

# **A Collection of Timken “Roller Freight” Advertisements**

**Edwin R. Kraft**

**December 2024**

The Timken Company was one of the first to introduce roller bearings for railroad cars. According to Wikipedia, railroad cars owned and operated by the Atchison, Topeka and Santa Fe Railway were among the first to use roller bearings rather than "oil waste journal" boxes. Henry Timken, a German immigrant founded the company in 1899.

The initial applications of roller bearings were on locomotives and passenger cars, but Timken heavily promoted the idea of "Roller Freight" as a significant advancement in railroading. These ads appeared in the mid-20th century, a time when railroads were actively modernizing and seeking ways to improve efficiency and speed.

Vintage Timken Roller Freight ads are now sought-after collectibles, particularly by those interested in railroad history and in advertising memorabilia. Many collectors have posted images of the advertisements on-line at public sites like EBay as well as others. This provided the source the images in this collection, which were all retrieved from the internet in the Fall of 2024.

Even to this day, there is a debate in the literature as to whether friction vs. roller bearing cars should be modeled using different Davis equation coefficients. These advertisements show that Timken Company certainly believed that their roller bearings would reduce rolling resistance as well as provide other benefits such as improved safety.

This collection of advertisements is offered not only for historical enjoyment, but also to document some of the technical claims that were made about roller bearings as of the time of their widespread adoption by the North American railroad industry.

## FREIGHT TRAIN IN A HURRY

...The story of "ROLLER FREIGHT"

**T**HE Big Rock Candy Mountain" is a never-never land where a hobo's dreams are supposed to come true—in the form of "handouts that grow on bushes", "bulldogs with rubber legs", "hens that lay soft-boiled eggs", and "boxcars that are always empty".

Despite all those far-fetched imaginings, however, there's no mention of freight cars travelling at the same swift speed, and in the same smooth comfort, as passenger trains.

But—rub your eyes!—such cars are actually here, as "Roller Freight", the next great step in railroad-ing, gets under way.

Roller Freight" is the term railroad men, who always have a word for it (see glossary on page 95), use to describe freight cars that roll on Timken tapered roller bearings—like modern passenger cars—instead of on old-style friction-type bearings, or "brasses".

But why should you care whether a freight car rolls on roller bearings or on douglinites? Actually, it affects you even more than the streamlined passenger trains that started a new era of travel comfort.

You may not take a train trip very often. But you use freight trains every day. 70% of all the things you eat and wear and use reach you by way of railroad freight.

When smooth, high-speed "Roller Freight" rolls throughout the land, your favorite fruits and vegetables will move more quickly from farm to food store. You'll enjoy that "just-picked" flavor right at your own table.

Stores in your town will get the latest fashions a whole lot faster. And things that break or spoil easily, such as eggs, glassware, furniture and meats will arrive in better shape.

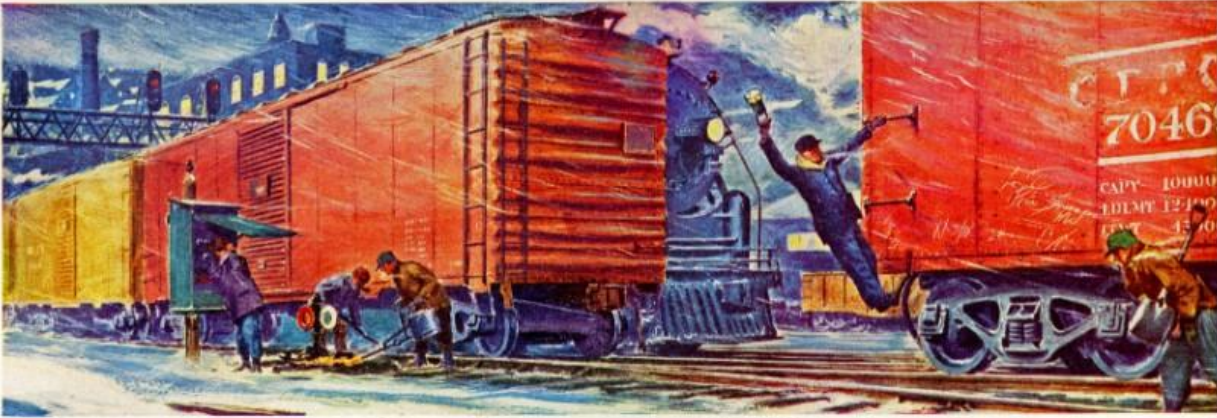
Why does the use of Timken bearings make all this difference? With the friction bearings used up to now, a wad of oil-soaked packing is used to lubricate the axles and keep them cool. Sometimes the packing sticks, particularly at high speeds, and a "hot-box" develops. Then the train has to stop while the "hot-box" is repacked or the car is cut out of the train.

Timken roller bearings end all this. Because they practically eliminate friction, "hot-boxes" are

(Advertisement continued on Page 95)



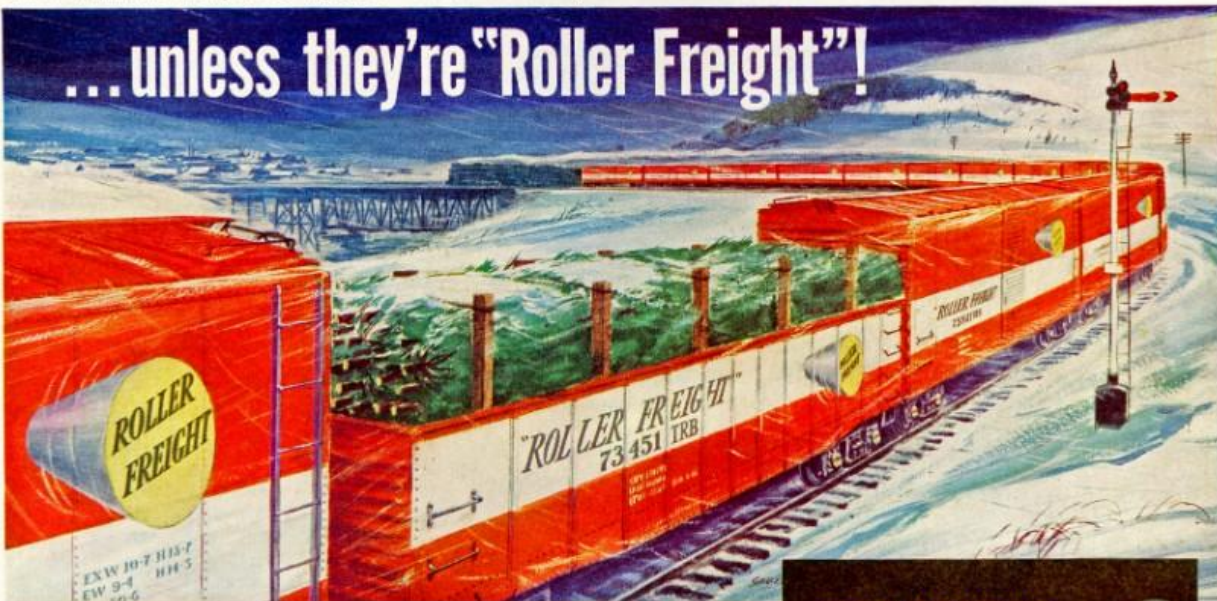
# Why freight trains get shorter in winter



