	3.3
3	6.3	11.2	6	1½	0.2	3.3	3.5
4	8.3	14.6	8	2½	0.3	3.3	3.6
5	10.4	18.0	10	2¾	0.4	3.4	3.8

TABLE VI (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
6	12.5	21.2	12	3¼	0.5	3.4	3.9
7	14.6	24.3	15	4½	0.7	3.5	4.2
8	16.7	27.1	17	4¾	0.9	3.5	4.4
9	18.8	29.8	19	5¼	1.0	3.6	4.6
10	20.8	32.4	21	5½	1.1	3.6	4.7
11	22.9	34.8	23	6⅝	1.2	3.7	4.9
12	25.0	37.1	25	7¼	1.4	3.7	5.1
13	27.1	39.3	27	8	1.5	3.8	5.2
14	29.2	41.3	29	8⅝	1.6	3.8	5.4

TABLE VII

For Divisor Shown in Figure 2
 Long box; no dam; divisor board hinged 24 inches
 from side of flume: 0.1 ft. or 1 3-16 inches
 effective head in divisor channel,
 and free flow in main channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	4.7	2	..	...	...	...
2	4.2	7.5	4	0¾	0.1	1.6	1.7
3	6.3	10.2	6	1½	0.1	1.6	1.7
4	8.3	12.9	8	2¼	0.2	1.7	1.9
5	10.4	15.6	10	2¾	0.2	1.7	1.9
6	12.5	18.3	12	3⅝	0.3	1.7	2.0
7	14.6	20.8	15	4¾	0.3	1.7	2.0
8	16.7	23.3	17	5½	0.4	1.7	2.1
9	18.8	25.7	19	6¼	0.4	1.7	2.1
10	20.8	27.9	21	7⅛	0.5	1.8	2.3
11	22.9	30.1	23	7⅞	0.6	1.8	2.4
12	25.0	32.2	25	8¾	0.6	1.8	2.4
13	27.1	34.2	27	9⅝	0.7	1.8	2.5
14	29.2	36.1	29	10½	0.8	1.8	2.6
Head = 0.8 ft. or 9% inches							
1	2.1	4.0	2	..	...	...	...
2	4.2	6.9	4	1	0.2	4.6	4.8
3	6.3	9.8	6	1¾	0.3	4.6	4.9
4	8.3	12.6	8	2⅝	0.5	4.7	5.2
5	10.4	15.4	10	3	0.6	4.7	5.3

TABLE VII (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
6	12.5	18.0	12	3¾	0.7	4.7	5.4
7	14.6	20.5	15	4%	0.9	4.8	5.7
8	16.7	23.0	17	5%	1.0	4.8	5.8
9	18.8	25.4	19	6%	1.2	4.9	6.1
10	20.8	27.8	21	7¼	1.4	4.9	6.3
11	22.9	30.2	23	8	1.5	4.9	6.4
12	25.0	32.4	25	8¾	1.7	5.0	6.7
13	27.1	34.7	27	9%	1.9	5.0	6.9
14	29.2	36.9	29	10½	2.0	5.1	7.1

TABLE VIII

For Divisor Shown in Figure 2
Long box; no dam; divisor board hinged 24 inches
from side of flume; 0.1 ft. or 1 3-16 inches
effective head in main channel.
and free flow in divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	4.0	2	..	...	...	...
2	4.2	7.3	4	1	0.1	1.5	1.6
3	6.3	10.6	6	1%	0.1	1.5	1.6
4	8.3	13.7	8	2%	0.2	1.6	1.8
5	10.4	16.6	10	2%	0.2	1.6	1.8
6	12.5	19.3	12	3½	0.3	1.6	1.9
7	14.6	21.9	15	4%	0.3	1.6	1.9
8	16.7	24.3	17	5%	0.4	1.6	2.0
9	18.8	26.4	19	5%	0.4	1.6	2.0
10	20.8	28.5	21	6%	0.5	1.6	2.1
11	22.9	30.4	23	7½	0.5	1.7	2.2
12	25.0	32.2	25	8%	0.6	1.7	2.3
13	27.1	33.8	27	9%	0.7	1.7	2.4
14	29.2	35.3	29	10½	0.8	1.7	2.5
15	31.2	36.7	31	11%	0.8	1.8	2.6
16	33.4	38.0	33	12½	0.9	1.8	2.7
17	35.4	39.3	35	13%	1.0	1.8	2.8
18	37.5	40.5	38	16	1.2	1.9	3.1

TABLE VIII (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
19	39.6	41.6	40	17%	1.3	1.9	3.2
20	41.7	42.6	42	19%	1.4	1.9	3.3
21	43.8	43.6	44	21%	1.6	2.0	3.6
22	45.8	44.6	46	23½	1.7	2.0	3.7
23	47.9	45.6	..	..	...	...	...
24	50.0	46.5	..	..	...	...	...
Head = 0.8 ft. or 9% inches							
1	2.1	5.0	2	..	...	...	...
2	4.2	10.0	4	0¾	0.1	3.2	3.3
3	6.3	14.3	6	1¼	0.3	3.2	3.5
4	8.3	18.2	8	1⅝	0.3	3.3	3.6
5	10.4	21.7	10	2	0.4	3.3	3.7
6	12.5	24.7	12	2½	0.5	3.3	3.8
7	14.6	27.4	15	3¼	0.6	3.4	4.0
8	16.7	29.8	17	3⅝	0.7	3.4	4.1
9	18.8	32.0	19	4¼	0.8	3.5	4.3
10	20.8	34.0	21	4¾	1.0	3.5	4.5
11	22.9	35.8	23	5⅝	1.1	3.6	4.7
12	25.0	37.5	25	6¼	1.2	3.6	4.8
13	27.1	38.9	27	6⅞	1.4	3.7	5.1
14	29.2	40.3	29	7%	1.6	3.8	5.4

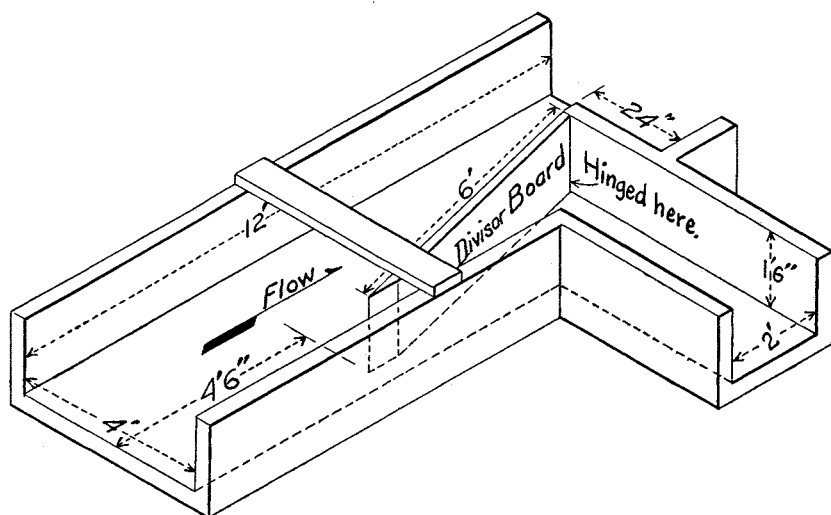


Fig. 2

TABLE IX
For Divisor Box Shown in Figure 3
Short box; 4-inch dam; divisor board hinged 24
inches from side of flume; free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.2 ft. or 2½ inches				
1	2.1	2.0	..	..	...	...	...
2	4.2	4.0	4	2	...	...	...
3	6.3	6.0	6	3	0.1	1.1	1.2
4	8.3	8.0	8	4	0.1	1.1	1.2
5	10.4	10.0	10	5	0.1	1.1	1.2
6	12.5	12.0	12	6	0.2	1.0	1.2
7	14.6	14.0	15	7½	0.2	1.0	1.2
8	16.7	16.1	17	8½	0.2	1.0	1.2
9	18.8	18.2	19	9½	0.2	1.0	1.2
10	20.8	20.2	21	10¾	0.3	0.9	1.2
11	22.9	22.3	23	11¾	0.3	0.9	1.2
12	25.0	24.3	25	12¾	0.3	0.9	1.2
13	27.1	26.4	27	13¾	0.3	0.9	1.2
14	29.2	28.5	29	14¾	0.4	0.8	1.2
15	31.2	30.6	31	15¾	0.4	0.8	1.2
16	33.4	32.7	33	16¾	0.4	0.8	1.2
17	35.4	34.7	35	17½	0.4	0.8	1.2
18	37.5	36.8	38	18½	0.5	0.7	1.2
19	39.6	39.0	40	19½	0.5	0.7	1.2
20	41.7	41.1	42	20¾	0.5	0.7	1.2
21	43.8	43.2	44	21¾	0.5	0.7	1.2
22	45.8	45.3	46	22¼	0.5	0.7	1.2
23	47.9	47.4	48	23¼	0.6	0.6	1.2
24	50.0	49.6	50	24¼	0.6	0.6	1.2
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	1.8	2	1½	0.1	2.9	3.0
2	4.2	3.6	4	2¼	0.1	2.9	3.0
3	6.3	5.5	6	3¼	0.2	2.9	3.1
4	8.3	7.4	8	4¾	0.3	2.8	3.1
5	10.4	9.3	10	5¾	0.3	2.8	3.1
6	12.5	11.2	12	6¾	0.4	2.8	3.2
7	14.6	13.2	15	7¾	0.5	2.7	3.2
8	16.7	15.2	17	8¾	0.5	2.7	3.2
9	18.8	17.2	19	9¾	0.6	2.6	3.2
10	20.8	19.2	21	10¾	0.7	2.6	3.3
11	22.9	21.3	23	11¾	0.7	2.6	3.3
12	25.0	23.4	25	12¾	0.8	2.5	3.3
13	27.1	25.6	27	13¾	0.9	2.4	3.3
14	29.2	27.7	29	14¾	0.9	2.4	3.3
15	31.2	29.9	31	15½	1.0	2.3	3.3
16	33.4	32.1	33	16¾	1.1	2.2	3.3
17	35.4	34.3	35	17¾	1.1	2.2	3.3
18	37.5	36.5	38	18¾	1.2	2.1	3.3

TABLE IX (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
19	39.6	38.7	40	19 $\frac{5}{8}$	1.3	2.0	3.3
20	41.7	40.9	42	20 $\frac{1}{2}$	1.4	1.9	3.3
21	43.8	43.2	44	21 $\frac{3}{8}$	1.4	1.9	3.3
22	45.8	45.3	46	22 $\frac{1}{4}$	1.5	1.8	3.3
23	47.9	47.5	48	23 $\frac{1}{4}$	1.6	1.7	3.3
24	50.0	49.7	50	24 $\frac{1}{8}$	1.7	1.7	3.4
Head = 0.8 ft. or 9 $\frac{5}{8}$ inches							
1	2.1	2.5	2	0 $\frac{3}{4}$	0.1	6.6	6.7
2	4.2	4.6	4	1 $\frac{3}{4}$	0.3	6.6	6.9
3	6.3	6.7	6	2 $\frac{5}{8}$	0.4	6.6	7.0
4	8.3	8.8	8	3 $\frac{5}{8}$	0.6	6.5	7.1
5	10.4	10.9	10	4 $\frac{1}{2}$	0.7	6.5	7.2
6	12.5	13.1	12	5 $\frac{1}{2}$	0.9	6.5	7.4
7	14.6	15.2	15	7	1.2	6.4	7.6
8	16.7	17.3	17	7 $\frac{7}{8}$	1.3	6.4	7.7
9	18.8	19.4	19	8 $\frac{7}{8}$	1.5	6.3	7.8
10	20.8	21.5	21	9 $\frac{3}{4}$	1.7	6.3	8.0
11	22.9	23.6	23	10 $\frac{3}{4}$	1.9	6.2	8.1
12	25.0	25.7	25	11 $\frac{5}{8}$	2.0	6.2	8.2
13	27.1	27.7	27	12 $\frac{5}{8}$	2.2	6.1	8.3
14	29.2	29.8	29	13 $\frac{5}{8}$	2.4	6.0	8.4

