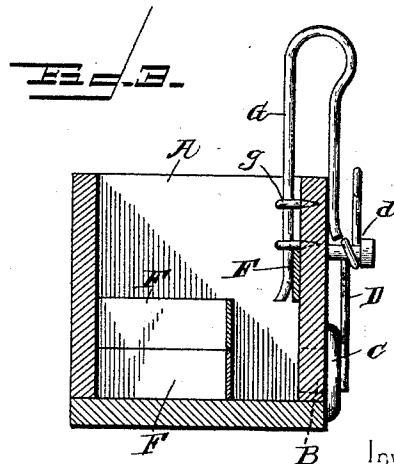
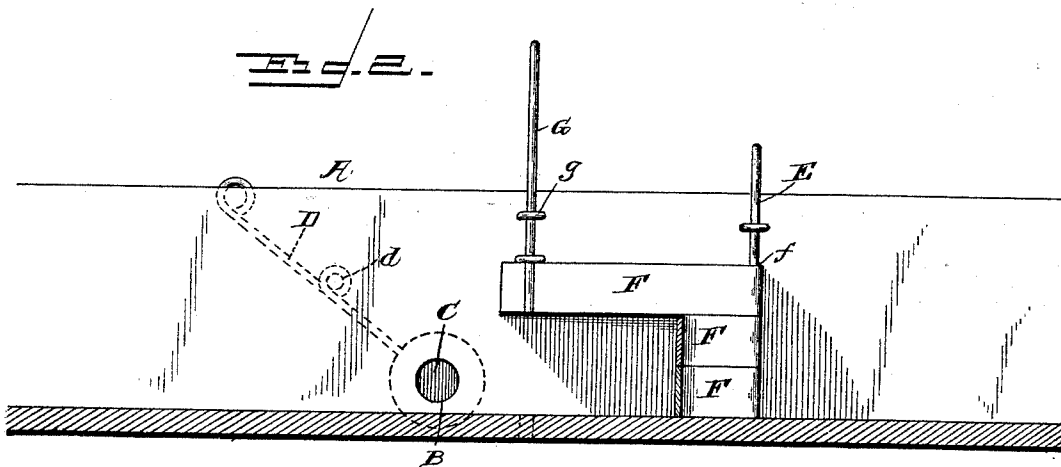
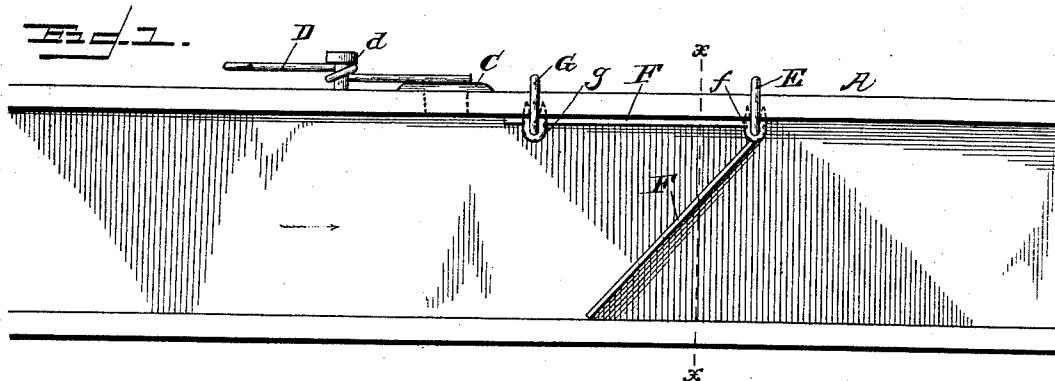


(No Model.)

S. A. BAGGS.
FLUME RIFFLE.

No. 519,981.

Patented May 15, 1894.



Witnesses
C. H. Stewart
S. A. H. H. H.

By *his* Attorneys.

Samuel A. Baggs

C. A. Snow & Co.

UNITED STATES PATENT OFFICE.

SAMUEL A. BAGGS, OF RIVERSIDE, CALIFORNIA, ASSIGNOR OF ONE-HALF
TO J. K. WOODWARD, OF SAME PLACE.

FLUME-RIFFLE.

SPECIFICATION forming part of Letters Patent No. 519,981, dated May 15, 1894.

Application filed December 9, 1893. Serial No. 493,227. (No model.)

To all whom it may concern:

Be it known that I, SAMUEL A. BAGGS, a citizen of the United States, residing at Riverside, in the county of Riverside and State of California, have invented a new and useful Flume-Riffle, of which the following is a specification.

This invention relates to improvements in flume riffles; and it has for its object to provide an improved riffle attachment for flumes or sluiceways, whereby simple and efficient means shall be provided for backing up the water in a flume adjacent to the gate openings therein, so as to evenly distribute the water to the point of use.

To this end the main and primary object of the invention is to provide an improved riffle attachment which can be readily mounted in the ordinary flumes which are employed as water ways for conducting water to a wheel, or different kinds of washers, &c., and also to provide an attachment of this character which can be conveniently and readily adjusted to hold back or dam up the water to any depth desired, according to the quantity required for use at any particular gate opening.