IN EXTREMELY COLD WEATHER, it has been common railroad practice to reduce the number of cars in a freight train in order to keep the train moving on schedule. Some railroads reduce their loads 10% when the mercury hits 15 degrees; at

zero and below, the cut may be as high as 30%! Why? Chiefly because, with the friction bearings commonly used on freight cars, low temperatures stiffen the oil in the journal box and prevent proper lubrication. Starting resistance is increased so

much that the locomotive no longer can get a full string of cars underway, and the tonnage has to be reduced. That's what winter weather does to freight trains . . .



WHEN FREIGHT TRAINS, like modern passenger trains, are equipped with Timken tapered roller bearings, they start smooth as silk, summer or winter!

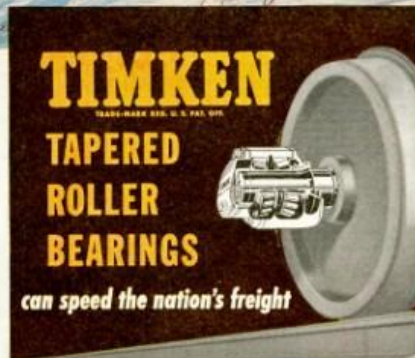
With Timken bearings on the axles, locomotives can pull full-length trains all year 'round. Shippers will get faster delivery of goods. Railroads can be free from costly cold weather delays due to bearings.

After extensive tests one leading railroad reported officially that "The implications are that no matter how low the temperature, the resistance of the Timken roller bearing cars will be no higher in winter than in summer . . ." Yes, no drastic cuts in winter freight tonnage is one

big reason why "Roller Freight" is the next great step in railroading.

With "Roller Freight", hot boxes are eliminated; maintenance is reduced; freights can travel at passenger train speeds; and there's smaller chance of damage to lading because 88% less starting resistance makes possible velvet-smooth, jolt-free starts and stops.

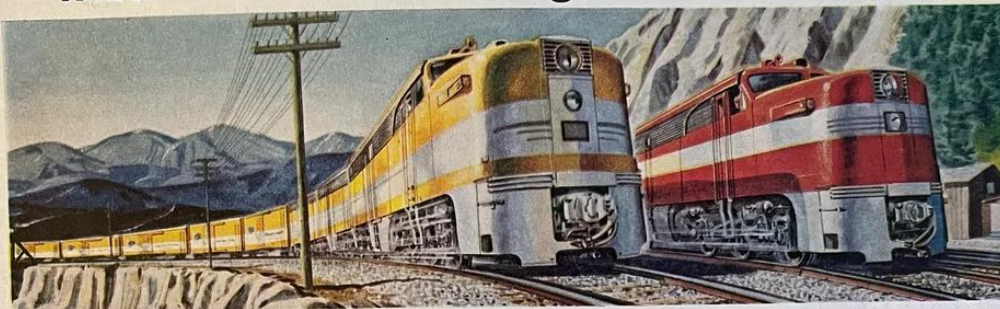
Timken tapered roller bearings take any combination of radial and thrust loads. Whether you make freight cars or printing presses, airplanes or power shovels, be sure the trade-mark "Timken" is on every tapered roller bearing you use. The Timken Roller Bearing Company, Canton 6, Ohio. Tapered Roller Bearings, Alloy Steels and Tubing, Removable Rock Bits.



NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION



## Which train is on the "right track"?

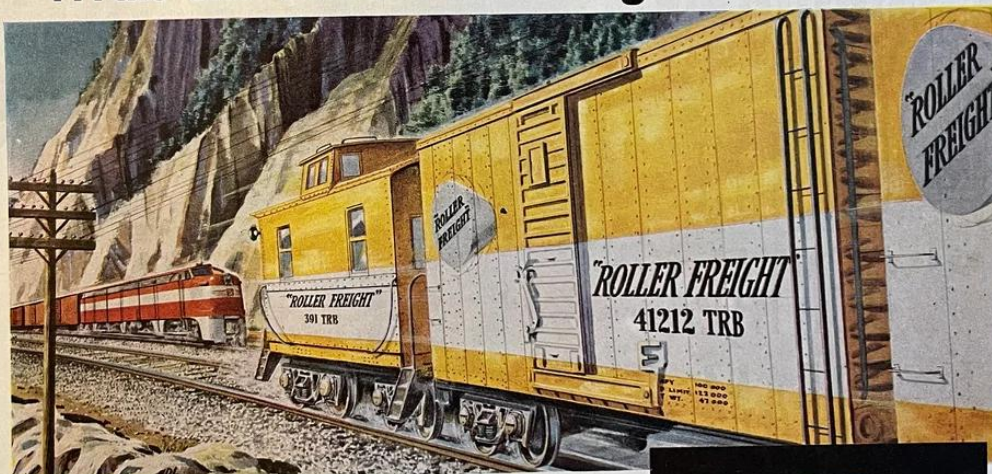


**YOU DON'T HAVE TO** be a model railroad fan to figure this one out. Take a good look at these two freight trains. Both of them—like the thou-

sands of other freights that haul over 70% of all the things you eat and wear and use—are doing a good job no matter which track they're routed on.

Yet when you're thinking in terms of *faster and more dependable freight service*, only one of these trains is on the "right track" . . .

