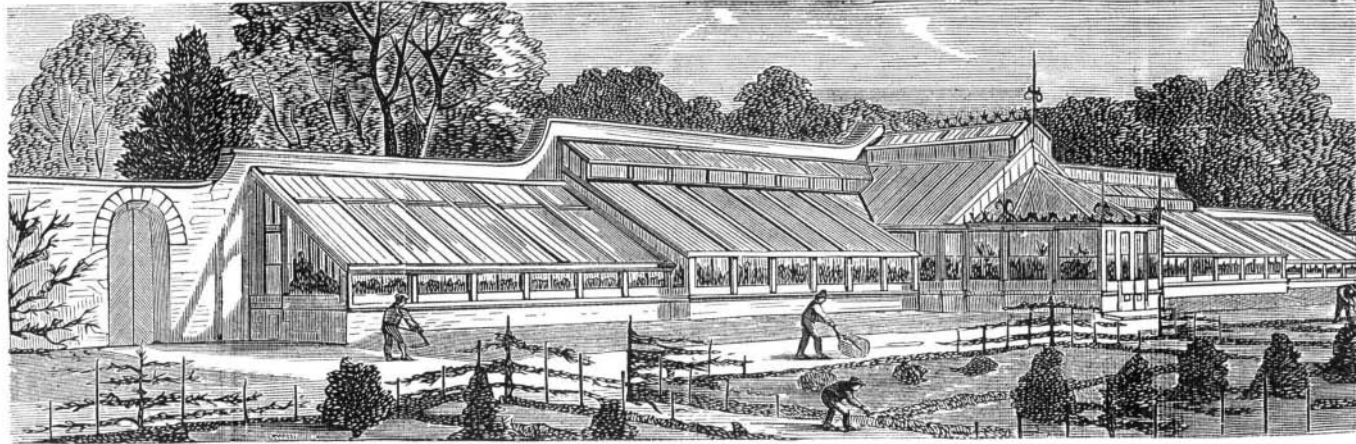


**GREENHOUSES AND HOTHOUSES.**

The long winter of our Northern and Middle States tries the patience of our gardeners, and renders doubly acceptable any hints and directions for the construction of greenhouses, wherein plants can be nurtured till the advent of spring; and where propagation can be carried on, so that a large supply of plants, both for flowers and fruit, may be ready for planting out as soon as the frost leaves the ground. Where the horticultural operations are extensive, the plan shown in our Fig. 1 is perhaps the best that could be adopted. The buildings can be constructed of any required size, and the heat is well confined to the back of the house by the brick wall. Flues are built in the wall with furnaces at the ends; or steam or hot water pipes are used for heating. Grape vines are usually trained under the sloping roof, and thus enjoy the maximum of light and sunshine. The wall is very handy in a fruit garden, even when not covered with glass. Fruit on trees trained against a brick wall (as shown on the left of Fig. 1) ripens much earlier; indeed, in England peaches and nectarines will hardly ripen at all in ordinary seasons unless the trees enjoy the reflected heat from a wall, which, by the way, should be painted black. Gardeners who devote much time to the cultivation of the



**RECENTLY CONSTRUCTED HOTHOUSES.**

a bronze tazza, ornamented with well known decorative plants. The margin is fringed with *isolepis gracilis*, used expressly to tone down the harshness of the metal work. Two or three plants of the palm-like *curculigo*, says a correspondent of the *English Garden*, from the pages of which we select the engraving, are placed in the center; and these, by furnishing bold and graceful foliage, contrast well with the horizontal lines of the tazza below, while their cool and

streets and placed above the buildings, as in some cities, and we hope the time is not far distant when this desirable change will be made. As to underground wires, they cannot be easily worked, even when carefully insulated, on account of the interference of static induction. All telegraph wires, without regard to their position, are thus affected. but wires placed underground or in water are affected 50 times as much as those which pass through the air, the amount of the static charge in aerial wires being inversely proportional to the distance of the wires from the earth. The amount of the static charge in all telegraph wires, whether they are stretched through the air or buried under the ground, is proportional, also, to the length of the wire; and consequently an underground wire of half a mile to a mile in length may be worked without any inconvenience from the presence of the static charge, while one of greater length may give rise to the most serious trouble.

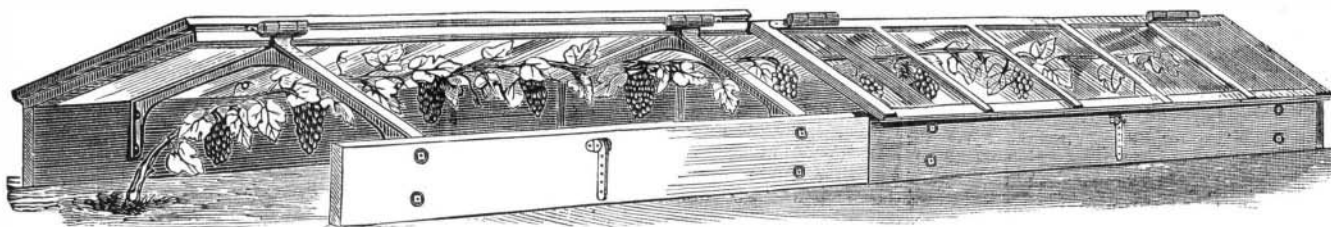
deep-toned greenness forms a pleasing contrast to the character of the stand itself. Heaths and similar hard wooded plants are added, and with good effect.

