

H. STRAIT.

Improvement in Railway-Switches.

No. 114,622.

Patented May 9, 1871.

Fig. 1

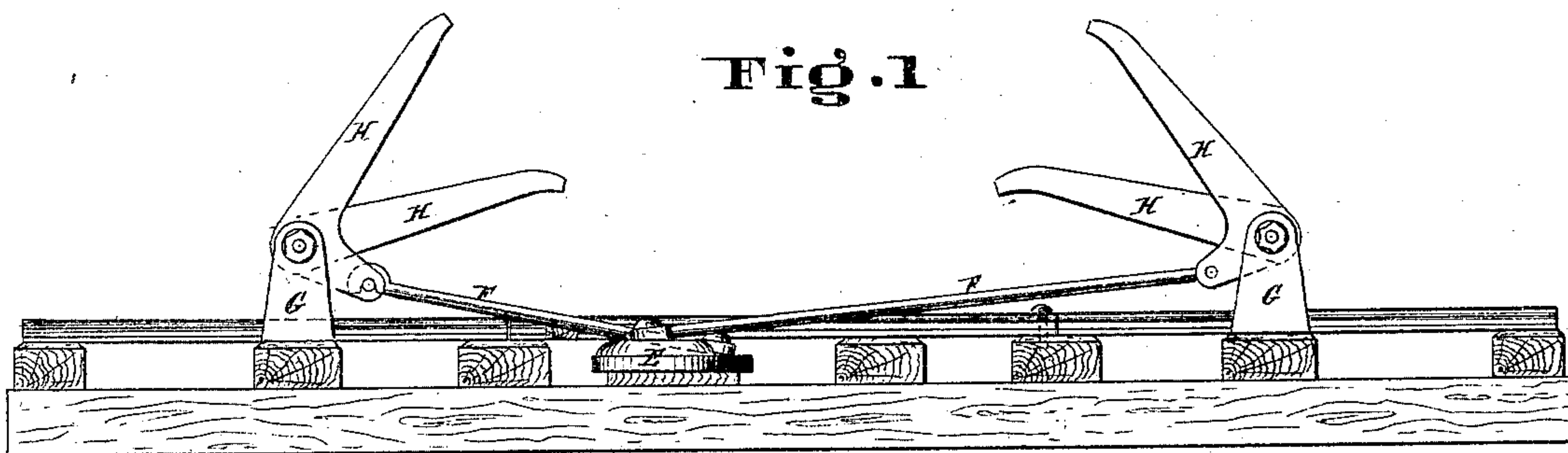


Fig. 2

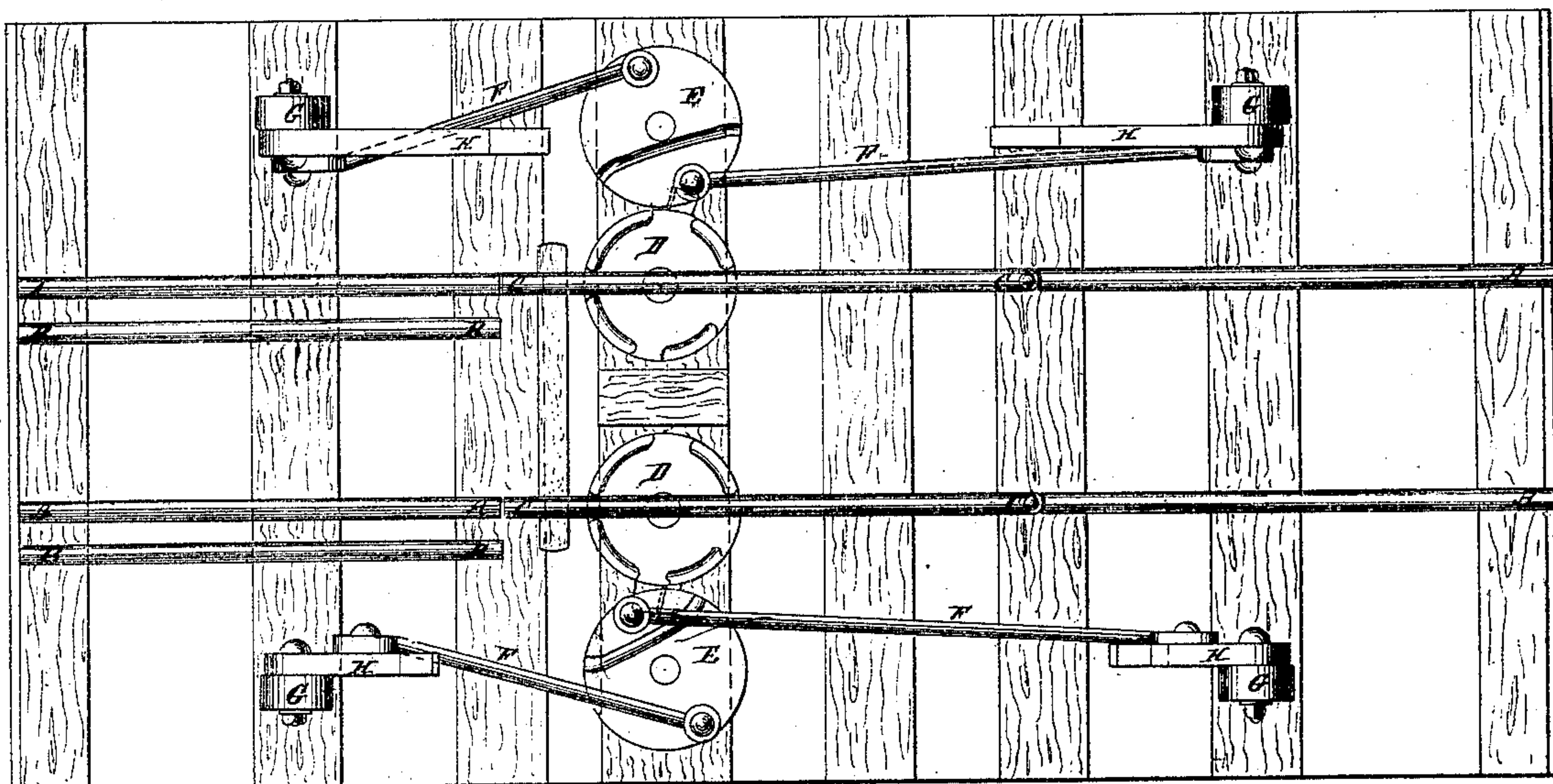
