

(No Model.)

2 Sheets—Sheet 1.

B. F. & J. C. THOMAS.

WICKET DAM.

No. 382,395.

Patented May 8, 1888.

Fig. 1.

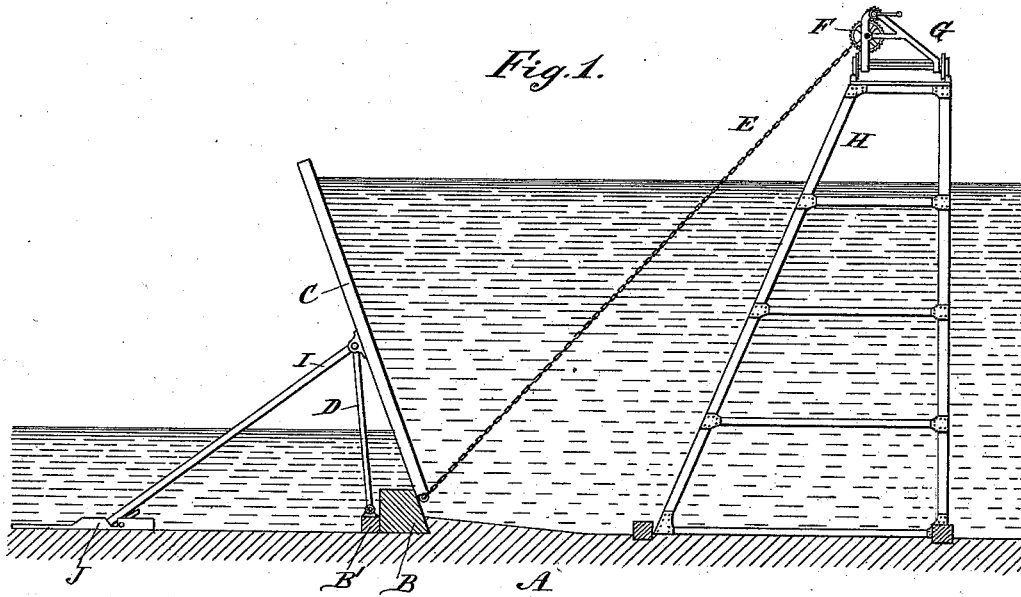


Fig. 2.

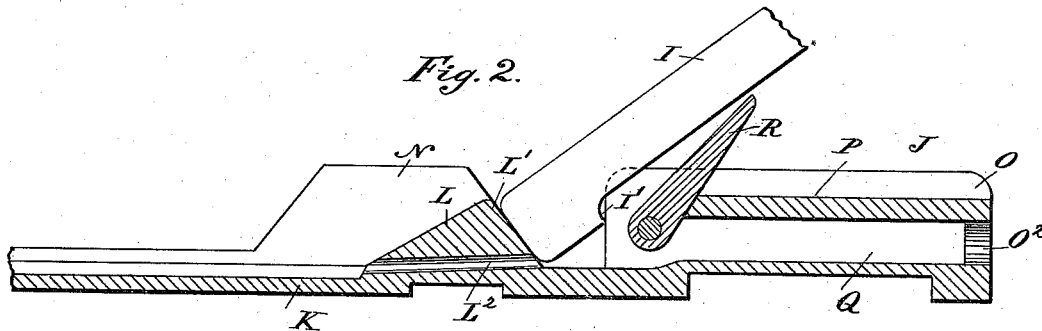
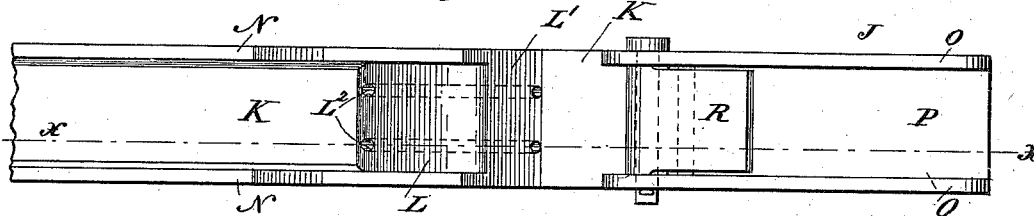


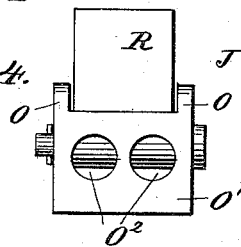
Fig. 3.



WITNESSES:

D. C. Reusch.
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Fig. 4.



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Fig. 5.

