

No. 849,332.

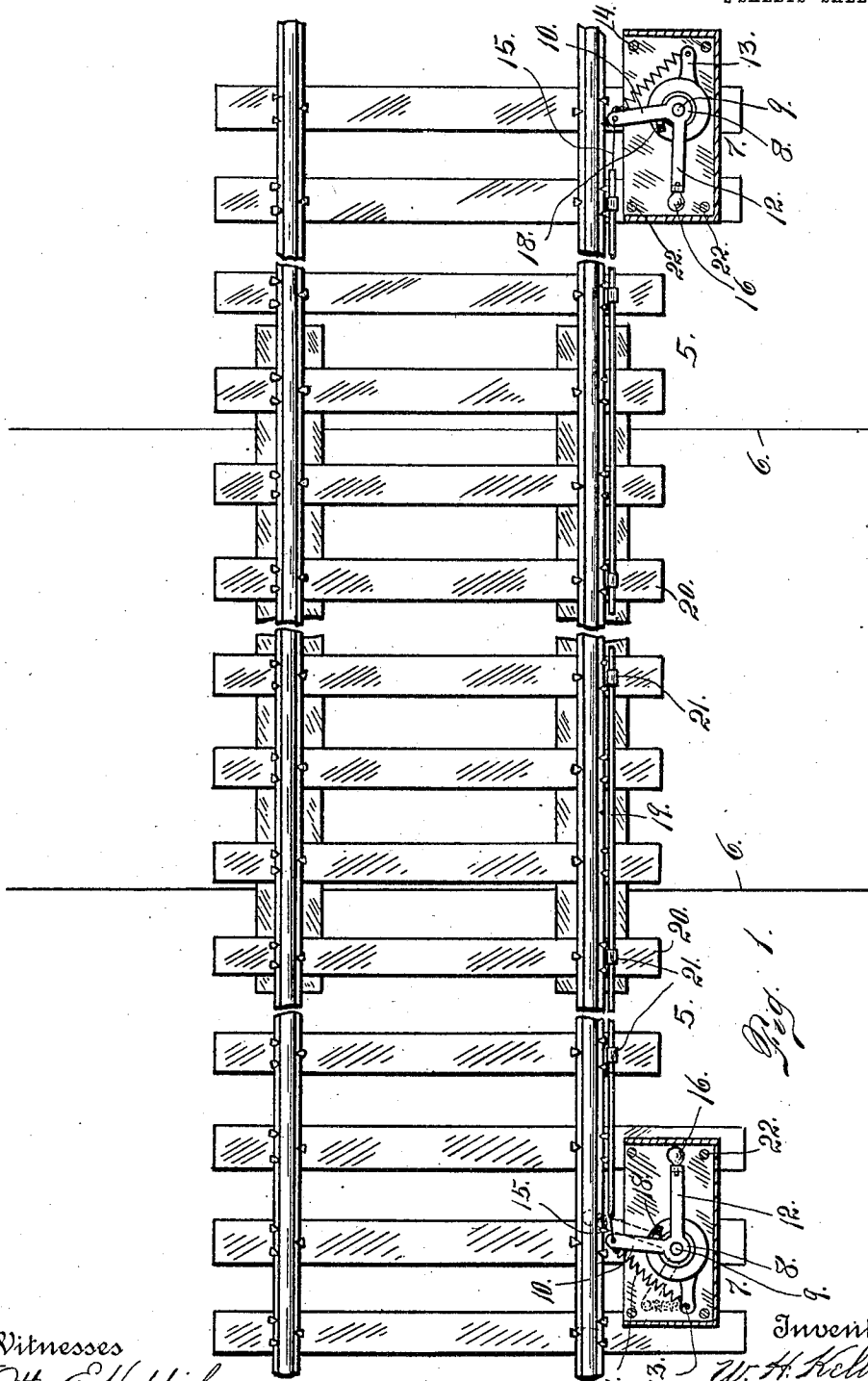
PATENTED APR. 2, 1907.

W. H. KELLEY.

AUTOMATIC TORPEDO PLACING DEVICE FOR RAILROADS.

APPLICATION FILED FEB. 15, 1907.

