et, where it has ample time to make noxious deposits. (See

(6, 2.) It is usual to provide a small tank or cistern in the upper part d a house, from which water can be drawn, when wanted, more pidly than from the small pipe which supplies the house from the street. Such a tank is fed by a faucet governed by a float, that it is kept nearly full. As any defect in the action of the toot might cause the tank to overflow, it must always be provided with an overflow pipe, to carry off the water in such an mergency. If this overflow-pipe is connected to a waste or n-pipe, the foul air will rise through it and escape through its ben mouth at the top, where it may taint the water by being beorbed by it, or taint the air about it. No trap placed upon the an overflow can be relied upon, for the flow occurs so beldom that such a trap would lose its water by evaporation and for heat such a trap would lose its water by evaporation and bon becomes worthless. The safer way is to discharge such overflow pipes in the open air, either outside the house, in a rainpout, or on the roof. If this cannot be conveniently arranged, they should be allowed to discharge over an open sink or bath-the, or similar receptacle, without direct connection with the drain of the state of th trains. Where no public water supply exists, large tanks for torage of rain-water are sometimes constructed as a source for conestic supply, located under the ground, which overflows dis-charging into the main-drain. Such a course should never be wed. No intervening trap can serve for stopping the back tow of gas, because the overflow does not occur often enough in by weather to ensure the presence of water in such traps. Such overflows ought to be discharged on the surface of the ground, the in a propuls soil, where the water will readily soak away at all times. An instance occurred within my own observation a few years ago, where the overflow of a rain-water tank discharged into the main drain. This became choked with grease, and sent back all the sewage of the anale cnoked with grease, and sent back an one of the water was and for all domestic purposes, and its pollution was discovered ally through the nauseous tasts it had acquired after some week's accumulation of sewage in the cistern. This leads us to the the question of grease in drains, a prolific source of annoyance in one all the source of annoyance in the maching of diales in our climate. The grease comes from the washing of dishes in water in a fluid state. It soon becomes chiled in cool weather, and adheres to the sides of the drain, where it accumulates coninnally, till sometimes filling the pipes for long distances. If the drain has a very rapid descent, the flow of water may some-time. times prevent this accumulation, but otherwise some provision is needed for intercepting the grease in a small tank. The nearer this tank is to the sink the better, to guard against the choking of the pipe above the tank. Where the sinks are located against the orthogonal tank is bost to the tank is best nalaced outside the the outer wall of the house, the tank is best placed outside the wills, where the grease can be removed without creating a nuiance in the house. Such a tank is shown in this section (Fig. a), built of brick and hydraulic cement, plastered smoothly adde. For small and medium houses it should be at least three feet long on the inside, and about two feet wide, with reunded corners. The outlet should be made of a bent joint of pipe dimensional should be made of a bent joint of pipe dipping under the water, so that the grease, while floating on the surface, will not be drawn into it. The inlet should be at least in the higher than the outlet, so as not to be obstructed by the accumulation of grease which takes place in the form of a shi hick scum on the water. It is also best to allow about a foot below the mouth of the outlet in the clear, for accumulation of and and other solid matter which is heavier than the water. A man-hole cover is placed on the top; through which the grease may be removed as occasion may require. The soil-pipes from water-closets should never discharge into this receptacle. It hand bould be arranged upon the branch leading from the kitchen and pantry sinks only, having its outlet connected with the main thin when convenient. If the sink is not situated near enough to the outside of the house to allow this grease tank to be conthracted outside of the nouse to allow this give the cellar or base-ment, of wood, and lined with heavy lead. In such cases, the hot of a liberal size, the grease is liable to pass through before the bound of a liberal size, the grease is liable to pass through before bound separated from the water. Whenever drains become bour of her water over the outside in a small stream, for half an hour of her water over the outside in a small stream, for half an hour of her water over the outside in a small stream, for half an hour or less. This heats up the whole contents, and the softened ase then passes along with the water that is applied inside. the better way is to catch the grease before it gets into the prove. If once allowed to coat the inner walls of the drains, trouble will ensue.

I have before alluded to the need of getting the plumbing

fixtures inside the house arranged as far as possible in compact groups. It is a very common fault among architects to so arrange them that their drain-pipes are led across considerable lengths of floor spaces, with little or no fall, terminating, as before described, in a water-closet trap, just below the floor, which sometimes holds the water for several feet back in this horizontal reach of pipe. (See Fig. 2 above). Whenever a bowlfull of water is discharged into such a flat waste, the lower end of which is filled with water, the air that happens to be in the pipe above such water is displaced and is driven out. Where can it escape ? Sometimes it finds a branch waste coming in from another apartment, and is blown up that, through the trap and waste-hole of a wash-bowl in a sleeping-room or dressing-room attached. Sometimes it bubbles up in one's face in the bowl that is discharged. Sometimes it is pushed forward and bubbles up in the water-closet. The result in either case is far from satisfactory, and shows how important it is to give each line of waste an independent and unobstructed course to the main drain or soil-pipe, where the air can find ready communication with the

