(No Model.) 2 Sheets—Sheet 1.

E. S. ELLIS.

SWITCH FOR OVERHANGING TRACKS.

No. 386,871. Patented July 31, 1888.

Fig. 1.

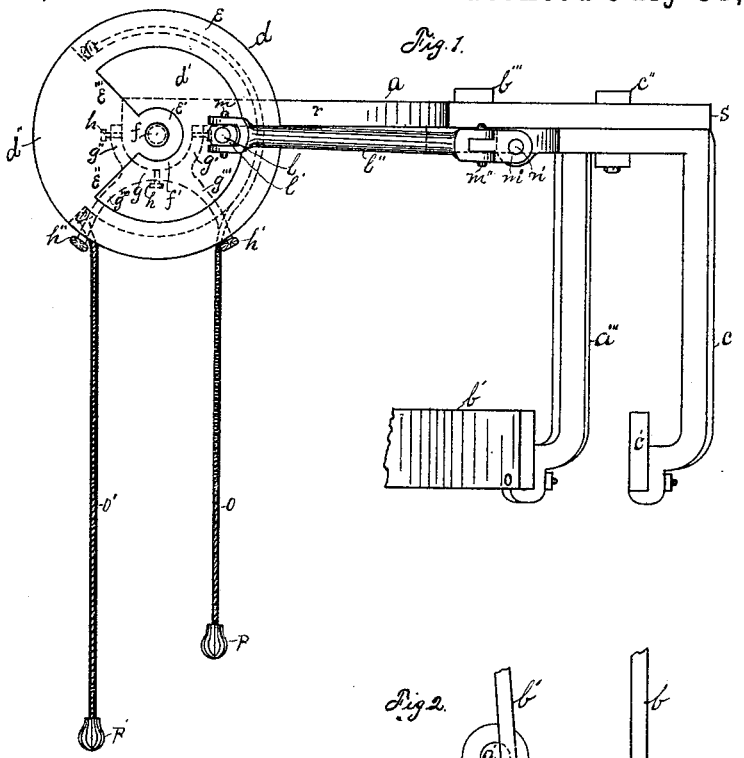
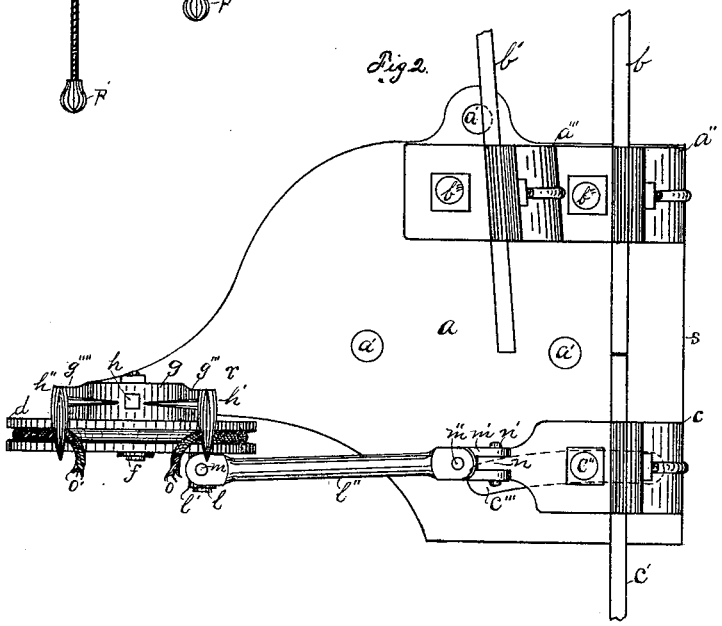


Fig. 2.



Witnesses:
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Clarence L. Bemis.

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Edmund S. Ellis.
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(No Model.) 2 Sheets—Sheet 2.

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Fig. 4.