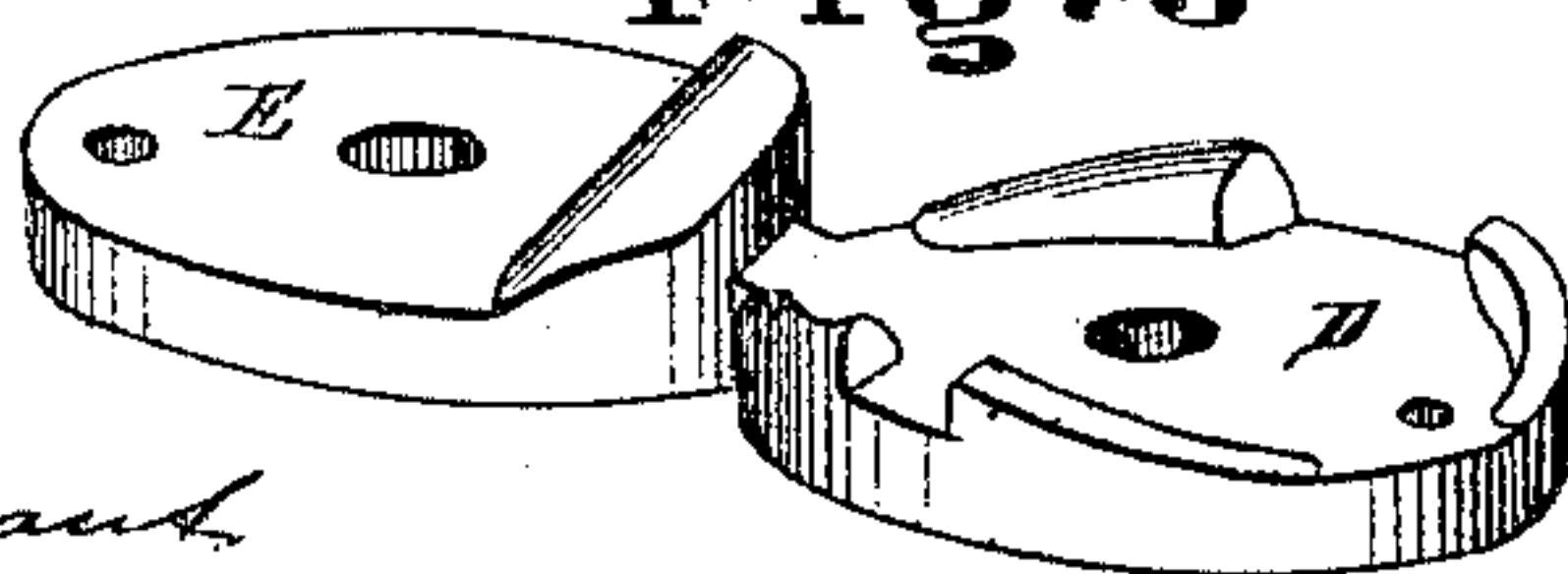


Fig. 3



Attest

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HIRAM STRAIT, OF CINCINNATI, OHIO.

