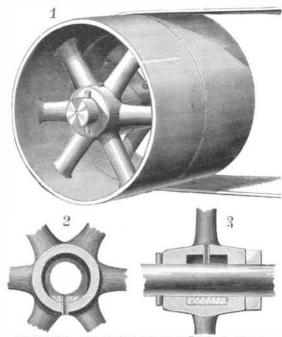
DEVICE FOR LUBRICATING WHEELS AND PULLEYS.

The lubricating hub herewith illustrated is designed for loose wheels and pulleys of different kinds, including car, wagon, or carriage wheels running loosely upon their axles. The hub portion of the pulley, shown in cross section in Fig. 2 and in longitudinal section in Fig. 3, is made with Mr. John Honeyman, before the Sanitary Institute, Glasthe usual oil receptacle or chamber extending around the interior of the hub and in open communication with the bore. Ordinarily the oil is introduced through a simple radial bole in the hub, so that when the wheel is rotated or left standing with the hole in a downward position much oil the tenements will be in stories of ten feet high each, but escapes. In the case of loose running wheels of cars used in mines it is seldom that the hole in each hub will be in ous to us here, in favor of allowing the buildings on a street such a position that oil can be poured in, and consequently of that width to be four stories high, each story of eight the car has to be moved in order to bring the holes into proper position.



DANIELL'S DEVICE FOR LUBRICATING PULLEYS.

The waste thus caused is, to a large extent, at least, avoided by inserting or casting in the hub a tube, in open communication with the exterior of the hub and arranged to project within the chamber to the full extent of its depth, so that its inner end is in line with the walls of the bore. By means of this tubular feeding projection within the chamber the oil, when once put in, is prevented from escaping by any way except that which serves to lubricate the axle. Made in accordance with this plan it does not matter in what position the wheel is allowed to stand, since the oil cannot find a passage to the inner opening of the tube. This is shown clearly in Fig. 2, in which the tube is directly beneath the axle.

This invention has been patented by Mr. William P. Daniell, of Girardville, Penn.

High Buildings in Cities.

that designation, are not generally disposed to look with ap- ually break down the structure, but large steam plows are the pawls may be made to take at each operation. The lev-

proval on the increasing number of high office buildings and residence flats in all our large cities. Perhaps most of the dangers from fire, in nine, ten, and eleven story structures, are removed by tbe exclusive use of brick, stone, and iron, not only for walls and staircases, but for ceilings and partitions. But, even if this be so, there is yet room for the conviction that many apartments are so filled with furniture and other combustibles that it would require no strange occurrence of circumstances to convert one of these great structures into a vast smoke house, where suffocation might be as fatal to many as the flames have frequently been in other cases. Besides, there are y who doubt that all of the said-to-be fireproof structures would really be so if put to a severe test.

Of much greater importance, probably, than the above considerations are the hygienic questions involved in the build-

S. Oakley Vanderpoel, in a recent paper read before the Medical Society of New York, says that in them it would snow from the line, through which no locomotive uncontaminated clothing, or currents of air, the epidemic snow plows of sheet iron, sharp edged and backed with building of their edifices as well as to the prevention of fire. poison would be carried to all occupants. The air shafts stout timbers. These, however, frequently prove insuffifrom the bottom to the top, into which open windows cient, and passengers have to turn out of the carriages to from each floor, make facile means of distributing poisoned assist in shoveling the snow off the line. The plow in our such structures have a baneful effect inshutting out sunshine depth of snow off the track.—London Graphic.

from the streets and from surrounding bouses, so that private dwellings before cheerful and healthy become gloomy and unhealthy.

In striking contrast with these conditions in house building here, we note the subject of a paper recently read by gow, Scotland. There, it seems, it is proposed, in a police bounded by a new street forty feet wide, dwellings shall not be more than two stories high. In this case it is supposed the writer argues, with a detail which seems quite superflufeet, claiming that such a building is not too high where land is valuable, and that rooms eight feet high will ordinarily be as well ventilated as those ten feet high. This, indeed, seems like flying from one extreme to the other.

Bellows for Insect Powder and Liquids.

It is now well known that emulsions of kerosene are our best insect exterminators. Persian insect powder (the ground leaves of certain Pyrethrums), hellebore, sulphur, ete., are also valuable. But their application has hitherto been laborious and uncertain. Two years ago we began to use several kinds of bellows known as the Woodaston bellows, for sale by most seedsmen. They are made in different sizes, costing from one dollar upward—one set for the use of powders, the other for liquids. The latter are constructed on the plan of the little "evaporizers" sold by druggists, except that instead of pressing a little rubber bag to induce the spray, we use the handles of the bellows, the same as if "blowing the fire."