## ...the one that's "Roller Freight"!



**FREIGHTS CAN TRAVEL** as fast and smooth as passenger trains when they replace their friction bearings with high speed Timken tapered roller bearings.

Timken bearings eliminate "hot boxes". They reduce maintenance and remove all speed restrictions due to bearings. And because Timken bearings reduce starting resistance 88%, "Roller Freight" gets under way smoothly and effortlessly. Fuel consumption is cut. Velvet starts and stops permit goods to arrive in better condition.

Already two great railroads have taken the next

great step in railroading by going "Roller Freight" on a large scale: 1000 Timken-equipped hopper cars for one, 800 Timken-equipped livestock dispatch cars for the other.

Timken tapered roller bearings are first choice because they take any combination of radial and thrust loads. Whether you're building freight cars or automobiles, machine tools or tractors, for the best in bearings look for the trade-mark "Timken". The Timken Roller Bearing Company, Canton 6, Ohio. Tapered Roller Bearings, Alloy Steels and Tubing, Removable Rock Bits.



NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION







# Here's how America gets things done.



**1 AMERICANS THINK BIG.** If harnessing a river calls for the world's largest dam, American industry goes for it and builds it—with whatever new ideas, new equipment it takes. One idea that speeds construction is the elimination of friction in machinery—by Timken bearings.



**2 AMERICANS WORK TOGETHER.** You've read how farmers get together with scores of reapers to harvest one man's crop. Leading a band, too, are the Timken tapered roller bearings in the farm equipment. They do away with wasteful friction and wear in wheels and shafts.



**3 AMERICANS MOVE FAST.** In 51 short years, the automotive industry's miraculous methods have put the world on wheels. The machines that build the cars—as the cars themselves—are equipped with frictionating Timken bearings.

## the newest example is "Roller Freight"



**NOW ANOTHER MIRACLE** of American industry is under way! It's "Roller Freight"—freight cars with Timken bearings on their wheels cut of friction bearings.

"Roller Freight" will travel as fast as Timken big equipped passenger trains. The things that, once and for all, will reach you faster, fresher. "Roller Freight" will reduce damage to goods in use. Timken bearings cut starting resistance by 88%, eliminate jolting starts and stops. "Roller Freight" will eliminate "hot boxes" (the delays they cause, cut railroads' fuel maintenance costs, enable locomotives to move cars, and make more cars available loading!

The railroads have already started the switch to "Roller Freight"—from a handful of cars on some roads to as many as 800 and 1,000 on others.

By eliminating wasteful friction on the railroads and throughout all industry, Timken bearings help produce the profits that build America. If you build freight cars or reapers, construction equipment or automobiles—or any other product where wheels and shafts turn—remember you can make it better with bearings that have the trademark "Timken". The Timken Roller Bearing Company, Canton, O., Ohio. Cable address: "Timkenco". Tapered Roller Bearings, Alloy Steels and Tubing, Removable Rock Bits.

### TIMKEN

**TAPERED  
ROLLER  
BEARINGS**



can speed the nation's freight



# What's your hurry?



**1. MR. KELLEY IS FURST!** Lived on a farm as a kid—his fruits and vegetables *deey-fresh*. He'll the day when they're rushed his way by *er Freight*—freight trains that can travel at *ger-train speeds*.



**2. MR. GIBSON IS FRANK!** Just discovered he needs more materials to speed up his construction job. What a spot for the "rush-rush" deliveries that will be possible when railroads equip their freight cars with Timken tapered roller bearings!



**3. MR. ROGERS IS FURRING!** There's a breakdo plant. And he's going to need extra fuel on some new equipment. He's another of the who'll welcome the day when railroads's "Roller Freight"—the next great step in rail

## You'll get it faster via "Roller Freight"



**ROLLER FREIGHT**—freight trains equipped with passenger trains and locomotives, with a roller bearings—will cut the delivery time of everything you eat and wear and use. Machine tools, with motors, farm implements and countless other types of machinery, cars, too gain big advantages in reduced cost and longer life when they are equipped with roller bearings.

"Roller Freight" can travel with passenger speed and smoothness. "But how" delays

duce starting resistance 88%, there are no jolting starts to damage loading.

Timken bearings take any combination of radial and thrust loads. First choice throughout industry wherever the loads are tough, Timken bearings eliminate wasteful friction—help insure the profits so essential to our American Way. Make sure the trade-mark "Timken" is on the bearings you use. The Timken Roller Bearing Company, Canton, Ohio. Cable address: "TIMROSCO". Tapered Roller Bearings,

### TIMKEN

TAPERED  
ROLLER  
BEARINGS

can speed the nation's freight

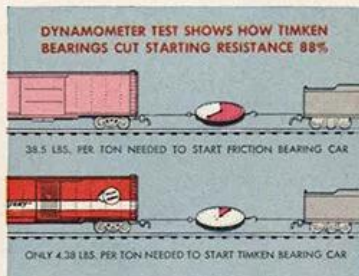




# Why freight trains back up to go forward



**1** IT'S TOUGH WORK to slide a steel drum across a floor. The easy way is to roll it. And for the same reason it's harder for a locomotive to get a string of freight cars moving when they're mounted on old-style friction bearings instead of roller bearings.

