(No Model.)

J. M. HARPER & J. BRYAN.

RAILROAD SIGNAL.

No. 246,130. Patented Aug. 23, 1881.

Fig. 1.

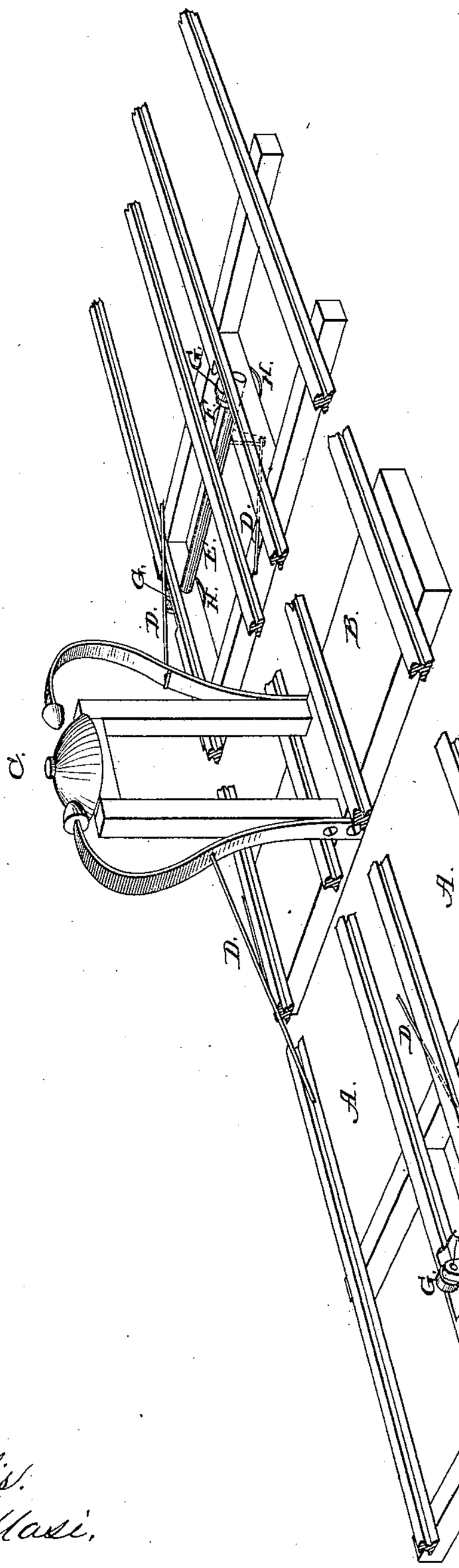
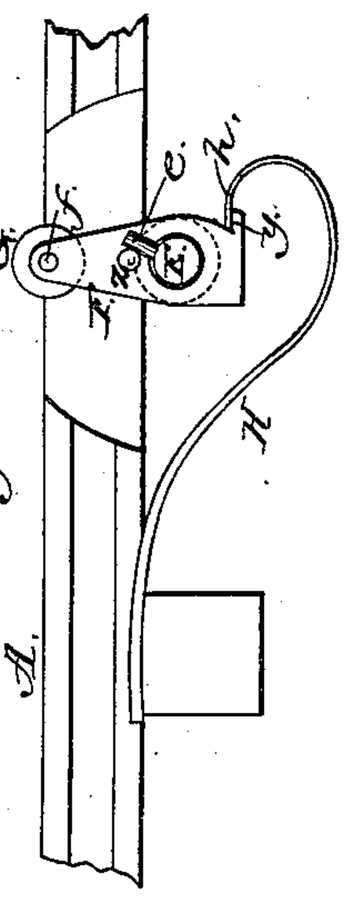


Fig. 2.



WITNESSES

John A. Ellis.
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INVENTORS

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by Anderson & Smith
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UNITED STATES PATENT OFFICE.

JAMES M. HARPER AND JOHN BRYAN, OF EL PASO, ILLINOIS; SAID BRYAN ASSIGNOR OF ONE-HALF HIS RIGHT TO SAID HARPER.

RAILROAD-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 246,130, dated August 23, 1881.

Application filed March 19, 1881. (No model.)

To all whom it may concern:

Be it known that we, JAMES M. HARPER and JOHN BRYAN, citizens of the United States, resident at El Paso, in the county of Woodford and State of Illinois, have invented certain new and useful Improvements in Railroad-Signals; and we 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 appertains to make and use the same, reference being had to the accompanying drawings, and to letters or figures of reference marked thereon, which form a part of this specification.

Figure 1 is a representation of a perspective view, partly broken away; and Fig. 2 is an enlarged detail view.

This invention relates to improvements in signals applied to railways and operated by the action of moving trains.

The invention consists in the construction hereinafter described.

In the annexed drawings, A represents railroad-tracks, and B a crossing. Placed at a convenient point near this crossing is a signal, C, whose strikers are connected by rods D D to transverse rock-shafts E E, running under the tracks at each side of the crossing and working in bearings. Sleeved upon these shafts at one rail of each of the tracks are the crank-arms F, having at their upper ends pins *f*, turned toward the rail, said pins carrying rollers G G. On the other side, near shafts E E, these cranks have pins *z*, which bear against pins *e* on said shafts, the position being such that these two pins only engage when the cranks are moved toward the crossing. At the bottom, on either side, these cranks have lugs *y*, on which bear the free ends *h* of springs H, whose other ends are made fast at any convenient place.

As a train approaches a crossing the peripheries of its wheels, bearing against the rollers G G, cause the cranks E to turn as the pins *z* and *e*, engaging, turn the shaft E and pull the striker from the signal. As the wheels leave the rollers the spring of the striker, being released, throws the latter against the alarm, and warning is given of the train's approach, the notice being repeated by each following wheel. As the train leaves the crossing the cranks turn without moving the shaft, and the springs return the cranks to place. The shafts should be at such a distance from the crossing as to give any one upon it time to get off upon hearing the alarm or any one approaching to stop.

What we claim is—

Shaft E, having pin *e*, loose crank-arm F, having pins *f* and *z* and lug *y*, roller G, and spring H, in combination with connecting-rod D and signal C, substantially as described.

In testimony whereof we affix our signatures in presence of two witnesses.

JAMES M. HARPER.
JOHN BRYAN.

Witnesses:
WILLIAM R. WILLIS,
P. C. MASI.