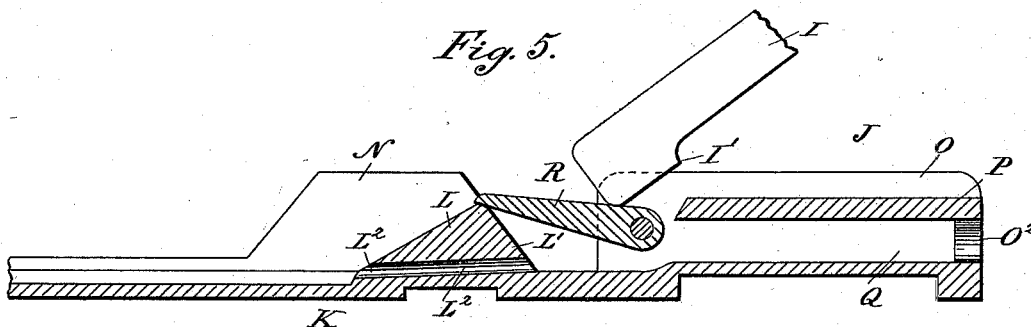


Fig. 6.

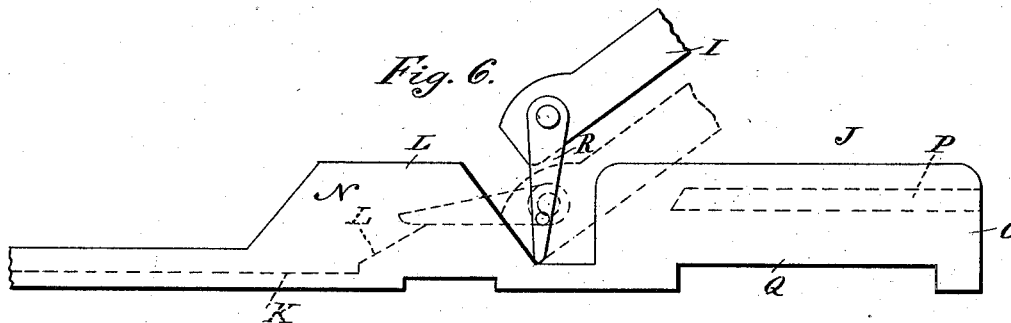


Fig. 7.

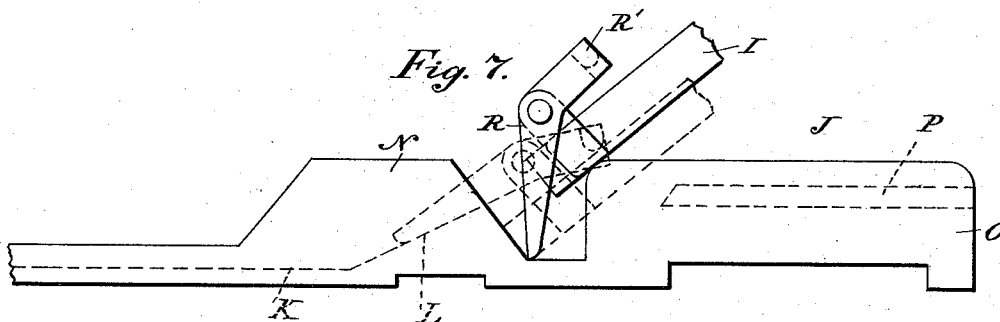
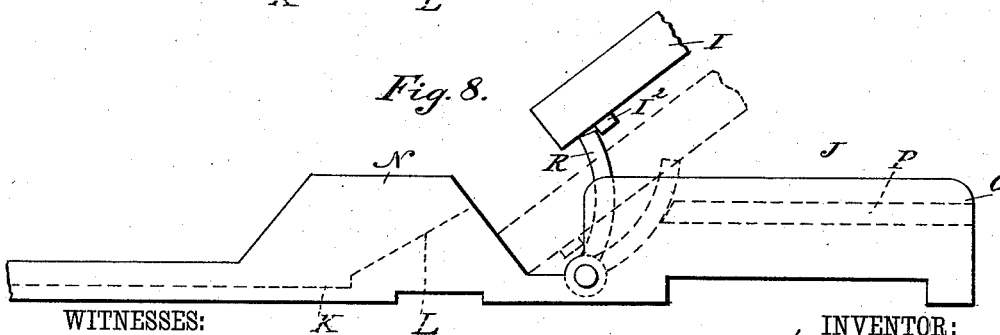


Fig. 8.



