No. 829,418. PATENTED AUG. 28, 1906.

W. A. McNAIR.

TRACK CLEANER.

APPLICATION FILED OCT. 30, 1905.

FIG. 1.

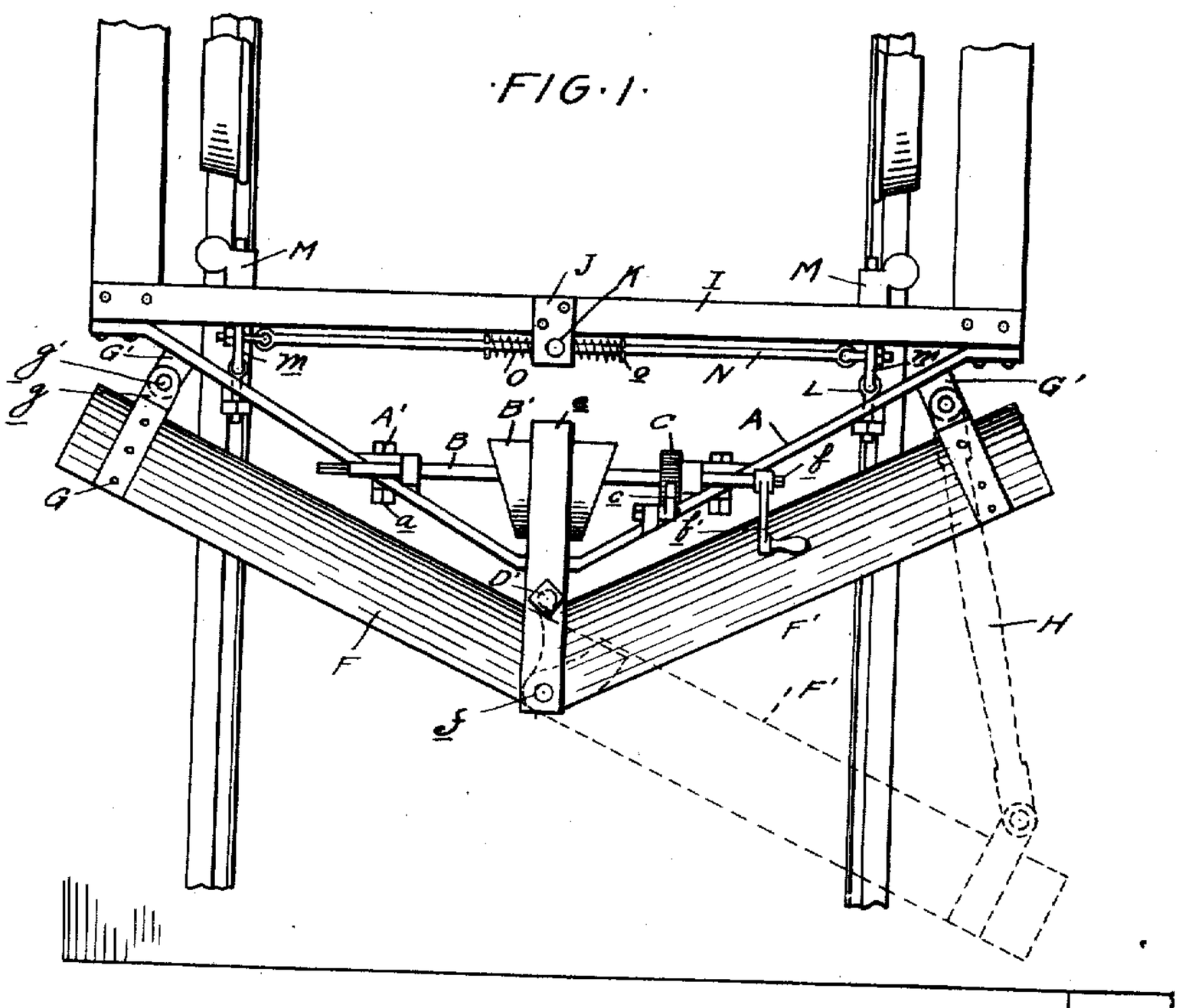


FIG. 2.

