

# Sanitary Refuse Truck Loads While Entirely Closed

*Mechanical Low Loading Saves the Time of One Man and  
the Very Real Danger of Hernia*

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NOT much more than a year ago the 2,200 motor vehicles of this department were obsolete. In fact, only 70 of them were up to our present requirements. There had been few purchases since 1931, and solid tires had wracked the stiffening and life out of most of the steel bodies. This old equipment was not only inadequate for the modern requirements of refuse collection, street cleaning and snow loading; but it was noisy as well, which is against the policies of the LaGuardia administration.

Consequently, when the present management took over the Department of Sanitation, the first move was to design a new type of collection truck, this being the predominating vehicle. New York City uses 1,800 collection trucks for the daily job. We decided on two sizes of trucks of the same type, having closed steel sanitary bodies. The larger truck has a gross capacity of 40,000 pounds, or 24 cubic yards, and a wheelbase of 170 inches. The smaller truck is of half this capacity, 20,000 pounds, or 12 cubic yards, and a wheelbase of 121 inches, permitting short turning in alleys. We designed these ourselves and, on open specifications, purchased 315 big trucks from General Motors and 105 of the smaller trucks from the White Co.

These trucks load through side doors and through the top. For snow loading, the entire roof panel is removed, leaving the top wide open except for two reinforcing members. They were delivered in March, 1937; but by that



THE SANITARY TRUCK IS EASILY LOADED

time, only about five months ago, we had not only improved the body design but had radically changed the whole idea of loading.

## *Chain Conveyor Distributes Load*

In June, 300 more heavy-duty GMC chassis were ordered on which will be mounted enclosed bodies equipped with mechanical loaders. The loaders are simple chain conveyors running up from the bottom rear of the truck on a 30-degree angle, to the top and along the top to the front end. The material is dumped in at the bottom, is carried up and starts falling as soon as there is space, loading continuously toward the front until the entire body is filled. The chains travel at 660 feet per minute.

An experimental truck has already proved the advantages of this design, which though simple is the only one of its kind in the country. The first advantage is that the truck is really closed. The only opening, other than the hopper attached to the tailgate, is a door on the side, well up to the front, through which such objects as bed-springs, branches and baby carriages can be loaded. Incidentally, the chain is designed so that in the event of large chunks of material entering the hopper, springs permit the hopper to lower and free the offending mass and carry it up onto the conveyor, after which the springs return to normal position.



TAILGATE RAISED PREPARATORY TO DUMPING

The second advantage is the low-loading point, only 40 inches above ground. This removes a great deal of the strain of lifting and is expected to cut down materially the present high rate of hernia in the department, amounting to 235 cases a year; 40 per cent of the 14,000 men have been herniated. The third advantage is that as the load is distributed mechanically, it will no longer be necessary to put a man inside the truck; thus releasing this third man for much-needed street-cleaning work. The fourth advantage is that 25 per cent more material can be placed, without the top man, in 20 per cent less space or

in a body a fifth smaller than those now in use. The fifth advantage is the better appearance of this closed sanitary truck. Dumping is a simple matter of elevating the front end of the truck by means of hydraulic pistons, and raising the tailgate, leaving the rear end open.

No figures are yet available on maintenance and operating costs. Against the increases in these items, which may be attributable to the loading mechanism, there will be the solid economies of a smaller crew, less exposure to illness and injury, and a closed sanitary collection truck in keeping with a progressive city and the times.