1957

Papers: 1957-04, Tree Labels

Buffalo State College

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PLANT LABELS

Robert E. Woerner, Director
Denver Botanical Garden

Several years ago we undertook a survey of the different types of labels being used in arboretums and botanic gardens in this country. The results fo that survey may be of value in the field of horticulture, for every gardener and platsman has had to use labels at one time or another.

The two general types of labels are temporary labels for short term use in the transportation, sale, or growing of plants, and permanent display and identification signs or tags, the former types are used throughout the field of horticulture. Permanent labels are used by serious gardeners and all botanic gardens, conservatories, and display gardens.

TEMPORARY LABELS

PAPER:

Improved paper labels are available for the marking of nursery stock. New types are of treated paper to resist weathering. Printed labels for the general line of nursery stock may be obtained. Blank labels may be secured in sheets so that the legend may be typed in before the tags are separated. These are slotted at one end so that the opposite end may be passed around the plant stem and pushed through the slot to make a secure fastening.

Small carboard tags with attached string loops are available in many grades, sizes, and colors and are useful for marking seed plants, crosses, etc. Weather proof pen or pencil markings will last a long time on these tags, and the shapes and colors lend themselves to simple codes.

WOOD:

Thin wood labels are manufactured in a variety of shapes and sizes. Tree and shrub labels are notched at one end to hold a short length of copper wire. The free ends of this wire are used to attach the label to the plant. Wood labels for use in pots, flats, or in the garden are pointed at one end so that they may be easily pushed into the soil.

Wood labels are usually given a thin coat of white paint by the manufacturer. They can be marked with a graphite or wax pencil or with waterproof ink. A coat of clear resin or other protective material can be applied over the writing to increase the life of these labels. A thin film of white paint may be rubed on an unpainted label and the name of the plant can be written or printed with a lead pencil while the paint is still wet.

Wood labels used in contact with the soil will last longer if the pointed ends are soaked in cuprenol or other preservative before use.

METAL:

Paper thin labels of aluninum, zinc, or copper may be embossed by writing with a pencil or stylus on the metal backed with soft cardboard or a blotter. These labels may last several seasons. The writing remains legible, but the thin tag can wear through or become detached.

PERMANENT LABELS

There are many kinds of permanent labels that have been developed since the first garden plants were labeled in cloisters or early botanic gardens. Wood was undoubtedly one of the first materials used along with durable metals such as lead and zinc. Today we have newer materials such as aluminum and stainless steel, plus a wide range of plastics.

WOOD:

Wood labels still find favor today. They are inexpensive in the simpler types and require no elaborate equipment for their preparation. They range from simple painted signs to elaborate removable standards.

Painted wood signs require an artistic ability with the brush. Proper wood preservative or paints must be used to protect the wood from decay or warping and splitting. After a number of years the legend will be worn off by the action of sun and rain and the labels will require repainting, repeating the largest part of the initial cost of the label.

An improvement over the hand lettering of labels is the printing of the legend on the wood. This is usually accomplished through the use of rubber type and a simple press. An old letterpress will serve well or a suitable press can be adapted from those manufactured for use with portable electric drills. Type can be set up by relatively inexperienced employees. Although it takes a considerable amount of time to set up each plant name with its accompanying information, a number of duplicate labels can be printed quickly. A reserve stock of labels may be kept on hand so that weathered labels may be immediately replaced and the old label can be refurbished and reprinted in the off season.

A third type of wooden label is routed or incised. The legend is cut in the wood blank with a router or drill press. An engraving machine (which will be memtioned later may also be used. A small portable router selling for less than $60.00 can be used for routed wood signs of all types. This technique is not limited to plant tags, for routed signs can be used for the identification of the different plant groups and for directional and informational signs. If redwood, cedar, cypress, locust, or other decay resistant wood is used, the sign or label need not be painted. Where a high speed router is used for small labels, the letters may be "burned" or scorched by the cutting tool to effect a pleasant contrast to the background wood color. The letters may also be filled in with paint for additional visibility. The wood may be stained or painted to achieve any required effect, protected with a clear finish, or simply allowed to weather.