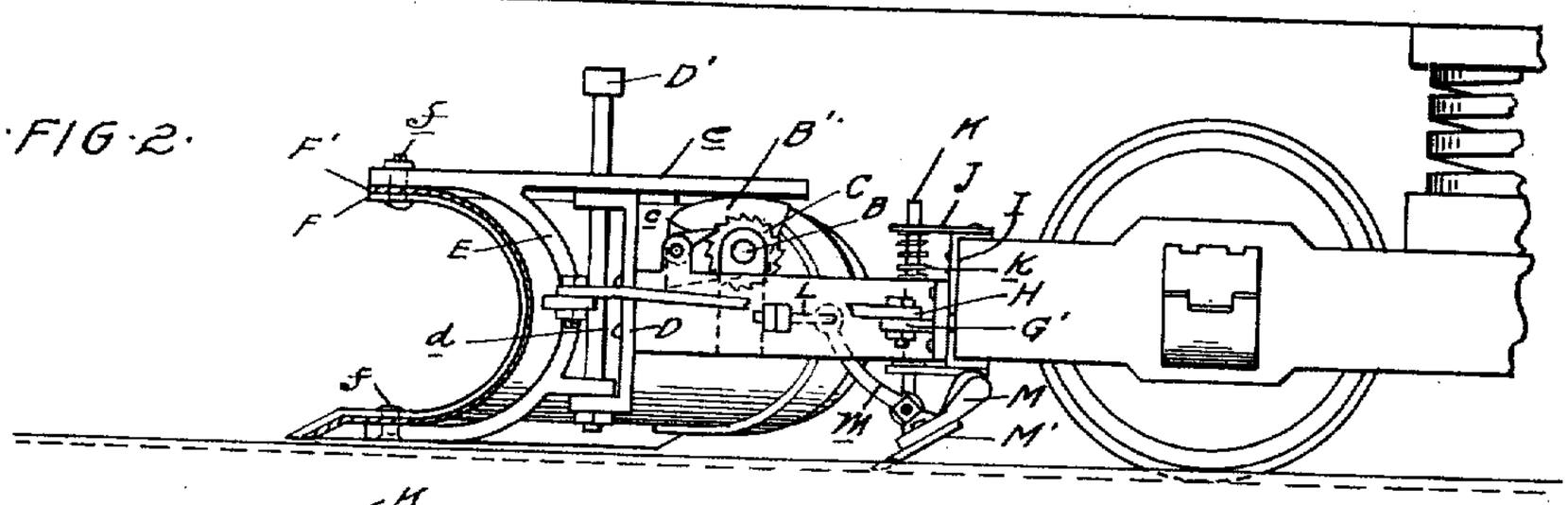


FIG. 3.