**Take the Poles out of the Streets.**

Complaints are frequently made against the objectionable practice of the telegraph companies in placing their poles in

In London, all the railroads have stations centrally situated, most of the roads coming into the heart of the city. The South-Eastern Railway, for instance, has a station at Cannon street, which is only one third of a mile from the General Post Office, where the headquarters of the English telegraph lines are situated. Now, these telegraph wires are placed

Fig. 2



**GRAPE VINE AND HOTBED FRAMES.**

grape will find the glass frames, shown in our Fig. 2, economical and efficient. The timber used in making them is small in quantity, and the glass is well placed to ripen the fruit. Air is readily admitted to the vines by raising the glass frames, the height of which can be adjusted by the attachment shown in the engraving, which displays the construction so clearly that no further explanation is necessary.

Another convenient form of glass frame is shown in Fig. 3; it is especially suitable for use on hotbeds. Being of little depth, the sun's heat is concentrated by the glass on the rich earth of the well manured bed; and the frames, which are well suited to cucumbers, melons, and early tomatoes, are so constructed as to slide open for purposes of ventilation.

Winter is the time when people are most apt to feel the need of a greenhouse; and if they do not construct one then, they usually get their plans perfected, and begin building in the early spring. We have published illustrations of more elaborate and expensive greenhouses than the one represented herewith; but we have seen none in which the arrangement is better, and the cost of construction less, than the one shown in Fig. 1. While Fig. 2 and 3 present no special novelty, they are each well adapted for the different purposes for which they are intended, and can be built cheaply.

**PLANT VASES FOR INDOOR DECORATION**

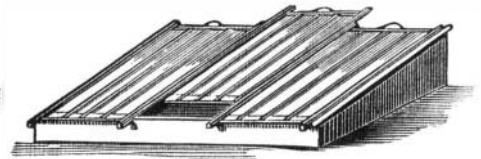
The votaries of floriculture are now turning their attention indoors, and inquiries as to proper and tasteful modes of parlor and dinner table decoration are beginning to reach us. The usual way of keeping plants in houses is to place them in vases or tazzas, of wood or pottery, although some are now made in bronze or iron, of very handsome designs; terra cotta is also employed, and, although cheaper than metal, is capable of equally effective ornamentation. Filled with a light earth, and covered with the moss called sphagnum, hardy and half hardy plants will thrive well in these vases; care must, however, be taken not to water them too profusely, as (there being no way of escape through the bottom of the vase for superfluous water) too much moisture will rot the roots.

The accompanying illustration represents



**ORNAMENTAL PLANT STAND.**

Fig. 2.



the streets of cities; and the popular belief is that the wires ought to be put underground. It is true that the main streets of New York are sadly disfigured by the clumsy wooden poles, and probably no improvement can be expected until we have a better city government. But the idea that it would be easily practicable to work the wires underground is a mistake. They could, however, be taken out of the

on poles and follow the lines of the railroads into the stations, where they first pass under ground, running as subterranean lines only from the railroad termini to the central telegraph station. Hence, the quantity of underground wire in London is comparatively small. In addition, it may be stated that in all parts of the city there are certain large distributing telegraph offices which are connected by wires with all the sub-stations in the city—of which there are 400 to 500—and every wire from each of these distributing offices to the several hundred sub stations is carried over the house tops; where there are several wires running to the same station, they are insulated on poles which are fastened to the tops of houses. In addition to those that have been mentioned, there are in London 800 private lines, running to all parts of the city. They use what are known as the Wheatstone dial instruments. There is not a single rod of wire working all these instruments that is under ground, the wires all being carried over the house tops. Frequently 40 to 50 insulated wires are made into a single cable, which is suspended on fixtures attached to the roofs of houses.

In 1854 a telegraph company was organized in England which constructed an underground line between London and Liverpool, 210 miles, the cable containing 10 wires. But in less than two years after the line was built, its insulation became so much impaired that the company was obliged to take up and replace a considerable portion of the cable. One wire after another still continued to fail, until there were only five of the ten that would work at all. After this, as others failed, sections of the underground line were abandoned, and wires placed on poles were substituted, until, finally, so much of the underground system had failed that the company decided to place the whole line on poles. The copper and gutta percha which constituted the valuable portion of the underground cable were taken up and sold for enough to replace the whole system with a good overland line. All similar lines that were ever constructed in England have been abandoned, except one of thirty miles, constructed by the government nearly three years ago as an experiment, which is the only line outside of the cities.