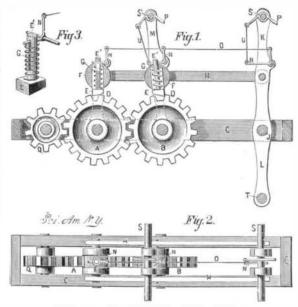
Previous to their use we had poured kerosene upon the perches, in the cracks and nests of our hen houses to rid them of vermin. Now we use the bellows, and the spray reaches every crevice and hole, while one-tenth the quantity serves and the operation is performed far more effectually in one-tenth the time. These bellows will project a fine spray for six feet, so that vines, small trees, or plants infested with aphides, bark lice, or insects of any kind may readily be reached. The powder bellows serve just as well for sulphur, hellebore, Paris green, and the like, as the spray bellows do for liquids, and we commend their use to all of our readers who are obliged to fight insect foes, whether in the hennery, kitchen, conservatory, garden, or field.—Rural New-Yorker.

A CANADIAN SNOW PLOW.

We in England know comparatively little of the inconveniences of winter, and although we hear occasionally of a train being snowed up in the North, the occurrence is so rare that it is chronicled in the journals as an instance of lever, when it may be worked at the same time that the unduly severe weather. Across the Atlantic, however, in hands are employed on the power lever, the hand lever being the northern portion of the United States and in Canada, the winter is so long and severe—this week the thermometer marked 48 degrees below zero in Dakota—that the railway authorities have to make great preparations for the safety of their traffic. Not only are bridges roofed over to prevent Old fashioned people, as well as some who cannot claim the accumulation of a mass of snow which might event-



The device herewith illustrated consists of a pair of coothed wheels geared together, and so arranged that continuous rotary motion is communicated to the wheels, one pawl acting on one of them when the lever moves in one direction and another pawl acting on the other wheel when the lever moves the other way, the wheels thus driving in bill draughted by the Corporation of Glasgow, that on land the same direction, but turning in opposite directions. On a suitable frame, C, are geared two spur-toothed wheels, A B. Pawl levers, D, are set so as to act on the teeth of the wheels for driving them in opposite directions. The pawls are formed on the ends of short rods, E_1 , that are fitted to the sockets, F, of the pawllevers for being worked by them, and they rise and fall in the sockets in order to pass over and drop into the teeth for working the wheels, the springs, G, forcing them down. The pawl levers, D, are connected to a working bar, H, which is to be reciprocated by power applied



KUBEC'S MECHANICAL MOVEMENT.

to it in any approved way. A lever, L, may be pivoted to the frame, C, and have one arm, K, worked by hand, and the other by the feet. One or both of the pawl levers may have an arm, M, by which the power may be applied by hand, the lever, L, being dispensed with. The pawls are connected to trip levers, N, by which they may be raised out of contact with the wheels, when it may be required, to permit the working lever to be shifted to a more favorable point for starting the machine. The trip levers are connected to a rod, O, worked by a hand lever, P, on the power connected to any one of the trip levers by a rod, U. The power may be transmitted from the wheels, A B, by a pinion, Q.

An important feature of the device is that power may be applied by long or short strokes which may be varied within a considerable range, according to the number of teeth

> erage of the transmitting gear may thereby be varied, according as the work is light or heavy. This invention has been patented by Mr. Frederick Kubec.

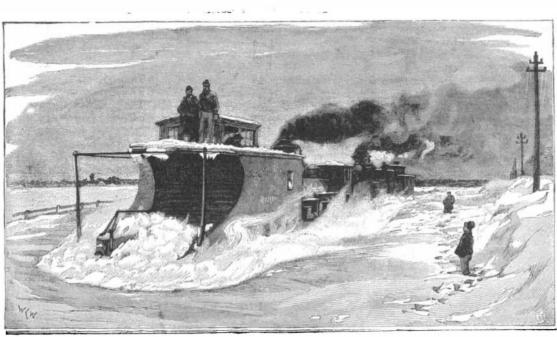
of Riverside, Iowa.

Church Fires.

The Chronicle states that nearly eight hundred churches-an average of about eight per monthhave been destroyed by fire in the United States in the past nine years. According to the fire tables of the aboved named journal, there were one hundred and nineteen churches destroyed during the year 1882, at a loss of \$672,170, and a loss to insurance companies of \$312,280. Among the principal causes ascribed for these fires are defective flues ar heating apparatus and incendiarism. The incendiary is no respecter of buildings, and not only bears his flaming torch through the thoroughfares of our large cities, but also appears at intervals in our smaller cities and ob-

ing of so many of these great apartment houses. Dr. | constructed, which, propelled by several locomotives, are scure country towns. Churches, and particularly those located capable of penetrating and clearing away huge quantities of in country towns, are too often built of the cheapest and weakest material, and present strong temptations to the inbe impossible to properly isolate the sick in the case of a aided could possibly force its way by itself. Many of the herent lovers of fires and easy prey to the fire fiend. Church general epidemic; that either through necessary attendance, | locomotives are fitted, in event of emergency, with small | societies owe it to themselves to pay more attention to the

THE will of the late Sir William Siemens covered personal estate of the value of £382,000. The testator makes air, which any defect in plumbing or accident in the water engraving, however, is a far more serviceable apparatus, provision by his will for the carrying on, under the same or soil pipes might give rise to. It is also pointed out that and with good steam power behind it can clear away a great management as during his lifetime, of his civil engineering business, including his patented inventions.



A SNOW PLOW ON THE GRAND TRUNK RAILWAY, CANADA,