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REMOVAL OF SNOW FROM STREETS.

of snow makes matters worse. In addition to the present. trouble thus caused, the accumulations of snow are lected in the slushy mass is a serious danger to health.

The expense of carting away the snow has been variously estimated to range from seventy-five cents to one load, there would be 25 cartloads to be taken from each | simple. block, at a minimum cost of \$12.50, or \$250 per mile, for every snow storm.

The use of steam has often been suggested, and we have described in our columns various forms of steam apparatus, but they have generally failed to give satisfaction, in part because they are not sufficiently expedistributing companies have laid mains, attempts have nearly every experiment there has been an enormous loss of free steam in proportion to the work done.

strong sled, with openwork runners, is fitted with a general use, displacing the old devices referred to. short pipe passing through the top dthe sled, having a hose coupling at its upper end. A tarpaulin, or can-that the complainants are not joint inventors. vas spread, about 25 feet square, made steam tight, Judge Coxe said the proof demonstrated that the extends from the sled as a center, and thehose coupling field in which the complainants operated was at best passes through it. The tarpaulin is piled on the sled a narrow one, and the question arises, Is the patent, until it is drawn to the place for beginning work; the though it cannot be defeated for want of novelty, void est spread, the edges are tucked into the snow, connect means easy to give an entirely satisfactory answer. tion is made by hose from a boiler or steam pipe to the Each case must depend upon its own facts and cirsled, and the steam is turned on, a pressure of 40 pounds cumstances. The perplexities which surround such being sufficient. The steam cannot escape into the controversies cannot always be solved by an examinaair, but is held right down to the work required of it; tion of adjudged cases. The serve to illuminate the and in a very few minutes the deepest snowbank or paths to be traversed; but he who desires to select the off.as water. By repeating this operation a street can be ment. Although the present case is very near the cleaned in a very moderate length of time and at small border line between invention and mechanical skill, expense. The three inches of snow on 10,000 square it is thought the doubt which arises should be resay, \$12.50. The melting process would require that fore what the complainants did-viz., produce an inthe tarpaulin should be shifted sixteen times to cover vitation card with two or more folds having panels, to the street 200 feet long and 50 feet wide. Making the represent cards, embossed thereon, upon which the excessive allowance of 15 minutes for each shifting of printing is afterward done. This particular structure the tarpaulin, the street would be melted off in four is new, useful, and inexpensive. It soon became popuhours. The cost would depend upon the amount of lar; it supplies a need. Time and thought were resteam used. That is a difficult matter to calculate, for quired in its development. The obstacles which thereit would vary according to the temperature of the air fore could only be surmounted by skilled labor were and of the snow. The N. Y. Steam Co. charges \$1 for 2,000 pounds of steam, which would melt from six to than the labor of the mechanic. It amounted to inseven tons of snow, and on that basis the steam would vention. cost from three to four dollars per block, and the labor of attendants, etc., probably as much more, say \$8 per and answer, quoted with approval upon the defendblock, or \$160 per mile.

are steam mains already laid, would call for a consider- nary skill in the art would have been unable to proable outlay. Steam plugs, like fire hydrants, would be duce representations of eards by embossing upon needed on every corner, and each melting would re- paper, and the answer was: "If they happened to quire about 100 to 125 feet of steam hose, capable of think of it; probably they would not." Exactly so. sustaining a pressure of certainly over 40 pounds to the It is the presence of a thought like this which raises square inch, and preferably 80. It is probable that a an ordinary mechanic to the plane of the inventor. private company could be organized to do this work. Invention requires thought; mechanical skill does not. The plan has been successfully operated, and it seems to present a practicable and economical escape from the present disagreeable and dangerous condition of our streets during the winter months.

A GOOD RULE-DOUBT MUST BE RESOLVED IN FAVOR did, though something of the kind was long wanted. OF THE INVENTOR.

