

A. K. MITCHELL.

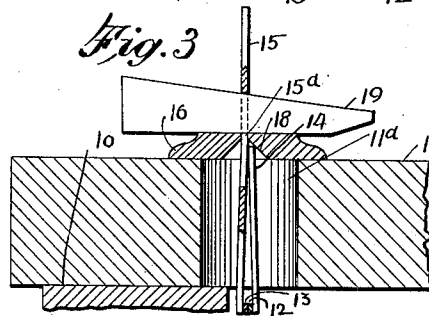
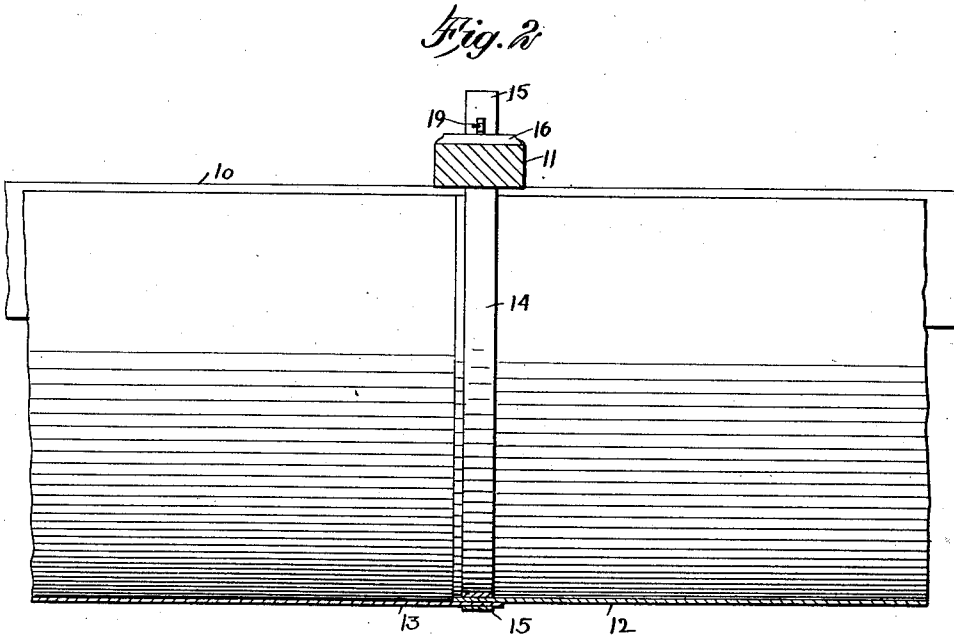
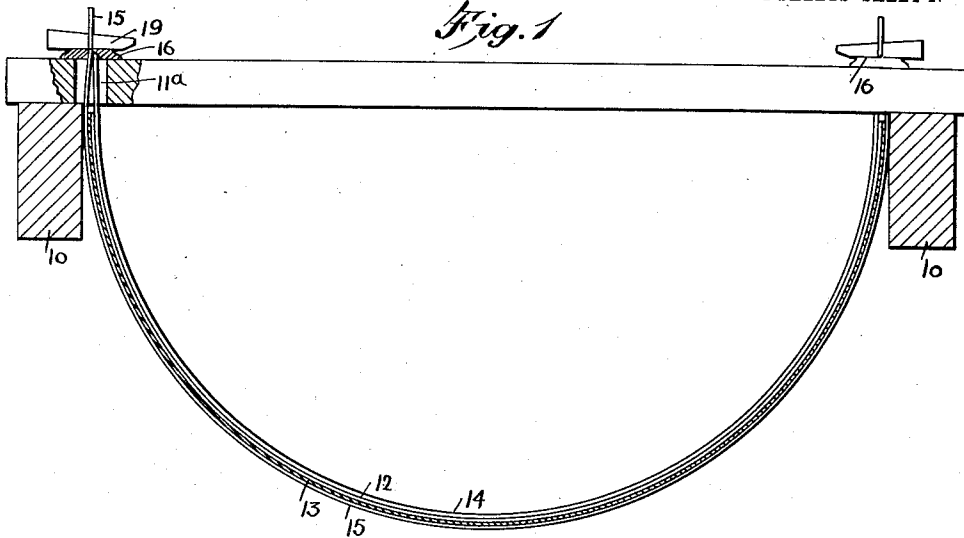
FLUME JOINT.