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UNITED STATES PATENT OFFICE.

BENJAMIN F. THOMAS AND JOHN C. THOMAS, OF LOUISA, KENTUCKY.

WICKET-DAM.

SPECIFICATION forming part of Letters Patent No. 382,395, dated May 8, 1888.

Application filed February 1, 1888. Serial No. 262,627. (No model.)

To all whom it may concern:

Be it known that we, BENJAMIN F. THOMAS and JOHN C. THOMAS, of Louisa, in the county of Lawrence and State of Kentucky, have invented a new and Improved Wicket-Dam, of which the following is a full, clear, and exact description.

The object of the invention is to provide certain new and useful improvements in wicket-dams, by which the dams can be easily raised and placed in position or lowered to discharge the accumulated waters.

The invention consists of a dam pivoted on a hinged post and supported by a prop abutting on a heurter of special construction.

The invention also consists of certain parts and details and combinations of the same, as will be fully described hereinafter, and then pointed out in the claims.

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

Figure 1 is a side elevation of the improvement as applied. Fig. 2 is an enlarged sectional elevation on the line *xx* of Fig. 3 of the heurter and prop. Fig. 3 is a plan view of the heurter with the prop removed. Fig. 4 is an end elevation of the same. Fig. 5 is a longitudinal sectional elevation of the heurter with the prop in a sliding position. Fig. 6 is a side elevation of a modified form of the heurter and prop. Fig. 7 is a side elevation of another modification of the heurter and prop, and Fig. 8 is a like view of another modification of the same.

In the bed *A* of the river or water-course to be dammed up is placed a sill, *B*, against one side of which rests the lower end of the dam *C*, extending transversely in the bed of the river and made of as many sections as desired. Each section of the dam *C* is pivotally connected at its outer side with one or several posts, *D*, hinged at their lower ends to a second sill, *B'*, located next to the sill *B*, as shown in Fig. 1. The lower end of the dam *C* is connected with one end of a chain or rope, *E*, ex-

tending upward and adapted to be wound at its upper end on a windlass, *F*, of any approved construction and mounted on the truck *G*, traveling on a track supported by a trestle, *H*, in the bed of the river or water-course above the dam *C*. On the rear of the latter is pivotally secured one end of a prop, *I*, supported at its lower end on the heurter *J*, located in the bed of *A* of the river below the dam *C*. Any number of props *I* may be employed for each section of the dam *C*, and a corresponding number of heurters is used; but as all props and heurters are alike in construction, it is only necessary to describe one.

The heurter *J* is provided with a bed-plate, *K*, on which is mounted a triangularly-shaped cross-piece, *L*, on one side, *L'*, of which the lower end of the said prop *I* rests. On each side of the triangular cross-piece *L* are formed the sides *N*, extending downward throughout the lower part of the bed-plate *K* of the heurter *J*. Between the sides *N* is adapted to travel the lower part of the prop *I*, as the latter fits loosely between the said sides. A short distance above the triangularly-shaped cross-piece are formed the sides or flanges *O*, extending in line with the sides *N* and supporting a partition, *P*, which forms a channel, *Q*, below it, and the upper end, *O'*, of the heurter *J* is provided with apertures *O²*, opening into the said channel *Q*, so that the water passing down the river or water-course can flow through the openings *O²* into the said channel *Q*, and from the latter on the triangularly-shaped cross-piece *L* and through the apertures *L²* of the same, so as to wash off all sand and gravel, thereby keeping the upper end, *L'*, which forms the seat for the prop *I*, clear and clean from all impurities.

Between the sides *O* is pivoted a trigger, *R*, which rests, when the prop *I* is in position, against the lower edge of the partition *P*, as shown in Fig. 2. This trigger *R* serves to raise the lower end of the prop *I* over the triangularly-shaped cross-piece *L* when the dam *C* is to be lowered.