TABLE X

For Divisor Box Shown in Figure 3
 Short box; 4-inch dam; divisor board hinged 24
 inches from side of flume, 0.1 ft. or 1 3-16 inches
 effective in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	1.3	2	1½	0.1	2.1	2.2
2	4.2	2.7	4	2½	0.1	2.1	2.2
3	6.3	4.5	6	3¾	0.1	2.1	2.2
4	8.3	6.4	8	4¾	0.2	2.1	2.3
5	10.4	8.4	10	5¾	0.2	2.1	2.3
6	12.5	10.4	12	6¾	0.3	2.1	2.4

TABLE X (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
7	14.6	12.5	15	8 $\frac{1}{4}$	0.4	2.0	2.4
8	16.7	14.6	17	9 $\frac{3}{8}$	0.4	2.0	2.4
9	18.8	16.7	19	10 $\frac{1}{8}$	0.4	2.0	2.4
10	20.8	18.8	21	11	0.5	1.9	2.4
11	22.9	20.9	23	12	0.5	1.9	2.4
12	25.0	23.0	25	13	0.6	1.8	2.4
13	27.1	25.1	27	13 $\frac{7}{8}$	0.6	1.8	2.4
14	29.2	27.2	29	14 $\frac{7}{8}$	0.7	1.8	2.5
15	31.2	29.3	31	15 $\frac{7}{8}$	0.8	1.7	2.5
16	33.4	31.3	33	16 $\frac{3}{4}$	0.8	1.7	2.5
17	35.4	33.4	35	17 $\frac{3}{4}$	0.9	1.6	2.5
18	37.5	35.6	38	19 $\frac{1}{8}$	0.9	1.6	2.5
19	39.6	37.7	40	20	1.0	1.5	2.5
20	41.7	39.9	42	21	1.0	1.5	2.5
21	43.8	42.0	44	21 $\frac{7}{8}$	1.1	1.4	2.5
22	45.8	44.2	46	22 $\frac{7}{8}$	1.2	1.3	2.5
23	47.9	46.3	48	23 $\frac{3}{4}$	1.2	1.3	2.5
24	50.0	48.4	50	24 $\frac{5}{8}$	1.3	1.2	2.5

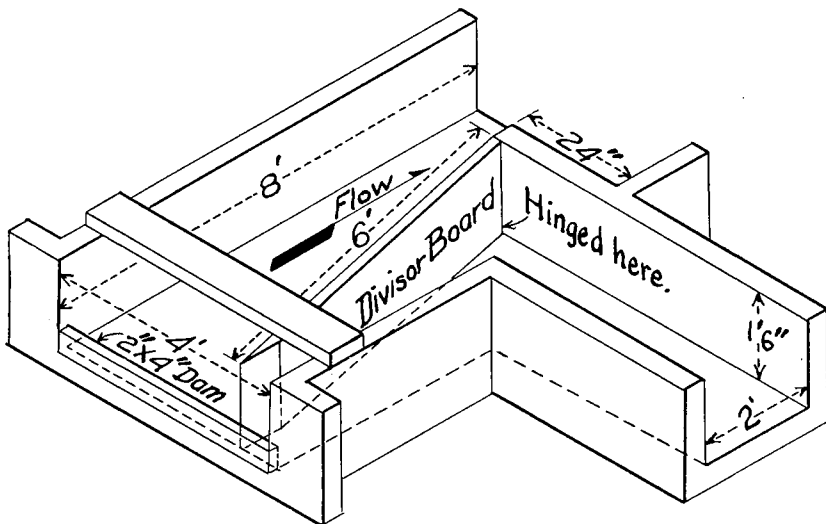


Fig. 3

TABLE X (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
1	2.1	1.7	2	1½	0.1	3.7	3.8
2	4.2	3.4	4	2¾	0.2	3.8	4.0
3	6.3	5.2	6	3¾	0.3	3.9	4.2
4	8.3	7.0	8	4½	0.4	3.9	4.3
5	10.4	9.0	10	5½	0.5	3.9	4.4
6	12.5	10.9	12	6½	0.6	3.9	4.5
7	14.6	12.9	15	8	0.7	3.9	4.6
8	16.7	14.9	17	9	0.8	3.9	4.7
9	18.8	17.0	19	10	0.9	3.8	4.7
10	20.8	19.0	21	10¾	1.0	3.7	4.7
11	22.9	21.1	23	11¾	1.1	3.6	4.7
12	25.0	23.2	25	12¾	1.2	3.6	4.8
13	27.1	25.3	27	13¾	1.3	3.5	4.8
14	29.2	27.4	29	14¾	1.5	3.4	4.9

TABLE XI

For Divisor Box Shown in Figure 3
 Short box; 4-inch dam; divisor board hinged 24
 inches from side of flume; free flow in main channel;
 0.1 ft. or 1 3-16 inches effective head in divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	1.0	2	2	0.1	2.9	3.0
2	4.2	2.0	4	3 $\frac{7}{8}$	0.1	2.9	3.0
3	6.3	3.0	6	5 $\frac{1}{2}$	0.2	2.8	3.0
4	8.3	4.1	8	7	0.3	2.7	3.0
5	10.4	5.3	10	8 $\frac{1}{4}$	0.3	2.8	3.1
6	12.5	6.7	12	9 $\frac{1}{2}$	0.4	2.7	3.1
7	14.6	8.1	15	11 $\frac{1}{4}$	0.5	2.6	3.1
8	16.7	9.6	17	12 $\frac{3}{8}$	0.5	2.6	3.1
9	18.8	11.1	19	13 $\frac{1}{2}$	0.6	2.5	3.1
10	20.8	12.7	21	14 $\frac{5}{8}$	0.7	2.4	3.1
11	22.9	14.4	23	15 $\frac{5}{8}$	0.7	2.4	3.1
12	25.0	16.2	25	16 $\frac{5}{8}$	0.7	2.3	3.0
13	27.1	18.0	27	17 $\frac{5}{8}$	0.8	2.2	3.0
14	29.2	19.8	29	18 $\frac{5}{8}$	0.9	2.1	3.0
15	31.2	21.8	31	19 $\frac{5}{8}$	0.9	2.1	3.0
16	33.4	23.8	33	20 $\frac{1}{2}$	1.0	2.0	3.0
17	35.4	25.8	35	21 $\frac{1}{2}$	1.0	2.0	3.0
18	37.5	27.8	38	22 $\frac{3}{4}$	1.1	1.8	2.9

TABLE XI (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
19	39.6	29.8	40	23¾	1.2	1.7	2.9
20	41.7	31.9	42	24½	1.2	1.7	2.9
21	43.8	34.0	..	..	...	...	...
22	45.8	36.1	..	..	...	...	...
23	47.9	37.3	..	..	...	...	...
24	50.0	40.5	..	..	...	...	...
Head = 0.8 ft. or 9½ inches							
1	2.1	....	2	3¾	0.1	6.5	6.6
2	4.2	1.0	4	5½	0.3	6.5	6.8
3	6.3	1.5	6	7½	0.4	6.4	6.8
4	8.3	2.4	8	8½	0.5	6.4	6.9
5	10.4	3.3	10	9½	0.7	6.3	7.0
6	12.5	4.5	12	11	0.8	6.2	7.0
7	14.6	5.7	15	12¾	1.1	6.1	7.2
8	16.7	7.2	17	13½	1.2	6.0	7.2
9	18.8	8.7	19	14½	1.4	5.9	7.3
10	20.8	10.3	..	..	...	...	...
11	22.9	11.9	..	..	...	...	...
12	25.0	13.7	..	..	...	...	...
13	27.1	15.5	..	..	...	...	...
14	29.2	17.3	..	..	...	...	...

TABLE XII

For Divisor Box Shown in Figure 3

Short box; 4-inch dam; divisor board hinged 24
inches from side of flume; free flow in divisor channel;
0.1 ft. or 1 3-16 inches effective head in main channel

Divisor opening in inches	Percent divisor openings of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	3.7	2	..	...	...	...
2	4.2	6.2	4	1½	0.1	2.2	2.3
3	6.3	8.7	6	1½	0.1	2.2	2.3
4	8.3	11.2	8	2¾	0.2	2.1	2.3
5	10.4	13.7	10	3½	0.2	2.2	2.4
6	12.5	16.2	12	4¼	0.3	2.1	2.4

TABLE XII (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
7	14.6	17.7	15	5½	0.4	2.1	2.5
8	16.7	21.2	17	6¼	0.4	2.1	2.5
9	18.8	23.7	19	7⅛	0.5	2.0	2.5
10	20.8	26.2	21	7⅞	0.6	2.0	2.6
11	22.9	28.6	23	8¾	0.6	2.0	2.6
12	25.0	30.9	25	9½	0.6	2.0	2.6
13	27.1	33.3	27	10⅝	0.7	2.0	2.7
14	29.2	35.7	29	11¼	0.8	1.9	2.7
15	31.2	38.0	31	12	0.8	1.9	2.7
16	33.4	40.3	33	12⅞	0.9	1.8	2.7
17	35.4	42.5	35	13¾	0.9	1.8	2.7
18	37.5	44.7	38	15	1.0	1.8	2.8
19	39.6	46.9	40	15⅞	1.1	1.7	2.8
20	41.7	49.1	42	16¾	1.2	1.6	2.8
21	43.8	51.3	44	17¾	1.2	1.6	2.8
22	45.8	53.5	46	18⅝	1.3	1.5	2.8
23	47.9	55.6	48	19½	1.4	1.5	2.9
24	50.0	57.7	50	20½	1.4	1.5	2.9
Head = 0.8 ft. or 9⅝ inches							
1	2.1	6.6	2	..	...	...	...
2	4.2	9.9	4	..	...	...	...
3	6.3	13.2	6	0⅞	0.2	3.7	3.9
4	8.3	16.4	8	1⅝	0.3	3.8	4.1
5	10.4	19.5	10	2	0.4	3.8	4.2
6	12.5	22.4	12	2⅝	0.5	3.9	4.4
7	14.6	25.3	15	3⅝	0.7	3.9	4.6
8	16.7	28.1	17	4¼	0.8	3.9	4.7
9	18.8	30.7	19	4⅞	0.9	3.9	4.8
10	20.8	33.3	21	5½	1.0	3.9	4.9
11	22.9	35.8	23	6¼	1.2	3.9	5.1
12	25.0	38.2	25	6⅞	1.3	3.9	5.2
13	27.1	40.5	27	7⅝	1.4	3.9	5.3
14	29.2	42.8	29	8⅝	1.5	3.9	5.4

TABLE XIII

For Divisor Box Shown in Figure 4
 Short box; floor flush with top of 4-inch dam;
 divisor board hinged 24 inches from side of flume;
 free flow in both channels.

