SPOILING MIRRORS.

It is a fact worth knowing, but which does not seem generally understood, that the amalgam of tinfoil with mercury which is spread on glass plates to make looking-glasses, is very readily crystalized by actinic solar says. A mirror hung up where the sun can shine on it is usually spoiled; it takes a granulated appearance familiar to house-keepers, though they may not be acquainted with its cause. In such a state the article is nearly worthless; the continuity of its surface is destroyed, and it will not reflect outlines with any approach to precision. Care should therefore be exercised in hanging. If any of our readers have mirrors which appear to be spoiling, it would be well to ascertain whether the direct sunlight strikes them. If thus exposed, they can probably be saved from further injury by simply changing their position. The back as well as the front must be protected. A small glass hung in a window, where the rays strike it behind, is peculiarly exposed. The back should always be covered where the beams are likely to touch it.

The greatest danger to looking-glasses, however, is in transporting them. Very expensive ones have been seriously injured by careless handling when merely carried across a street. The men who move furniture are seldom fully aware of these possibilities, and need to be cautioned and watched. Frequently a man or boy may be seen in the street carrying a mirror in such a way that the full glare of noon-day strikes and injures it. Owners of such articles would, as a rule, be able to keep and use them much longer if they would exercise much caution in this regard. To re-silver a pier-glass often costs as much as one-fifth of the original price of the article; while the common glass is seldom worth re-silvering.

It is also well to avoid hanging a mirror near a stove or fireplace, where the heat radiated can reach it. If this precaution is neglected, granulation is likely to occur, even in a comparatively dark room, by the influence of warmth instead of light. A lamp or gas jet, if placed too close while burning, though it may not crack the glass, will often bring about the same injurious crystalization, and will even sometime cause the amalgam to melt and run off.—*Crockery and Glass Journal.*

A MOUNTAIN DISMEMBERED.

An interesting account of the recent falling of a mountain in Tarentaise, Savoy, causing disaster to two flourishing villages, has been communicated to the *Courrier des Alpes*, by Mr. Berard. The phenomenon has been incorrectly reported as instantaneous and the destructive effect complete; whereas the case is that of a mountain, which, for 20 days without cessation, has been dismembering itself, and literally falling night and day into the valley below, filling it with piled-up blocks and stones, extinguishing all sounds by its incessant thunder, and covering the distant horizon with a thick cloud of yellowish dust. The entire mass comprised in the slope forms a mutilated cone 200 meters broad at the top, and 600 at the base (the slope being about 50°). This is composed of blocks of hard schist, lying close together, but no longer united; and it is united to the body of the mountain only by a vertical mass 40 to 50 meters thick, which already is fissured and shaken. Periods of repose occur, lasting only a few seconds or a minute at most; then the movement recommences, and continues about 500 hours. Blocks of 40 cubic meters become displaced with no apparent cause, traverse the 1,800 meters of descent in 30 seconds, leaping 400 or 500 meters at a time, and finally get dashed to pieces in the bed of the torrent or launch their shattered fragments into the opposite forest, mowing down gigantic pines as if they were so many thistles. One such block was seen to strike a fine fir tree before reaching the bridge between the villages. The tree was not simply broken or overthrown, but was crushed to dust (*volatilisé*). Trunk and branches disappeared in the air like a burning match. Rocks are hurled together and broken into fragments, that are thrown across the valley like swallows in a whirlwind. Then follow showers of smaller fragments, and one hears the whistling sound of thousands of pebbles as they pass. Mr. Berard reached the edge of the rock (2,460 meters high) on one of the sides of the falling cone and ventured along it, obtaining a good view of the "terrifying" spectacle. He reaffirms his conviction that the phenomenon is inexplicable by any of the usual reasons that account for Alpine disturbances—such as penetration of water, or melting of snows, or inferior strata in motion; nor does the declivity of the slope explain it.

It is stated that the addition of from 10 to 12 per cent. of chloride of ammonium to melted zinc will give it a considerable increase of hardness.