APPLICATION FILED NOV. 15, 1912.

1,058,620.

Patented Apr. 8, 1913.

2 SHEETS—SHEET 1.



WITNESSES

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2 SHEETS—SHEET 2.

Fig. 4

. 6 |

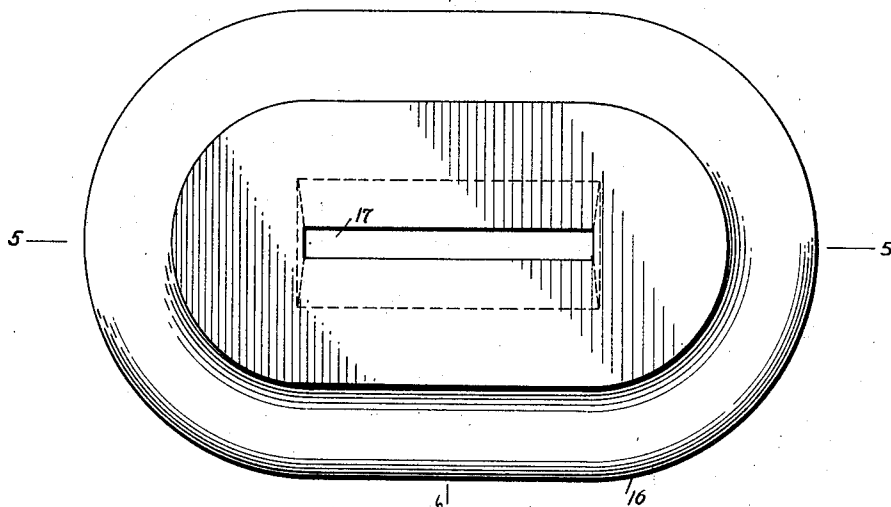


Fig. 5

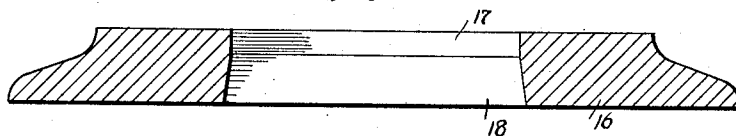
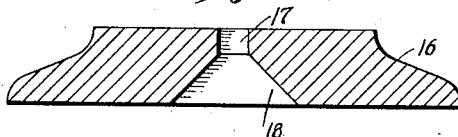


Fig. 6



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UNITED STATES PATENT OFFICE.

ARTHUR KNOX MITCHELL, OF VICTORIA, BRITISH COLUMBIA, CANADA, ASSIGNOR TO
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FLUME-JOINT.

1,058,620.

Specification of Letters Patent.

Patented Apr. 8, 1913.

Application filed November 15, 1912. Serial No. 731,464.

To all whom it may concern:

Be it known that I, ARTHUR K. MITCHELL, a citizen of the United States, and a resident of Victoria, Province of British Columbia, and Dominion of Canada, have invented a new and Improved Flume-Joint, of which the following is a full, clear, and exact description.

My invention relates to the joints of flumes formed by overlapping sections and having inner and outer straps at the joint, with means for causing the said straps to exert pressure on the flume sections.

The present invention is more particularly designed as a development of the invention forming the subject matter of an application for patent on flumes, filed by me July 10, 1912, Serial No. 708,573, in which flume the overlapped ends of the flume sections are plain and without any bends or interlocking engagement, the sections being held solely by compression of the straps.

