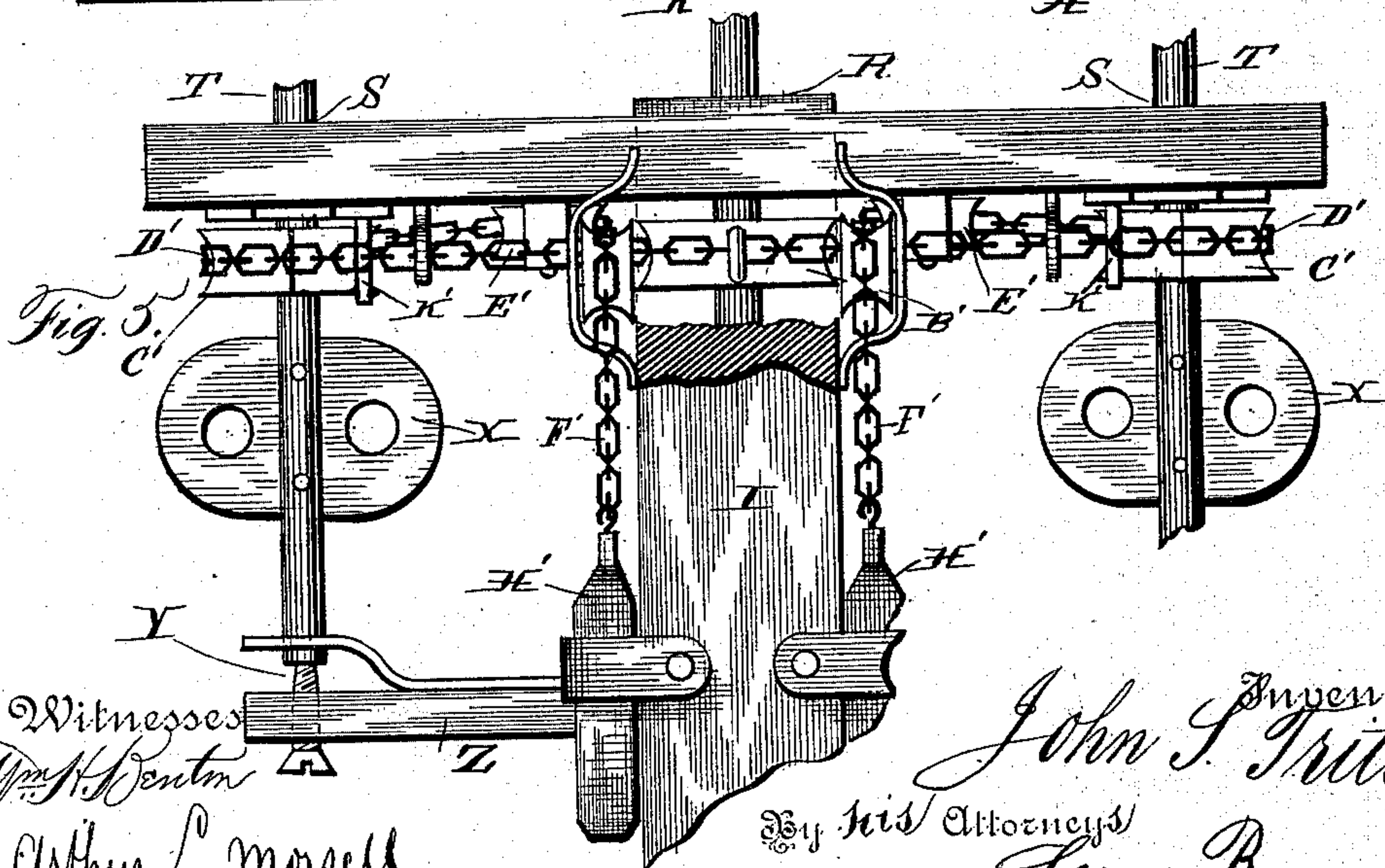
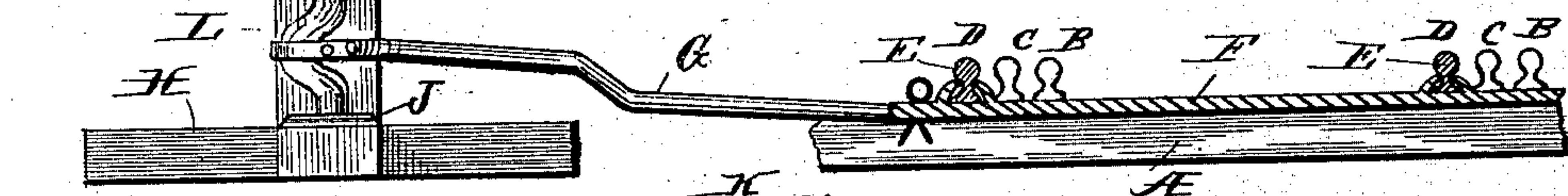