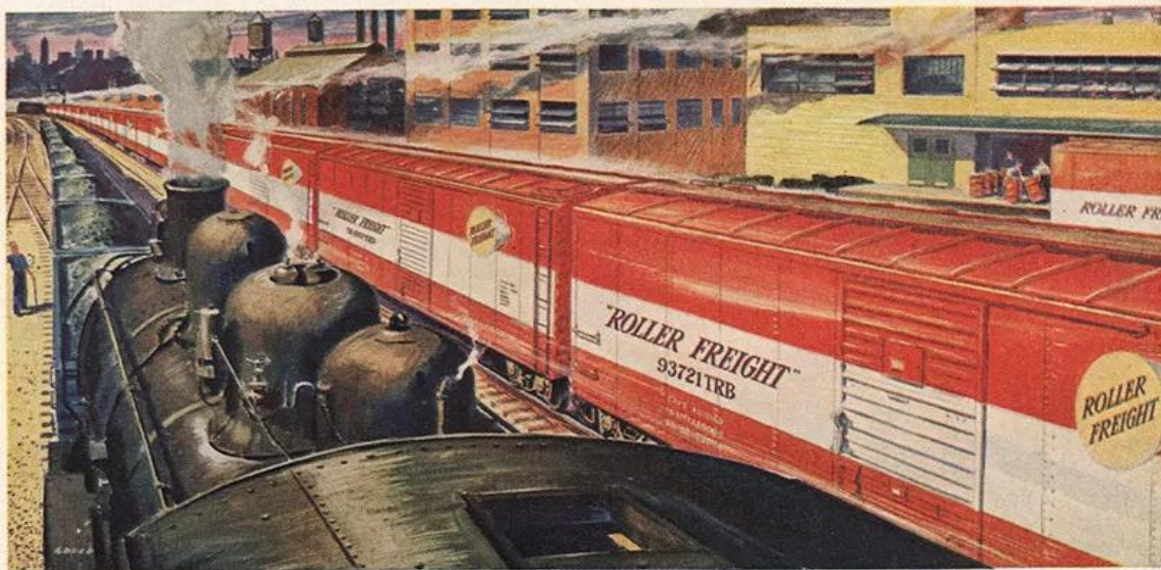


**2** STARTING RESISTANCE of friction bearings is extremely high (as this diagram shows) because metal slides against metal. By contrast, starting resistance is reduced a whopping 88% with Timken bearings because they have true rolling motion.



**3** WITH TIMKEN BEARINGS a whole freight train starts smoothly as a unit. Without them, cars have to be jerked into motion one at a time—which means the train must be backed first to take up the slack. That's why freight trains back up to go forward . . .

## ...unless they're "Roller Freight"!



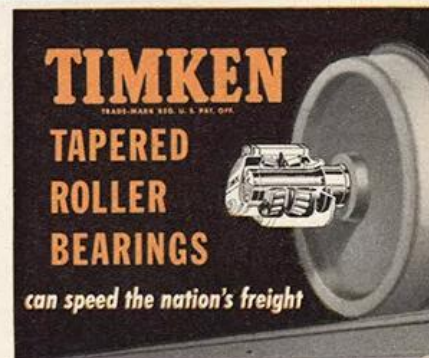
**4** "ROLLER FREIGHT" GETS UNDER WAY smoothly and effortlessly. No jolts and jars to damage lading.

And because Timken tapered roller bearings remove all speed restrictions due to bearings, "Roller Freight" can whisk along at a passenger train clip. Delays due to "hot boxes" are eliminated. Shippers and consumers alike will benefit from speedier service. Merchandise will arrive in tip-top condition.

"Roller Freight" also means operating economies for the railroads. Maintenance costs are cut, utilization of cars increased, fuel consumption reduced. No need for drastic winter cuts in freight tonnage.

Already two great railroads have taken the next great step in railroading by going "Roller Freight" on a large scale. 1000 Timken-equipped hopper stock cars for one; 800 Timken-equipped stock cars for the other.

Because Timken bearings take any combination of radial and thrust loads they're first choice for the toughest jobs. Whether you build freight cars or automobiles, machine tools or tractors, for the best in bearings look for the trade-mark "Timken". The Timken Roller Bearing Company, Canton 6, Ohio. Tapered Roller Bearings, Alloy Steels and Tubing, Removable Rock Bits.



COPR. 1948 THE TIMKEN ROLLER BEARING COMPANY

NOT JUST A BALL ○ NOT JUST A ROLLER ○ THE TIMKEN TAPERED ROLLER ○ BEARING TAKES RADIAL ○ AND THRUST ○ LOADS OR ANY COMBINATION ○





**These trailers will roll 1000 miles today**



**...because highway trailers and railroad cars got together**

**HIGHWAY TRAILERS AND TRAINS TEAM UP  
TO GIVE YOU FASTER, SURER SERVICE  
WITH "ROLLER FREIGHT"**

You're looking at a great new solution to America's transportation problem... teamwork! Trailer operators and railroads are using these specially designed flat cars to take highway trailers over the rails to cut hours, even days off long-haul schedules. For example, New York to St. Louis—1000 miles—in just 26 hours. Result: everybody benefits because shippers get faster service, trailer operators and railroads make a profit, and you get your goods on time. That's Better-ness!

How can Trailer-Train owners deliver goods so fast—twice as fast as the average freight train? First, they pioneered interchangeable piggy-back cars. And they standardized on the latest equipment advances. Foremost among these—they went 100% "Roller Freight". With roller bear-

ings instead of friction bearings on the car axles, there are no speed limitations imposed by bearings.

Over half of all bearings on Trailer-Train's 2000 cars are on Timken® tapered roller bearings. They'll roll up to 168,000 miles a year with no fear of hot boxes, No. 1 cause of freight train delays. That's because Timken bearings roll the load instead of sliding it. And bearing inspection time in terminals is cut 90%. Timken freight car bearings will go 4 years without adding lubricant.

Nearly all makes of trucks and trailers, too, roll on Timken tapered roller bearings. They're built to take all the pounding, lurching loads—up, down and sideways.

More and more railroads are going "Roller Freight". Already over 42,000 Timken bearing-equipped freight cars are in service or on order—over 2/3 of them in general interchange service. Look for Timken bearings on all the machines that are bringing you Better-ness. First in bearings for 60 years. The Timken Roller Bearing Company, Canton 6, Ohio. Cable: "Timrosco".



**BETTER-NESS rolls on**

**TIMKEN®**  
tapered roller bearings

© 1964 THE T.R.B. CO.

**TIMKEN TAPERED ROLLER BEARINGS • TIMKEN FINE ALLOY STEELS • TIMKEN REMOVABLE ROCK BITS**





## The next great step in

**A** 400-year-old manuscript once known as the *Book of Hours* is the most beautiful and complete manuscript of the *Book of Hours* ever produced. It is the most beautiful and complete manuscript of the *Book of Hours* ever produced. It is the most beautiful and complete manuscript of the *Book of Hours* ever produced.