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.2 ft. or 2¾ inches							
1	2.1	....	..	..	...	...	...
2	4.2	1.4	4	3¾	0.1	0.9	1.0
3	6.3	2.6	6	5¾	0.1	0.9	1.0
4	8.3	3.8	8	6¾	0.1	0.9	1.0
5	10.4	5.4	10	7¾	0.1	0.9	1.0
6	12.5	7.0	12	8¾	0.1	0.9	1.0
7	14.6	8.8	15	10	0.2	0.8	1.0
8	16.7	10.7	17	10¾	0.2	0.8	1.0
9	18.8	12.8	19	11¾	0.2	0.8	1.0
10	20.8	15.0	21	12¾	0.2	0.8	1.0
11	22.9	17.3	23	13½	0.2	0.8	1.0
12	25.0	19.6	25	14¼	0.2	0.7	0.9
13	27.1	21.9	27	15½	0.3	0.7	1.0
14	29.2	24.3	29	16	0.3	0.7	1.0
15	31.2	26.7	31	16¾	0.3	0.7	1.0
16	33.4	29.1	33	17½	0.3	0.7	1.0
17	35.4	31.6	35	18¾	0.3	0.6	0.9
18	37.5	34.2	38	19½	0.4	0.6	1.0
19	39.6	36.7	40	20¼	0.4	0.6	1.0
20	41.7	39.2	42	21¾	0.4	0.6	1.0
21	43.8	41.6	44	22	0.4	0.6	1.0
22	45.8	44.0	46	22¾	0.5	0.5	1.0
23	47.9	46.5	48	23¾	0.5	0.5	1.0
24	50.0	47.8	50	24½	0.5	0.5	1.0
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	....	2	2½	0.1	2.7	2.8
2	4.2	1.4	4	3¾	0.1	2.7	2.8
3	6.3	2.6	6	5¾	0.2	2.6	2.8
4	8.3	3.9	8	6¾	0.2	2.6	2.8
5	10.4	5.4	10	7¾	0.3	2.5	2.8
6	12.5	7.0	12	8¾	0.4	2.4	2.8
7	14.6	8.8	15	10	0.4	2.4	2.8
8	16.7	10.7	17	10¾	0.5	2.3	2.8
9	18.8	12.8	19	11¾	0.5	2.3	2.8
10	20.8	15.0	21	12¾	0.6	2.2	2.8
11	22.9	17.3	23	13½	0.6	2.2	2.8
12	25.0	19.6	25	14¼	0.7	2.1	2.8

TABLE XIII (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
13	27.1	21.9	27	15½	0.8	2.0	2.8
14	29.2	24.3	29	16	0.8	2.0	2.8
15	31.2	26.7	31	16¾	0.9	1.9	2.8
16	33.4	29.1	33	17½	0.9	1.9	2.8
17	35.4	31.6	35	18¾	1.0	1.8	2.8
18	37.5	34.2	38	19½	1.1	1.7	2.8
19	39.6	36.7	40	20¼	1.1	1.7	2.8
20	41.7	39.2	42	21½	1.2	1.6	2.8
21	43.8	41.6	44	22	1.2	1.6	2.8
22	45.8	44.0	46	22¾	1.3	1.5	2.8
23	47.9	46.5	48	23¾	1.4	1.4	2.8
24	50.0	48.9	50	24½	1.4	1.4	2.8
Head = 0.8 ft. or 9½ inches							
1	2.1	....	2	1½	0.1	6.6	6.7
2	4.2	2.6	4	2¾	0.3	6.6	6.9
3	6.3	4.4	6	3¾	0.4	6.5	6.9
4	8.3	6.3	8	4¾	0.6	6.5	7.1
5	10.4	8.2	10	6	0.7	6.5	7.2
6	12.5	10.1	12	7	0.9	6.4	7.3
7	14.6	12.0	15	8½	1.1	6.4	7.5
8	16.7	14.0	17	9½	1.3	6.3	7.6
9	18.8	16.0	19	10½	1.5	6.2	7.7
10	20.8	18.1	21	11¾	1.6	6.2	7.8
11	22.9	20.0	23	12¾	1.8	6.1	7.9
12	25.0	22.1	25	13½	2.0	6.0	8.0
13	27.1	24.1	27	14¾	2.2	5.9	8.1
14	29.2	26.2	29	15¼	2.3	5.8	8.1
15	31.2	28.3	31	16¼	2.5	5.7	8.2
16	33.4	30.5	33	17½	2.7	5.5	8.2
17	35.4	32.8	35	18	2.9	5.4	8.3
18	37.5	35.0	38	19¼	3.1	5.2	8.3
19	39.6	37.3	40	20¼	3.3	5.0	8.3
20	41.7	39.6	42	21½	3.5	4.8	8.3
21	43.8	41.9	44	21¾	3.6	4.6	8.2
22	45.8	44.1	46	22¾	3.8	4.4	8.2
23	47.9	46.5	48	23½	3.9	4.3	8.2
24	50.0	48.8	50	24¾	4.1	4.1	8.2

TABLE XIV

For Divisor Box Shown in Figure 4
 Short box; floor flush with top of 4-inch dam;
 divisor board hinged 24 inches from side of flume;
 0.1 ft. or 1 3-16 inches effective head in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	....	2	3½	0.1	2.2	2.3
2	4.2	....	4	4½	0.1	2.2	2.3
3	6.3	1.0	6	6¼	0.2	2.2	2.4
4	8.3	2.6	8	7¾	0.2	2.2	2.4
5	10.4	4.2	10	8½	0.3	2.1	2.4
6	12.5	5.8	12	9½	0.3	2.1	2.4
7	14.6	7.4	15	11	0.4	2.0	2.4
8	16.7	9.2	17	12	0.4	2.0	2.4
9	18.8	11.1	19	12¾	0.5	1.9	2.4
10	20.8	13.0	21	13¾	0.5	1.9	2.4
11	22.9	15.0	23	14¾	0.6	1.8	2.4
12	25.0	17.1	25	15½	0.6	1.8	2.4
13	27.1	19.3	27	16¾	0.6	1.8	2.4
14	29.2	21.4	29	17¼	0.7	1.7	2.4
15	31.2	23.7	31	18	0.7	1.7	2.4
16	33.4	26.1	33	18¾	0.8	1.6	2.4
17	35.4	28.5	35	19½	0.8	1.6	2.4
18	37.5	31.0	38	20¾	0.9	1.5	2.4
19	39.6	33.4	40	21½	0.9	1.5	2.4
20	41.7	36.0	42	22¼	1.0	1.4	2.4
21	43.8	38.6	44	23	1.0	1.4	2.4
22	45.8	41.4	46	23¾	1.1	1.3	2.4
23	47.9	44.1	..	..	...	...	...
24	50.0	46.8	..	..	...	...	...
Head = 0.8 ft. or 9½ inches							
1	2.1	....	2	2	0.1	4.0	4.1
2	4.2	2.0	4	3½	0.2	4.0	4.2
3	6.3	3.8	6	4½	0.3	4.0	4.3
4	8.3	5.8	8	5¼	0.4	3.9	4.3
5	10.4	7.7	10	6¼	0.4	3.9	4.3
6	12.5	9.6	12	7¼	0.5	3.9	4.4
7	14.6	11.5	15	8¾	0.7	3.8	4.5
8	16.7	13.4	17	9¾	0.8	3.8	4.6
9	18.8	15.3	19	11	0.9	3.8	4.7
10	20.8	17.2	21	12	1.0	3.7	4.7
11	22.9	19.1	23	13½	1.1	3.7	4.8
12	25.0	21.0	25	14½	1.2	3.6	4.8

TABLE XIV (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
13	27.1	22.8	27	15 $\frac{1}{8}$	1.3	3.6	4.9
14	29.2	24.8	29	16 $\frac{1}{4}$	1.5	3.5	5.0
15	31.2	26.7	31	17 $\frac{1}{4}$	1.6	3.5	5.1
16	33.4	28.6	33	18 $\frac{1}{4}$	1.7	3.4	5.1
17	35.4	30.5	35	19 $\frac{1}{4}$	1.8	3.3	5.1
18	37.5	32.5	38	20 $\frac{3}{4}$	2.0	3.2	5.2
19	39.6	34.6	40	21 $\frac{3}{4}$	2.1	3.1	5.2
20	41.7	36.6	42	22 $\frac{3}{4}$	2.2	3.1	5.3
21	43.8	38.6	44	23 $\frac{3}{4}$	2.3	3.0	5.3
22	45.8	40.7	..	..	...	...	...
23	47.9	42.7	..	..	...	...	...
24	50.0	44.8	..	..	...	...	...

TABLE XV

For Divisor Box Shown in Figure 4
 Short box; floor flush with top of 4-inch dam;
 divisor board hinged 24 inches from side of flume;
 free flow in main channel, and 0.1 ft. or 1 3-16 inch
 effective head on divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	....	2	5 $\frac{7}{8}$	0.1	2.6	2.7
2	4.2	....	4	7 $\frac{1}{4}$	0.1	2.6	2.7
3	6.3	....	6	8 $\frac{3}{8}$	0.2	2.5	2.7
4	8.3	....	8	9 $\frac{1}{2}$	0.2	2.4	2.6
5	10.4	....	10	10 $\frac{5}{8}$	0.3	2.3	2.6
6	12.5	2.2	12	11 $\frac{5}{8}$	0.3	2.3	2.6
7	14.6	3.6	15	13	0.4	2.2	2.6
8	16.7	5.3	17	14	0.4	2.2	2.6
9	18.8	7.0	19	14 $\frac{7}{8}$	0.5	2.1	2.6
10	20.8	8.9	21	15 $\frac{5}{8}$	0.5	2.1	2.6
11	22.9	10.8	23	16 $\frac{1}{2}$	0.6	2.0	2.6
12	25.0	12.8	25	17 $\frac{3}{8}$	0.6	2.0	2.6
13	27.1	15.0	27	18 $\frac{1}{8}$	0.7	1.9	2.6
14	29.2	17.2	29	18 $\frac{3}{8}$	0.7	1.9	2.6
15	31.2	19.4	31	19 $\frac{1}{4}$	0.8	1.8	2.6
16	33.4	21.7	33	20 $\frac{1}{2}$	0.8	1.8	2.6
17	35.4	24.1	35	21 $\frac{1}{4}$	0.9	1.7	2.6
18	37.5	26.7	38	22 $\frac{1}{4}$	1.0	1.6	2.6

TABLE XV (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
19	39.6	29.2	40	23	1.1	1.6	2.7
20	41.7	31.8	42	23½	1.1	1.6	2.7
21	43.8	34.5	44	24½	1.2	1.5	2.7
22	45.8	37.2	..	..	...	...	...
23	47.9	40.0	..	..	...	...	...
24	50.0	42.9	..	..	...	...	...
Head = 0.8 ft. or 9½ inches							
1	2.1	....	2	6⅞	0.2	6.5	6.7
2	4.2	....	4	8½	0.3	6.4	6.7
3	6.3	....	6	10	0.4	6.3	6.7
4	8.3	....	8	11½	0.5	6.2	6.7
5	10.4	....	10	12¾	0.7	6.0	6.7
6	12.5	1.0	12	14½	0.8	5.9	6.7
7	14.6	2.1	15	15⅞	1.0	5.7	6.7
8	16.7	3.3	17	17	1.1	5.6	6.7
9	18.8	4.6	19	18½	1.3	5.4	6.7
10	20.8	6.0	21	19	1.4	5.3	6.7
11	22.9	7.4	23	20	1.5	5.1	6.6
12	25.0	8.8	25	20⅞	1.6	5.0	6.6
13	27.1	10.3	27	21¾	1.7	4.8	6.5
14	29.2	11.9	29	22½	1.9	4.6	6.5
15	31.2	13.5	31	23⅞	2.0	4.5	6.5
16	33.4	15.2	33	24¾	2.1	4.3	6.4
17	35.4	17.0	..	..	...	...	...
18	37.5	18.9	..	..	...	...	...