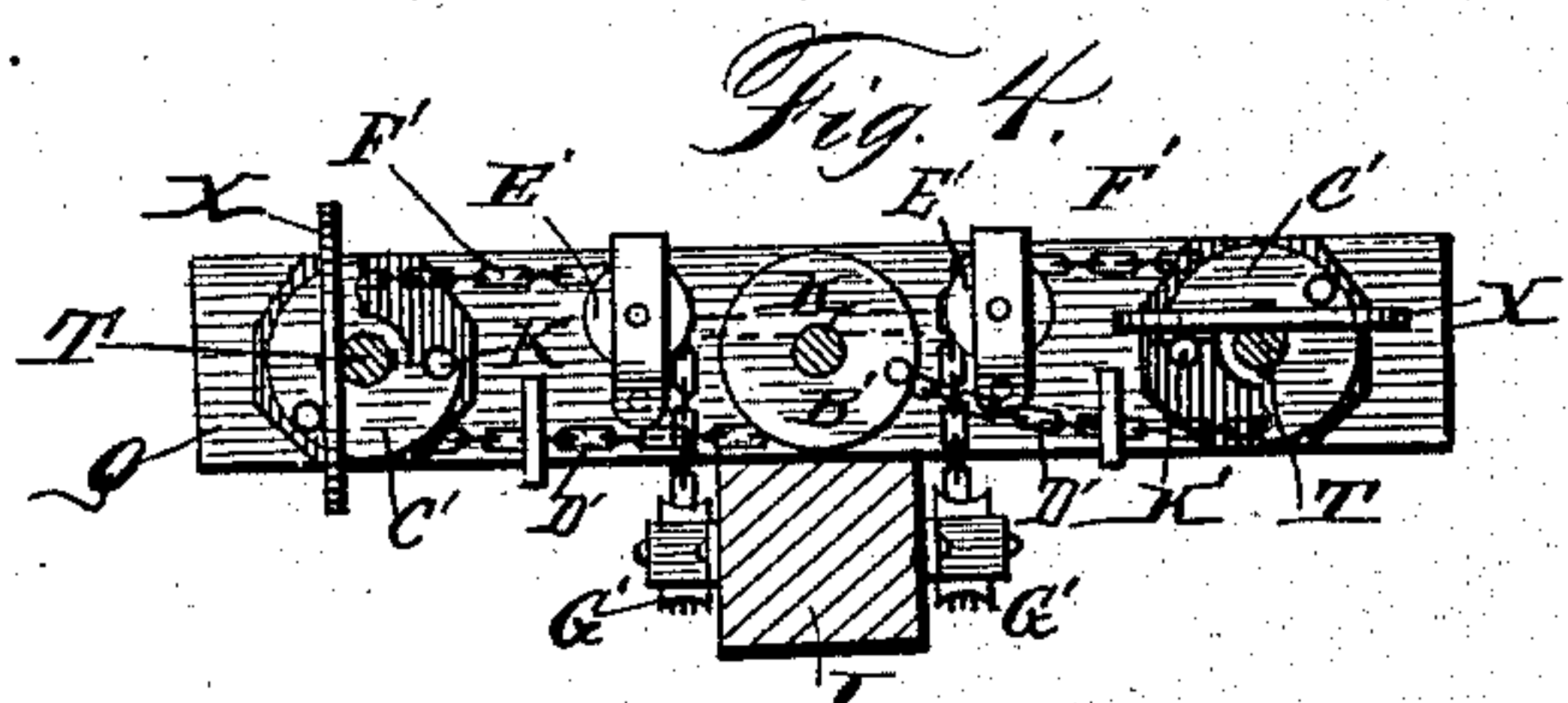