2 SHEETS—SHEET 1.



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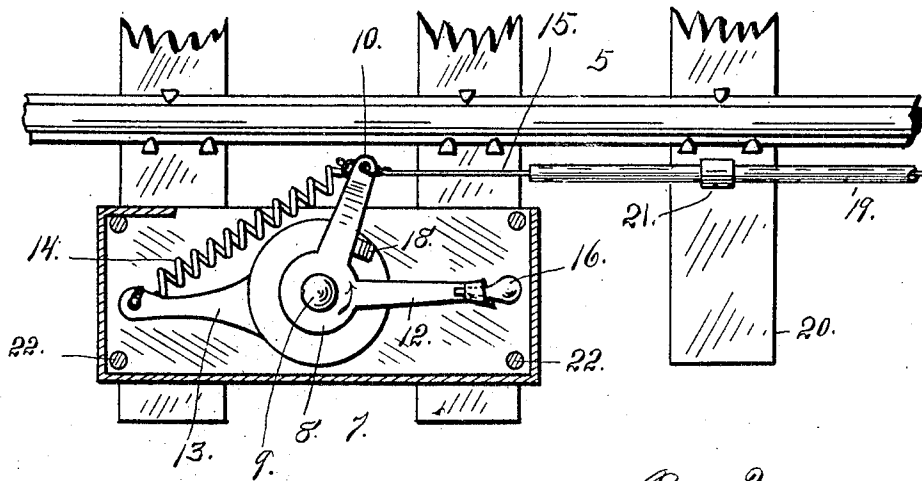


Fig. 2.

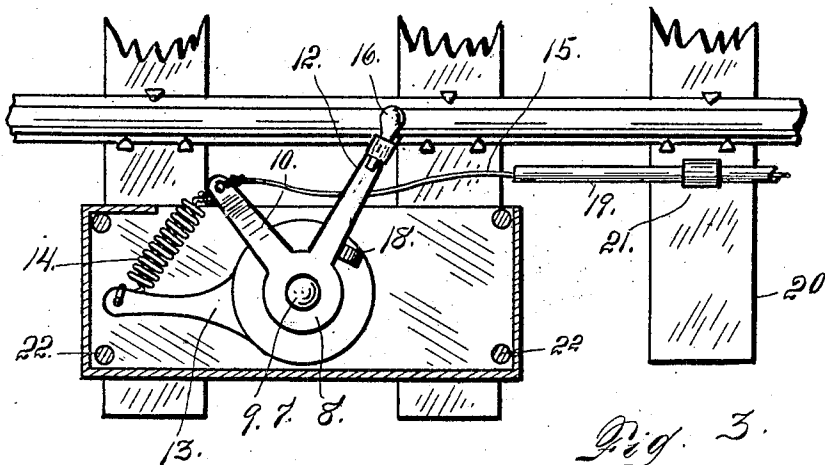


Fig. 3.

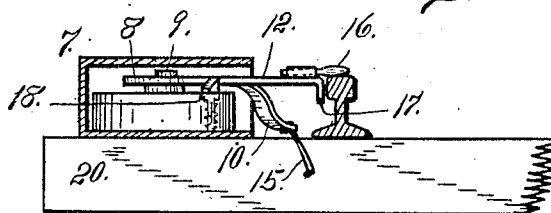


Fig. 4.

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UNITED STATES PATENT OFFICE.

WILLIAM H. KELLEY, OF DENVER, COLORADO.

AUTOMATIC TORPEDO-PLACING DEVICE FOR RAILROADS.

No. 849,332.

Specification of Letters Patent.

Patented April 2, 1907.

Application filed February 15, 1907. Serial No. 357,482.

To all whom it may concern:

Be it known that I, WILLIAM H. KELLEY, a citizen of the United States, residing at the city and county of Denver and State of Colorado, have invented certain new and useful Improvements in Automatic Torpedo-Placing Devices for Railroads; and I do 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, reference being had to the accompanying drawings, and to the letters and figures of reference marked thereon, which form a part of this specification.

My invention relates to a device for automatically placing torpedoes on a railway-track for the purpose of notifying those in charge of the train that the track in the vicinity is in a dangerous condition due to the burning or washing away of a bridge or culvert or the destruction of the track by reason of any accident or mishap.

The invention is more especially intended for use in connection with the track on both sides of bridges or culverts which are liable to be burned or washed away.

Generally considered, the invention comprises two torpedo-placing devices located on opposite sides of the bridge and normally inactive by reason of a connection between the two devices, which connection, however, has a fusible or readily-breakable portion which will be disrupted by the destruction of the bridge or culvert, in which event the torpedo-placing devices, which are spring-actuated, automatically place a torpedo upon the track on each side of the bridge. These devices should be located a suitable distance from the bridge or culvert to give the engineer time to stop the train before reaching the point of danger.

Having briefly outlined my improved construction, as well as the object it is intended to perform, I will proceed to describe the same in detail, reference being made to the accompanying drawings, in which is illustrated an embodiment thereof.