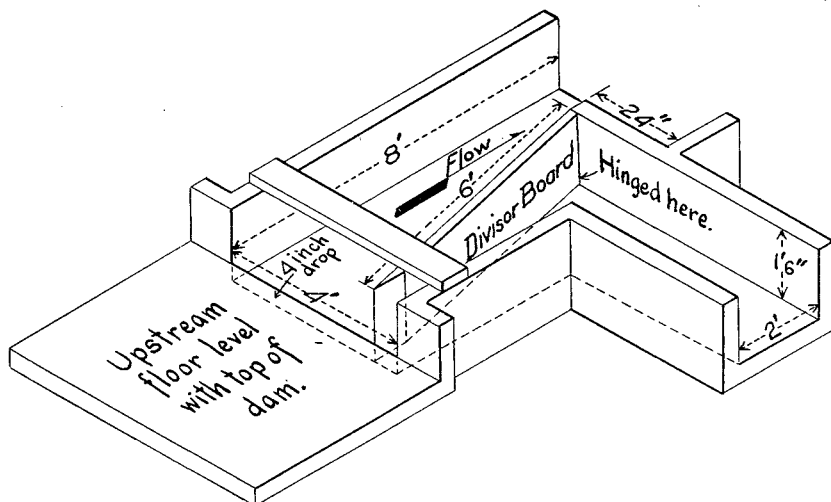


Fig. 4

TABLE XV (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
19	39.6	20.9	..	..	...	...	...
20	41.7	23.0	..	..	...	...	...
21	43.8	25.2	..	..	...	...	...
22	45.8	27.5	..	..	...	...	...
23	47.9	30.0	..	..	...	...	...
24	50.0	32.5	..	..	...	...	...

TABLE XVI

For Divisor Box shown in Figure 4
 Short box; floor flush with top of 4-inch dam;
 Divisor board hinged 24 inches from side of flume; free flow in
 divisor channel and 0.1 ft. or 1 3-16 inches effective head
 in main channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	1.0	2	1½	0.1	2.4	2.5
2	4.2	3.0	4	2½	0.1	2.4	2.5
3	6.3	4.8	6	3½	0.2	2.3	2.5
4	8.3	6.7	8	4½	0.2	2.3	2.5
5	10.4	8.7	10	5½	0.3	2.2	2.5
6	12.5	10.8	12	6½	0.3	2.2	2.5
7	14.6	12.9	15	8	0.4	2.1	2.5
8	16.7	15.0	17	8¾	0.4	2.1	2.5
9	18.8	17.3	19	9¾	0.5	2.0	2.5
10	20.8	19.6	21	10½	0.5	2.0	2.5
11	22.9	21.9	23	11¾	0.6	1.9	2.5
12	25.0	24.3	25	12¼	0.6	1.9	2.5
13	27.1	26.7	27	13½	0.7	1.9	2.6
14	29.2	29.1	29	14	0.8	1.8	2.6
15	31.2	31.7	31	14¾	0.8	1.8	2.6
16	33.4	34.3	33	15½	0.9	1.7	2.6
17	35.4	36.8	35	16¾	0.9	1.7	2.6
18	37.5	39.4	38	17½	1.0	1.6	2.6
19	39.6	42.0	40	18¼	1.0	1.6	2.6
20	41.7	44.8	42	19	1.1	1.5	2.6
21	43.8	47.6	44	19¾	1.2	1.4	2.6
22	45.8	50.5	46	20½	1.2	1.4	2.6
23	47.9	53.5	48	21¾	1.3	1.4	2.7
24	50.0	56.5	50	21¾	1.3	1.3	2.6

TABLE XVI (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
1	2.1	4.0	2	0½	0.1	4.1	4.2
2	4.2	7.7	4	1	0.2	4.0	4.2
3	6.2	11.3	6	1½	0.3	4.0	4.3
4	8.3	14.7	8	2¼	0.4	4.0	4.4
5	10.4	17.9	10	2½	0.5	4.0	4.5
6	12.5	20.8	12	3¼	0.6	4.0	4.6
7	14.6	23.7	15	4⅞	0.7	4.0	4.7
8	16.7	26.4	17	4¾	0.8	3.9	4.7
9	18.8	29.1	19	5%	1.0	3.9	4.9
10	20.8	31.7	21	6	1.1	3.9	5.0
11	22.9	34.2	23	6¾	1.2	3.9	5.1
12	25.0	36.7	25	7½	1.3	3.8	5.1
13	27.1	39.2	27	8¼	1.4	3.8	5.2
14	29.2	41.5	29	9	1.6	3.8	5.4
15	31.2	44.0	31	9¾	1.7	3.7	5.4
16	33.4	46.4	33	10½	1.8	3.7	5.5
17	35.4	48.7	35	11%	2.0	3.6	5.6
18	37.5	51.1	38	12½	2.2	3.6	5.8
19	39.6	53.2	40	13¼	2.3	3.5	5.8
20	41.7	55.4	42	14⅞	2.5	3.4	5.9
21	43.8	57.5	44	15	2.6	3.4	6.0
22	45.8	59.5	46	15⅞	2.8	3.3	6.1
23	47.9	61.5	48	16%	3.0	3.2	6.2
24	50.0	63.5	50	17½	3.1	3.1	6.2

TABLE XVII

For Divisor Box Shown in Figure 5
 Short box; 4-inch dam; divisor board hinged
 12 inches from side of flume; free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.2 ft. or 2½ inches				
1	2.1	1.5	2	..	...	...	...
2	4.2	3.1	4	2½	0.1	1.1	1.2
3	6.3	4.9	6	3½	0.1	1.1	1.2
4	8.3	6.9	8	4½	0.1	1.1	1.2
5	10.4	9.0	10	5½	0.1	1.0	1.1
6	12.5	11.2	12	6%	0.1	1.0	1.1

TABLE XVII (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.2 ft. or 2 3/8 inches							
7	14.6	13.3	15	7 3/4	0.2	1.0	1.2
8	16.7	15.4	17	8 3/4	0.2	1.0	1.2
9	18.8	17.5	19	9 3/4	0.2	0.9	1.1
10	20.8	19.6	21	10 5/8	0.2	0.9	1.1
11	22.9	21.7	23	11 5/8	0.3	0.9	1.2
12	25.0	23.8	..	..	...	...	...
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	1.0	2	1 3/4	0.1	3.3	3.4
2	4.2	2.3	4	3 1/8	0.1	3.2	3.3
3	6.3	3.8	6	4 1/4	0.2	3.1	3.3
4	8.3	5.6	8	5 1/4	0.3	3.0	3.3
5	10.4	7.5	10	6 1/4	0.3	3.0	3.3
6	12.5	9.5	12	7 1/4	0.4	2.9	3.3
7	14.6	11.6	15	8 5/8	0.5	2.8	3.3
8	16.7	13.7	17	9 5/8	0.6	2.7	3.3
9	18.8	15.8	19	10 1/2	0.6	2.7	3.3
10	20.8	17.9	21	11 1/2	0.7	2.6	3.3
11	22.9	20.0	..	..	...	...	...
12	25.0	22.2	..	..	...	...	...
Head = 0.8 ft. or 9 5/8 inches							
1	2.1	1.0	2	1 3/8	0.2	8.5	8.7
2	4.2	2.1	4	3 1/4	0.4	8.3	8.7
3	6.3	3.6	6	4 1/4	0.6	8.1	8.7
4	8.3	5.4	8	5 3/8	0.7	8.0	8.7
5	10.4	7.3	10	6 3/8	0.9	7.8	8.7
6	12.5	9.3	12	7 1/4	1.0	7.7	8.7
7	14.6	11.3	15	8 3/4	1.3	7.4	8.7
8	16.7	13.5	17	9 3/4	1.5	7.2	8.7
9	18.8	15.6	19	10 5/8	1.7	7.0	8.7
10	20.8	17.7	21	11 1/2	1.8	6.9	8.7
11	22.9	19.8	..	..	...	...	...
12	25.0	22.0	..	..	...	...	...

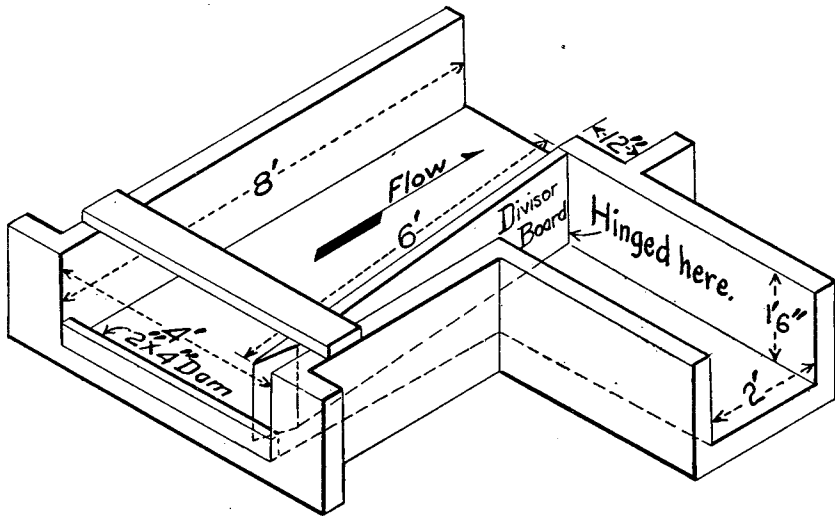


Fig. 5

TABLE XVIII

For Divisor Box Shown in Figure 5

Short box; 4-inch dam; divisor board hinged
 12 inches from side of flume; 0.1 ft. or 1 3-16 inches
 effective head in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	0.6	2	2¾	0.1	2.5	2.6
2	4.2	1.6	4	3¾	0.1	2.5	2.6
3	6.3	2.9	6	4¾	0.2	2.4	2.6
4	8.3	4.4	8	5¾	0.2	2.4	2.6
5	10.4	6.3	10	6¾	0.3	2.3	2.6
6	12.5	8.3	12	7¾	0.3	2.3	2.6
7	14.6	10.4	15	9¾	0.4	2.2	2.6
8	16.7	12.6	17	10	0.5	2.1	2.6
9	18.8	14.8	19	10¾	0.5	2.1	2.6
10	20.8	17.1	21	11¾	0.6	2.0	2.6
11	22.9	19.4	..	..	...	...	...
12	25.0	21.7	..	..	...	...	...
Head = 0.8 ft. or 9½ inches							
1	2.1	0.8	2	2¼	0.1	5.2	5.3
2	4.2	1.8	4	3½	0.2	5.2	5.4
3	6.3	3.1	6	4½	0.3	5.2	5.5
4	8.3	4.7	8	5½	0.4	5.2	5.6
5	10.4	6.6	10	6½	0.6	5.1	5.7
6	12.5	8.7	12	7½	0.7	5.0	5.7

TABLE XVIII (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
7	14.6	10.9	15	8¾	0.8	4.9	5.7
8	16.7	13.2	17	9%	1.0	4.8	5.8
9	18.8	15.5	19	10½	1.1	4.7	5.8
10	20.8	17.9	21	11%	1.2	4.6	5.8
11	22.9	20.2	23	12½	1.3	4.4	5.7
12	25.0	22.6	..	..	...	...	...