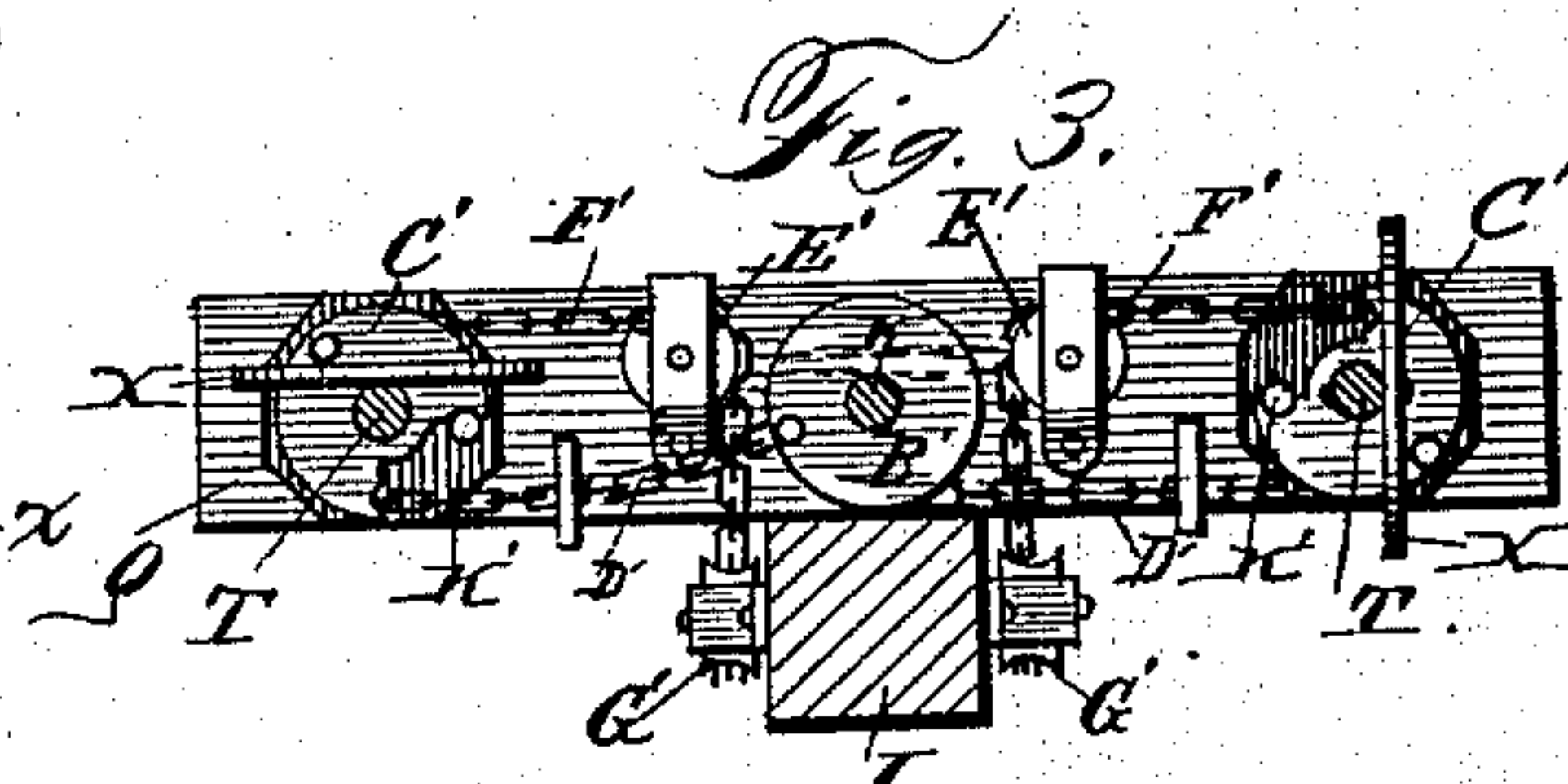
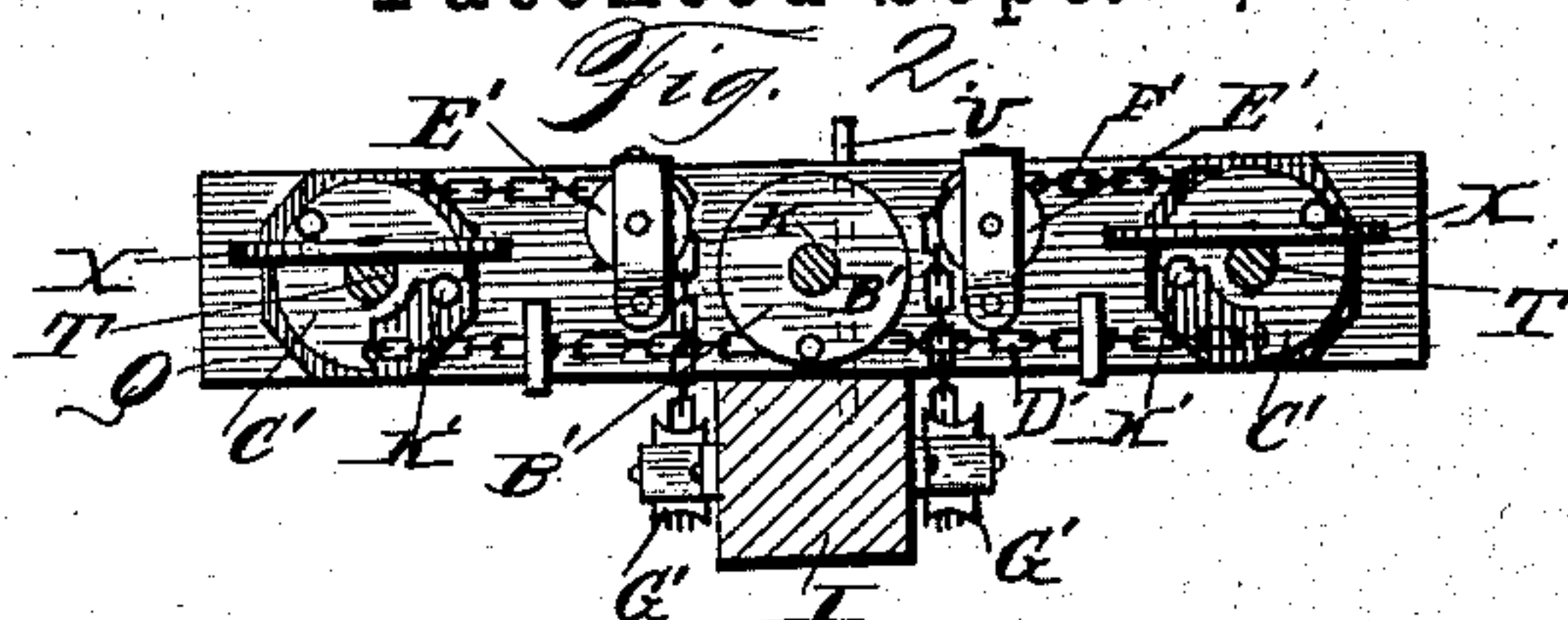