IMPROVEMENT IN RAILWAY-SWITCHES.

Specification forming part of Letters Patent No. 114,622, dated May 9, 1871.

I, HIRAM STRAIT, of Cincinnati, Hamilton county, Ohio, have invented certain Improvements in Railroad-Switches, of which the following is a specification:

The objects of these improvements are easier and more accurate switching, and to lower the stationary posts and vibrating levers as much as possible on the side of the track.

In the drawing, A A A A represent the main track; B B B B, the side track; C C C C, the switching-track; D D, the vibrating turn-tables; E E, the vibrating disks; F F F F, the four connecting-rods; G G G G, the four stationary posts; and H H H H, the four vibrating levers.

The turn-tables D D are two circular vibrating tables, of wood or metal, recessed into a broad cross-tie, where the lines of the rail in a right-and-left switch intersect one another, which is about one-third of their length from the switching end of the track. They, however, may be placed in advance or rear of this intersection. These turn-tables, in their centers, both on the upper and under sides, require to be made full, so that their vibration will be free and easy, both under the rails and on their cross-tie. An arm from each one is to project outside of the track, so as to gear to the disks E E, either by teeth on both or in any other way to insure their equal vibration.

On the face of each turn-table there is to be a Λ -formed recess, just wide enough at the narrow end to receive a rail, while on the opposite side it must be just wide enough to allow a full switch either way. The bearings of the recess on each side of the rail may be permanent or adjustable, while within the track they must be low enough not to interfere with the flanges of the wheels, and on the outside of it they may be nearly as high as the rails. These turn-tables, at their centers, are bolted to the cross-tie just under the rails, and so as to partially support them in all of their motions and allow their free and necessary vibration to switch either way.

Both the turn-tables and disks are to be recessed into the cross-tie, so that their faces will be nearly in line with the bottom of the track. Either the narrow or wide end of the Λ -formed

recess in the turn-tables may be toward or from the switching end of the track.

When there are more than two switching-rails, as many more turn-tables are required.

By hinging or otherwise attaching a lever to either arm of these turn-tables, so that its outward end will rise and fall a few inches, so as to fasten in a guard just outside of the track, with two lever-recesses in its top, one for a full right and the other for a full left hand switch, they can be used as a hand lock-switch.

These turn-tables may be made of any size and shape required to vibrate the best, and, between the rails, may be either connected or disconnected.

The disks E E are two tables of the same size or a little larger than the turn-tables, secured at their centers by bolts on the same cross-tie and just outside of them, and so geared to them that both will have a reversed vibration.

At opposite points on their circumference the four rods F F F F are movably secured at one end to give their reversing motion. The Four posts G G G G are to be placed just outside of the track, and far enough from the switching-track, up or down, either way, to allow its full switch before the foremost wheels in a train mount it. The other ends of the connecting-rods connect and fasten to the feet of the vibrating levers H H H H, so as to elevate them on one side of the track and depress them on the other alternately, as the switching may require.

When the operating-roller, attached in front of the foremost wheels in a train, acts on the vibrating levers on one side of the track it depresses them and elevates the opposite ones, and the track is always switched to the side of the depressed levers. These levers, when moved on either side, communicate their motion to the rods, the rods to the disks, the disks to the turn-tables, and the turn-tables to the switching-track. By these means trains can pass freely either way on the side or main track.

The recesses across the faces of the turn-tables may be formed by projections, elevations, or bolts on or near their circumference, so as to confine the rails on one side and limit

their motion on the other. Continuous recesses might clog with dirt and obstruct free motion.

In the drawing, Figure 1 is a side view of the steam-switch; Fig. 2, a plan; and Fig. 3, a view of a turn-table and disk as geared together.

Claims.

I claim as my invention—

1. The vibrating turn-tables D D, for switching the rails and limiting their motion either way.

2. The combination of the turn-tables D D and disks E E, constructed and operating as described.

3. The combination of the turn-tables D D, disks E E, rods F F F F, posts G G G G, and levers H H H H, all substantially as herein specified.

HIRAM STRAIT.

Witnesses:

N. MARCHANT,
HENRY COLE.