Wood labels take many forms. The Morris Arboretum makes use of a wood label and stand made of locust wood. The stand has a stainless steel connection at ground label temporarily for mowing and other maintenance. The same institution makes use of wood tree labels which are secured to a stainless steel plate which in turn is fastened to the bark of the tree with screws. Wood tags for shrubs are generally 1½-2"wide, 3/8"thick, and 6 or 7" long. They can be fastened to the branches of a shrub or small tree with a heavy copper wire passed through a hole drilled at one end.

METAL:

Permanent labels of metal make use of lead, zinc, monel, copper, stainless steel, and aluminum for their rustproff qualities. They are made in a variety of styles for specific labeling purposes. Only two types are conspicuous enough to be used as display labels in public gardens-metal plates with printed legends and the largest size embossed metal strips. (Fig. 1-A)

Most of the metals oxidize enough to destroy their luster, and this serves to increase their value as unobttusive record or identification labels.

Painted steel plates with printed legends have been used with success by the Arnold Arboretum for years. Only the best bakelite-reinforced enamels should be used and the plate should receive a final coat of clear resin or varnish after printing. The Missouri Botanic Garden prints plant information on an aluminum plate which is then coated with a clear resin material of great durability.

An embossing machine with a five line capacity may be used to emboss metal strips a little over 1½" wide (and long enough to accomodate the plant name). These are large enough to be used for labeling shrubs and small trees as is done at the Morris Arboretum. Similar strips placed in galvanized steel holders are in use in several botanic gardens. The entire unit may be given a coat of green paint after which the raised letters may be lightly buffed with a sandpaper block to give contrast. (Fig. 1-A)

Embossed strips of either one or two lines are widely used for record labels in addition to display labels. (Fig 1-B) A simple single line hand embossing machine can be purchased for around $30.00 making it possible for any garden to make use of this type of record tag. Two line strips require the larger machine mentioned in the previous paragraph.

Zinc or alloy labels are manufactured for use in pots and on shrubs. With galvanized wire supports, these inexpensive labels may be used for herbaceous plants and rock gardens . (Fig.2) Ordinary pencil markings or India ink will remain legible for years. These labels are quite inconspicuous which may be a desirable factor.

Another type of metal marker makes use of thin metal sheets embossed with a pencil. The lettering may then be filled in with a special ink. The sheets are slipped into galvanized steel holders of several types to serve as tree, shrub, or garden markers. (Fig. 3) An elaboration of this includes a glass cover plate for greater protection.

The patented "Serpent" label consists of a narrow strip of lead which is stamped on a small, inexpensive machine. A sufficient length of strip is left beyond the printing so that the label may be wound spirally around a plant stem, pushed into the ground, or attached to a heavy galvanized wire support. White lead may be rubbed into the letters for increased legibility.

A simple metal disk may be used for identification. It may be stamped with the accession number of the plant or a suitable code number. Disks can be of any rust proof metal. An inexpensive set of number stamps is used. The disks may be attached directly to the plant or to a rust-proof wire support.

PLASTIC:

Plastic materials have come into wide use in recent years. They include several different plastics and many label styles for both home and public gardens. Plastics may be routed or engraved, or simply lettered with ordinary or special pencils.

Plastic markers for smaller plants are available in one piece and combination units. One piece markers are stamped or molded from plastic and come in several sizes. (Fig. 4) They make excellent pot labels and can be used in rock gardens and in displays of annuals and perennials. Some are formed with the top or legend portion inclined for easy readibility. Others have punched holes (reinforced with a gromet in some) for attaching to the plant with a plastic ring or wire loop. A unique variation is a plastic strip with one end curled. The curled end is merely "snapped" around the plant stem .

