

and pale colors only were carefully chosen. I know that last year I longed to make a bride's bouquet with some white ones I had; they seemed to be growing for that. The leaves of the columbine are very beautiful. Did you ever use them with scarlet geraniums and a few dainty white flowers for a table decoration? In the fall they are beautifully tinted.

The various kinds of phlox occupy an important place about half-way back in the bed. The early and later varieties enable one to have continuous bloom. Joan of Arc, a tall variety, if not caught by the frost, makes beautiful white trusses late in the fall. The pinks, coral red and shaded ones, are such handsome flowers that no herbaceous border can afford to be without them.

The perennial larkspurs, shorter and not so compact in their growth as the delphiniums, are very beautiful and fill their corner with constant bloom.

The old-fashioned ribbon grass has its place, and very effective it is.

The dear old pansy is there also in all its various forms and colors.

Last year there were a few clumps of that beautiful biennial, the Canterbury bell. These were one mass of flowers, blue, white, and delicate pink.

The *Spiraea Van Houttei* is one of our best flowering shrubs. I have small specimens of these in the border, also lilacs and *hydrangea paniculata*. This does very well here and the immense trusses of bloom remain till spoiled by the frost.

The *hemerocallis* and *funkia* raise their stately heads and bring a touch of yellow where it is needed.

But the crowning glory of this particular border are the clumps of delphiniums. There is one, a rich violet, near a golden elder—truly a study of purple and gold too beautiful to describe. Then there are the blues, that seem to try to catch all the color of the noon-day sky, and the blues and mauves melted together, as only Nature can blend colors, and one lovely creamy white. Even the dainty humming birds seemed to think that they were especially blooming for them. They were constantly hovering in twos and threes up and down the blossom spikes. These stately flowers are in big clumps. Their neighbors have been carefully chosen, their immediate background spruce, golden elder, and variegated corn.

Last year there were several clumps of hollyhocks, white, red, pink, and yellow in the background near the spruce trees. These old friends are not so easy to grow here as the delphiniums. After the first winter they are likely to kill out, the same plants may be grown every year if they are lifted and

stored in a root cellar for the winter.

Perhaps some people may think this must be a very mixed up kind of flower border—so many varieties (and I have overlooked one or two—lychnis, and a clump of common asparagus with its pretty foliage and red berries). It is a

mixed border. The only things kept in mind when planting were the relation of colors, the various heights of the plants, and to avoid all stiffness of arrangement. The result is what was intended—flowers from early spring till freeze up—a feast of beauty.

Concrete Hotbeds and Cold Frames

HERE is nothing which pleases the appetite so much as delicacies out of season. As for vegetables, such delicacies are not costly luxuries, and are within the means of anyone who will take the time to build and run a hotbed or a cold frame. Such a bed will make possible home-grown lettuce and radishes (and even violets) for the Christmas dinner. Moreover, by this means, one can depend on having good hardy plants for spring planting in the garden.

The fall months are the best in which to prepare the hotbed. A few boards and sash are all that is required, unless it is desired to avoid annual repairs, in which case it can be built of concrete. Locate the bed on the sunny, wind-protected side of a building. A four-sash bed is usually large enough except for commercial purposes. A standard hotbed sash is three feet by six feet. Lay out the bed six feet eight inches wide by twelve feet ten inches long. Concrete walls are six inches thick. Dig the foundation trenches two feet six inches deep within the lines given above. Make forms of one inch lumber to carry the south (front) wall six inches and the north (back) wall fourteen inches above ground. Forms are not required below ground level. The tops of the end walls slope to the others. Before filling the forms with concrete, test the dimensions of the bed by means of the sash. See that the sash laps the forms two inches on all sides.

MIXING AND PLACING THE CONCRETE

Mix the concrete mushy wet in the proportion of one bag of Portland cement to two and one-half cubic feet of sand to five cubic feet of crushed rock, or one bag of cement to five cubic feet of bank-run gravel. Fill the forms without stopping for anything. Tie the walls together at the corners by laying in them old iron rods bent to right angles. While placing the concrete set half-inch bolts about two feet apart to hold the wooden top-framing of the bed to the concrete; or make grooves in the top of the concrete for counter-sinking the sash to the level of the walls with an allowance of one-quarter inch for clearance. This can be done by temporarily embedding in the concrete wooden strips of the necessary dimensions. During this operation, by means of blocks nailed to the strips, make provision for the

centre-bars described below. Remove the strips as soon as the concrete stiffens. Take down the forms after five days. The extra two and five-eighths inches in length of the bed is allowance for the three centre-bars between the sash. These sash-supports are of dressed one-inch stuff, shaped like a capital T turned upside down. The length of the stem of the T is equal to the thickness of the sash and the top is three inches wide. Sufficient materials for the concrete will be supplied by fourteen bags of Portland cement, one and one-quarter cubic yards of sand, and two and one-half cubic yards of crushed rock; or fourteen bags of cement and two and one-half yards of pit gravel at a cost of ten dollars.

PREPARATION AND CARE OF THE HOT-BED

If the bed is to be used as a cold frame, it is finished when covered with glass. For a hotbed, dig out the dirt to the depth of two feet, tramp in eighteen inches of fresh horse manure well mixed with leaves or bedding and cover it with four to eight inches of rich soil. Bank the excavated earth around the outside of the bed. Put the sash in place, hang a thermometer on the inside and allow the bed to heat up. After a couple of days, when the temperature has dropped to eighty-five or ninety degrees, planting may be safely done. Seed catalogues contain valuable information as to the length of time necessary to produce the different kinds of plants.

During the midday, in bright weather, the bed will become too hot and must be ventilated for a short period by raising the sash on the side away from the wind. Water the plants in the morning only and ventilate later to remove the moisture from the foliage. On winter nights it will often be necessary to cover the bed with old carpets and boards.

It is a genuine pleasure to grow win-



A. Concrete Hotbed