

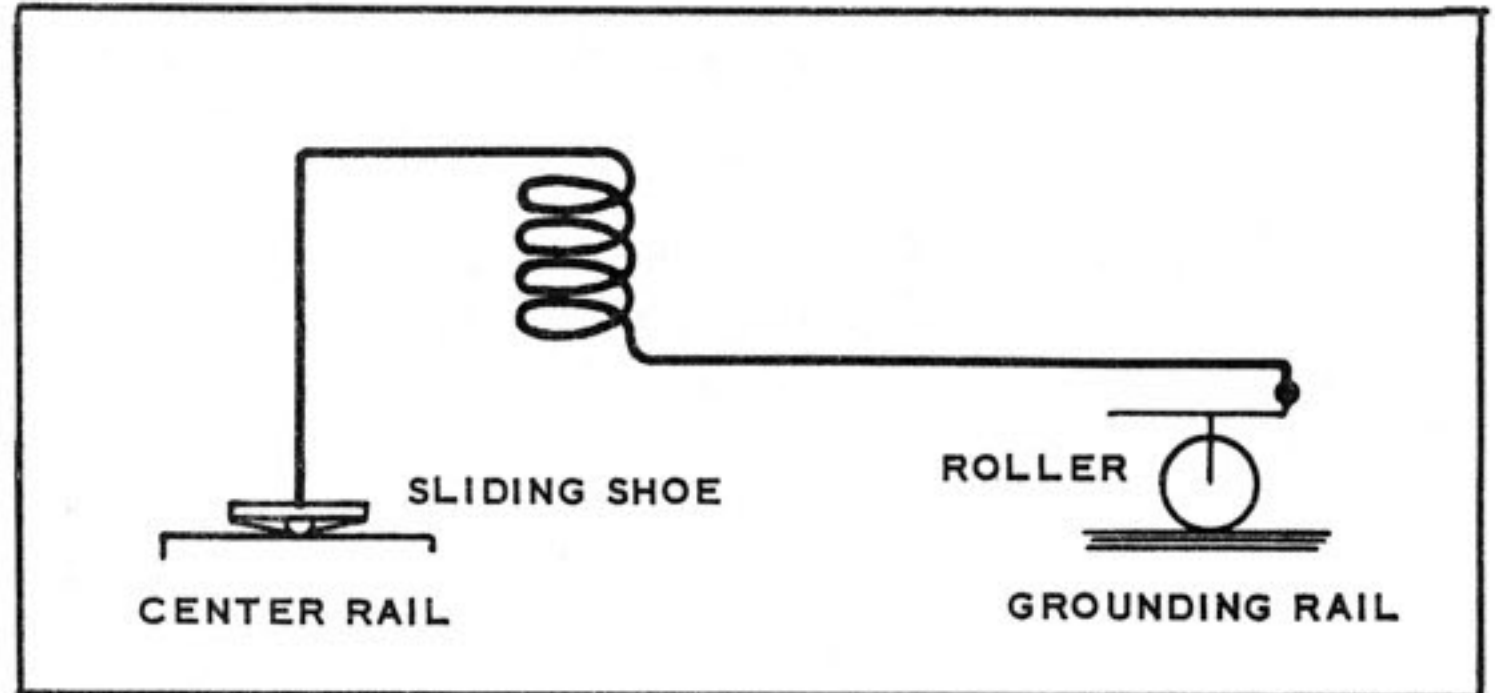
# LIONEL SERVICE MANUAL

## NO. 3424 OPERATING BRAKEMAN CAR

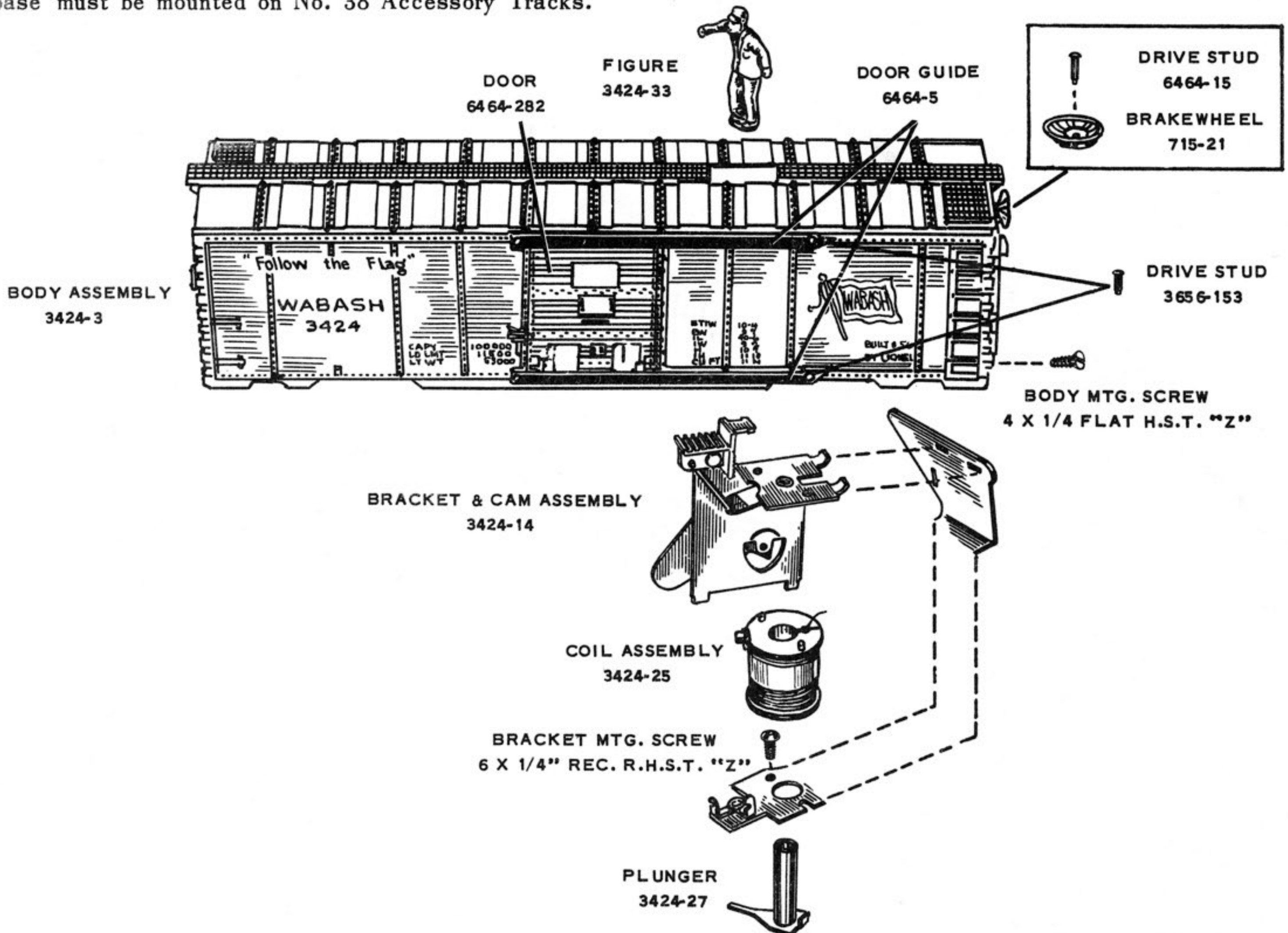
Lionel No. 3424 Operating Brakeman Car, made in 1956 and 1957, has a figure of a brakeman standing on top of the car. When the car reaches a "low-bridge" signal, indicating that the train is approaching a tunnel or another overhead obstruction, the brakeman drops prone to the roof of the car to avoid being hit. After the car passes the obstruction and reaches a second "low-bridge" signal on the other side the brakeman rises upright again.

Power for the coil operating the brakeman mechanism is picked up by a contact roller on one of the trucks. The circuit is normally open but is completed whenever the special sliding shoe mounted on the other truck makes contact with one of the grounding blades inserted in the base of the "low-bridge" signals. The two actions of the brakeman always alternate, one contact causing him to fall, the next causing him to rise. Because of the difference in the heights of the "O" and "027" tracks two sets of blades are furnished with each signals. "Super-O" track requires the use of "027" blades but the signal base must be mounted on No. 38 Accessory Tracks.