*From railroads go "Buller Freight"*

© 2000 Blackwell Science Ltd



1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 2024 2025 2026 2027 2028 2029 2030 2031 2032 2033 2034 2035 2036 2037 2038 2039 2040 2041 2042 2043 2044 2045 2046 2047 2048 2049 2050 2051 2052 2053 2054 2055 2056 2057 2058 2059 2060 2061 2062 2063 2064 2065 2066 2067 2068 2069 2070 2071 2072 2073 2074 2075 2076 2077 2078 2079 2080 2081 2082 2083 2084 2085 2086 2087 2088 2089 2090 2091 2092 2093 2094 2095 2096 2097 2098 2099 2100 2101 2102 2103 2104 2105 2106 2107 2108 2109 2110 2111 2112 2113 2114 2115 2116 2117 2118 2119 2120 2121 2122 2123 2124 2125 2126 2127 2128 2129 2130 2131 2132 2133 2134 2135 2136 2137 2138 2139 2140 2141 2142 2143 2144 2145 2146 2147 2148 2149 2150 2151 2152 2153 2154 2155 2156 2157 2158 2159 2160 2161 2162 2163 2164 2165 2166 2167 2168 2169 2170 2171 2172 2173 2174 2175 2176 2177 2178 2179 2180 2181 2182 2183 2184 2185 2186 2187 2188 2189 2190 2191 2192 2193 2194 2195 2196 2197 2198 2199 2200 2201 2202 2203 2204 2205 2206 2207 2208 2209 2210 2211 2212 2213 2214 2215 2216 2217 2218 2219 2220 2221 2222 2223 2224 2225 2226 2227 2228 2229 2230 2231 2232 2233 2234 2235 2236 2237 2238 2239 2240 2241 2242 2243 2244 2245 2246 2247 2248 2249 2250 2251 2252 2253 2254 2255 2256 2257 2258 2259 2260 2261 2262 2263 2264 2265 2266 2267 2268 2269 2270 2271 2272 2273 2274 2275 2276 2277 2278 2279 2280 2281 2282 2283 2284 2285 2286 2287 2288 2289 2290 2291 2292 2293 2294 2295 2296 2297 2298 2299 2300 2301 2302 2303 2304 2305 2306 2307 2308 2309 2310 2311 2312 2313 2314 2315 2316 2317 2318 2319 2320 2321 2322 2323 2324 2325 2326 2327 2328 2329 2330 2331 2332 2333 2334 2335 2336 2337 2338 2339 2340 2341 2342 2343 2344 2345 2346 2347 2348 2349 2350 2351 2352 2353 2354 2355 2356 2357 2358 2359 2360 2361 2362 2363 2364 2365 2366 2367 2368 2369 2370 2371 2372 2373 2374 2375 2376 2377 2378 2379 2380 2381 2382 2383 2384 2385 2386 2387 2388 2389 2390 2391 2392 2393 2394 2395 2396 2397 2398 2399 2400 2401 2402 2403 2404 2405 2406 2407 2408 2409 2410 2411 2412 2413 2414 2415 2416 2417 2418 2419 2420 2421 2422 2423 2424 2425 2426 2427 2428 2429 2430 2431 2432 2433 2434 2435 2436 2437 2438 2439 2440 2441 2442 2443 2444 2445 2446 2447 2448 2449 2450 2451 2452 2453 2454 2455 2456 2457 2458 2459 2460 2461 2462 2463 2464 2465 2466 2467 2468 2469 2470 2471 2472 2473 2474 2475 2476 2477 2478 2479 2480 2481 2482 2483 2484 2485 2486 2487 2488 2489 2490 2491 2492 2493 2494 2495 2496 2497 2498 2499 2500 2501 2502 2503 2504 2505 2506 2507 2508 2509 2510 2511 2512 2513 2514 2515 2516 2517 2518 2519 2520 2521 2522 2523 2524 2525 2526 2527 2528 2529 2530 2531 2532 2533 2534 2535 2536 2537 2538 2539 2540 2541 2542 2543 2544 2545 2546 2547 2548 2549 2550 2551 2552 2553 2554 2555 2556 2557 2558 2559 2560 2561 2562 2563 2564 2565 2566 2567 2568 2569 2570 2571 2572 2573 2574 2575 2576 2577 2578 2579 2580 2581 2582 2583 2584 2585 2586 2587 2588 2589 2590 2591 2592 2593 2594 2595 2596 2597 2598 2599 2600 2601 2602 2603 2604 2605 2606 2607 2608 2609 2610 2611 2612 2613 2614 2615 2616 2617 2618 2619 2620 2621 2622 2623 2624 2625 2626 2627 2628 2629 2630 2631 2632 2633 2634 2635 2636 2637 2638 2639 2640 2641 2642 2643 2644 2645 2646 2647 2648 2649 2650 2651 2652 2653 2654 2655 2656 2657 2658 2659 2660 2661 2662 2663 2664 2665 2666 2667 2668 2669 2670 2671 2672 2673 2674 2675 2676 2677 2678 2679 2680 2681 2682 2683 2684 2685 2686 2687 2688 2689 2690 2691 2692 2693 2694 2695 2696 2697 2698 2699 2700 2701 2702 2703 2704 2705 2706 2707 2708 2709 2710 2711 2712 2713 2714 2715 2716 2717 2718 2719 2720 2721 2722 2723 2724 2725 2726 2727 2728 2729 2730 2731 2732 2733 2734 2735 2736 2737 2738 2739 2740 2741 2742 2743 2744 2745 2746 2747 2748 2749 2750 2751 2752 2753 2754 2755 2756 2757 2758 2759 2760 2761 2762 2763 2764 2765 2766 2767 2768 2769 2770 2771 2772 2773 2774 2775 2776 2777 2778 2779 2780 2781 2782 2783 2784 2785 2786 2787 2788 2789 2790 2791 2792 2793 2794 2795 2796 2797 2798 2799 2800 2801 2802 2803 2804 2805 2806 2807 2808 2809 2810 2811 2812 2813 2814 2815

1997, 1998, 1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 26

1992-1993 14,980,000



**railroading is under way!**

[illegible]

DOI: 10.1002/for

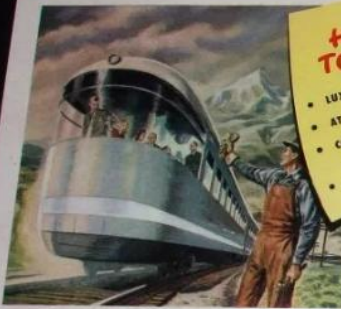
Study subject

2000년 1월 1일 기준

[illegible]



## THE NEXT GREAT STEP



**1. IT'S FUN TO RELAX** in the unparalleled comfort and watch the world go by. Big, wide windows in the new observation cars offer an unobstructed view of the finest scenery in the world—America's! Modern roller bearings under the cars insure velvet-smooth starts and a gliding ride.

