

J. FLEISHMAN.  
 FISH GUARD FOR DITCHES.  
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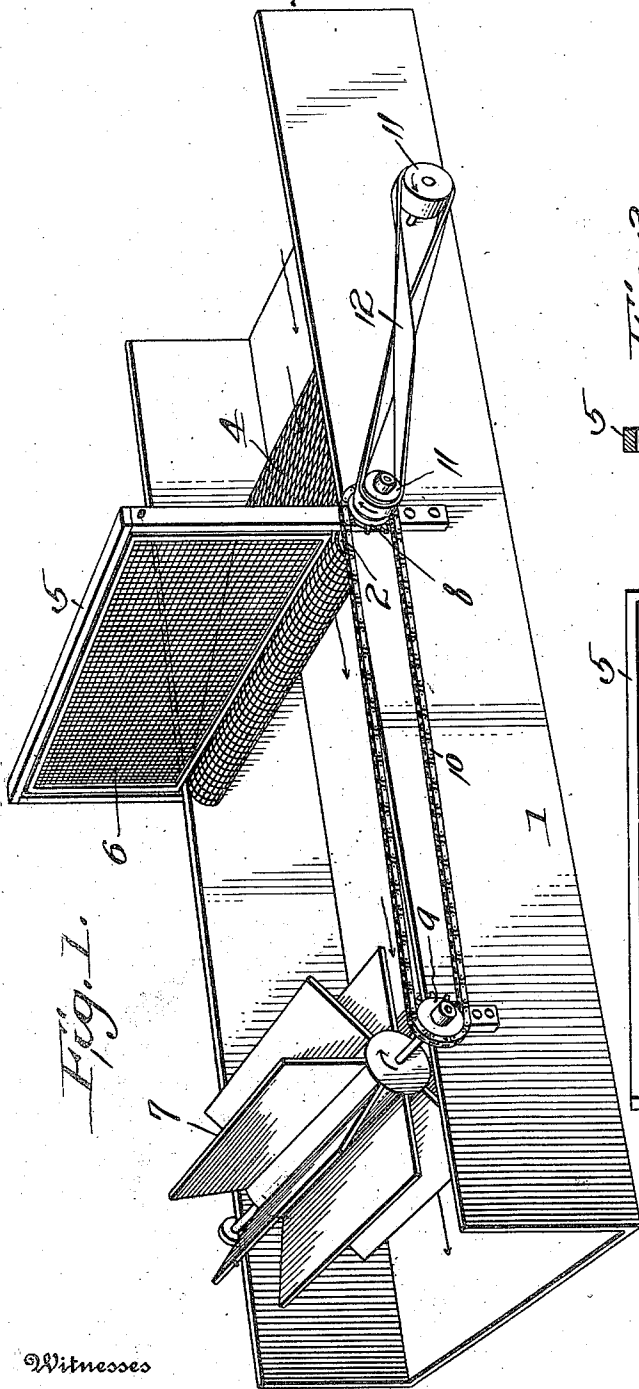


Fig. 1.

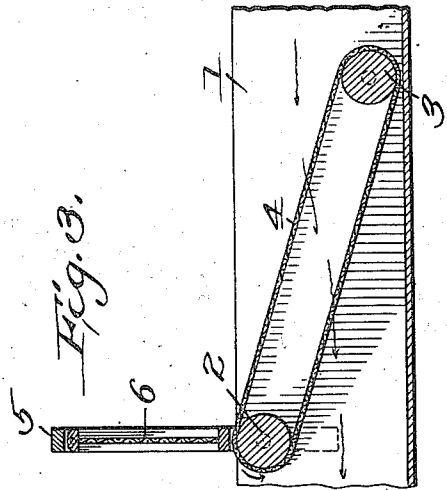


Fig. 3.