The present invention resides in a novel means for receiving the end thrust of a compression strap, and will be more particularly explained in the specific description hereinafter to be given.

Reference is to be had to the accompanying drawings forming a part of this specification, in which similar characters of reference indicate corresponding parts in all the views.

Figure 1 is a cross sectional view of a flume embodying my invention; Fig. 2 is a longitudinal vertical section; Fig. 3 is a detail transverse vertical section on an enlarged scale at one end of the joint; Fig. 4 is a plan view on a larger scale of the improved shoe plate for receiving the end thrust of the compression strap, and on which the tensioning key bears; Fig. 5 is a longitudinal vertical section on about the line 5—5 of Fig. 4; and Fig. 6 is a transverse section on the line 6—6, Fig. 4.

In constructing a flume in accordance with my invention, any approved supporting means may be provided, such as longitudinal stringers 10, having at proper intervals transverse top members 11 extending between the stringers to constitute carriers, from which the flume formed of overlapped plates 12, 13 is suspended. The flume plates which ordinarily are formed of metal, but not necessarily so, are curved transversely

and the overlapped ends of the plates are pressed together between the inner compression strap 14 and an outer tension strap 15, which preferably are of hoop steel.

To receive the end thrust of the compression strap 14, I provide a shoe plate 16, which rests at each end on the top member 11, over an auger hole 11^a or the like, through which the ends of the straps pass. The shoe plate 16 is formed with a vertical opening 17, through which passes the end of the tension strap 15, and said opening is flaring at the under side, thereby presenting a surface 18 which is inclined to the direction of end thrust, and inclined toward the tension strap 15. The tension strap 15 is slotted vertically, as at 15^a, said slot extending above the shoe plate 16, and receiving the tapered key 15 that has a bearing upon the shoe plate.

It will thus be observed that when the key is driven it will exert tension on the tension strap 15, and the contact of the compression strap with the inclined wall presented thereto at the under side of the shoe plate, will bring the tension and compression straps into intimate contact. The result obviates kinking of the compression straps and very materially shortens the lever arm between the upward thrust of the inner strap and the downward pull of the outer strap on the compression key; and thus the turning moment due to these combined forces is reduced to a minimum. It will not be possible therefore for the wedge to ride up on its heel and tilt its toe or forward end upwardly. The shortening of the mentioned lever arm represented by the thrust of the compression strap and the down-pull of the tension strap enables me to develop the required strain on the straps by the use of the key.

Having thus described my invention, I claim as new, and desire to secure by Letters Patent:—

1. In a flume or like joint, a tension strap for the joint, a compression strap between which and the tension strap the sections of the flume are received, a supported shoe plate for receiving the end thrust of the compression strap, said shoe plate having an opening flaring at the side toward the end of the compression strap, and a tapered key to exert tension on the tension strap,

said tension strap passing through the opening of the shoe plate and having a slot, the said key being received in the slot of the tension strap and bearing on the shoe plate.

5 2. In a flume joint or similar joint, a clamping means for the joint comprising a tension strap, a compression strap, means for putting the tension strap under tension, and a member for receiving the end thrust
10 of the compression strap, said member presenting a resistance surface inclined to the direction of the thrust of the compression strap.

15 3. In a flume joint or like joint, clamping means for the joint comprising a tension strap, a compression strap, a device for receiving the end thrust of the compression strap, and tensioning means bearing on the mentioned device and serving to exert ten-

sion on the tension strap, said device having 20 an opening through which the tension strap passes to the tensioning means, and presenting to the compression strap a surface inclined toward the said opening and inclined to the direction of the end thrust. 25

4. In a flume joint, a tension strap and a compression strap to exert clamping pressure on the flume members, means for exerting tension on the tension strap, and means to deflect the ends of the compression strap 30 in the direction of the tension strap.

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

ARTHUR KNOX MITCHELL.

Witnesses:

SYDNEY W. TAYLOR, JR.,
EARL E. BOYNTON.

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