**HERE TODAY**

- LUXURY SIGHTSEEING
- AT-HOME PRIVACY
- COAST-TO-COAST THROUGH SERVICE
- GLIDING RIDE



**2. YOUR ROOM IS YOUR CASTLE** in the newest all-room passenger cars. Here's all the comfort of home—and the privacy as well. And you arrive fresh and sparkling, thanks to roller bearings which speed you along smoothly and effortlessly.

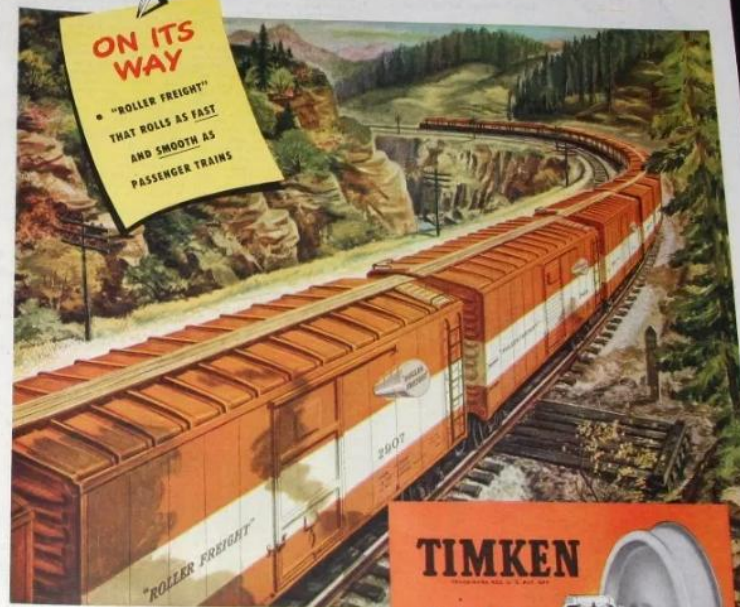


**3. THROUGH SERVICE COAST-TO-COAST** without changing cars is one of the latest improvements on the railroads. And it's fast service, too! All speed restrictions due to bearings are eliminated when cars are equipped with modern roller bearings.



**4. THE TIMKEN NAME ON THE JOURNAL BOX** is the sign of a modern train. Timken tapered roller bearings reduce starting resistance 80%. They pave the way for sustained high speeds of 100 m.p.h. and more! Delays due to hot boxes eliminated.

## IN RAILROADING !



**ON ITS WAY**

- "ROLLER FREIGHT"
- THAT ROLLS AS FAST AND SMOOTH AS PASSENGER TRAINS

**5. IT'S COMING**—the next great step in railroading is "Roller Freight"! When freights replace their friction bearings with Timken tapered roller bearings, freights will roll as fast and smooth as passenger trains.

The things you eat and wear and use will reach you faster—and in better condition. There will no longer be any need for drastic winter cuts in freight tonnage, due to 80% less starting resistance. Maintenance costs on rolling stock will be reduced, equipment life lengthened, and the days of the "hot box" will be over.

On the railroads and throughout industry, the Timken tapered roller bearing is preferred because it takes any combination of radial and thrust loads. Make sure the trade-mark Timken is on every tapered roller bearing you use. The Timken Roller Bearing Company, Canton, Ohio. Tapered Roller Bearings, Alloy Steels and Tinting, Removable Rock Bits.

**TIMKEN**

**TAPERED  
ROLLER  
BEARINGS**



TIMKEN ROLLER BEARINGS CAN SPEED THE NATION'S FREIGHT



# Do you know your railroad lingo?



**1. "BAT THE STACK"**—That's railroad talk for driving a locomotive at high speed. Modern passenger cars and locomotives owe much of their speed and smoothness to Timken roller bearings. And soon Timken bearings will make it possible to "bat the stack" on freight trains, too!

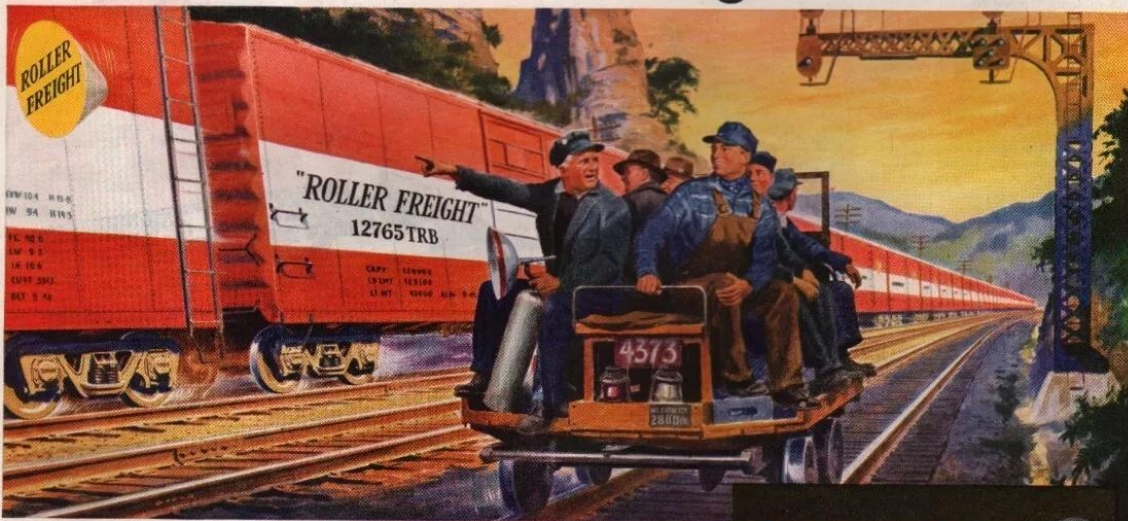


**2. "HIGHBALL ARTIST"**—In the colorful business of railroading, there's a colorful word for everything. An engineer, for instance, is called a "highball artist". His job will be easier when freight cars roll on Timken bearings because starting resistance will be cut 88%.



**3. "HOT BOX"**—This man is signalling to a passing train that a car has a "hot box"—railroader's term for an overheated axle. When the friction bearings now used on freight cars are replaced by Timken roller bearings, "hot box" will begin to disappear from railroad lingo!