TABLE XIX

For Divisor Box Shown in Figure 5
 Short box; 4-inch dam; divisor board hinged
 12 inches from side of flume; free flow in main channel;
 0.1 ft. or 1 3-16 inches effective head in divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	0.5	2	2%	0.1	3.2	3.3
2	4.2	1.3	4	4%	0.1	3.1	3.2
3	6.3	2.2	6	6%	0.2	3.0	3.2
4	8.3	3.2	8	7%	0.3	2.9	3.2
5	10.4	4.4	10	8½	0.3	2.8	3.1
6	12.5	5.8	12	9%	0.4	2.7	3.1
7	14.6	7.4	15	11¼	0.4	2.6	3.0
8	16.7	9.0	17	12%	0.5	2.5	3.0
9	18.8	10.8	..	..	...	...	...
10	20.8	12.6	..	..	...	...	...
11	22.9	14.4	..	..	...	...	...
12	25.0	16.4	..	..	...	...	...
Head = 0.8 ft. or 9% inches							
1	2.1	...	2	5¼	0.2	7.8	8.0
2	4.2	0.5	4	7½	0.4	7.6	8.0
3	6.3	0.9	6	8¾	0.5	7.5	8.0
4	8.3	1.4	8	9½	0.7	7.3	8.0
5	10.4	2.1	10	10½	0.8	7.1	7.9
6	12.5	2.9	12	11½	1.0	6.9	7.9
7	14.6	3.9	..	..	...	...	...
8	16.7	5.3	..	..	...	...	...
9	18.8	7.0	..	..	...	...	...
10	20.8	8.9	..	..	...	...	...
11	22.9	11.0	..	..	...	...	...
12	25.0	13.2	..	..	...	...	...

TABLE XX

For Divisor Box Shown in Figure 5
 Short box; 4-inch dam; divisor board hinged
 12 inches from side of flume; free flow in divisor channel;
 0.1 ft. or 1 3-16 inches effective head in main channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	2.4	2	..	...	...	...
2	4.2	4.7	4	1¾	0.1	2.5	2.6
3	6.3	7.1	6	2½	0.1	2.5	2.6
4	8.3	9.5	8	3¾	0.2	2.4	2.6
5	10.4	11.9	10	4¾	0.3	2.4	2.7
6	12.5	14.3	12	5	0.3	2.4	2.7
7	14.6	16.8	15	6¼	0.4	2.3	2.7
8	16.7	19.2	17	7⅛	0.4	2.3	2.7
9	18.8	21.6	19	7⅞	0.5	2.2	2.7
10	20.8	24.0	21	8¾	0.6	2.2	2.8
11	22.9	26.3	23	9⅝	0.6	2.2	2.8
12	25.0	28.7	25	10½	0.7	2.1	2.8
Head = 0.8 ft. or 9⅝ inches							
1	2.1	3.0	2	..	...	...	...
2	4.2	5.9	4	1¾	0.2	5.2	5.4
3	6.3	8.7	6	2	0.3	5.2	5.5
4	8.3	11.4	8	2¾	0.5	5.2	5.7
5	10.4	14.1	10	3½	0.6	5.2	5.8
6	12.5	16.8	12	4¼	0.7	5.2	5.9
7	14.6	19.5	15	5⅝	0.9	5.2	6.1
8	16.7	22.1	17	6⅜	1.0	5.1	6.1
9	18.8	24.6	19	6⅞	1.2	5.1	6.3
10	20.8	27.1	21	7⅞	1.3	5.0	6.3
11	22.9	29.6	23	8¾	1.4	5.0	6.4
12	25.0	32.0	25	9⅞	1.6	4.9	6.5

TABLE XXI

For Divisor Box Shown in Figure 5*
 Short box; 6-inch dam; divisor board hinged
 12 inches from side of flume; free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.2 ft. or 2 3/8 inches							
1	2.1	1.5	2	..	...	...	...
2	4.2	3.2	4	..	...	...	...
3	6.3	5.1	6	3 1/2	0.1	1.1	1.2
4	8.3	7.1	8	4 3/8	0.1	1.1	1.2
5	10.4	9.2	10	5 3/8	0.1	1.1	1.2
6	12.5	11.4	12	6 1/4	0.1	1.1	1.2
7	14.6	13.6	15	7 7/8	0.2	1.0	1.2
8	16.7	15.8	17	8 1/2	0.2	1.0	1.2
9	18.8	18.0	19	9 1/2	0.2	0.9	1.1
10	20.8	20.2	21	10 3/8	0.2	0.9	1.1
11	22.9	22.4	23	11 1/4	0.2	0.9	1.1
12	25.0	24.6	25	12 1/4	0.3	0.8	1.1
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	1.3	2	1 1/2	0.1	3.2	3.3
2	4.2	2.7	4	2 3/4	0.1	3.2	3.3
3	6.3	4.3	6	3 7/8	0.2	3.1	3.3
4	8.3	6.2	8	4 7/8	0.3	3.0	3.3
5	10.4	8.2	10	5 7/8	0.3	3.0	3.3
6	12.5	10.2	12	6 7/8	0.4	2.9	3.3
7	14.6	12.3	15	8 1/4	0.5	2.8	3.3
8	16.7	14.4	17	9 1/4	0.6	2.7	3.3
9	18.8	16.5	19	10 1/8	0.6	2.7	3.3
10	20.8	18.7	21	11 1/8	0.7	2.6	3.3
11	22.9	20.8	23	12	0.8	2.5	3.3
12	25.0	23.0	..	..	...	...	...
Head = 0.6 ft. or 7 3-16 inches							
1	2.1	1.2	2	1 5/8	0.1	5.9	6.0
2	4.2	2.5	4	3	0.3	5.7	6.0
3	6.3	4.1	6	4 1/8	0.4	5.6	6.0
4	8.3	5.8	8	5 1/8	0.5	5.4	5.9
5	10.4	7.8	10	6 3/8	0.6	5.3	5.9
6	12.5	9.8	12	7	0.7	5.2	5.9
7	14.6	11.9	15	8 1/2	0.9	5.0	5.9
8	16.7	14.0	17	9 3/8	1.1	4.9	6.0
9	18.8	16.1	19	10 3/8	1.2	4.8	6.0
10	20.8	18.3	21	11 1/4	1.4	4.6	6.0
11	22.9	20.4	23	12 1/4	1.5	4.5	6.0
12	25.0	22.6	..	..	...	...	...

*Figure 5 applies, except for 6-inch dam instead of 4-inch dam as shown.

TABLE XXII

For Divisor Box Shown in Figure 6
 Short box; floor flush with top of 4-inch dam;
 divisor board hinged 12 inches from side of flume;
 free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.2 ft. or 2 3/8 inches				
1	2.1	0.6	..	..	...	...	...
2	4.2	1.6	4	3 3/8	0.1	0.9	1.0
3	6.3	2.8	6	5 3/8	0.1	0.9	1.0
4	8.3	4.2	8	6 3/4	0.1	0.9	1.0
5	10.4	5.8	10	7 3/8	0.1	0.9	1.0
6	12.5	7.6	12	8 3/8	0.1	0.9	1.0
7	14.6	9.4	15	9 3/4	0.1	0.9	1.4
8	16.7	11.3	17	10 3/8	0.2	0.8	1.0
9	18.8	13.4	19	11 1/2	0.2	0.8	1.0
10	20.8	15.6	..	..	...	...	...
11	22.9	17.9	..	..	...	...	...
12	25.0	20.2	..	..	...	...	...
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	0.5	2	2 3/4	0.1	2.8	2.9
2	4.2	1.3	4	4 3/8	0.1	2.8	2.9
3	6.3	2.3	6	5 5/8	0.2	2.7	2.9
4	8.3	3.5	8	6 3/4	0.2	2.7	2.9
5	10.4	5.0	10	7 3/4	0.3	2.6	2.9
6	12.5	6.7	12	8 3/4	0.3	2.5	2.8
7	14.6	8.6	15	10	0.4	2.4	2.8
8	16.7	10.6	17	10 3/8	0.5	2.3	2.8
9	18.8	12.7	19	11 3/4	0.5	2.3	2.8
10	20.8	15.0	..	..	...	...	...
11	22.9	17.4	..	..	...	...	...
12	25.0	19.8	..	..	...	...	...
Head = 0.8 ft. or 9 5/8 inches							
1	2.1	0.3	2	3 1/4	0.2	7.9	8.1
2	4.2	0.8	4	4 3/8	0.4	7.7	8.1
3	6.3	1.7	6	5 5/8	0.6	7.5	8.1
4	8.3	2.9	8	6 3/8	0.7	7.4	8.1
5	10.4	4.5	10	7 3/4	0.9	7.2	8.1
6	12.5	6.3	12	8 3/4	1.0	7.1	8.1
7	14.6	8.3	15	10	1.3	6.8	8.1
8	16.7	10.4	17	10 3/8	1.4	6.7	8.1
9	18.8	12.7	19	11 5/8	1.6	6.5	8.1
10	20.8	15.0	..	..	...	...	...
11	22.9	17.5	..	..	...	...	...
12	25.0	20.0	..	..	...	...	...

TABLE XXIII

For Divisor Box Shown in Figure 6
 Short box; floor flush with top of 4-inch dam;
 divisor board hinged 12 inches from side of flume;
 0.1 ft. or 1 3-16 inch effective head in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	...	2	3%	0.1	2.3	2.4
2	4.2	0.8	4	5%	0.1	2.3	2.4
3	6.3	1.5	6	6%	0.2	2.2	2.4
4	8.3	2.4	8	7%	0.2	2.2	2.4
5	10.4	3.6	10	8%	0.2	2.2	2.4
6	12.5	5.0	12	9%	0.3	2.1	2.4
7	14.6	6.6	15	11	0.4	2.1	2.5
8	16.7	8.5	17	11%	0.4	2.1	2.5
9	18.8	10.5	..	..	...	...	...
10	20.8	12.7	..	..	...	...	...
11	22.9	15.1	..	..	...	...	...
12	25.0	17.5	..	..	...	...	...
Head = 0.8 ft. or 9% inches							
1	2.1	1.0	2	2 1/8	0.1	5.1	5.2
2	4.2	1.9	4	3%	0.2	5.0	5.2
3	6.3	2.9	6	5%	0.3	4.9	5.2
4	8.3	4.1	8	6%	0.4	4.9	5.3
5	10.4	5.5	10	7%	0.5	4.8	5.3
6	12.5	6.9	12	8%	0.6	4.7	5.3

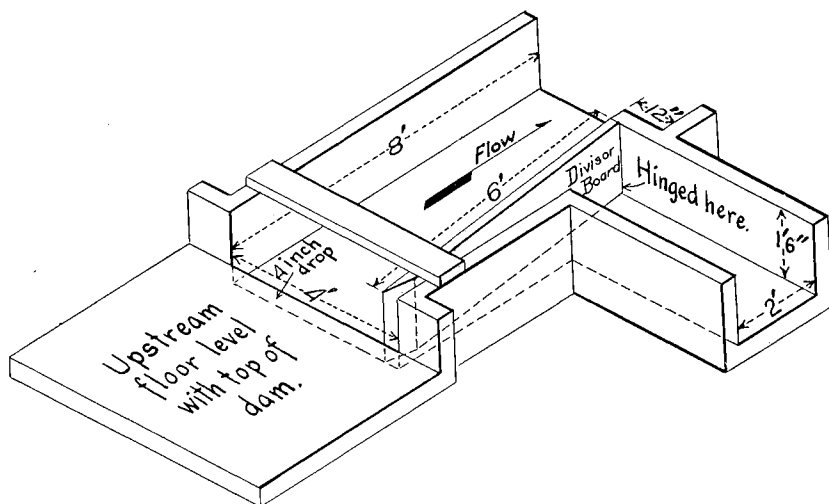


Fig 6

TABLE XXIII (Continued)

Divisor opening in inches	Percent divisor flow is of total flow in box of box	Percent divisor opening is of total width	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
7	14.6	8.6	15	10%	0.8	4.5	5.3
8	16.7	10.4	17	11¼	0.9	4.4	5.3
9	18.8	12.3	19	12¼	1.0	4.3	5.3
10	20.8	14.3	..	..	...	...	...
11	22.9	16.4	..	..	...	...	...
12	25.0	18.5	..	..	...	...	...