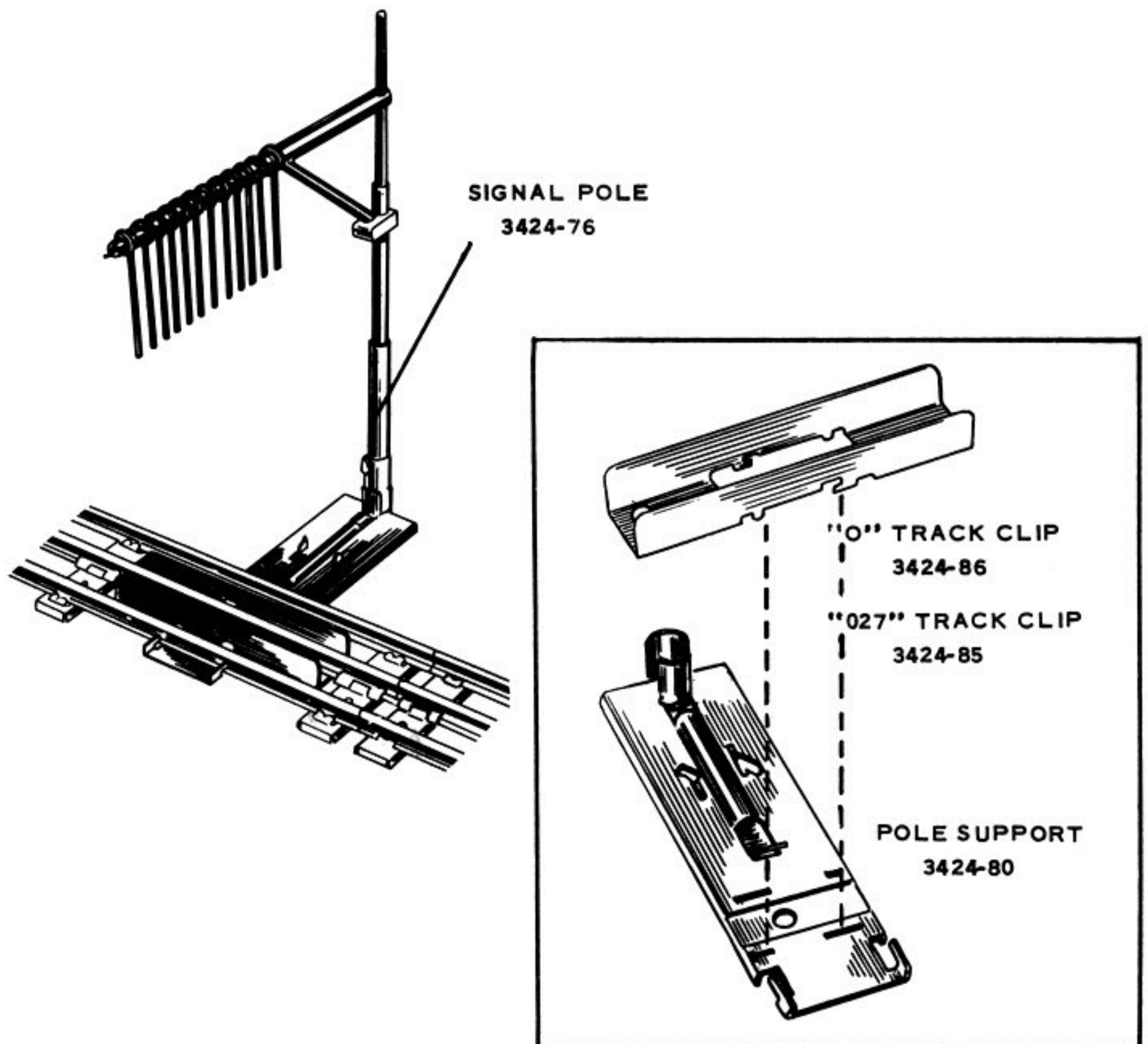
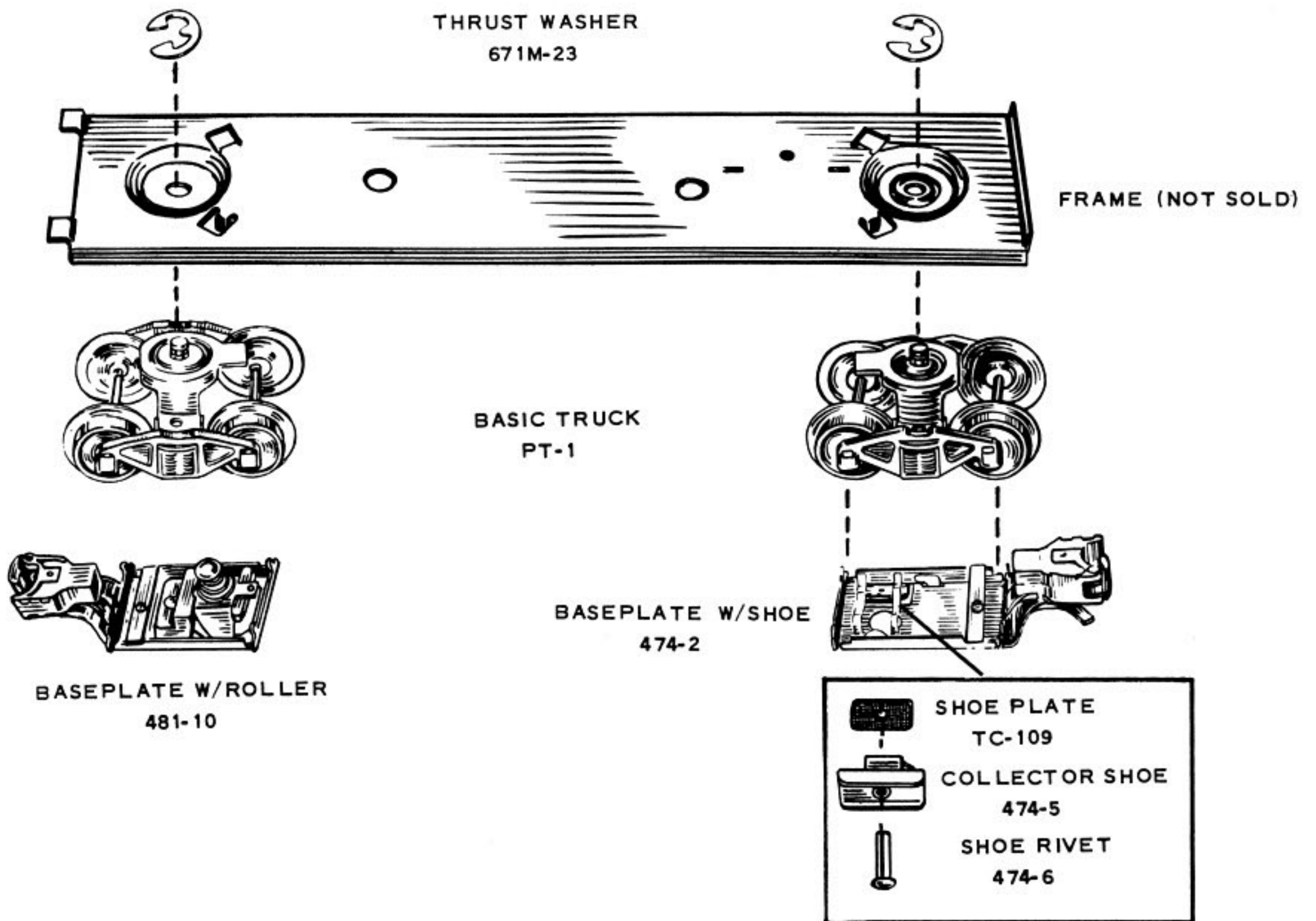
The contact shoes used on No. 3424 Operating Brakeman Car are made with an especially narrow slot to keep the car from operating on remote control track sections, or on other auxiliary rails. However, it will operate on the grounding blades of such accessories as No. 497 Coaling Station and No. 3656 Cattle Platform. On layouts using these accessories the brakeman car must be oriented so that its sliding shoe does not make contact with the grounding blade.



