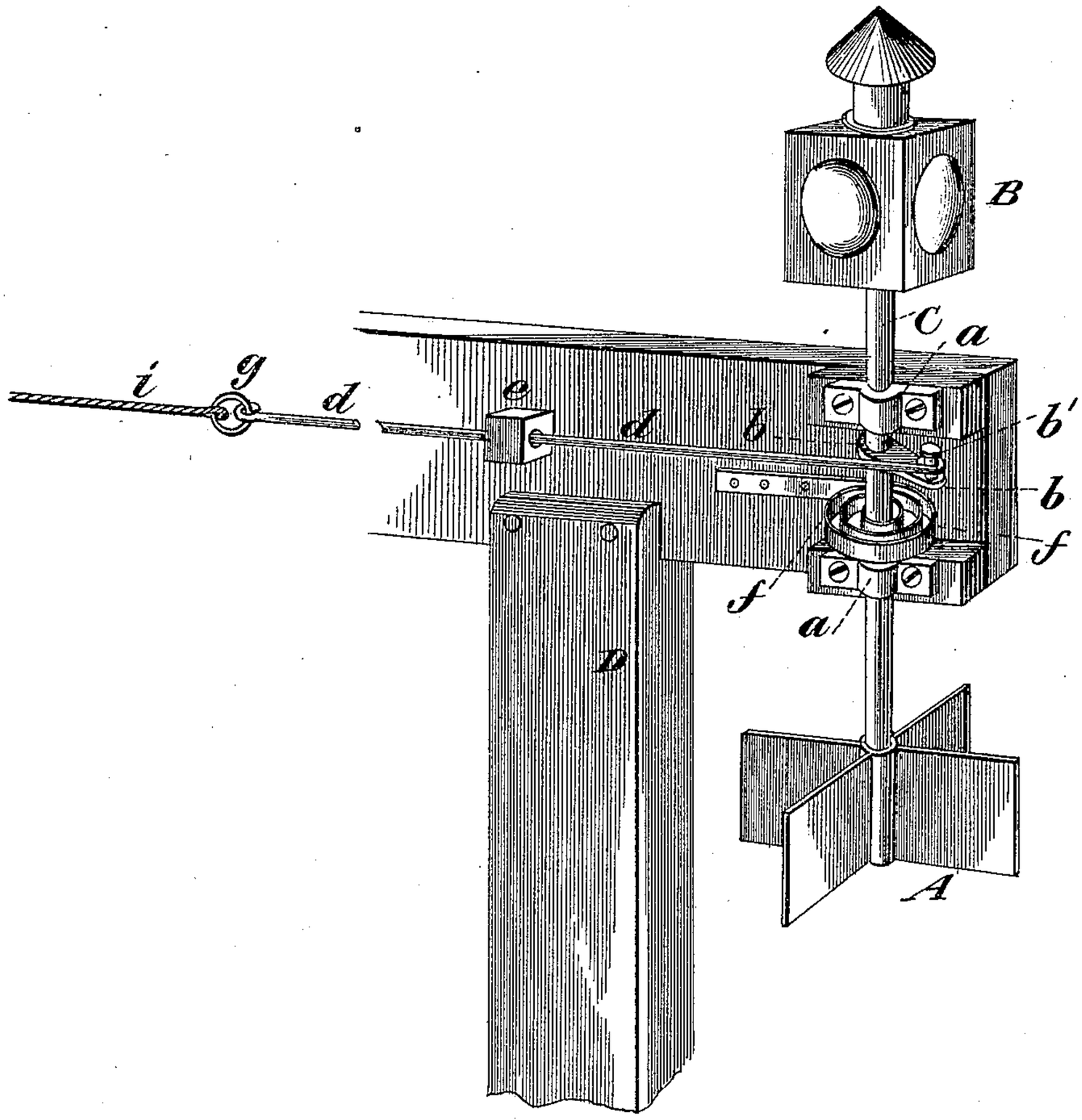
(No Model.)

J. H. AMES.

RAILWAY SIGNAL.

No. 356,342. Patented Jan. 18, 1887.



Witnesses:
A. Ruppert.
E. Crane.

Inventor:
John H. Ames,
by Geo. W. J. Stevens
Atty.