With these and other objects in view which will readily appear as the nature of the invention is better understood, the same consists in the novel construction, combination and arrangement of parts hereinafter more fully described, illustrated and claimed.

In the drawings:—Figure 1 is a plan view of a section of a flume or sluiceway provided with my improved riffle attachment, showing two of the riffle plates closed transversely across the flume. Fig. 2 is a central longitudinal sectional view of the construction shown in Fig. 1. Fig. 3 is a horizontal sectional view on the line $x-x$ of Fig. 1. Fig. 4 is a detail in perspective of the substantially U-shaped plate holding clip.

Referring to the accompanying drawings, A represents a section of an ordinary flume or chute which is ordinarily employed for carrying water to a wheel, to ore washers, or for other purposes, and such flume is provided, at points from which the water is to be drawn, with gate openings B, which gate openings are formed in one side of the flume near the bottom thereof and are adapted to be covered

and uncovered by suitable gates C, working thereover and carried at one end of suitable gate levers D, preferably hinged as at d , to one side of the flume.

At a point adjacent to the gate openings B, a substantially U-shaped hinge clip E, is fastened over one of the sides of the flume, and to the inner arm thereof inside of the flume are hinged a series of riffle plates F. The riffle plates F, are hinged at one end as at f , to the clip E, so as to leave their other ends free to be moved across the flume when necessary, and any number of these plates may be arranged one above the other according to the depth of the flume, and one or more are adapted to be used at one time for holding back or damming up the water as requirements may demand, it being understood that the aggregate width of the plates is less than the depth of the flume. When in use for the purpose intended, the said riffle plates are adapted to be swung on their hinges transversely across the flume so that their free ends will rest against the side of the flume opposite to the hinged ends of the same, and such plates will then be diagonally disposed to the path of the water and will provide simple and efficient means for backing or damming up the same to any required depth, whereby it may be evenly distributed to the points of use. It will be clearly seen from the drawings that when more than one of the riffle plates are closed diagonally across the flume passage, the same are all in vertical alignment with each other to form substantially a single interrupting plate for the water, and thereby insure the backing up of the same to the depth required. The hinged riffle plates are intended especially for use in the flume at points where the flume is on an uneven grade, and it is therefore necessary to back up or dam the water to cause it to be evenly distributed, and when not in use the said plates are adapted to be turned back flat against one side of the flume. In this open position the free ends of the hinged riffle plates are held from movement by the U-shaped plate holding clip G. The plate holding clip G, is of a substantial U-shape corresponding to the shape of the hinge clip E, and is guided to slide vertically over one of the flume sides by

suitable guide eyes *g*, arranged at the inside of the flume, and above the uppermost of the hinged riffle plates. By raising the U-shaped clip *G*, one or more of the riffle plates will be unlocked so as to be free to be adjusted across the flume, while the other plates are still retained in locked positions against one side of the flume by the clip, and by raising such clip sufficiently high to bring its inner arm above the uppermost riffle plate, all of such plates may be brought into use, and when thrown back against the flume side, are locked again in position by sliding the plate holding clip back to its lowered position.

From the foregoing it is thought that the object and advantages of the herein-described riffle attachment for flumes will be readily understood by those skilled in the art, and I will have it understood that changes in the form, proportion and the minor details of construction may be resorted to without departing from the principle or sacrificing any of the advantages of this invention.

Having thus described the invention, what is claimed, and desired to be secured by Letters Patent, is—

1. The combination with a water flume; of a riffle plate hinged at one end to one side of the flume and adapted to have its other end moved transversely across the flume against its opposite side, said riffle plate being of a width less than the depth of the flume, substantially as set forth.

2. The combination with a flume; of a series of riffle plates hinged one above the other at one side of the flume, and means for temporarily holding the free ends of said plates

at one side of the flume, substantially as set forth.

3. The combination with a flume having a side gate opening; of a hinged riffle plate mounted within the flume adjacent to the gate opening and adapted to be swung diagonally across the same, and a locking device for the free end of such riffle plate, substantially as set forth.

4. The combination with a water flume having a side gate opening; of a series of separate and independent riffle plates mounted within the flume and hinged to the same point of attachment, one or more of said plates being adapted to be swung transversely across the flume at one time, substantially as set forth.

5. The combination with a water flume; of a hinge clip fitted to one side of said flume at a suitable point of attachment, a series of separate and independent riffle plates hinged at one end to the inner arm of said clip and adapted to be either separately or together swung transversely across the flume to interrupt the water passing therethrough, and a substantially U-shaped plate-holding clip guided to slide over one of the flume sides and adapted to have the inner arm thereof engage the free ends of the riffle plates, substantially as set forth.

In testimony that I claim the foregoing as my own I have hereto affixed my signature in the presence of two witnesses.

SAMUEL A. BAGGS.

Witnesses:

L. K. BRUCE,

FRANK. A. PATTON.