HOW THE FRENCH WORKMAN LIVES.

The French laborer probably gets more for his wages than any other. His food is cheaper and more nourishing. His bouillon is the liquid essence of beef at a penny per bowl. His bread at the restaurant is thrown in without any charge, and is the best bread in the world. His hot coffee and milk is peddled about the streets in the morning at a sou per cup. It is coffee, not slops. His half bottle of claret is thrown in at a meal costing twelve cents. For a few cents he may enjoy an evening's amusement at one of the many minor theatres, with his coffee free. Sixpence pays for a nicely cushioned seat at the theatre. No gallery gods, no peanuts, pipe, smoke, drunkenness, yelling, or howling. The Jardin des Plantes, the vast galleries and museums of the Louvre, Hotel Cluny, palace of the Luxembourg and Versailles are free for him to enter. Art and science hold out to him their choicest treasures at small cost, or no cost at all. French economy and frugality do not mean that constant retrenchment and self-denial which would deprive life of everything which makes it worth living for. Economy in France, more than in any other country, means a utilization of what America throws away, but it does not mean a pinching process of reducing life to a barren existence of work and bread and water.—St. Louis *Republican.*

GLASS AND BARS FOR ROOF GLAZING.

We lately saw a defectively glazed glass roof under treatment toward restoring broken panes and stopping leaks. Counted by the acre, the surface of such glazing is enormous in American cities, and would be increased were the immunity from leakage and breakage nearly assured. The system of glazing used on the roof of the Royal Aquarium, London, is held up as a model of this sort of protection and convenience; it consists of a series of zinc bars of pot hook section, with a return bend, the bars being screwed on the purlins. The top is simply a pothook or hanger section, at the bottom of the same section reversed. The glass rests in the groove of the lower bars and back groove of the intermediate upper one, in which it has full vertical play. The panes of glass lap each other; and the theory is, that no water can find its way inside the building covered by a roof glazed on this principle. The advantages of this system appear to be the diminution of breakage of glass from vibration, and expansion and contraction and other causes due to rigid fixing in the ordinary system, and the facility with which glass can be fixed or a damaged pane removed and replaced. The grooves carrying off water from the inside as well as from the outside is of course another advantage, for unless the roof be a very flat angle, indeed, water will not leave the glass, but will run down into the outside groove. Condensed water and vapors are, therefore, thus well got rid of.

Belgian Patents' Rules.—The Belgian Government has issued new rules for the applicants for patents of invention, which came into force on the first of the present month. The following are the principal points of interest:—The specification must be written on paper measuring 34c. in height by 21c. to 22c. in width—14in. by 8$\frac{2}{5}$in. to 8in.—with a margin of 4c. to 5c.—1$\frac{3}{5}$in. to 2in.—and must terminate with a complete *résumé* of its contents, describing the principal features of the invention without the use of drawings. The drawings which accompany the specification are to be made on linen paper of the same size as the paper on which the specification is written. They must be drawn according to rule, on a given scale, with black ink, excepting those parts which particularly characterise the invention, and which should be in another colour.

Liquid Glue.—Three parts of glue, broken into small pieces, should be covered with eight parts of water, and left to stand for some hours. One-half of chlorhydric acid and three-fourths of sulphide of zinc must then be added, and the whole exposed to a temperature of from 81 to 80 deg. Cent. during ten or twelve hours. The compound thus obtained does not gelatinise. It only needs to be allowed to settle, and will be found a most useful agent for joining purposes.

Another.—If a decoction of ordinary glue be repeatedly melted, say ten or twelve times, it will, provided it be not too thick, no longer gelatinise on cooling. The same result may be obtained at once, by boiling the ordinary thick glue, with about six drops of nitric acid, to each ounce of glue. The acid may be afterwards neutralised by lime. But the glue is much weaker after this operation. The best liquid glue is made by dissolving shellac in wood spirit.