In the drawings, Figure 1 is a top plan view of a section of railroad-track, showing my improved torpedo-placing devices in position for use, the casing of the device in each case being shown in horizontal section. Fig. 2 is a fragmentary view of the track, showing one of the torpedo-placing devices on a larger scale. Fig. 3 is a similar view showing the

device in a different position—that is to say, in the position after it has placed a torpedo upon the track. Fig. 4 is a cross-section taken through one of the devices in a direction cutting one of the track-rails transversely, the device being shown in the same position as in Fig. 3.

The same reference characters indicate the same parts in all the views.

Let the numeral 5 designate a section of track. The two lines 6, extending transversely of the track, may be understood to indicate the extremities of a bridge or culvert. On each side of this bridge or culvert is located a casing 7, in which is located a bell-crank-lever device 8, fulcrumed at 9 and having two arms 10 and 12. The arm 10 is connected, by means of a spring 14, with a stationary lug 13. The arms 10 of the two devices are connected by a wire 15 or other suitable device having a fusible and readily-breakable portion. When this connecting-wire 15 is intact, it holds the two devices in the position shown in Figs. 1 and 2, in which event the spring 14 is distended or placed under tension. Upon the outer extremity of the arm 12 of each lever is located a torpedo 16. The extremity of the arm carrying the torpedo is also provided with a depending flange 17, bent at right angles to the body of the arm, the said flange occupying a position close to the rail when the torpedo is in place. Within the casing is also located a vertically-movable spring-actuated dog or pawl 18, having one beveled face adapted to be acted on by the arm 12 of the lever when the latter is thrown to the torpedo-placing position. (See Fig. 3.) As soon as the arm 12 has reached the last-named position the dog moves upwardly in the rear of the arm and locks the said arm against the return movement. The said arm is prevented from moving too far in the opposite direction, or that shown in the direction of the arrow in Figs. 2 and 3, by the flange 17, which engages the rail of the track and prevents further movement under the influence of the spring's tension.

The rail or other connecting device 15 is passed through a sheath or protecting tube or pipe 19, mounted upon the ties 20 and secured in place by suitable fastening devices 21. Each casing 7 is closed, except on the inside or on the side toward the track-rail, where it is open to allow the lever-arms to move freely in the performance of their func-

tion. Each casing 7 is secured to the ties of the track in any suitable manner, as by fastening devices 22.

From the foregoing description the use and operation of my improved device will be readily understood. Assuming that the two devices are in the position shown in Fig. 1, the lever-arms 10 being connected, under these circumstances if the bridge should burn the heat acting on the protecting tube or pipe 19 will be sufficient to fuse or melt the fusible portion of the connecting device 15, thus releasing the arms 10, in which event the springs 14, acting on the said arms, would throw the lever to the position illustrated in Fig. 3, whereby the torpedo 16 of each device would be placed upon one rail of the track. In moving to this position the arm 12 engages and depresses the pawl or dog 18 and passes over the same after the said dog returns to its normal position and locks the arm in the torpedo-placing position, thus preventing the return of the arm for any reason. Now again if the bridge or culvert should be washed away by a flood the connecting device 15 would be broken, in which event the torpedoes would be placed upon the track, as just explained. Now if a train approaches the location of the destroyed bridge or culvert the torpedo will be exploded by the train and the trainmen notified that there is danger ahead in time to stop the train, and thus prevent accidents.

Having thus described my invention, what I claim is—

1. In an automatic torpedo-placing device for railroads, the combination with a suitable casing, of a bell-crank-lever device, one arm of which is provided with a torpedo, a spring connected with the other arm, and normally having a tendency to throw the torpedo-arm toward the rack-rail and into position to place the torpedo upon the rail, and a readily-destructible device connected with the spring-arm and normally holding the device in such

position as to prevent the torpedo-arm from approaching the rail.

2. A device of the character described, comprising a bell-crank lever suitably fulcrumed, one arm of the lever carrying a torpedo, and a spring connected with the other arm and normally having a tendency to throw the torpedo-arm toward the track, and means connected with the spring-arm for holding the torpedo-arm away from the track, the said means being readily destructible, substantially as described.

3. In apparatus of the class described, the combination of two spring-actuated torpedo-placing devices located at a suitable distance from the extremities of a bridge, culvert, or other danger-point, and a readily-destructible connection between the two devices whereby they are held inactive as long as the said connection remains intact, substantially as described.

4. The combination with a railroad-track, of a spring-actuated torpedo-placing device located in the vicinity of the track, and a destructible connection with the said device whereby the same is held in the inactive position until the said connection is destroyed or broken.

5. The combination with a railroad-track, of two spring-actuated lever-like torpedo-placing devices located in the vicinity of the track and at a suitable distance from the opposite ends of the bridge, culvert or other danger-point, and a destructible connection between the two lever-like devices whereby they are held inactive as long as the destructible device remains intact, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM H. KELLEY.

Witnesses:

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MAY WILLIAMS.