The question is sometimes asked why it is that the examiners of the Patent Office are so liberal in the allowance of patents, especially in simple things. The answer is obvious. It is clearly their duty, under the facilitate him in securing his invention by patent. The versible current of air by means of deflectors, seems

inventor is a man who supplies the country with new The difficulty of cleaning the streets not only is per- and valuable forms of industry; by means of his new ennial, but it is one that becomes more disagreeable, inventions he enables the public to save time and money and yet more imperative, with the increase of traffic in the performance of labors, and he supplies the people and the growth of population. The streets of New with all manner of comforts and conveniences. In the York are frequently chebed by the throngs of vehicles earlier days of the Patent Office, the examiners did not even in the best of weather, and of course a heavy fall so fully appreciate their relations to the inventor as at

Many of them were in the habit of officially acting sources of annoyance to pedestrians, and the filth collagainst the inventor by finding flaws in his devices, and rejecting if the thing was simple, or if there was doubt of novelty or reality of invention. They used to act upon the idea that their chief duty was to redollar per cartload; but even at fifty cents per cart- fuse patents. This was all wrong. The constitution load it is manifest that to properly clear the streets expressly provides that the useful arts are to be enwould cost enormously. Take, for example, one street couraged by the grant of patents. It is to grant patblock 200 feet long and say 50 feet wide, having a sur- ents that examiners are chiefly employed in the Patface area of 10,000 square feet. A moderate snowfall of ent Office. The simple inventions for which patents three inches of snow will give 2,500 cubic feet on that are asked are the most numerous and the most valuable one block of street. Assuming that in loading this is to the public. If errors are to be made, let them be in packed down to nearly half—say 1,350 cubic feet—there fayor of the inventor. It is better to grant a hundred would be 50 cubic yards of snow to be carted; and erroneous patents, which are worthless, than to reallowing two cubic yards as the outside limit of each fuse a single patent for a new invention, however

> Doubt should in every case be resolved in the inventor's favor. A recent trial before Judgo Coxe in the U.S. Court, Indiana, well illustrates this.

This was an action in equity based upon letters patent No. 273,023; granted to Orlando W. Butler and Thomas W. Kelley, February 27, 1883, for an improveditious, and in part because they were too expensive. ment in paper for cards and circulars. The purpose of In New York, Lockport, and other cities where steam! the invention was to supersede the expensive and cumbersome method of pasting separate cards upon wedbeen made to melt off the snow by turning upon it ding invitations and similar papers by substituting live steam. This plan melts the snow very fast, but in therefor a card having two or more folds upon which the desired number of partels to represent cards are embossed or pressed out. On these raised panels the Recently, Mr. Charles E. Emery, C.E., Chief Engi-printing may afterward be done. When the invitation neer of the N. Y. Steam Company, has employed a is folded, the unsightly cavities produced by the pronovel apparatus with such success that it bids fair to cess of embossing are concealed from view by one of solve the problem. While it is probable that it can be the flaps of the paper. The cords when finished have operated more expeditiously and economically by using the same general characteristics as their pasted predesteam taken from underground supply pipes, its use is cessors; but, in addition, they are more symmetrical not limited to this supply. Any locomotive or movable and uniform in appearance, can be manipulated with boiler could be employed. All that is needed is to greater ease, are less liable to become soiled, and are keep the steam to contact with the snow without let-ting a great portion of it escape before touching the ceived the marked approval of dealers in stationery snow. For this purpose a broad, light, rough, and and of the public. The patented cards have gone into

The defenses were lack of novelty and invention, and

tarpaulin is then spread out upon the snow to its full- for lack of invention? To this question it is by no the iciest packed roadbed yields to the heat and runs right one must depend largely upon his own judgfeet of street on a block, if removed by carts, would be, solved in favor of the patent. No one ever did beentirely eliminated. All this required something more

The whole matter is well illustrated by a question ants' brief. One of the complainants was asked if he To carry out such an undertaking, even where there thought that prior to October, 1880, persons of ordi-The one is the result of mental, the other of manual, action. Grant that the invention is a simple one, that when viewed from our present standpoint it is hard to understand why the idea did not occur to some one long before, and yet the fact remains that it never

After giving the subject the best thought of which I am capable. I am convinced that to relegate these complainants to the condition of mere skilled workmen would be to do them a grave injustice. In the light of the present the idea of substituting hard rubber for law, to exercise the greatest degree of liberality toward other material as a plate for holding artificial teeth, or the inventor, and to do everything in their power to of providing tubular kerosene lanterns with an irre-