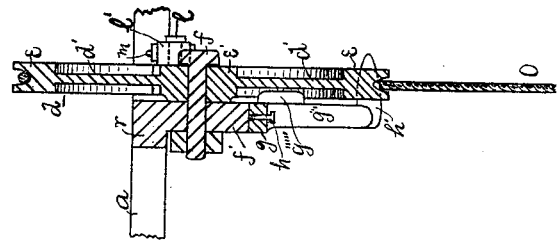
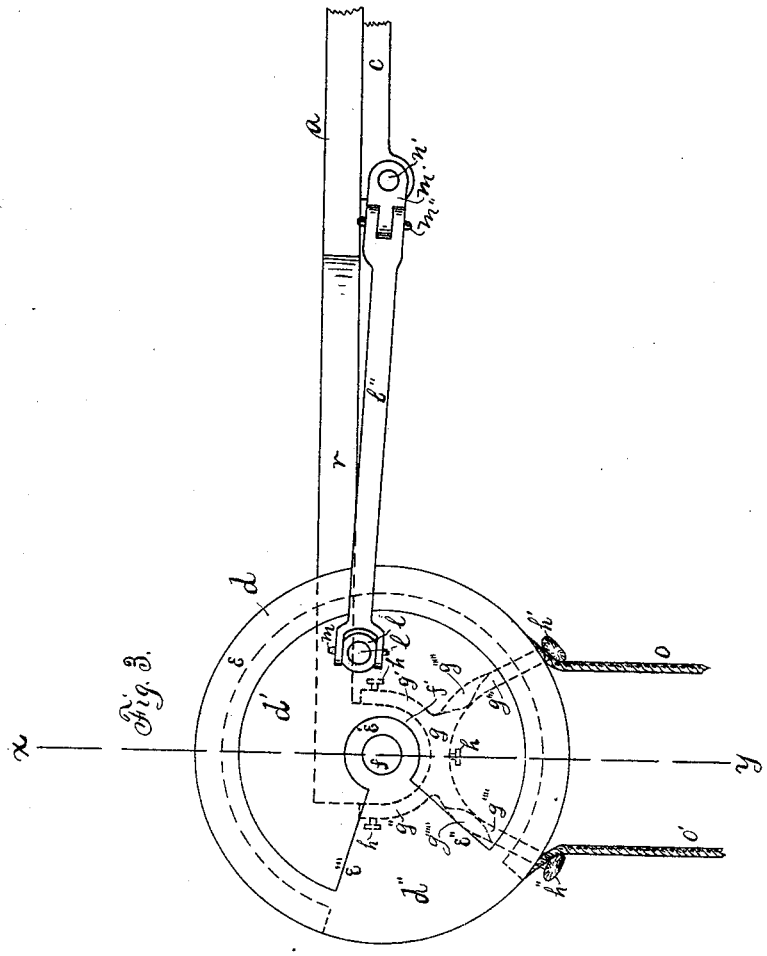


Fig. 3.



Witnesses:
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UNITED STATES PATENT OFFICE.

EDMUND S. ELLIS, OF LAKE, ILLINOIS.

SWITCH FOR OVERHANGING TRACKS.

SPECIFICATION forming part of Letters Patent No. 386,871, dated July 31, 1888.

Application filed January 7, 1888. Serial No. 260,110. (No model.)

To all whom it may concern:

Be it known that I, EDMUND S. ELLIS, a citizen of the United States, residing at the town of Lake, in the county of Cook and State of Illinois, have invented a new and useful Switch for Hanging Tracks, of which the following is a specification.

My invention relates to switches for tracks attached by hangers to joists or beams for suspending and carrying dressed meats or weights of any kind, which may be more conveniently moved upon suspended tracks than upon carriages resting on the floor, and is designed as a positive means of deflecting and holding in position either solid or jointed rails.

The essential parts of my switch are a plate by which it is attached to the beams carrying the tracks; three hangers, one of which is movable and is attached to the plate by a bolt moving in a slot in the plate, and an eccentric arranged at one end of the plate and joined by a connecting-rod to the movable hanger in such a manner that the whole mechanism may be operated as shown in the accompanying drawings, in which—

Figure 1 is a side view of the switch. Fig. 2 is a plan of the same as seen from beneath when attached to the support above. Fig. 3 is a detail view of the wheel *d*, hereinafter described; and Fig. 4, a vertical section of the wheel *d* on the line *x y*.

The plate *a*, in form as illustrated in the drawings, and having bolt-holes *a'*, by which it is secured with bolts to the beam supporting the track, is the frame of the switch.

a'' and *a'''* are hangers which are bolted to the plate *a* with the bolts *b''* and *b'''*, the hanger *a''* supporting the end of the main track *b*, and the hangers *a'''* supporting the end of the branch track *b'*.

c is a movable hanger attached to the plate *a* by the bolt *c''*, and supports the end of the track *c'*, which is a movable section of the track *b*.

c''' is a curved slot in the plate *a*, through which the bolt *c''* passes.

d is a wheel having a groove in its rim extending through about two hundred and seventy degrees of its periphery and terminates in the web portion *d''*, which forms a continuous surface on both sides of the wheel *d* from the rim *e* to the hub *e'*, its edges *e''* and *e''* forming a square raised angle or shoulder with the web *d'*.

f is a stud-bolt which forms an axle for the wheel *d*, and is set parallel with both the track *b* and the surface of the plate *a* into the semicircular lug *f'*, which is cast integral with and perpendicular to the surface of the elongated end *r* of the plate *a*.

g is a piece having four prongs, *g'*, *g''*, *g'''*, and *g''''*, the two prongs *g'* and *g''* forming a semicircular band concentric with and fitting upon the lug *f'*, to which it is fastened by the set-screws *h*. The prongs *g''* project in an opposite direction from the prongs *g'* and parallel with the face and toward the rim of the wheel *d*, where they terminate in the fingers *h'* and *h''*, which stand at right angles with the plane of the wheel *d*, and project across its rim to prevent the cords *o* and *o'* from getting out of the groove.

l is a wrist-pin set into the wheel *d* eccentric with and at a distance from its center equal to one-half of the throw of the hanger *c*.