Schematic Diagram of No. 3424 Brakeman Car



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<u>Part Number</u>	<u>Location</u>	<u>Unit Price</u>	<u>Min. Quan.</u>	<u>Description</u>
474-2	I-71	.75		Baseplate W/Shoe
474-5	I-71	.10	6	Collector Shoe
474-6	I-71	.02	25	Shoe Rivet
481-10	E-13	.75	6	Baseplate W/Roller
600-129	P-65	.02	25	Thrust Collar
601-63	P-54	.10	6	Insulated Rivet
715-21	L-41	.10	12	Brakewheel
3359-31	I-66	.02	25	Solder Lug
3424-3	C-52	3.00		Body Assem. "Wabash"
3424-10	C-47	1.00		Frame
3424-14	C-67	1.00		Bracket & Cam Assem.
3424-18	C-87	.20		Figure Support
3424-19	C-87	.05	12	Figure Support Stud
3424-20	C-87	.10	6	Cam Lever
3424-25	C-47	1.25		Coil Assem.
3424-27	C-47	.30		Plunger Assem.
3424-33	C-47	.30		Figure
3424-76	C-97	1.00		Low Bridge Signal Pole
3424-78	C-87	.10	6	Tell Tales
3424-79	C-87	.10		Support Rod (Tell Tales)
3424-80	C-87	.50		Pole Support Base
3424-85	C-67	.10	6	"027" Gauge Track Clip
3424-86	C-47	.10	6	"O" Gauge Track Clip
3656-153	M-48	.02	25	Drive Stud (Door Guide)
6464-5	A-75	.10	6	Door Guide
6464-15	E-45	.02	25	Drive Stud (Brakewheel)
6464-284	E-37	.25		Door
PT-1	H-21	1.00		Basic Truck
TC-109	P-63	.02	25	Collector Shoe Plate
4 x 1/4"		.02	25	FHST "Z" Body Mtg. Screw
6 x 1/4"		.02	25	Rec. RHST "Z" Bracket Mtg. Screw