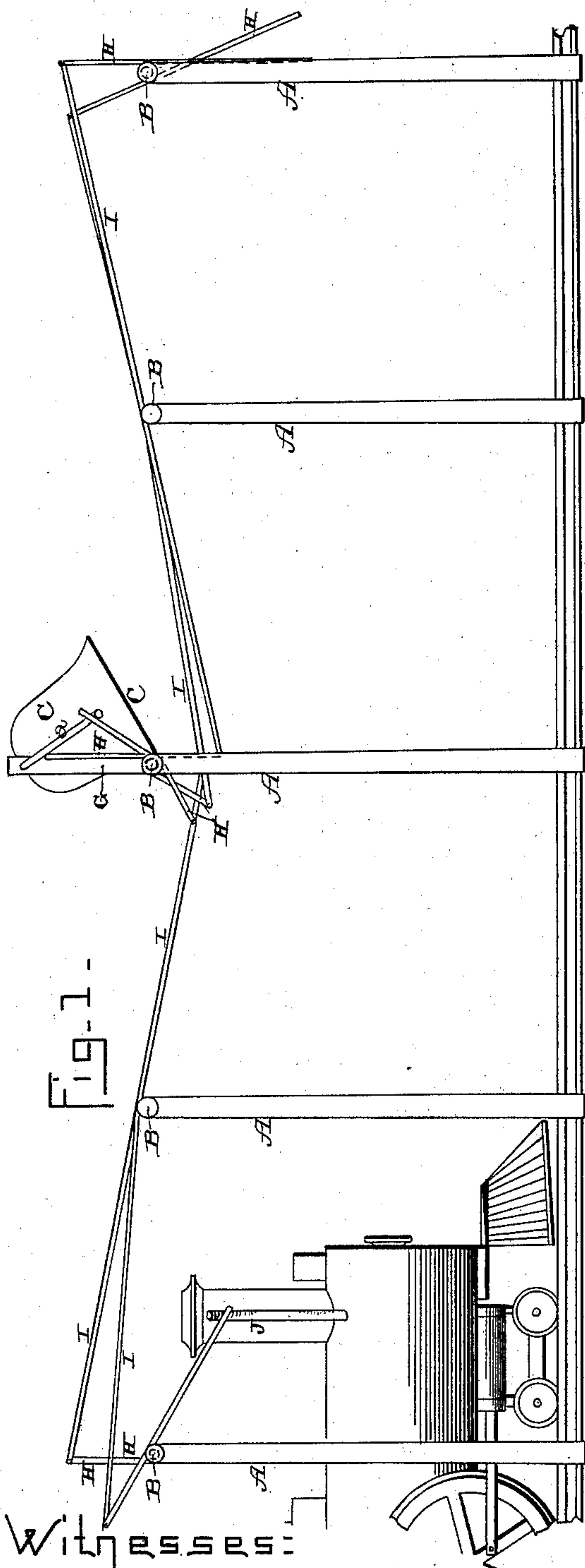


(No Model.)

C. A. FINLEY.
RAILROAD SIGNAL.

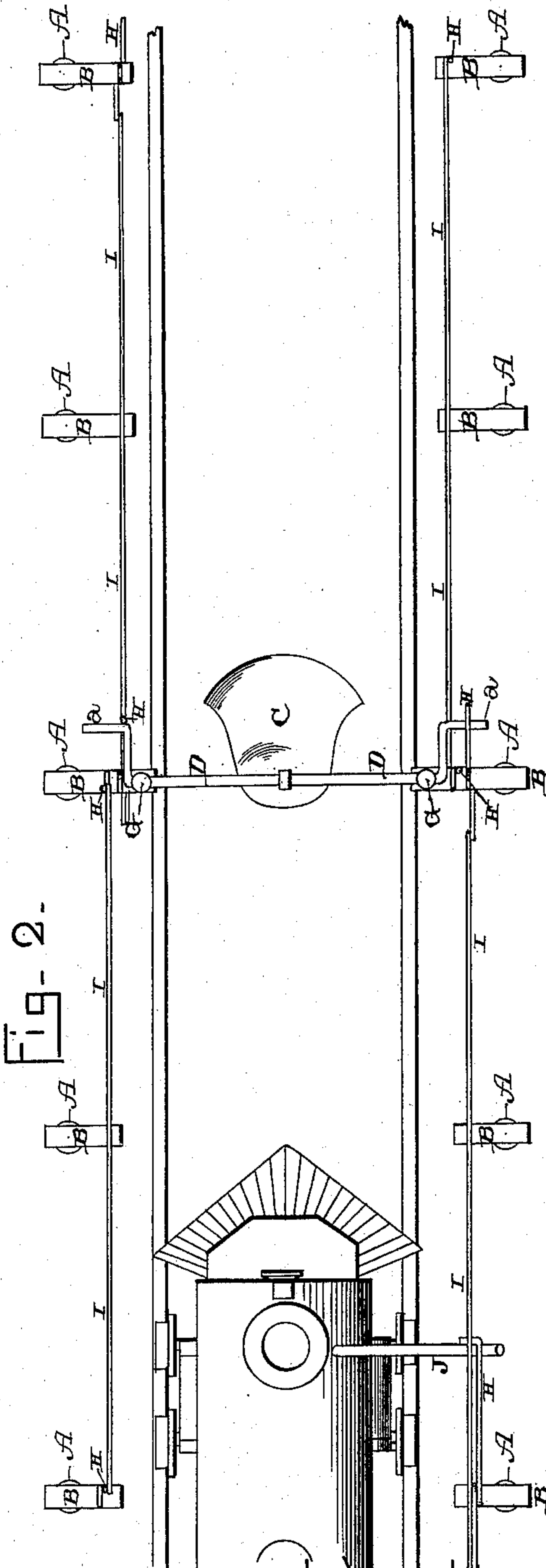
No. 407,653.