Two manufacturers supply plastic tags for use with heavy wire stands to raise the marker up off the ground for better vision and easier cultivation. (Fig. 5) All of these plastic labels may be hand lettered with the desired information. One plastic has a special finish for use with an ordinary graphite lead pencil. Others recommend weatherproof pencils or special inks. Where pencils are used the labels may be erased and reused if necessary. All of these small plastic markers may be easily removed and are subject to vandalism.

Engraved plastic labels are permanent, professional, and have excellent visibility. These are prepared with an engravograph machine which is in effect a pantographic router. the initial cost of a machine and several sets of master type is over $600.00 which may be a definite limiting factor in its use in small gardens. One firm will manufacture these labels with three lines of information at a reasonable cost for those gardens requiring a small number of labels.

A selection of colors in phenolic plastics is available for routed markers. These are laminated with a contrasting color as a core. The letters are cut through the outer laminations or ground color to expose the core. Different colors may be used for different classes of plants giving further clarity to plant identification. A wood tone may be used for trees, gree for herbaceous plants, and red for poisonous plants. (Fig.6)

Clear plastics such as polyvinylchoride or lucite may be used. The incised letters then appear translucent against the transparent background. Lettering may also be cut on the reverse side of clear plastic (with reversed letters) for a three dimensional effect.

The new plastics and bonding materials make it possible to use a marker entirely constructed of weather proof plastic. The plastic plate can be cemented to a plastic stake for a foolproof label.

The separate plastic labels may be attached to trees with nails, suspended from shrubs with wires, or bolted to angie iron supports for garden use. For insurance against breakage by vand als when the plastic is cold (and more brittle) the Morton Arboretum rivets the plastic blank to tempered masonite.

ATTACHING LABELS

Fastening labels to trees is often a problem a problem. Where nails are used the label may be forced off the nail or be overgrown by the tree bark as the tree increases in diameter. It is important to drive the nail only part way in when putting up the label to give room for expansion of the tree. Copper and aluminum nails have been used since they are rustproof, but even then the nails are difficult to pull after a few years when the marker has to be reset. The Morton Arboretum uses stainless steel nails and springs which hold the label against the bark but allow room for growth. The stainless steel nail is also easier to pull since it is highly resistent to corrosion.

The Morris Arboretum has made extensive studies of label attachment problems.* Test have shown that labels can be fastened to thick-barked trees with wood-screws which do not extend into the wood of the tree. This allows the label to move out with the bark as the tree grows. For thin-barked trees they have devised a system of spring loaded stainless steel bands which encircle the trunk and hold the marker securely. The bands "stretch" as the tree increases its circumference. This method may be too elaborate or expensive for small arboretums but it has merit. Stainless steel strips are also employed to hold name plates on large shrubs and small flowering trees at this arboretum. The strip does not cut into the bark of the plant, and it will hold the label in a position where it can be easily read.

The use of iron angles, wire rods, and special galvanized steel holders has been covered in other sections of this report. They are essential for the labeling of evergreens, small shrubs, and herbaceous plants.

*SEE "TREES MAGAZINE" Vol. 16, Nos. 1-2, Nov-Dec. 155 and Jan.-Feb. 1956.

LABELS USED BY 50 ARBORETUMS AND BOTANIC GARDENS

Display Labels

Type of Label	TREES	SHRUBS	HERBACEOUS PLANTS
Painted (Wood, plastic. etc.	5	4	4
Printed (on wood, metal, etc.	10	11	4
Routed Wood	5	5	
Routed Plastic	15	16	12
Embossed Metal	21	20	12