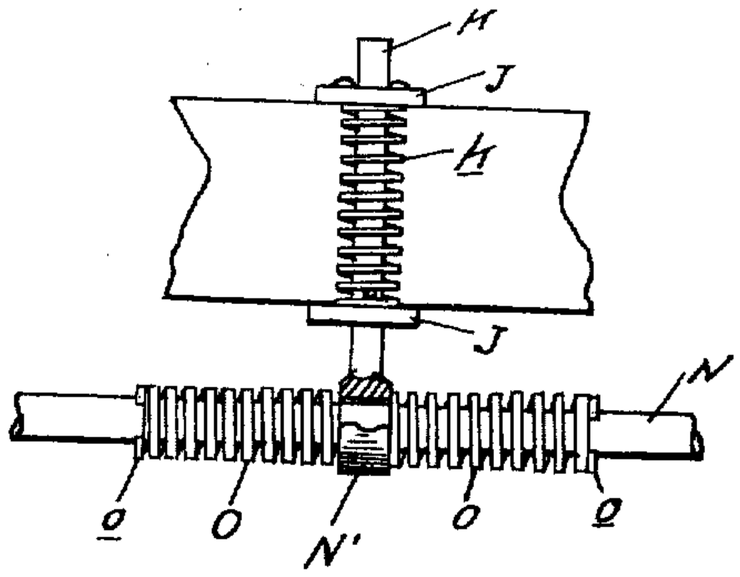
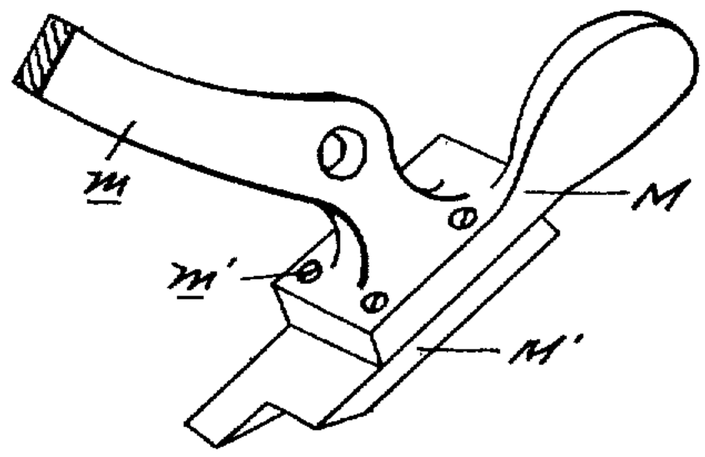


FIG. 4.



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TRACK-CLEANER.

No. 829,418. Specification of Letters Patent. Patented Aug. 28, 1906.

Application filed October 30, 1905. Serial No. 285,102.

To all whom it may concern:

Be it known that I, WILLIAM A. McNAIR, a citizen of the United States of America, residing at Detroit, in the county of Wayne and State of Michigan, have invented certain new and useful Improvements in Track-Cleaners, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to new and useful improvements in track-cleaners, and is particularly adapted for use on street-railways for clearing the tracks of snow.

The invention consists in the novel construction and arrangement of parts, as will be more fully hereinafter described, and set forth in the claims.

In many cities it has been found impractical to provide snow-plows on the regular street-railway cars, for the reason that where there is a double track the snow must be thrown to one side and where there is a single track it must be banked on both sides. On suburban cars the snow must sometimes be thrown to one side and sometimes to the other. A special snow-plow car with an expensive apparatus has been required, and as this car can only get over the line at long intervals the snow becomes badly drifted and the whole car service often becomes completely blocked in the interim. By my invention this difficulty has been avoided and each regular car may be fitted with a track-cleaner by which the snow may be banked at either side or at both sides and the rails may be kept entirely free of all snow that may have become packed in the flange-grooves and unaffected by the plowshare.

In the drawings, Figure 1 is a plan view. Fig. 2 is a side elevation of my device. Fig. 3 is an elevation of a portion of the track-cleaning mechanism, and Fig. 4 is a perspective view of the track-cleaner blade.

A is a bow-shaped bracket suitably secured to the truck of the car in a horizontal position. On the sides of this bracket are secured bearings A′, preferably by means of bolts *a*, and the rock-shaft B is journaled in these bearings. On the shaft B is rigidly mounted a cam B′, and the ends of said shaft are squared, as at *b*, or otherwise suitably arranged for engagement with a crank-handle *b′* for rocking the shaft and cam. Near one end of the shaft is a ratchet C, adapted to be engaged by a dog *c* for holding the shaft and cam in the desired position of adjustment.

To the forward or central portion of the bracket is secured, preferably by bolts *d*, an upright bar D, with its ends bent forward to a horizontal plane and apertured to receive the pivot-pin or rod D′, the lower end of which is screw-threaded to engage the lower aperture of bar D.