UNITED STATES PATENT OFFICE.

JOHN H. AMES, OF ST. PAUL, MINNESOTA.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 356,342, dated January 18, 1887.

Application filed October 6, 1885. Serial No. 179,111. (No model.)

To all whom it may concern:

Be it known that I, JOHN H. AMES, of St. Paul, in the county of Ramsey and State of Minnesota, have invented certain new and useful Improvements in Railway-Signals, of which the following is a specification.

This invention has reference to that class of signals which are employed to indicate the condition of the track or tracks of a railroad at yards, switches, junctions, crossings, drawbridges, tunnels, curves, or other portions of the track, or for block and other signaling, and may be used in connection with any mechanical, electric, or other system of interlocking, whereby to guard the tracks, switches, crossings, &c.

The invention has special reference to means for automatically restoring or moving the signal, whether for day or night use, to a normal position. This normal position may be that in which the signals are placed to indicate "safety," "danger," "caution," "orders," or any other information previously agreed upon and understood by the railroad officials or operatives.

The invention is intended more particularly for use in connection with a target and lantern, the former for day and the latter for night use, the object being to automatically restore the target and lantern to the normal position from which they have been moved by the operator, whether standing in the neighborhood of the signal or in a cabin or signal-station remote from the signal.

The accompanying drawing is a perspective view of a structure embodying my invention.

It is intended to operate the day signal or target in connection with a night signal or lamp, or its equivalent, the day and night signals being restored to the normal position from which they have been previously turned by the elastic force of a spring coiled about the signal-shaft, the tendency of which is to restore the signals to their said normal position.

A is the day signal or target, and B is a lamp having lenses of different-colored glass, as ordinarily constructed. Each lamp will preferably contain four lenses, the opposing lenses being of the same color; thus, for instance, two lenses opposing each other may be of red glass and the lenses at a right angle thereto of green glass, all as well known heretofore.

The target and lantern are mounted upon a common revolving shaft, C, preferably standing in a vertical line and turning in bearings *a*. The target and lantern thus arranged may be placed upon a tower or post, D, of sufficient altitude to enable the signal to be readily seen by an approaching train, or otherwise conveniently located, as heretofore well known.

The shaft C is provided with a crank-arm, *b*, having a pin, *b'*, to which a rod, *d*, is attached. The rod *d* is adapted to move longitudinally and loosely in a bracket or bearing, *e*, secured to the tower, post, or other support. Mounted upon the said rod *d*, and extending between the bracket *e* and a collar, *f*, secured to the rod, is a coiled spring, *g*. The outer end of the rod *d* is provided with a ring, *h*, or other device, by means of which a rope, *i*, may be attached to it, which rope leads to the point or locality at which the operator stands to actuate the signal. It will be understood that the arms of the target are preferably four in number, which are of contrasted colors to correspond with the indications of the lantern.

The drawing shows the signals in their normal position, or that previously agreed upon as normal, whether indicating "danger," "safety," or other condition.

When it is desired to change the signal from the normal position to a state indicating an opposite condition, the operator draws upon the rope *i*, causing a quarter-revolution of the shaft C, and the consequent quarter-revolution of the target and lamp bringing the necessary color of the target and lamp to stand in view of an approaching train. The cord *i* may be operated by hand, or may form a part of a general system of signaling, and be used in connection with interlocking mechanism, all as heretofore well known. Upon the release of the means which hold the cord drawn back, whether such means are hand or mechanical, the expansive force of the spring gives a quarter-turn backward to the crank-arm *b*, and consequently causes a corresponding quarter-rotation of the shaft which carries the target

and lantern, the signals being thus restored to their normal position.

Having described my invention, I claim—

The shaft C, having at its respective ends a lantern and a target, and the crank *b*, fixed to said shaft centrally of its length, combined with the support D, bearings *a a*, coiled spring *f*, and rod *d*, said spring being adapted to be compressed by strain torsionally applied to said shaft, substantially as set forth.

In testimony whereof I hereunto set my hand and seal this 10th day of September, A. D. 1885.

JOHN H. AMES. [L. S.]

Witnesses:
F. G. PREST,
GEO. B. CRUMMEY.