RECORD LABELS

Type of Label	Number Using
Embossed strip	31*
Numbered tag	7
Other	8
None	6

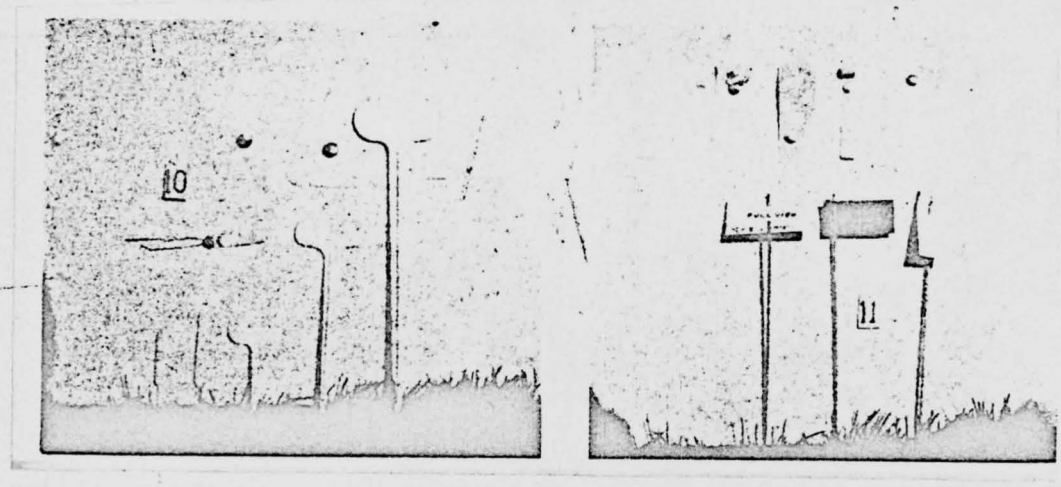
Those using printed markers of metal or wood include; Arnold, Barnes, Southwestern, Finch, Holden, Hoyt, Missouri, Morris, Ohio State, West Virginia.

Those using markers of routed plastic include: Cornell, Bowamans Hill, Brocklyn, Callaway, Denver, Rochester, Huntington, Kingwood, Longwood, Los Angeles, Morton, Mt. Airy, New York, Scott, National, Whitnall (Boerner).

Embossed display markers (mostly in holders) are used by: Cutting, desmond, Ellis, George, Long Island, Rancho Santa Ana, Rutgers, Santa Barbara, Smith, Tyler, Univ. of California, Univ. of New Hampshire, Univ. of Washington, Westtown, as well as many of the institutions in the two preceeding paragraphs.

*N.B. Rochester uses a rustproof addressograph plate for record labels. This was not discussed in the report, but may be a solution for those gardens already possessing a machine to prepare these plates for mailing purposes.

A list of label and marker manufacturers and suppliers furnished by the author is included as an insert.



