

the front end of a motor is used to considerable extent but it cannot be made to operate in very deep snow or drifts as in the case of the horse drawn road grader. There is also the power driven rotary sweeper, similar to that used by electric railways to clean their tracks.

It is my experience that there is nothing at the present time that can deal with the 5 or 6 ft. snow drift excepting some kind of snow plow moved by a caterpillar tractor. My suggestion of course at all times is to clear the road from berm to berm of any snow on the surface, because it is quite dangerous for traffic to continue in one track and in most cases where the approaching vehicles turn out in passing they are liable to skid causing the drivers to lose control. Throwing snow completely over into the ditch is another important feature because when this snow melts it is less apt to damage the berm.

It has been our experience that the expense of snow removal in Allen county by use of the old methods of hand labor was excessive as compared to the cost at the present time using mechanical equipment. I would estimate that in 1918 we paid approximately \$15,000 for the removal of snow, but by the use of preventative methods, as well as the result of procuring suitable machinery for this purpose, we have been able to reduce this figure to not more than \$2,000 per season. The one thing that is most essential is the use of preventative methods.

## MAINTENANCE METHODS ON CITY PAVEMENTS

By C. J. Allardt,  
City Street Commissioner, South Bend.

South Bend has 158 miles of paved streets as follows: 54 miles of brick, 58 miles of sheet asphalt, 30 miles of asphaltic concrete, 5 miles of macadam and 16 miles of Portland cement concrete.

Most of our brick streets are old and were laid at a time when sand and gravel were used as a base. It is almost impossible to keep these streets in a serviceable condition. The repairs which we make in cases of both natural settlement and cuts do not last in a satisfactory manner. Where a brick pavement requires repairs we have had good success in re-surfacing with asphalt, although the patched surface is not pleasing to the eye.

In repaving small holes on asphalt pavements we have been quite successful in using Amiesite. This contains 95% of

crushed stone and 5% of asphalt. Where it is tamped properly it becomes very firm and durable. We have one crew consisting of truck and three men employed on this work about five months out of the year. On the larger asphalt cuts we employ an asphalt foreman with truck, four men, and an Andressen asphalt road repair machine, which makes a complete crew. Where the cuts are large we invariably use our steam roller after the raking has been done.

The question of maintenance of city streets is going to tax the ingenuity of officials for some time to come. Much of the cost in this state has now been relieved by the gasoline tax a part of which is distributed to cities throughout the state for street repair work and maintenance of bridges. South Bend's share of this fund collected last year amounted to \$21,000. This year it should be approximately \$30,000. This fund has been of great help, and I feel that by the end of next summer our streets will be in much better condition than they ever have been since the automobile has come into general use.

We employ during the summer months, on street repair work, four different crews and have been endeavoring to adopt only modern methods.

The order for making service cut repairs comes from the city engineer's office. After repairs are made this order is returned with a notation as to the size of the cut and the charge is then made against the person or persons who had the cut made. Our council last year passed an ordinance prohibiting service cuts being made during the winter months.

## STREET DEPARTMENT REPORT FOR 1926

By Charles Lyons,  
City Street Commissioner, Richmond, Ind.

### Cleaning Streets and Alleys

Hauling trash, ashes, etc., 57,166 cu.	
yds. ....	\$23,708.62
Maintenance and operating cost,	
trucks and tractors .....	6,058.56
	\$29,767.18
Total .....	
Cost per cu. yd. 52 cents	
Sweeping streets (hand) .....	\$3,928.75
Removing snow .....	801.09
Dump labor .....	996.36
Cutting weeds .....	357.28
	\$35,850.66
Total .....	