The operation is as follows: In the position

shown in Fig. 1, the dam C is erected so that the water in the river or water-course can accumulate and finally can pass over the upper edge of the said dam. The posts D, supporting the dam, are in nearly an upright position, and the lower ends of the props I rest against the sides L' of the triangular cross-pieces L, fastened on the bed-plates K of the heurters J. Now, when it is desirable to lower the dam C, the chain E is wound up on the windlass F, so that the dam C swings on its pivots on the posts D and the props I until it assumes a horizontal position. The accumulated water is thus permitted to flow down the river or water-course, and when it is desirable to lower the entire dam a further pull is exerted on the chain E, whereby the props I are moved upward, their lower ends traveling over the triggers R and finally dropping on the partitions P in the upper part of the heurters J. The operator then releases his pull on the chain E, so that the props I slide downward and press against the triggers R, which are thus swung downward, their free ends falling on the top of the triangular cross-pieces L, as shown in Fig. 5. A further downward-sliding motion of the lower ends of the props I causes the latter to pass over the triggers R, which form bridges, so that the lower ends of the props I slide down between the sides N, their lower ends resting on the base-plates K of the heurters J. The chain E is entirely unwound until the posts D rest at their lower ends in the bed of the river and the props I also assume a horizontal position with the dam C. The water in the river or water-course can now flow unobstructed. When it is desired, however, to again raise the dam C, the chain E is wound on the windlass F, so as to cause the posts D to swing nearly into a vertical position, at the same time pulling the props I upward into an inclined position. Each prop in its upward movement travels up on the side L' of the triangular cross-piece L. Its lower end, which is provided with a shoulder, I', engages by means of the shoulder the free end of the trigger R and throws the latter upward into its former position, (shown in Fig. 2,) so that the lower end of the prop I can again pass on the upper side, L', of the triangular cross-piece L, as shown in said Fig. 2. When the operator unwinds the chain E, the lower part of the dam C swings downward and its lower edge again rests on the sill B, located in the bed of the river or water-course. The several parts of the dam have then again assumed the position shown in Fig. 1.

In the modification shown in Fig. 6 the trigger R is pivoted to the lower end of the prop I, instead of being pivoted on the sides O of the heurter J. When the prop is erected, as shown in Fig. 1, the said trigger R assumes the position shown in dotted lines in Fig. 6,

and when the dam C is to be lowered the chain E is wound up, as above described, so that the lower end of the prop I moves upward a short distance until the trigger R assumes the position shown in full lines in said Fig. 6—that is, its lower end rests at the base of the triangular cross-piece L. When the chain E is now unwound, the prop I passes downward and is lifted over the triangular cross-piece L, and passes between the sides N of the heurter J in the manner above described.

In the modification shown in Fig. 7 the trigger R is also pivoted to the lower end of the prop I, but is of a different construction, being provided with an extension, R', which rests on the upper side of the prop I when the latter is in an erected position, as shown in Fig. 1, and the lower part of the trigger R rests on the side L' of the triangular cross-piece L. When the prop I is to be disengaged from the triangular piece, L it is moved upward again, as above described, until the trigger R rests at the base of the triangular cross-piece L. A downward movement of the prop I now carries the lower end of the same over the triangular cross-piece L as the said trigger R turns, the fulcrum being at its lower end on the base of the side L' of the triangular cross-piece L, as shown in Fig. 7.

In the modification shown in Fig. 8 the trigger R is fulcrumed between the sides O of the heurter J and is slightly curved. When the dam C is erected, the prop I, with the trigger R, is in the position shown in dotted lines in Fig. 8, and when the dam is to be let down the above-described operation is repeated, so that the prop I is moved forward, and a lug, I', on the under side of the prop I, engages the free end of the curved trigger R, whereby the latter is swung upward and assumes the position shown in full lines in Fig. 8. When the dam C is now lowered, the lower end of the prop I is swung over the top of the triangular cross-piece L by the trigger R and is enabled to slide downward between the sides N. Thus it will be seen that the dam C can easily be raised and placed in position or lowered to discharge the accumulated waters whenever desired.

Having thus fully described our invention, we claim as new and desire to secure by Letters Patent—

1. In a wicket-dam, the combination, with a dam and hinged posts pivotally connected with the said dam, of props pivotally connected with the said dam, a heurter in which the lower end of each prop abuts, and a trigger for carrying the lower end of the prop over its abutment, substantially as shown and described.

2. In a wicket-dam, the combination, with a heurter provided with a cross-piece, of a prop resting against the said cross-piece, and a

trigger for carrying the lower end of the said prop over the said cross-piece, substantially as shown and described.

3. In a heurter, the combination, with a
5 base-plate and sides, of a triangular cross-piece held between the said sides and provided with longitudinal apertures for the passage of the water and impurities, substantially as shown and described.

10 4. A heurter comprising a base-plate, a cross-piece held on the said base-plate, and a trigger for carrying the lower end of the prop

over the said cross-piece, substantially as shown and described.

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J. J. JOHNSON.

Witnesses to the signature of John C. Thomas:

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W. E. BROACH.