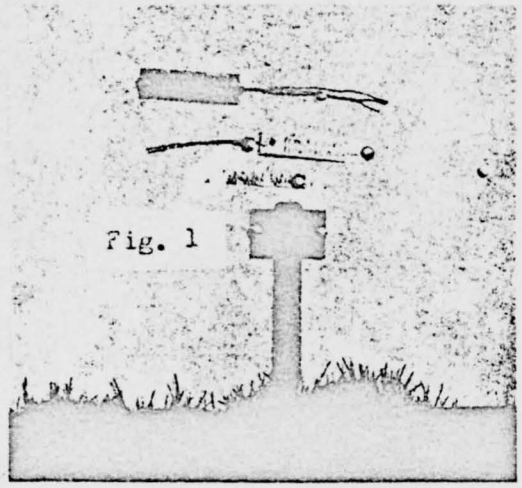


Fig. 1

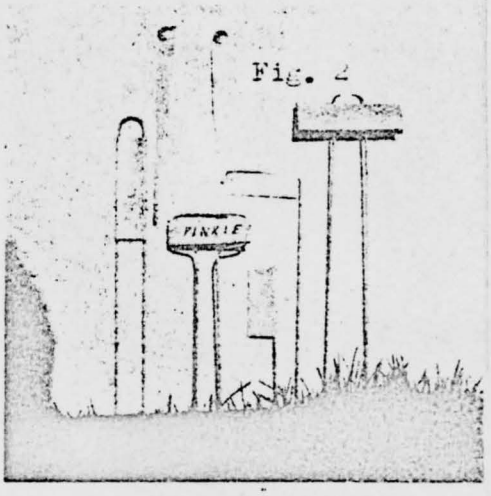


Fig. 2

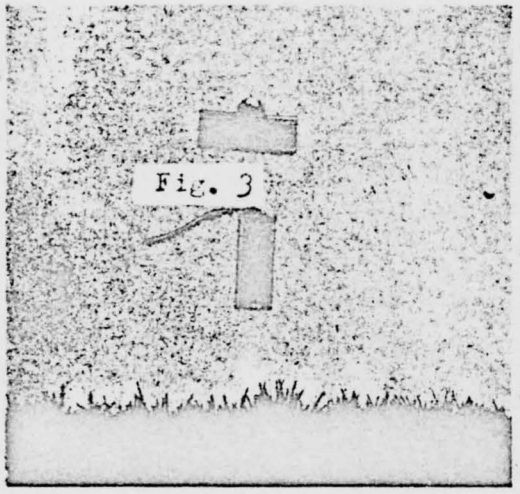


Fig. 3

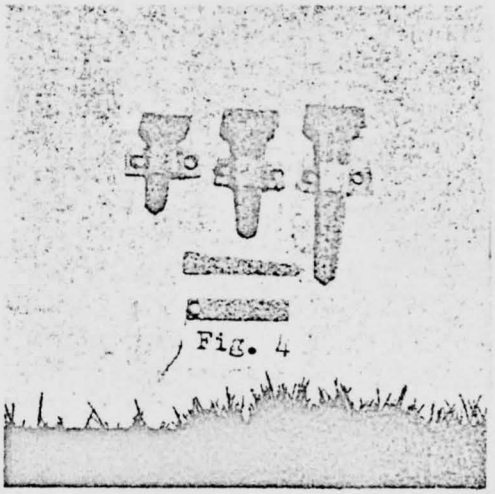


Fig. 4

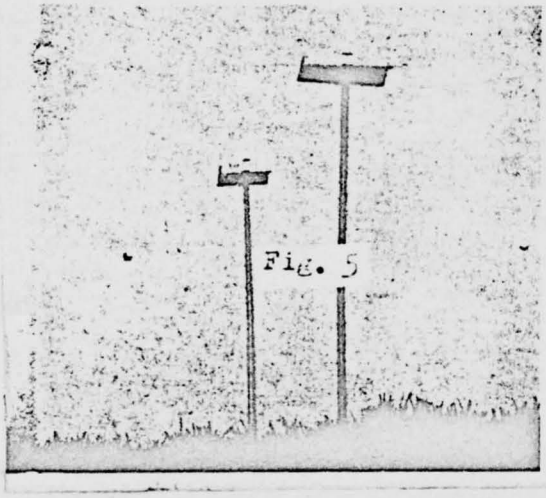


Fig. 5

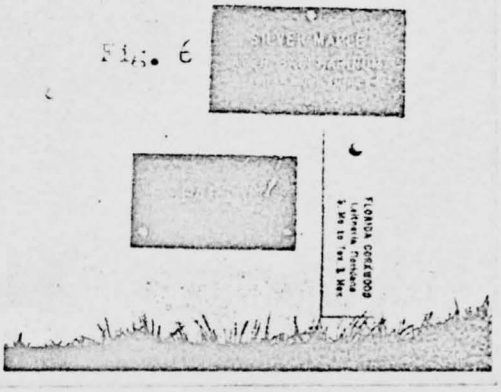


Fig. 6

OTHER NOTES ON LABELS

Hayes Regional Arboretum

In regard to labeling trees and shrubs we use a 3/8" stencil machine to cut stencils and them put both the botanical and the common name of each item on a marine board 1/4" thick 4/34" wide and 6-½" long. This material does not shrink or split and holds the lettering very well. We put the lettering on in white and put a coat of spar varnish over it. The board is held up by a stake about 3 feet long driven about 18" into the ground. We have used this method for several years and find it the best we have ever tried

S. W. Hayes

University of Washington Arboretum

For the past year we have been putting out permanent labels to some of our larger trees and shrubs. These signs, manufactured from scrap in the University's shops, have either channel iron or steel pipes for standards, with a heavy steel plate varying in size from 6 x 4 to 12 x 8 inches, welded to the top at about a 45° angle, These are then lettered with the scientific name, common name and country of origin, with each category having a different style of letter. Some of our original signs that have gone through a winter will need re-lettering because they are rusting through the paint. Our later models have been treated with a rust inhibitor before painting and probably will stand up much longer.