## The latest is "Roller Freight"!

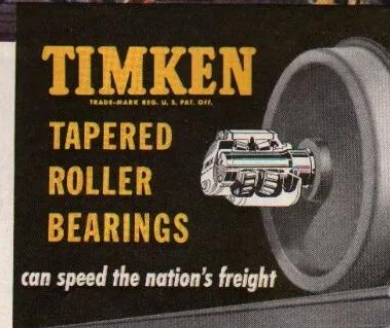


**4. "ROLLER FREIGHT"**—That's a freight train that rolls, like a modern streamliner, on Timken tapered roller bearings. *It's the next great step in railroading!* It will make possible faster, more dependable delivery of the things we eat and wear and use.

Because Timken bearings remove all speed restrictions due to bearings, "Roller Freight" can highball along like a streamliner! "Hot boxes" are eliminated, maintenance costs reduced, starting resistance cut by 88%. And Timken bearings can increase freight car availability by keeping them out of the repair shop and on the rails.

More and more railroads are switching to "Roller Freight"—from a handful of cars for some roads to as many as 800 and 1000 cars for others.

Throughout industry, Timken bearings are first choice for the tough jobs because they take any combination of radial and thrust loads. Whether you build freight cars or combines, machine tools or automobiles, make sure the trade-mark "Timken" is on the bearings. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMROSCO". Tapered Roller Bearings, Alloy Steels and Tubing, Removable Rock Bits.



COPR. 1949 THE TIMKEN ROLLER BEARING COMPANY

NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION



# Quick report on things to come...



**1 FASTER FREIGHT TRAINS!** Timken roller bearings on the axles permit "Roller Freight" cars to speed things your way at a passenger train clip. No more speed restrictions due to bearings when Timken bearings replace today's friction bearings.

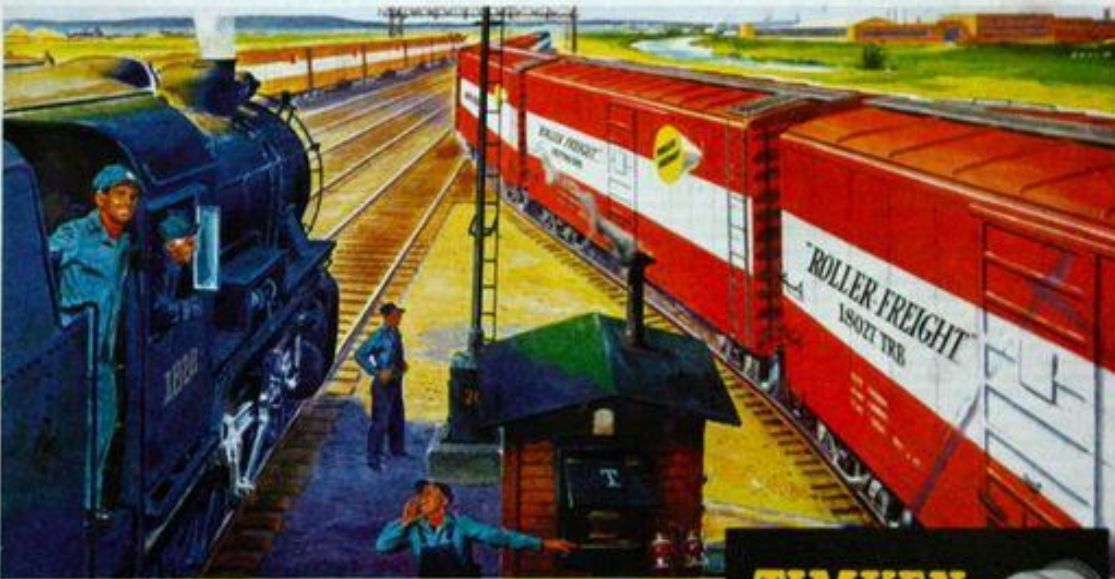


**2 A SMOOTHER RIDE** for eggs, glassware and other breakables! No jolts and jars when "Roller Freight" starts up because Timken tapered roller bearings reduce starting resistance 88%. A whole string of cars get under way as a unit.



**3 ON-TIME DELIVERY** of things you need in a hurry! Over 70% of the things you eat and wear and use are shipped in freight trains. And there'll be no "hot boxes" to delay them when freight cars roll on Timken tapered roller bearings.

## when railroads switch to "Roller Freight"!



**4 RAILROADS ARE NOW** putting roller bearings on all modern passenger cars and locomotives. And for good reasons. To name a few: higher speeds, smoother rides; lower fuel costs, less time out for repairs, increased availability of equipment.

Everyone stands to benefit when freight cars, too, are rolling on Timken tapered roller bearings instead of old-style friction bearings. You'll enjoy even fresher food on the table. Fragile items will arrive in tip-top condition. Your rush shipments will get there faster. All because Timken bearings permit speedier, smoother, more dependable freight service. It's the next great step in railroading—"Roller Freight".

The railroads have already started the switch to "Roller Freight"—from a handful of cars for some roads to as many as 800 and 1000 for others.

Because Timken tapered roller bearings take any combination of radial and thrust loads, they're first choice for the tough jobs throughout industry. Whether you build freight cars or cement mixers, machine tools or tractors, mine cars or automobiles, the trade-mark "Timken" means the best bearings you can buy. The Timken Roller Bearing Company, Canton 6, Ohio. Cable address: "TIMBROSCO". Tapered Roller Bearings, Alloy Steels and Tubing, Removable Rock Bits.

### TIMKEN

TRADE MARK REG. U. S. PAT. OFF.

**TAPERED  
ROLLER  
BEARINGS**

*can speed the nation's freight*



NOT JUST A BALL NOT JUST A ROLLER THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS OR ANY COMBINATION







# Shorter wait...



## with "Roller Freight"!

EVER wait at a crossing while a freight train passes by? Then you've probably wondered if the day would ever come when freight trains would travel as fast as passenger trains. Well, the answer's on the way! It's "Roller Freight"—the next great step in railroading!

Forward-looking American railroads know that friction bearings are just what their name implies—they retard motion. The railroads know, too, that Timken tapered roller bearings remove all

speed restrictions due to bearings—they speed freight along. Already one railroad has ordered 5000 new hopper cars equipped with Timken tapered roller bearings—"Roller Freight" is on its way!

