

STEP AND FOLDING LADDERS.

Time has worked changes in ladders, as in all things else. Great improvements have been made. The step ladder which is now very commonly used is in all the larger sizes made of skeleton construction. The modern step ladder is, indeed, in its way, eminently characteristic, combining lightness, sightliness, and strength with economy of material.

Of the old, familiar straight ladder, with two continuous side pieces and rungs between, called a pole ladder, because the two side pieces are made of the two halves of a spruce pole split for this purpose, there are fewer in use than formerly. This is especially true of the larger sizes. The change is due to the introduction and widespread use of hoisting machines, and also, in some measure, to the increased use of swinging scaffolds by painters, these scaffolds, however, being made by the ladder manufacturers. In the old days, when the hod carrier climbed the front of the building as its walls went up with the hod upon his shoulder, long ladders, 50 feet or thereabouts, were in common use. Now comparatively few such ladders are used. Ladder manufacturers make and keep always in stock pole ladders 10ft. to 32ft. in length, which would include the sizes in demand now. Such ladders are used now by painters and masons and carpenters, and also in shops.

There are sold now-a-days, especially in cities, many more sectional ladders than formerly. One of these, the window cleaner's ladder, with its peculiar tapering top section, made to fit over and rest against the corner bar of a window frame, is practical a new ladder within ten years. Within that time, too, window cleaning has come to be a trade followed to such an extent that the window cleaner himself, going to or from his work with his bucket in one hand and his jointed ladder on his shoulder, is no longer an unusual sight.

There are, however, other jointed or sectional ladders that are used in much larger numbers, and those are sectional ladders that are patented. Some are made in two and some in a greater number of sections, which nest together when the ladder is not in use. The sections are made to be set up into ladders of various lengths, generally of 35ft. and upwards. Sectional ladders are used by painters and sign writers and others. Ladders of this kind can be conveniently carried on a wagon.

There is another sort of folding ladder that is, as it has long been, in common use for the special purposes for which it is designed. That is a ladder in two sections hinged together at one end. In use this ladder is opened out at the ends not hinged, to stand upon the floor in the form of an inverted V. Two such ladders thus standing are used together, planks being laid between them, the ends of the planks resting upon the rungs of the ladders, the planks forming a platform to stand upon. Such ladders are used by plasterers and painters and decorators. This kind of folding ladder is made in various heights, of 8ft. to 20ft.

THE FORM OF ICE-HOUSES.

A Boston paper says: The best form for an ice-house would be that of a globe, because then we should have the greatest bulk with the least surface. Such a shaped house, however, would be inconvenient and expensive to construct. The next best form is a cylinder. Practically, however, an inverted truncated cone will give all the advantages of the cylindrical form, with the further advantage of being more economical in construction and in keeping in repair. The worst possible form is a cubical or square ice-house, for the corners of the ice in such a house will always melt away and leave the mass of ice round. The large amount of water which penetrates the ice in such an ice-house makes it porous, and it rarely happens that a square ice-house, unless very large and deep, will keep ice throughout the summer. In our climate ice-houses are rarely built above ground. The best way to construct one for family use, and this is the result of experience and observation, is to select a northern hillside or exposure where there is a good growth of forest trees. Lay off the circle on the surface of fifteen feet in diameter, and dig to the depth of fifteen feet, sloping so that the diameter of the excavation at the bottom may be ten feet. In this bottom of this sink a well six feet deep and five in diameter, for the purpose of catching the water from the melted ice. Over this well lay slabs of white oak or other hard wood, with the bark taken off and the rounded surface turned uppermost. Poles sixteen feet long and from five to six inches at the larger end are set up against the walls of the ice-house, the smaller ends being turned downward. The sloping sides of the ice-house and the tapering poles make a beautiful fit, and after the poles are adjusted the house will resemble a large churn turned bottom upward. If desired a few large hoops may be nailed to the poles above and below. The poles, however, will retain their position without the hoops. Over the house a square pen of frame-work three feet high should be erected and covered with a projecting roof. The earth should be thrown against the sides of the house until there is a slope outward in every direction. This will prevent the roof-water from running into the ice-house. Gutters for carrying off this roof water would be better and keep the earth near the pen from becoming saturated with water. The ends of the superstructure should be weatherboarded up, but slatted windows in both ends would be advantageous in permitting the hot air to escape. A large door should be constructed in one

end, so as to permit the ready housing of the ice. In putting up the ice, the first thing to be done is to throw straw enough in the bottom to cover the slabs two or three inches deep, after it is compressed by the weight of the ice. Straw must be kept also next to the sides, so that the ice will nowhere come in contact with the wood. When the ice-house shall have been filled on a level with the top of the ground, several wagon loads of straw should be used in covering it. If the entire roof is filled with straw, it will be all the better, though the ice will keep well if only a third of the roof is filled.

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