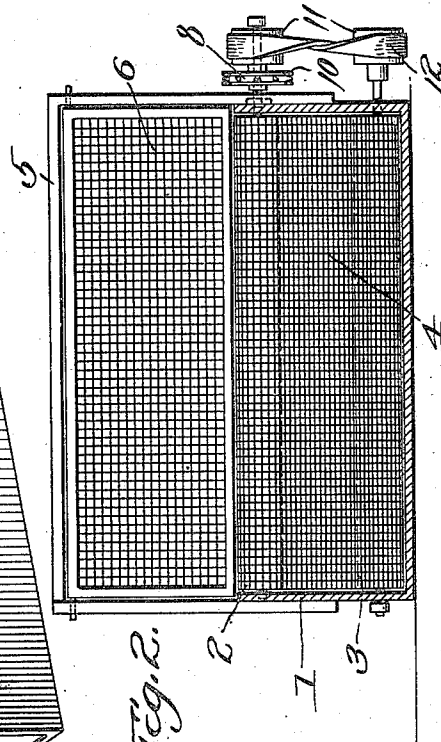


Fig. 2.

Witnesses

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# UNITED STATES PATENT OFFICE.

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FISH-GUARD FOR DITCHES.

1,063,344.

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Patented June 3, 1913.

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*To all whom it may concern:*

Be it known that I, JOSEPH FLEISHMAN, a citizen of the United States, residing at Winthrop, in the county of Okanogan and State of Washington, have invented a new and useful Improvement in Fish-Guards for Ditches, of which the following is a specification.

This invention relates to a guard intended to prevent fish from running from streams into irrigation ditches, and so constructed that while turning fish it will permit sticks, leaves and other forms of trash to be carried over, thereby preventing the closing of the ditch or drain by accumulation of trash at the guard.

With these objects in view, the invention consists of the novel features of construction hereafter described, pointed out in the claim and shown in the accompanying drawings, in which,

Figure 1 is a perspective view illustrating a perspective form of the device. Fig. 2 is a transverse section through a sluice box. Fig. 3 is a vertical section taken through a guard.

In these drawings 1 represents a sluice box or way, or a casing or boxing of any kind which it may be desirable to place within the ditch for the purpose of arranging my guard therein. It will of course be obvious that if it is preferred or more convenient a brick stand or concrete construction may be employed to replace the wooden box, either in whole or in part. Mounted within said sluice way extending entirely across the same are rollers 2 and 3, the roller 2 being arranged at the top and the roller 3 being arranged at the bottom and the last mentioned roller being arranged nearer the entrance of the ditch than the roller 2. A suitable screen 4 having the form of an endless carrier is adapted to travel over these rollers, the upper portion of the screen traveling upwardly and rearwardly. Mounted in vertical alinement with the roller 2 is an upright frame 5, within which is hinged a rectangular screen 6, the said screen being pivoted to the frame 5 at its upper corners. The lower edge of this screen hangs downwardly as close to the screen 4 as practicable and to the rear of the roller 2 there is arranged transversely

in the sluice way a water wheel 7 of any desired construction. The rollers 2 and 3 have reduced projecting portions or shafts extending through one side of the sluice way and upon the projecting portion of the roller 2 is a sprocket wheel 8 and upon the shaft of the water wheel is a sprocket wheel 9. A sprocket chain 10 travels over these sprocket wheels. Suitable pulleys 11 are also mounted upon the projecting shaft portions of the rollers 2 and 3 and a crossed endless belt 12 runs over these pulleys, thereby transmitting rotation in the desired direction to the lower pulley 11 from the water wheel 7. It will be understood that this form of gearing may be changed to suit circumstances as any desired transmission means may be employed for transmitting rotation from the water wheel 7 to the roller 3. Preferably I prefer to have a slow travel of the screen 4 as less power will be required to be developed by the water wheel than would be required if a considerable rate of speed was called for.

In operation fish entering the ditch will be stopped by the screen 4. To prevent fish jumping over the roller 2 I have employed the screen 6. Any fish attempting to jump the guard will strike the upper part of the screen 6 and so near the pivotal point as not to swing it into open position. But trash of any kind will be picked up by the screen 4 and will be brought against the lower edge of the hinged screen and will swing the same sufficiently rearwardly to permit the trash to pass beneath it and pass on beneath the water wheel.

What I claim is:

The combination with a drain ditch, of a fish guard comprising upper and lower rollers arranged out of vertical alinement with each other, an endless screen traveling over said rollers, means for driving said screen an upright frame arranged in vertical alinement with the upper roller, and a rectangular guard hinged within said frame at its upper corners, the lower edge of said hinged guard being parallel to and adjacent the upper roller.

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Witnesses:

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