J. S. TRITES.
RAILWAY SIGNAL.

Patented Sept. 8, 1885.



Witnesses
Wm. H. Benton
Arthur L. Morrell

 Inventor,
John S. Trites,
By his Attorneys
Louis Bagger & Co.,

UNITED STATES PATENT OFFICE.

JOHN STARR TRITES, OF MONCTON, NEW BRUNSWICK, CANADA.

RAILWAY-SIGNAL.

SPECIFICATION forming part of Letters Patent No. 326,069, dated September 8, 1885.

Application filed May 12, 1885. (No model.)

To all whom it may concern:

Be it known that I, JOHN S. TRITES, a subject of the Queen of Great Britain, and a resident of Moncton, in the Province of New Brunswick and Dominion of Canada, have invented certain new and useful Improvements in Railway-Signals; and I do hereby declare that the following is a full, clear, and exact description of the invention, which will enable others skilled in the art to which it appertains to make and use the same, reference being had to the accompanying drawings, which form a part of this specification, and in which—

Figure 1 is a side view of my improved switch-signal, showing the switch-rails in cross-section. Figs. 2, 3, and 4 are horizontal views taken on line *xx*, Fig. 1, seen from the under side, showing the signals in their three positions; and Fig. 5 is a rear view of the operating mechanism with the top of the post and signaling apparatus broken away.

Similar letters of reference indicate corresponding parts in all the figures.

My invention has relation to that class of railway-signals which are applied to a railway-switch, showing the position of the switch by means of signal-boards during the day, and by means of lamps having glass of different colors during the night; and it consists in the improved construction and combination of parts of the same, as hereinafter more fully described and claimed.