Patented July 23, 1889.



Witnesses:

E. P. Ellis,
L. L. Burkett,



Inventor:

Chas. A. Finley,
per J. A. Lehmann, atty.

UNITED STATES PATENT OFFICE.

CHARLES A. FINLEY, OF HOLTON, KANSAS.

RAILROAD-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 407,653, dated July 23, 1889.

Application filed March 18, 1889. Serial No. 303,733. (No model.)

To all whom it may concern:

Be it known that I, CHARLES A. FINLEY, of Holton, in the county of Jackson and State of Kansas, have invented certain new and useful Improvements in Railroad-Signals; 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 pertains to make and use it, reference being had to the accompanying drawings, which form part of this specification.

My invention relates to an improvement in railroad-signals; and it consists in the combination of a suitable number of bells mounted over or alongside of the track upon suitable supports and connected to cranked rods, supports placed along the track for the operating-rods for ringing the bells, and the wires which are connected to the rods and operated by a device placed upon the locomotive, as will be more fully described hereinafter.

The object of my invention is to mount large bells over the track at suitable distances apart, and which bells are operated at certain points along the track by the passage of the locomotive, so as to give notice to trains approaching each other, and thus give the engineers time to stop their trains before a collision occurs.

Figure 1 is a side elevation of a signal which embodies my invention. Fig. 2 is a plan view of the same.

Placed along each side of the track at regular distances apart are a number of posts A, and mounted upon these posts are the supports B of any suitable construction. Mounted upon two of these posts, placed upon opposite sides of the track, is a bell C, which is secured to a rod D, which is provided with a crank *a* at each of its ends, the bell being secured to the rod in such a manner that when the rod is turned the bell is operated. This cranked rod is journaled in two uprights G, which rise from the two horizontal supports B, and the cranked ends of the rod project downward near to the tops of the supports B. Loosely fastened to the supports B, at regular distances apart, are the operating-levers H, which extend vertically, and which are connected together in pairs by wires I. These wires are prevented from sagging by being made to

pass over the tops of the supports placed upon the tops of poles or posts which are provided especially for this purpose. The lower ends of those rods which are to be operated by a device J upon the locomotive have their lower ends bent inwardly toward the track, so that these devices upon the locomotive will strike the lower ends of these levers no matter in which direction the locomotive may be running. Upon the same supports upon which the bells are mounted are placed two operating-levers upon each side of the bell, one being connected to a wire which extends from one direction and the other to a wire which extends from the opposite direction. These two levers are made to bear against opposite sides of the cranks on the bell rod or shaft, so that no matter in which direction the locomotive passes the bell will be rung both in advance of and behind it.

The striking of the device upon the locomotive against one of the levers before it reaches the bell causes the bell to be sounded in advance of the locomotive any regulated distance to alarm the engineer on the approaching train, and then after the locomotive has passed the bell a regulated distance it again rings the same bell, so as to give notice to the engineer of a train which may be following that another train is in advance.

There will be any suitable number of bells located along the track at regulated distances apart, and to these bells will be connected the wires running from opposite directions. The poles upon which the wire and rods are mounted will be also placed at regulated distances apart upon both sides of the track. The bells being sufficiently large to be heard a considerable distance away, the moment the engineer hears one of the bells sound he knows from what direction another train is coming, and so has ample time to stop and prevent a collision.

As will be seen, the parts which constitute my signal are few, simple, and are operated entirely by the passage of the locomotive, and hence nothing is left to the memory or care of the engineer.

Having thus described my invention, I claim—

In a railroad-signal, the combination of

bells supported above the track, horizontal rods connected thereto which extend across the track, cranks upon each end at opposite sides of the track, levers journaled to supports below the cranks at each side of the track and having their upper ends engaged thereby, and intermediate levers on each side of the track which are operated by devices upon the locomotive, with supporting-poles placed upon opposite sides of the track, two

lines of wires—one on each side of the track—which connect the said levers, and a device upon the locomotive for operating the levers, substantially as shown and described.

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

CHARLES A. FINLEY.

Witnesses:

C. E. ROSE,

ED. E. BIRKETT.