With "Roller Freight" high-balling across the country, shippers and consumers will enjoy faster delivery of goods. And since Timken bearings reduce starting resistance 85%, "Roller Freight" will start smoothly and effortlessly, without damaging jares and jolts.

On the railroads and throughout industry—wherever wheels and shafts turn—Timken bearings are first choice for the tough jobs.

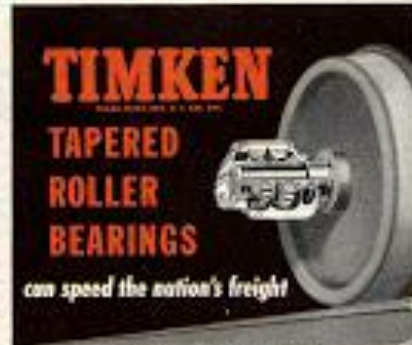
Whether you're building freight cars or airplanes, logging equipment or tractors, machine tools or printing presses, be sure the trademark "Timken" is on every tapered roller bearing you buy. The Timken Roller Bearing Company, Canton 6, Ohio. Tapered Roller Bearings, Alloy Steels and Tubing, Removable Rock Bits.



**NEW STREAMLINERS** will soon bring you the last word in fast, luxurious travel. The railroads are spending millions of dollars on this modern equipment and they're not overlooking a thing! Timken bearings on the axle will ensure smoother starts and a most gliding ride.



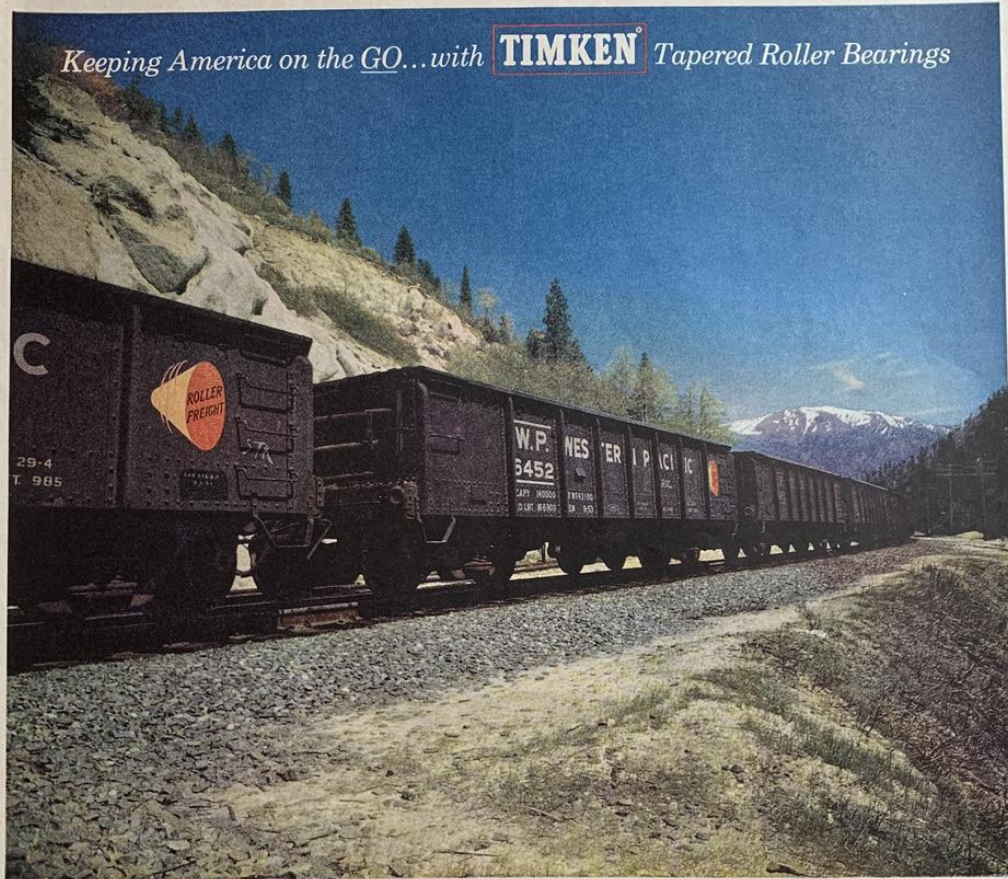
**WHEN YOU SEE** the name "Timken" on the journal box you can be sure it's a modern railroad car. Timken bearings mean trouble-free operation. Maintenance costs are cut. Delays due to "hot boxes" are eliminated. Life of equipment lengthened. Utilization of cars and locomotives increased.




NOT JUST A BALL — NOT JUST A ROLLER — THE TIMKEN TAPERED ROLLER BEARING TAKES RADIAL AND THRUST LOADS ON ANY COMBINATION



Keeping America on the GO...with **TIMKEN** Tapered Roller Bearings



How Western Pacific switched from this sign  to this sign  for this sign 

EVERY railroader is alerted to watch for hot boxes on passing trains—and to signal by holding his nose when he sees one. When that signal comes, the engineer stops the train. The train may be delayed for hours—the car with the hot box for days.

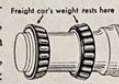
The "Roller Freight" sign on the cars above replaces the hot box sign. It says the Western Pacific is eliminating the hot box problem by switching to Timken® tapered roller bearings.

Western Pacific is using 100 of these "Roller Freight" gondolas to help speed deliveries on a 900-mile run—has 85 more Timken-bearing-equipped cars on order. In twenty-five months the 100 cars have traveled over 8,500,000 trouble-free car-miles.

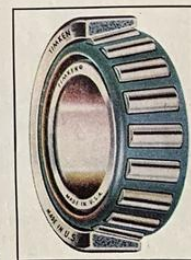
Timken bearings eliminate the hot box problem because they roll the load. They cut terminal inspection time 90%, lubricant cost as much as 89%. Timken bearings are designed to

roll true, made to live up to their design. They're lowest cost in terms of performance.

The railroads, like all industry, are using more and more Timken bearings to keep America on the go. The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ontario. Cable: "TIMROSCO".



Timken freight car axle bearings and hot box problem, cut costs



COPYRIGHT 1955 THE TRB CO.

Only **TIMKEN** bearings roll so true, have such quality thru-&-thru