H. S. KIESAU.

END GATE TIGHTENER.

APPLICATION FILED AUG. 13, 1914.

1,138,762. Patented May 11, 1915.

Fig. 1.

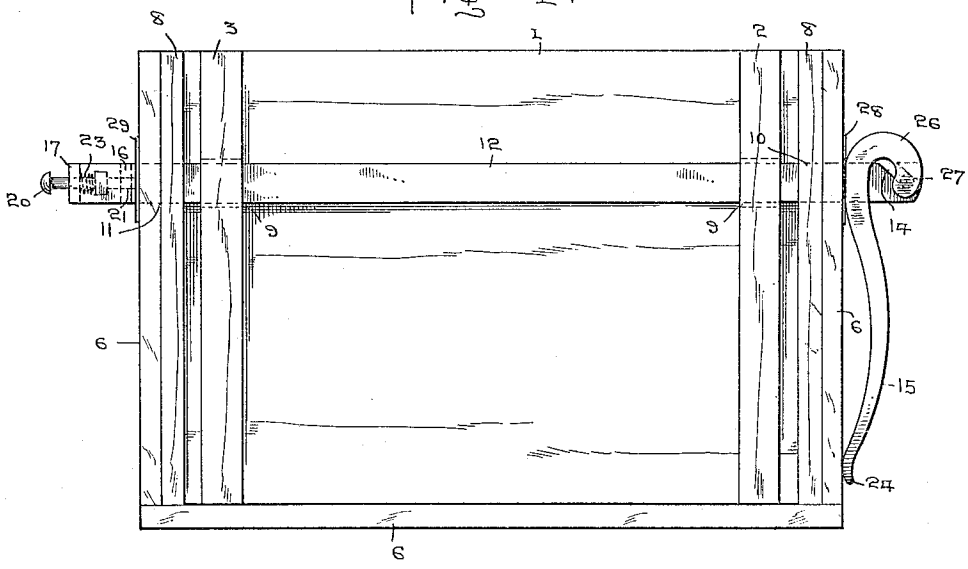


Fig. 2.

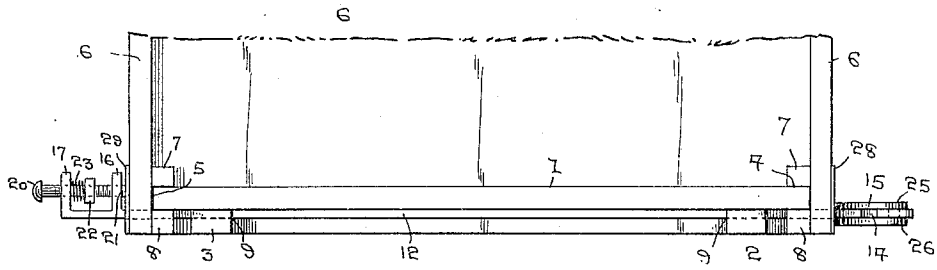


Fig. 3.

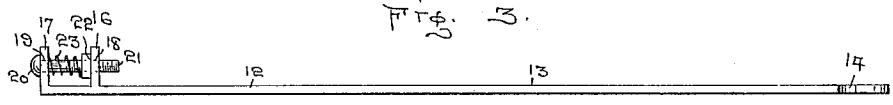
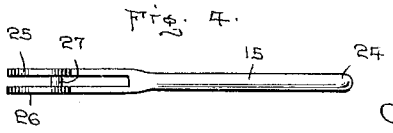


Fig. 4.



Witnesses

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END-GATE TIGHTENER.

1,138,762. Specification of Letters Patent. Patented May 11, 1915.

Application filed August 13, 1914. Serial No. 856,625.

To all whom it may concern:

Be it known that I, HENRY S. KIESAU, citizen of the United States, residing at R. R. No. 1, 83 E, Waukon, in the county of Allamakee and State of Iowa, have invented certain new and useful Improvements in End-Gate Tighteners; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

This invention relates to tighteners for head gates, and the like, and in particular to head gates for flumes.

One of the objects of this invention is to give a device whereby the gate will be locked in position.

Still another object of this invention is to give a device whereby the end of the flume and the gate will be tightened into an absolute seal.

Another object of this invention is to give a device that is easily mounted or demounted with but few parts to the same. And a still further object of this invention is to give a device that will combine to both lock the gate in position and to tighten the same for sealing purposes.

Other objects and advantages of this invention will be hereinafter more clearly set forth in the specification and pointed out in the claims.