TABLE XXIV

For Divisor Box Shown in Figure 6
 Short box; floor flush with top of 4-inch dam;
 divisor board hinged 12 inches from side of flume;
 free flow in main channel;
 0.1 ft. or 1 3-16 inch effective head in divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	...	2	3%	0.1	2.7	2.8
2	4.2	...	4	5%	0.1	2.7	2.8
3	6.3	...	6	7%	0.2	2.6	2.8
4	8.3	2.3	8	8%	0.2	2.5	2.7
5	10.4	3.2	10	9%	0.3	2.4	2.7
6	12.5	4.3	12	11	0.3	2.3	2.6
7	14.6	5.6	15	12%	0.4	2.2	2.6
8	16.7	6.9	..	..	...	...	...
9	18.8	8.5	..	..	...	...	...
10	20.8	10.1	..	..	...	...	...
11	22.9	11.9	..	..	...	...	...
12	25.0	13.8	..	..	...	...	...
Head = 0.8 ft. or 9% inches							
1	2.1	...	2	5%	0.2	7.5	7.7
2	4.2	...	4	8	0.3	7.1	7.4
3	6.3	...	6	9%	0.5	6.8	7.3
4	8.3	1.1	8	11%	0.6	6.5	7.1
5	10.4	1.6	10	12%	0.7	6.2	6.9
6	12.5	2.3	..	..	...	...	...
7	14.6	3.1	..	..	...	...	...
8	16.7	4.0	..	..	...	...	...
9	18.8	5.0	..	..	...	...	...
10	20.8	6.1	..	..	...	...	...
11	22.9	7.5	..	..	...	...	...
12	25.0	8.9	..	..	...	...	...

TABLE XXV

For Divisor Box Shown in Figure 6
 Short box; floor flush with top of 4-inch dam;
 divisor board hinged 12 inches from side of flume;
 free flow in divisor channel;
 0.1 ft. or 1 3-16 inch effective head in main channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	1.0	..	..	...	...	...
2	4.2	2.4	4	3 1/8	0.1	2.5	2.6
3	6.3	3.8	6	4 3/8	0.1	2.5	2.6
4	8.3	5.4	8	5 3/8	0.2	2.4	2.6
5	10.4	7.3	10	6 1/4	0.2	2.4	2.6
6	12.5	9.4	12	7 1/8	0.3	2.4	2.7
7	14.6	11.6	15	8 3/8	0.4	2.3	2.7
8	16.7	14.0	17	9 1/4	0.4	2.2	2.6
9	18.8	16.4	19	10	0.5	2.1	2.6
10	20.8	18.9	21	10 3/4	0.5	2.1	2.6
11	22.9	21.5	23	11 1/2	0.6	2.0	2.6
12	25.0	24.2	..	..	...	...	...
Head = 0.8 ft. or 9 1/2 inches							
1	2.1	2.5	2	0 3/4	0.1	5.3	5.4
2	4.2	5.0	4	1 5/8	0.2	5.2	5.4
3	6.3	7.5	6	2 3/8	0.3	5.2	5.5
4	8.3	10.0	8	3 1/4	0.5	5.2	5.7
5	10.4	12.5	10	4	0.6	5.1	5.7
6	12.5	15.1	12	4 3/4	0.7	5.1	5.8
7	14.6	17.6	15	6	0.9	5.0	5.9
8	16.7	20.2	17	6 3/4	1.0	4.9	5.9
9	18.8	22.7	19	7 1/2	1.1	4.9	6.0
10	20.8	25.3	21	8 1/4	1.3	4.8	6.1
11	22.9	27.9	23	9 1/8	1.4	4.8	6.2
12	25.0	30.5	25	9 3/8	1.6	4.7	6.3

TABLE XXVI

For Divisor Box Shown in Figure 7
 Short box; floor flush with top of 4-inch dam;
 divisor board parallel to side of flume;
 free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.2 ft. or 2 3/8 inches				
1	2.1	0.5	2	2 3/8	...	...	...
2	4.2	1.3	4	4 1/4	...	...	...
3	6.3	2.3	6	5 3/8	0.1	0.9	1.0
4	8.3	3.6	8	6 3/8	0.1	0.9	1.0
5	10.4	5.3	10	7 3/8	0.1	0.9	1.0
6	12.5	7.2	12	8 3/8	0.1	0.9	1.0
7	14.6	9.1	15	9 3/8	0.1	0.9	1.0
8	16.7	11.2	17	10 3/8	0.2	0.8	1.0
9	18.8	13.3	19	11 1/2	0.2	0.8	1.0
10	20.8	15.6	21	12 3/8	0.2	0.8	1.0
11	22.9	17.9	23	13 1/4	0.2	0.8	1.0
12	25.0	20.2	25	14	0.3	0.7	1.0
13	27.1	22.5	27	14 7/8	0.3	0.7	1.0
14	29.2	24.9	29	15 3/8	0.3	0.7	1.0
15	31.2	27.3	31	16 1/2	0.3	0.7	1.0
16	33.4	29.7	33	17 3/8	0.3	0.7	1.0
17	35.4	32.1	35	18 1/4	0.4	0.6	1.0
18	37.5	34.5	38	19 1/2	0.4	0.6	1.0
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	0.4	2	2 7/8	0.1	2.7	2.8
2	4.2	1.1	4	4 3/8	0.1	2.7	2.8
3	6.3	2.2	6	5 1/2	0.2	2.6	2.8
4	8.3	3.5	8	6 1/2	0.2	2.6	2.8
5	10.4	5.1	10	7 3/8	0.3	2.5	2.8
6	12.5	6.9	12	8 1/2	0.3	2.5	2.8
7	14.6	8.8	15	9 7/8	0.4	2.4	2.8
8	16.7	10.9	17	10 3/4	0.5	2.3	2.8
9	18.8	13.0	19	11 5/8	0.5	2.3	2.8
10	20.8	15.3	21	12 1/2	0.6	2.2	2.8
11	22.9	17.6	23	13 3/8	0.6	2.2	2.8
12	25.0	19.9	25	14 1/4	0.7	2.1	2.8
13	27.1	22.2	27	15	0.8	2.0	2.8
14	29.2	24.5	29	15 7/8	0.8	2.0	2.8
15	31.2	26.8	31	16 3/4	0.9	1.9	2.8
16	33.4	29.2	33	17 3/8	0.9	1.9	2.8
17	35.4	31.6	35	18 3/8	1.0	1.9	2.9
18	37.5	34.1	38	19 3/8	1.1	1.8	2.9

TABLE XXVI (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.6 ft. or 7 3-16 inches							
1	2.1	0.3	2	3 1/8	0.1	5.1	5.2
2	4.2	0.8	4	4 1/2	0.2	5.0	5.2
3	6.3	1.9	6	5 5/8	0.3	4.9	5.2
4	8.3	3.2	8	6 5/8	0.4	4.8	5.2
5	10.4	4.8	10	7 5/8	0.5	4.7	5.2
6	12.5	6.7	12	8 5/8	0.6	4.6	5.2
7	14.6	8.7	15	10	0.8	4.5	5.3
8	16.7	10.7	17	10 7/8	0.9	4.4	5.3
9	18.8	12.8	19	11 3/4	1.0	4.3	5.3
10	20.8	15.0	21	12 5/8	1.1	4.2	5.3
11	22.9	17.3	23	13 1/2	1.2	4.1	5.3
12	25.0	19.6	25	14 3/8	1.3	4.0	5.3
13	27.1	21.9	27	15 3/8	1.4	3.9	5.3
14	29.2	24.2	29	16	1.5	3.8	5.3
15	31.2	26.6	31	16 7/8	1.6	3.7	5.3
16	33.4	29.0	33	17 5/8	1.7	3.6	5.3
17	35.4	31.4	35	18 1/2	1.9	3.4	5.3
18	37.5	33.8	38	19 3/4	2.0	3.3	5.3
Head = 0.8 ft. or 9 5/8 inches							
1	2.1	0.1	2	3 1/4	0.2	7.9	8.1
2	4.2	0.7	4	4 5/8	0.4	7.7	8.1
3	6.3	1.6	6	5 3/4	0.5	7.6	8.1
4	8.3	2.9	8	6 7/8	0.7	7.4	8.1
5	10.4	4.6	10	7 3/4	0.9	7.2	8.1
6	12.5	6.4	12	8 3/4	1.0	7.1	8.1
7	14.6	8.3	15	10 1/8	1.3	6.8	8.1
8	16.7	10.4	17	11	1.4	6.7	8.1
9	18.8	12.5	19	11 7/8	1.6	6.5	8.1
10	20.8	14.7	21	12 3/4	1.8	6.4	8.2
11	22.9	17.0	23	13 5/8	2.0	6.2	8.2
12	25.0	19.3	25	14 1/2	2.1	6.1	8.2
13	27.1	21.6	27	15 1/4	2.3	5.9	8.2
14	29.2	23.9	29	16 1/8	2.4	5.8	8.2
15	31.2	26.3	31	17	2.6	4.6	8.2
16	33.4	28.7	33	17 3/4	2.7	5.5	8.2
17	35.4	31.1	35	18 5/8	2.9	5.3	8.2
18	37.5	33.5	38	19 7/8	3.1	5.1	8.2

TABLE XXVII

For Divisor Shown in Figure 7
 Short box; floor flush with top of 4-inch dam;
 divisor board parallel to side of flume;
 0.1 ft. or 1 3-16 inches effective head in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	....	2	3¾	0.1	2.4	2.5
2	4.2	0.5	4	5¾	0.1	2.4	2.5
3	6.3	1.3	6	6½	0.2	2.3	2.5
4	8.3	2.4	8	7½	0.2	2.3	2.5
5	10.4	3.6	10	8½	0.2	2.2	2.4
6	12.5	5.0	12	9½	0.3	2.1	2.4
7	14.6	6.9	15	10¾	0.3	2.1	2.4
8	16.7	8.9	17	11¾	0.4	2.0	2.4
9	18.8	10.9	19	12½	0.4	2.0	2.4
10	20.8	13.0	21	13½	0.5	1.9	2.4
11	22.9	15.2	23	14¾	0.5	1.9	2.4
12	25.0	17.5	25	15¾	0.6	1.8	2.4
13	27.1	19.8	27	16½	0.6	1.8	2.4
14	29.2	22.0	29	17	0.7	1.7	2.4
15	31.2	24.3	31	17¾	0.8	1.6	2.4
16	33.4	26.6	..	..	...	...	...
17	35.4	29.0	..	..	...	...	...
18	37.5	31.4	..	..	...	...	...
Head = 0.8 ft. or 9½ inches							
1	2.1	....	2	3¾	0.1	5.7	5.8
2	4.2	0.9	4	4¾	0.2	5.5	5.7
3	6.3	1.7	6	6	0.3	5.4	5.7
4	8.3	2.8	8	7½	0.4	5.2	5.6
5	10.4	4.3	10	8½	0.5	5.0	5.5
6	12.5	6.0	12	9	0.6	4.9	5.5
7	14.6	7.8	15	10¾	0.8	4.7	5.5
8	16.7	9.9	17	11¾	0.9	4.5	5.4
9	18.8	11.9	19	12¾	1.0	4.4	5.4
10	20.8	14.0	21	13¾	1.1	4.3	5.4
11	22.9	16.2	23	14	1.2	4.1	5.3
12	25.0	18.4	25	14¾	1.3	4.0	5.3
13	27.1	20.7	27	15¾	1.4	3.8	5.2
14	29.2	23.0	29	16½	1.5	3.7	5.2
15	31.2	25.3	31	17½	1.6	3.5	5.1
16	33.4	27.6	..	..	...	...	...
17	35.4	29.9	..	..	...	...	...
18	37.5	32.3	..	..	...	...	...