Pivoted on the rod D′ is the segment E, having rearwardly-extending apertured projections *e* and *e′*, which are apertured to engage the rod D′ on opposite sides of the upper projection *e*, which is extended rearwardly into engagement with the cam B′.

Pivotally secured to the segment E, through the medium of bolts *f*, are the complementary overlapping sections F F′ of the snow-plow. By this arrangement the adjustment of the cam B′ vertically adjusts the segment and with it the snow-plow, which is formed with a substantially semicircular cross-section, so that the snow engaged is rolled as it is moved by the plow. By rolling the snow in this way less power is required to drive the plow than when it is simply pushed by a straight plowshare.

At the outer ends of the sections F F′ are the reinforcing-segments G, with projections *g* apertured for engagement with bolts *g′* for attachment to lugs G′ on the bracket. The overlapping edges of the sections are so curved that the sections may both be swung back to the bracket at an angle to each other, and it is obvious that the sections may be kept in alinement and one end swung back while the other swings out. When one end is swung out, it is braced by the connecting-bar H, secured to projections *g* on the plow and lug G′ on the bracket.

Extending from end to end of the bracket and suitably secured thereto are the angle-bars I, to which is bolted the bearing-lug J for engaging the vertical rod K, yieldably forced downward by the spiral spring *k*. At points on the bracket A adjacent to the rails are eyebolts L, engaging eyes on the ends of the curved extensions *m* of the track-scrapers M, and these scrapers are provided with removable scraping-blades M′, secured, preferably, by means of screws or bolts *m′*. The two scrapers M are connected by a gaging-rod N, by means of which they are kept a distance apart equal to the gage of the track, and this rod N engages the eye N′ on the lower end of the rod K, and the scraper-blades are thus held in contact with the rails by the tension of springs *k*. The blades M′ are preferably

shaped to conform to the wheel-bearing surface of the rails, and it is therefore necessary that they be yieldable laterally as well as vertically. To accomplish this, I provide spiral springs O, engaging the rod N on opposite sides of the rod K and tensioned between said rod and the stop-pins *o*, passing through the rod N.

By the above-described arrangement of parts it will be seen that the snow-plow may be adjusted as described, while the track-scrapers immediately follow the plow and are automatically held in engagement with the rails.

What I claim as my invention is—

1. In a track-cleaner, the combination with a bracket, of a plowshare centrally pivoted thereon, and means carried by said bracket for vertically adjusting said share on said pivot, for the purpose described.

2. In a track-cleaner, the combination with a bracket, of a plowshare comprising complementary sections pivoted on said bracket, for the purpose described.

3. In a track-cleaner, the combination with a bracket, of a plowshare comprising complementary sections pivoted on said bracket, and means for vertically adjusting said share, for the purpose described.

4. In a track-cleaner, the combination with a bracket, of a plowshare pivoted thereon, a rock-shaft journaled in said bracket, a cam secured to said shaft in operative relation to said plowshare, for the purpose described.

5. In a track-cleaner, the combination with a bracket, of a plowshare comprising overlapping sections and a common pivot on said bracket for said sections, for the purpose described.

6. In a track-cleaner, the combination with a bracket, of a plowshare comprising overlapping sections pivoted on said bracket, and means for adjusting said sections to positions at different angles to the bracket and each other.

7. In a track-cleaner, the combination with a bracket, of a plowshare pivoted thereon, a scraper, and yielding connections between said bracket and scraper, permitting independent relative horizontal and vertical movements, for the purpose described.

8. In a track-cleaner, the combination with a bracket, of a plowshare pivoted thereon, a pair of scrapers, and connections between said bracket and scrapers comprising horizontal and vertical longitudinally-movable rods yieldingly mounted, for the purpose described.

In testimony whereof I affix my signature in presence of two witnesses.

WILLIAM A. McNAIR.

Witnesses:
JAMES P. BARRY,
EDWARD S. AULT.