Similar characters of reference refer to similar parts throughout the drawings, in which,

Figure 1, is an elevational view of this device in assembled formation. Fig. 2, is a top plan view thereof as assembled. Fig. 3, is a detail of the locking bar. Fig. 4, is a detail of the demountable eccentric locking lever.

In the drawings, 1 is the gate of any preferred form of construction, in this instance, having the reinforcing bars 2 and 3. This gate construction is adapted to vertically slide in guide ways 4 and 5 formed in the inner side of the end of the flume 6, by means of the beading members 7 and 8 as shown in the drawings, said beading members 7 and 8 being spaced apart to form the guide ways 4 and 5 as described. At a suitable point slightly below the top edge of the gate a bore 9 is run through the reinforcing elements 2 and 3, the same being indicated in dotted lines, and the same also registering in alinement with each other. Bores 10 and 11 are likewise run through the elements 8 and the flume 6, said last mentioned bores likewise registering with the bores of the reinforcing elements 2 and 3 and likewise being of the same contour or size. Through these registering bores is run a clamping and locking bar 12 of the character shown in Fig. 3. This locking bar is composed of an approximately sheet like substance, preferably metal, and consists of the reach rod portion 13, an obliquely cut slot 14 at one end thereof adapted to seat the demountable cam locking lever 15 to be hereinafter more fully set forth, and at the opposite end having two parallelly positioned and spaced projecting lugs 16 and 17. These projecting lugs have registering apertures 18 and 19 running therethrough, through which is mounted a stub-bolt 20, said stub-bolt mounted for reciprocatory play in said apertures 18 and 19, and the end of said bolt projecting inside of the lug 16 as at 21. An adjustably mounted and threaded nut 22 is placed upon the bolt and between said nut and the projection 17, a coil spring 23 is placed, and said spring actuating to return the bolt to normal position as shown in Fig. 3 of the drawings, when pressure is removed from the end 21 of the bolt, and the nut 22 is adjusted to regulate the degree of play of said bolt 20 as actuated upon by the spring 23.

As before stated, the member 12 is inserted through the registering bores previously described, until the slot 14 previously mentioned is free of the flume, the cam locking lever is then mounted in said slot to lock said member 12 within said end gate and said end gate tight with the flume as hereinafter more fully described in detail. This cam locking lever 15 is composed of the handle portion 24 which ends in, and forms two spaced and parallel arm members 25 and 26. These arm members have an approximately semicircular contour along their outer edge. A connecting bolt 27 is mounted between the end portions of said arms 25 and 26 as shown in Figs. 1 and 4 of the drawings in such manner that said cam locking lever 15 is mounted to the member 12 by seating said bolt 27 into the slot 14 so that the handle 24 of said lever when being thrown in a depressed condition as shown in Fig. 1, causes a cam or eccentric operation of the edges of the arms 25 and 26 against a metallic face plate 28 positioned upon the outer

face of the flume 6. This operation draws the member 12 over, until the end 21 of the stub-bolt 20 strikes a metallic face plate 29 upon the opposite side of the flume 6, when said stub-bolt 20 is forced outward as shown in Fig. 2, against the action of the spring 23, this act thereby clamping or tightening the sides of the flume in against the edges of the gate 1, thereby forming a tight seal, and also locking said gate in position.

Having now described my invention what I claim as new and desire to secure by Letters Patent is,

1. An end gate tightener comprising; a flume, an end gate thereto, a locking bar transversely mounted through said flume and said end gate, projections upon one end of said locking bar, a spring actuated bolt mounted in said projections and adapted to contact with said flume, and a removably mounted cam actuating means in the opposite end of said locking bar adapted to contact with the opposite face of said flume to draw said locking bar against the action of said spring actuated bolt to tighten said flume and said end gate.

2. An end gate tightener comprising; a flume, an end gate in the end thereof, locking means transversely mounted through said flume and said end gate having an oblique slot in one end, clamping means mounted in the opposite end of said locking bar, and a clamping lever mounted in said slot, said clamping lever having a handle portion, two parallelly disposed arm members of cam formation, and a bolt connecting the ends of said arm members, said clamping lever mounted in said slot through the medium of said bolt and operating to draw said locking bar into tight position upon the actuation of said lever through the medium of said cam like arm members.

In testimony whereof I have signed my name to this specification in the presence of two subscribing witnesses.

HENRY S. KIESAU.

Witnesses:
HENRY DAYTON,
DONALD C. DAYTON.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."