TABLE XXVIII

For Divisor Shown in Figure 7

Short box; floor flush with top of 4-inch dam;

divisor board parallel to side of flume; free flow in main channel;

0.1 ft. or 1 3-16 inches effective head in divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	0.6	2	..	...	...	...
2	4.2	1.2	4	5½	0.1	2.6	2.7
3	6.3	1.9	6	7%	0.2	2.5	2.7
4	8.3	2.7	8	8%	0.2	2.5	2.7
5	10.4	3.5	10	10½	0.3	2.4	2.7
6	12.5	4.5	12	11½	0.3	2.3	2.6
7	14.6	5.6	15	12½	0.4	2.2	2.6
8	16.7	6.8	17	13½	0.4	2.2	2.6
9	18.8	8.2	19	14½	0.5	2.1	2.6
10	20.8	9.8	21	15%	0.5	2.1	2.6
11	22.9	11.7	23	16%	0.6	2.0	2.6
12	25.0	13.7	25	17¼	0.7	1.9	2.6
13	27.1	15.8	27	18¼	0.7	1.9	2.6
14	29.2	17.9	..	..	...	...	...
15	31.2	20.1	..	..	...	...	...
16	33.4	22.3	..	..	...	...	...
17	35.4	24.5	..	..	...	...	...
18	37.5	26.7	..	..	...	...	...
Head = 0.8 ft. or 9% inches							
1	2.1	...	2	4%	0.2	7.4	7.6
2	4.2	0.6	4	7%	0.4	7.1	7.5
3	6.3	1.1	6	9%	0.6	6.7	7.3
4	8.3	1.6	8	11%	0.7	6.4	7.1
5	10.4	2.2	10	12%	0.8	6.2	7.0
6	12.5	2.8	12	14	0.9	6.0	6.9
7	14.6	3.5	15	15%	1.1	5.7	6.8
8	16.7	4.2	17	16%	1.2	5.5	6.7
9	18.8	5.2	19	18	1.3	5.4	6.7
10	20.8	6.3	..	..	...	...	...
11	22.9	7.5	..	..	...	...	...
12	25.0	9.0	..	..	...	...	...
13	27.1	10.5	..	..	...	...	...
14	29.2	12.0	..	..	...	...	...
15	31.2	13.7	..	..	...	...	...
16	33.4	15.4	..	..	...	...	...
17	35.4	17.2	..	..	...	...	...
18	37.5	19.0	..	..	...	...	...

TABLE XXIX

For Divisor Shown in Figure 7
 Short box; floor flush with top of 4-inch dam;
 divisor board parallel to side of flume;
 free flow in divisor channel;
 0.1 ft. or 1 3-16 inches effective head in main channel

Divisor openings in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.4 ft. or 4 13-16 inches				
1	2.1	1.1	..	..	...	...	...
2	4.2	2.4	4	3 $\frac{1}{8}$	0.1	2.5	2.6
3	6.3	3.8	6	4 $\frac{3}{8}$	0.2	2.4	2.6
4	8.3	5.3	8	5 $\frac{3}{8}$	0.2	2.4	2.6
5	10.4	7.1	10	6 $\frac{3}{8}$	0.3	2.3	2.6
6	12.5	9.2	12	7 $\frac{1}{4}$	0.3	2.3	2.6
7	14.6	11.6	15	8 $\frac{3}{8}$	0.4	2.2	2.6
8	16.7	14.1	17	9 $\frac{1}{8}$	0.4	2.2	2.6
9	18.8	16.6	19	9 $\frac{7}{8}$	0.5	2.1	2.6
10	20.8	19.2	21	10 $\frac{3}{4}$	0.5	2.1	2.6
11	22.9	21.7	23	11 $\frac{1}{2}$	0.6	2.0	2.6
12	25.0	24.2	25	12 $\frac{3}{8}$	0.7	1.9	2.6
13	27.1	26.7	27	13 $\frac{1}{8}$	0.7	1.9	2.6
14	29.2	29.3	29	13 $\frac{7}{8}$	0.8	1.8	2.6
15	31.2	31.9	31	14 $\frac{5}{8}$	0.8	1.8	2.6
16	33.4	34.5	33	15 $\frac{3}{8}$	0.9	1.7	2.6
17	35.4	37.0	35	16 $\frac{1}{4}$	0.9	1.7	2.6
18	37.5	39.6	38	17 $\frac{3}{8}$	1.0	1.6	2.6

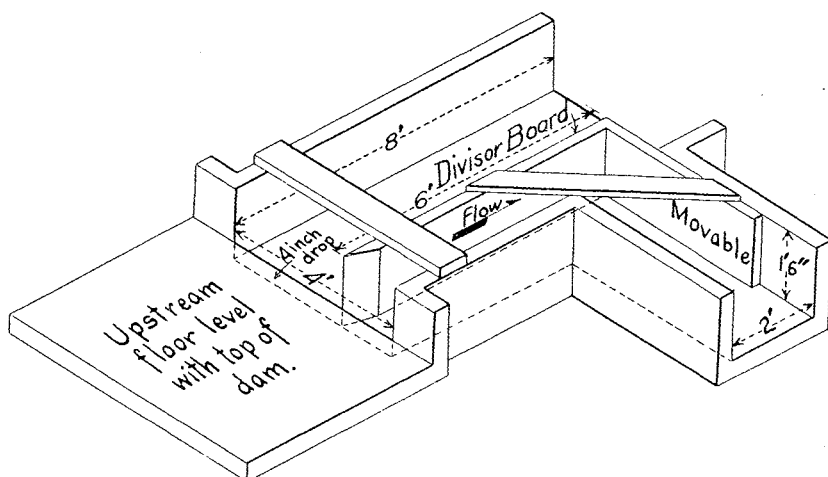


Fig. 7

TABLE XXIX. (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Divisor opening Width of to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9% inches				
1	2.1	1.6	2	1¼	0.1	6.0	6.1
2	4.2	3.4	4	2¼	0.2	5.9	6.1
3	6.3	5.5	6	3¼	0.4	5.7	6.1
4	8.3	7.8	8	4	0.5	5.6	6.1
5	10.4	10.3	10	4¾	0.6	5.5	6.1
6	12.5	13.1	12	5½	0.7	5.4	6.1
7	14.6	15.9	15	6½	0.9	5.3	6.2
8	16.7	18.7	17	7½	1.0	5.2	6.2
9	18.8	21.5	19	8	1.2	5.0	6.2
10	20.8	24.4	21	8¾	1.3	4.9	6.2
11	22.9	27.3	23	9½	1.5	4.8	6.3
12	25.0	30.2	25	10¼	1.6	4.7	6.3
13	27.1	33.1	27	10¾	1.7	4.6	6.3
14	29.2	36.0	29	11½	1.9	4.5	6.4
15	31.2	38.9	31	12¼	2.0	4.4	6.4
16	33.4	41.8	33	13	2.1	4.3	6.4
17	35.4	44.7	35	13½	2.2	4.2	6.4
18	37.5	47.6	38	14¾	2.5	4.0	6.5

TABLE XXX

For Divisor Shown in Figure 8
Short box; no dam; divisor board parallel to side of flume;
free flow in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.2 ft. or 2⅝ inches				
1	2.1	....	2	2⅝	0.1	0.8	0.9
2	4.2	1.2	4	3⅝	0.1	0.8	0.9
3	6.3	2.9	6	4⅝	0.1	0.8	0.9
4	8.3	4.6	8	5⅝	0.1	0.8	0.9
5	10.4	6.4	10	7	0.1	0.8	0.9
6	12.5	8.2	12	8	0.1	0.8	0.9
7	14.6	10.0	15	9½	0.1	0.8	0.9
8	16.7	12.0	17	10⅝	0.2	0.7	0.9
9	18.8	14.0	19	11⅝	0.2	0.7	0.9
10	20.8	16.1	21	12¼	0.2	0.7	0.9
11	22.9	18.2	23	13¼	0.2	0.7	0.9
12	25.0	20.4	25	14⅝	0.2	0.7	0.9

TABLE XXX (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.2 ft. or 2 3/8 inches							
13	27.1	22.6	27	15	0.2	0.7	0.9
14	29.2	24.8	29	15 7/8	0.3	0.6	0.9
15	31.2	27.0	31	16 3/4	0.3	0.6	0.9
16	33.4	29.3	33	17 7/8	0.3	0.6	0.9
17	35.4	31.6	35	18 1/2	0.3	0.5	0.8
18	37.5	33.8	..	..	...	...	...
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	....	2	2 1/4	0.1	2.6	2.7
2	4.2	1.5	4	3 1/2	0.1	2.6	2.7
3	6.3	3.1	6	4 5/8	0.1	2.5	2.6
4	8.3	4.8	8	5 3/4	0.2	2.4	2.6
5	10.4	6.6	10	6 3/4	0.2	2.4	2.6
6	12.5	8.5	12	7 7/8	0.3	2.3	2.6
7	14.6	10.4	15	9 1/4	0.4	2.2	2.6
8	16.7	12.4	17	10 1/4	0.4	2.2	2.6
9	18.8	14.4	19	11 1/4	0.5	2.1	2.6
10	20.8	16.4	21	12 1/8	0.5	2.1	2.6
11	22.9	18.5	23	13	0.6	2.0	2.6
12	25.0	20.7	25	14	0.6	2.0	2.6
13	27.1	22.9	27	14 7/8	0.7	1.9	2.6
14	29.2	25.1	29	15 3/4	0.7	1.9	2.6
15	31.2	27.3	31	16 5/8	0.8	1.8	2.6
16	33.4	29.6	33	17 1/2	0.9	1.7	2.6
17	35.4	31.9	35	18 3/8	0.9	1.7	2.6
18	37.5	34.2	..	..	...	...	...
Head = 0.6 ft. or 7 3-16 inches							
1	2.1	....	2	2 1/4	0.1	4.9	5.0
2	4.2	1.6	4	3 3/8	0.2	4.8	5.0
3	6.3	3.3	6	4 1/2	0.3	4.7	5.0
4	8.3	5.1	8	5 5/8	0.4	4.6	5.0
5	10.4	6.9	10	6 5/8	0.5	4.5	5.0
6	12.5	8.7	12	7 3/4	0.6	4.4	5.0
7	14.6	10.6	15	9 1/4	0.8	4.2	5.0
8	16.7	12.6	17	10 1/8	0.9	4.1	5.0
9	18.8	14.6	19	11 1/8	1.0	4.0	5.0
10	20.8	16.7	21	12	1.1	3.9	5.0
11	22.9	18.8	23	12 7/8	1.2	3.8	5.0
12	25.0	21.0	25	13 7/8	1.3	3.7	5.0
13	27.1	23.2	27	14 3/4	1.4	3.6	5.0
14	29.2	25.4	29	15 5/8	1.4	3.5	4.9
15	31.2	27.6	31	16 1/2	1.5	3.4	4.9
16	33.4	29.8	33	17 3/8	1.6	3.3	4.9
17	35.4	32.1	35	18 1/4	1.7	3.2	4.9
18	37.5	34.5	..	..	...	...	...