l' is a sleeve fitting upon the pin *l*, so as to rotate freely, and is surfaced so as to form two parallel sides diametrically opposite to each other.

l'' is a connecting-rod, each end of which is made forked, as illustrated in Fig. 1, one end forming a universal joint with the pin *l* and sleeve *l'*, to which it is united by the joint-pins *m*. The other end forms a knuckle-joint with the piece *m'*, to which it is united by the pin *m''*. Transversely to the joint between the rod *l''* and the piece *m'* the other end of the piece *m* forms a knuckle with the attenuated end *n* of the hanger *c*, to which it is united by the pin *n'*.

o and *o'* are cords or chains which rest in the groove of the wheel *d*, one end of each being made fast at the opposite sides of the web portion *d''*.

p and *p'* are knobs which form handles at the lower ends of the cords *o* and *o'*.

The plate *a* is located on the beam carrying the main track *b* at the point where it is desired to transfer to the branch track *b'*, with the side *s* parallel with the track *b* and its center line transversely at the meeting ends of the tracks *b*, *b'*, and *c'*.

The hangers *a''* and *a'''*, with the tracks *b* and

b', are so located with relation to the plate a, lengthwise, that the distance between the ends of the tracks a'' and a''' is twice the distance between centers of the bolt f and the pin l.

The track c' is a section of the main track b, and is jointed at a distance from the switch sufficient to allow the end supported by the sliding hanger c to be thrown in line with the branch track b' without forming an angle at the joint, such as to prevent or resist the passage of the truck.

In forming connection between the track c' and the tracks b and b', it is essential that the track c' should be so retained in its position of rest as to obviate the possibility of it moving one way or the other, and thus allow a passing car or truck with its load to run off the end of the track. This result is attained by the wheel d and connecting-rod l'', which move the hanger c, and operate as follows:

To move the track c' toward the track b' from its connection with the track b, pull downward on the cord o and rotate the wheel d until the shoulder e''' of the portion of web d'' nearest the lug f' strikes against the upper side of the prong g''', which projects at g'''' toward the web d', as shown in Fig. 4, beyond the plane of the rim e, thus forming an obstruction against which the shoulders e'' and e''' strike, and prevent the rotation of the wheel d beyond those points. The portion of web d'' is of such width and located with relation to the pin l, so as to allow the pin l to stop at a point above a horizontal diameter through the wheel d, when the shoulder e'' is in contact with the projection or lug g'''' of the prong g''', as shown in Fig. 3, and to occupy the same relative position at the opposite side of the line $x\ y$ when the shoulder e''' is in contact with the lug g'''' of the prong g'''. The pin l, thus resting above a horizontal diameter of the wheel d, practically renders the track c' immovable to lateral pressure, as pressure in one direction is resisted by the prongs g''' and g'''' and in the opposite direction by a direct pull against the bearing f of the wheel d. To throw the track c' again into connection with the track b, the cord o' is pulled downward and the rotation of the wheel d reversed until the shoulder e'' stops against the prong g'''', and the pin l rests slightly above the center of the wheel d, as shown in Fig. 1, thus preventing lateral movement of the track c' and hanger c from their position in line with the track b. In rotating the wheel d directly with the cord o, or reversely with the cord o', the rod l'' (having connection at one end with the hanger c by the piece m', transversely jointed, and connected at the other end with the wheel d by the sleeve l', forming a universal joint) is permitted to accommodate itself vertically to the rotation of the wheel d, and laterally to the movement of the hanger c, as the bolt c'', which retains it to the plate a, traverses the slot c''', which slot c''' must have its center of curvature concentric with the joint or hinge of the rail c', or the point of deflection where the rail is a continuous piece and is sprung instead of oscillated from a joint.

Having fully set forth the construction and operation of my alleged novelty in switches, I claim as my invention and pray to have secured by Letters Patent—

1. The combination of the plate a, having the elongated end r, lug f, holes a', and slot c''', the hangers a'' and a''', and tracks b and b', the hanger c, and bolt c'', with the connecting-rod l'', having the parts m, m', m'', n', and l', the grooved wheel d, having the web portion d'', web d', shoulders e'' and e''', and pin l, the stud-bolt f', the piece g, having the prongs g', g'', g''', and g'''', and fingers h' and h'', the set-screws h, and the cords o and o', substantially as described, for purposes stated.

2. In a switch for hanging tracks, the combination of the track-hangers a'' and a''' and the track-hanger c with the connecting-rod l'', universally jointed at both ends and connected with the hanger c, and the wheel d, having the fillet d'', for forming a stop with the pronged piece g, all substantially as set forth, for purposes stated.

3. The combination of the plate a, having the curved slot c'', holes a', elongated end r, and lug f', with the hangers a'', a''', and c, the wheel d, the connecting-rod l'', and the piece g, substantially as described, for purposes stated.

4. The combination of the sliding hanger c and pieces m', m'', and n', the bar l'', stud l, sleeve l', and pins m, with the wheel d, having the web portion d'', and the piece g, having the prongs g', g'', g''', and g'''', substantially as described and shown, for purposes stated.

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