In the accompanying drawings, the letter A indicates the switch-sleeper. B, C, and D indicate the rails of the main track and of two sidings, one pair of which siding-rails, D, is in a line with E, which indicates the switch-rails. F is the switch-rod, and G the connecting-rod, pivoted at its outer end to the switch-rod.

H is the base of the upright I of the signal, and this base is provided with vertical boxes or bearings J, for the vertical crank-rod K, which is provided at its lower end with a crank, L, to which the connecting-rod is pivoted, and which is provided with a handle or arm, M, which slides upon a semicircular bracket or segment, N, and which is provided with perforations through which passes a pin, O, which may pass through perforations P in the segment, adjusting the arm in its proper positions.

The upper end of the upright post I is pro-

vided with a horizontal board or platform, Q, which is formed with a vertical bearing, R, at its center and with vertical bearings S S, one at each end, and the crank-rod K turns in the central bearing, while two vertical rods, T T, turn in the other bearings.

The upper end of the crank-rod is provided with a board, U, secured upon it in the same plane as the crank at the lower end of the crank-rod, and with a lamp, V, which will show a white light or other light indicating that the corresponding track is clear to the sides in which the ends of the board point, while it will show a red light or other danger-signal to the sides toward which the faces of the board show.

The side rods, T T, are provided at their upper ends with lamps W W, and at their lower portions with boards X X, the glasses in which lamps correspond with the faces and edges of the boards in a similar manner to the lamp and board upon the crank-rod. The lower ends of the side rods are supported upon the ends of set-screws Y, passing up through the ends of laterally-projecting brackets Z upon the upright.

The crank-shaft is provided with a pulley, B', immediately below the platform, and the side rods with pulleys C' C', likewise below the platform, around which pulleys passes a chain, D', which also passes over two guide-pulleys, E' E', on both sides of the crank-shaft, so as to cause the portion of the chain which passes over the front sides of the pulleys upon the side rods to pass over the rear side of the pulley upon the crank-shaft, front being assumed to be at the side to which the handle and crank project. These pulleys C' have one-fourth of their circumference cut away, as shown. Pins K' K' project downwardly from the under side of the platform Q in such a manner as to engage with the notches formed in the pulleys by cutting away part of their circumference, and preventing any more than one-fourth of a revolution of the pulleys. Portions F' F' of the chain D' pass over other pulleys on the under side of the platform Q and through pulleys C' at the sides of the post I, and hang down its sides. Weights H' are secured to the ends of the chain and move in the guides I'.

When the switch-rails are in line with the

main track rails, the handle and crank are in their central positions, the board and lamp upon the crank-rod show the track clear, presenting, respectively, the edge and a white light, and the notches in the pulleys are both bearing against the pins supporting the weights, while the signal-boards and lamps upon the side rods show the corresponding tracks of the sidings blocked. When, now, the arm and crank are thrown to either side, throwing the respective siding open, the pulley upon the crank-shaft will draw upon the chain and turn the corresponding pulley and side rod around so as to show a "clear" signal, the chain drawing the weight upward, while the notch in the pulley and the pin at the other side will prevent the weight at that side from turning the pulley and side rod by reason of the chain being slack at that side, and when the crank-rod is again turned the weight will return the last-operated side rod and its signal to its "danger" position, and open the signal corresponding to the track thrown open.

25 Having thus described my invention, I claim and desire to secure by Letters Patent of the United States—

The combination, in a railway-switch signal, of the crank-rod having the switch-operating crank and the handle, the upright having the platform forming the vertical bearings, the side rods journaled in the bearings in the platform, the signals secured upon the crank-rod and the side rods, the pulleys upon the crank-rod and pulleys having one-fourth of their circumference cut away secured upon the side rods, two pins projecting from the platform, so as to engage with the notches in the sides of the pulleys, a chain passing over around the rear side of the pulley on the crank-shaft and around the pulleys on the side rods, and over pulleys on the under side of the platform and at the sides of the upright post, and weights secured to the ends of the chain, as and for the purpose set forth.

In testimony that I claim the foregoing as my own I have hereunto affixed my signature in presence of two witnesses.

JOHN STARR TRITES.

Witnesses:

A. G. KILLAM,
GEORGE SMITH.