TABLE XXX (Continued)

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
			Head = 0.8 ft. or 9½ inches				
1	2.1	....	2	2½	0.1	7.6	7.7
2	4.2	1.7	4	3¼	0.3	7.5	7.8
3	6.3	3.5	6	4¾	0.4	7.4	7.8
4	8.3	5.3	8	5½	0.6	7.2	7.8
5	10.4	7.1	10	6½	0.8	7.0	7.8
6	12.5	9.0	12	7½	1.0	6.9	7.9
7	14.6	10.9	15	9	1.2	6.7	7.9
8	16.7	12.9	17	10	1.4	6.5	7.9
9	18.8	14.9	19	11	1.5	6.4	7.9
10	20.8	17.0	21	11¾	1.7	6.2	7.9
11	22.9	19.1	23	12¾	1.8	6.0	7.8
12	25.0	21.2	25	13¾	1.9	5.9	7.8
13	27.1	23.4	27	14¾	2.1	5.7	7.8
14	29.2	25.6	29	15½	2.3	5.5	7.8
15	31.2	27.8	31	16¾	2.4	5.4	7.8
16	33.4	30.0	33	17¼	2.6	5.2	7.8
17	35.4	32.3	35	18½	2.7	5.1	7.8
18	37.5	34.6	..	..	...	...	...
Head = 1.0 ft. or 12 inches							
1	2.1	....	2	2½	0.2	10.8	11.0
2	4.2	1.8	4	3¼	0.4	10.5	10.9
3	6.3	3.6	6	4¼	0.6	10.3	10.9
4	8.3	5.4	8	5¾	0.8	10.1	10.9
5	10.4	7.3	10	6¾	1.0	9.9	10.9
6	12.5	9.2	12	7½	1.3	9.6	10.9
7	14.6	11.1	15	9	1.7	9.3	11.0
8	16.7	13.1	17	9¾	1.9	9.1	11.0
9	18.8	15.1	19	10¾	2.1	8.9	11.0
10	20.8	17.2	21	11¾	2.3	8.7	11.0
11	22.9	19.3	23	12¾	2.6	8.4	11.0
12	25.0	21.4	25	13¾	2.8	8.2	11.0
13	27.1	23.6	27	14½	3.0	8.0	11.0
14	29.2	25.8	29	15¾	3.2	7.8	11.0
15	31.2	28.0	31	16¼	3.4	7.6	11.0
16	33.4	30.3	33	17¼	3.6	7.3	10.9
17	35.4	32.6	35	18½	3.8	7.1	10.9
18	37.5	34.8	..	..	...	...	...

TABLE XXXI

For Divisor Shown in Figure 8

Short box; no dam; divisor board parallel to side of flume;

0.1 ft. or 1 3-16 inches effective head in both channels

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	....	2	2½	0.1	2.4	2.5
2	4.2	1.3	4	3¾	0.1	2.4	2.5
3	6.3	2.8	6	5	0.1	2.3	2.4
4	8.3	4.3	8	6⅛	0.2	2.2	2.4
5	10.4	6.0	10	7¼	0.2	2.2	2.4
6	12.5	7.7	12	8¼	0.3	2.1	2.4
7	14.6	9.6	15	9¾	0.3	2.1	2.4
8	16.7	11.5	17	10¾	0.4	2.0	2.4
9	18.8	13.4	19	11¾	0.4	2.0	2.4
10	20.8	15.5	21	12½	0.5	1.9	2.4
11	22.9	17.6	23	13½	0.6	1.9	2.4
12	25.0	19.7	25	14¾	0.6	1.8	2.4
13	27.1	21.9	27	15¼	0.6	1.8	2.4
14	29.2	24.1	29	16½	0.7	1.7	2.4
15	31.2	26.4	31	16¾	0.7	1.7	2.4
16	33.4	28.8	33	17¾	0.8	1.6	2.4
17	35.4	31.2	35	18½	0.8	1.6	2.4
18	37.5	33.6	..	..	...	...	...
Head = 0.8 ft. or 9¾ inches							
1	2.1	....	..	..	...	...	...
2	4.2	1.4	4	3½	0.2	5.6	5.8
3	6.3	3.1	6	4¾	0.4	5.4	5.8
4	8.3	4.8	8	5¾	0.5	5.3	5.8
5	10.4	6.5	10	6¾	0.6	5.2	5.8
6	12.5	8.3	12	7¾	0.7	5.1	5.8
7	14.6	10.2	15	9¾	0.9	4.9	5.8
8	16.7	12.2	17	10¾	1.0	4.8	5.8
9	18.8	14.2	19	11¾	1.1	4.7	5.8
10	20.8	16.2	21	12¼	1.2	4.6	5.8
11	22.9	18.3	23	13½	1.3	4.5	5.8
12	25.0	20.5	25	14½	1.5	4.4	5.9
13	27.1	22.7	27	15	1.6	4.3	5.9
14	29.2	24.9	29	15¾	1.7	4.2	5.9
15	31.2	27.1	31	16¾	1.8	4.1	5.9
16	33.4	29.3	33	17¾	1.9	4.0	5.9
17	35.4	31.5	35	18½	2.1	3.8	5.9
18	37.5	33.7	..	..	...	...	...

TABLE XXXII

For Divisor Shown in Figure 8

Short box; no dam; divisor board parallel to side of flume;
free flow in main channel;

0.1 ft. or 1 3-16 inches effective head in divisor channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	....	2	2 5/8	0.1	2.6	2.7
2	4.2	1.3	4	4	0.1	2.5	2.6
3	6.3	2.6	6	5 3/8	0.2	2.4	2.6
4	8.3	3.9	8	6 5/8	0.2	2.4	2.6
5	10.4	5.4	10	7 3/4	0.3	2.3	2.6
6	12.5	7.0	12	8 3/4	0.3	2.3	2.6
7	14.6	8.7	15	10 1/4	0.4	2.2	2.6
8	16.7	10.5	17	11 1/4	0.4	2.1	2.5
9	18.8	12.4	19	12 1/4	0.5	2.0	2.5
10	20.8	14.4	21	13 1/8	0.5	2.0	2.5
11	22.9	16.5	23	14	0.6	1.9	2.5
12	25.0	18.6	25	15	0.6	1.9	2.5
13	27.1	20.7	27	15 3/8	0.7	1.8	2.5
14	29.2	22.9	29	16 3/4	0.7	1.8	2.5
15	31.2	25.1	31	17 1/2	0.8	1.7	2.5
16	33.4	27.4	..	..	...	...	...
17	35.4	29.8	..	..	...	...	...
18	37.5	32.2	..	..	...	...	...
Head = 0.8 ft. or 9 5/8 inches							
1	2.1	....	2	3 1/4	0.1	7.4	7.5
2	4.2	0.7	4	4 3/4	0.3	7.2	7.5
3	6.3	1.8	6	6 1/4	0.5	7.0	7.5
4	8.3	3.0	8	7 1/2	0.6	6.8	7.4
5	10.4	4.3	10	8 3/4	0.7	6.6	7.3
6	12.5	5.7	12	10	0.9	6.4	7.3
7	14.6	7.2	15	11 5/8	1.1	6.1	7.2
8	16.7	8.8	17	12 3/4	1.2	5.9	7.1
9	18.8	10.4	19	13 3/4	1.4	5.7	7.1
10	20.8	12.1	21	14 1/4	1.5	5.6	7.1
11	22.9	13.8	23	15 3/4	1.6	5.4	7.0
12	25.0	15.6	25	16 5/8	1.7	5.3	7.0
13	27.1	17.5	27	17 5/8	1.9	5.1	7.0
14	29.2	19.5	29	18 1/2	2.0	4.9	6.9
15	31.2	21.6	..	..	...	...	...
16	33.4	23.7	..	..	...	...	...
17	35.4	25.9	..	..	...	...	...
18	37.5	28.1	..	..	...	...	...

TABLE XXXIII

For Divisor Shown in Figure 8

Short box; no dam; divisor board parallel to side of flume;
free flow in divisor channel; 0.1 ft. or 1 3-16 inches effective
head in main channel

Divisor opening in inches	Percent divisor opening is of total width of box	Percent divisor flow is of total flow in box	Width of Divisor opening to give percent- age of flow		Discharge in Second-feet		
			Percent	Inches	Divisor	Channel	Total
Head = 0.4 ft. or 4 13-16 inches							
1	2.1	....	2	2¼	0.1	2.4	2.5
2	4.2	1.7	4	3¾	0.1	2.4	2.5
3	6.3	3.4	6	4½	0.2	2.3	2.5
4	8.3	5.3	8	5½	0.2	2.3	2.5
5	10.4	7.2	10	6½	0.3	2.2	2.5
6	12.5	9.1	12	7½	0.3	2.2	2.5
7	14.6	11.0	15	9	0.4	2.1	2.5
8	16.7	13.0	17	9¾	0.4	2.1	2.5
9	18.8	15.1	19	10¾	0.5	2.0	2.5
10	20.8	17.3	21	11¾	0.5	2.0	2.5
11	22.9	19.5	23	12½	0.6	1.9	2.5
12	25.0	21.7	25	13¾	0.6	1.9	2.5
13	27.1	24.0	27	14¾	0.7	1.8	2.5
14	29.2	26.3	29	15¾	0.7	1.8	2.5
15	31.2	28.7	31	16	0.8	1.7	2.5
16	33.4	31.1	33	16¾	0.8	1.7	2.5
17	35.4	33.6	35	17¾	0.9	1.6	2.5
18	37.5	36.1	..	..	...	...	...
Head = 0.8 ft. or 9 5/8 inches							
1	2.1	....	2	1¾	0.1	5.8	5.9
2	4.2	2.3	4	2¾	0.2	5.7	5.9
3	6.3	4.8	6	3½	0.3	5.6	5.9
4	8.3	7.3	8	4¼	0.5	5.5	6.0
5	10.4	9.8	10	5¼	0.6	5.4	6.0
6	12.5	12.2	12	5¾	0.7	5.3	6.0
7	14.6	14.7	15	7¼	0.9	5.2	6.1
8	16.7	17.2	17	7¾	1.0	5.1	6.1
9	18.8	19.6	19	8¾	1.2	5.0	6.2
10	20.8	22.0	21	9¾	1.3	4.9	6.2
11	22.9	24.4	23	10¾	1.4	4.8	6.2
12	25.0	26.8	25	11¼	1.6	4.7	6.3
13	27.1	29.2	27	12¾	1.7	4.6	6.3
14	29.2	31.5	29	12¾	1.8	4.5	6.3
15	31.2	33.8	31	13¾	2.0	4.4	6.4
16	33.4	36.2	33	14¾	2.1	4.3	6.4
17	35.4	38.5	35	15½	2.3	4.2	6.5
18	37.5	40.8	38	16¾	2.5	4.1	6.6
..	....	....	40	17¾	2.6	4.1	6.7

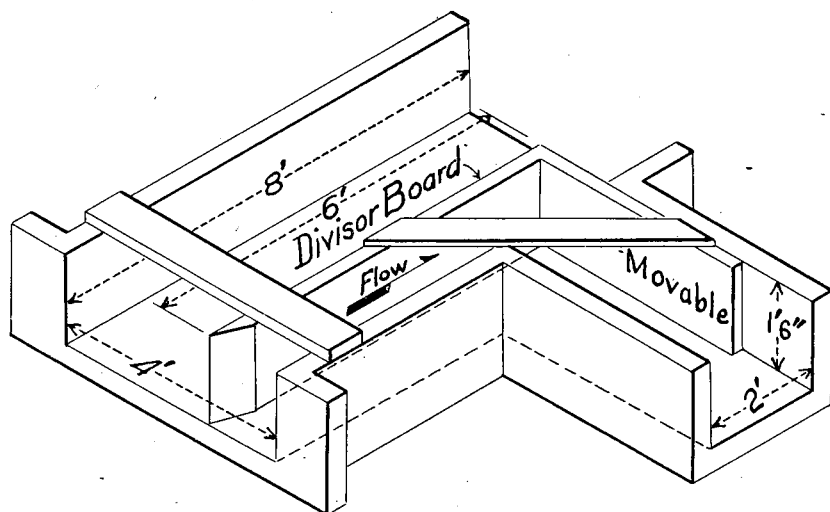


Fig. 8