As might be expected, we experienced some difficulty with vandalism and found that the standards needed a cross-piece welded to the bottom to keep the signs from being twisted or lifted from the ground. We also found that the channel iron could be bent, and that pipe ranging from 1½ to 2½ inches in diameter made more satisfactory stands. The cost has been quite moderate, about $2.00 each, including painting and lettering.

Since the signs are set in the ground as permanently as possible we try to keep them out of the way of the mowing machines by placing them in beds or as near to the trees as possible. Even so, we still must hand-trim around a few to keep the grass neat.

There has been a very favorable response from our visitors on these signs, both on their appearance and on the ease of identifying any labeled plant. We have had some 200 signs made to date, about half from funds contributed by garden clubs, and hope to continue with the program until all our major collections are completely labeled.

Joseph A. Witt

HUNTINGTON GARDENS

During the past two years a program of plant labeling has been to have in progress at the Huntington Gardens. The aim has been to have uniform display labels, easily readable, for Garden visitors, at distances of thirty to forty feet.

An Engravorgraph machine was purchased to use in engraving letters on the labels. Label material use is Gravoflex, 1/8" thick, and cut to standard size, 2½" x 6½". The Gravoflex is laminated; i.e., black material on the outside and white in the middlle. The machine cuts through the black and exposes the white; thus giving white letters on a black background. The labels are mounted on black strip metal stakes, 18" x ½" x 1/8". Parker-Kalon metallic drive screws are used to fasten the labels to the stakes.

To. date, approximately five thousand of the new labels have been placed in the Gardens. Shown on each label is the common name of the plant; the botanical name; the genera and the country of origin. Beacause of the dark color, the labels are not conspicuous and yet are easily readable. Many statements of appreciation of the labels have been made by our Garden visitors.

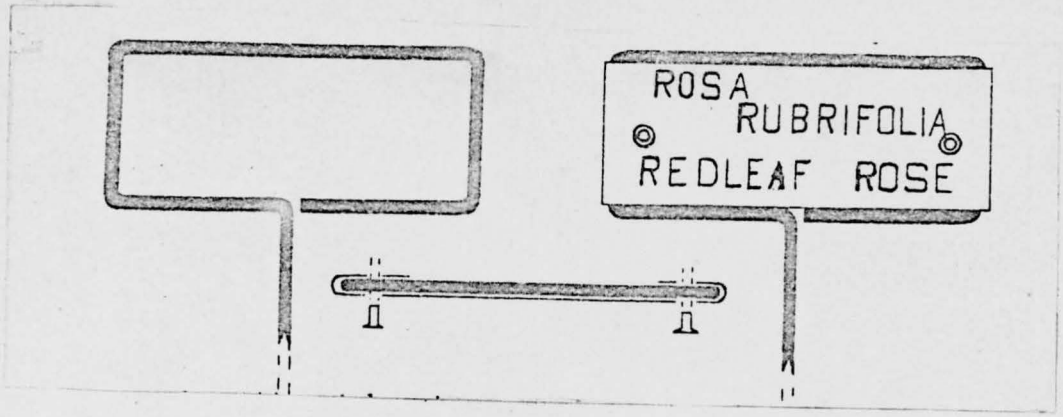
Howard Asper

University of New Hampshire

The latest and most successful version of the aluminum label embossed on the Roovers machine for shrubs or perennials has been made by bending a rectangular frame in the end of a five foot length of #8 galvanized hard steel wire, wrapping the ends of the embossed strip of aluminum around the ends of the rectangle and holding it in place with eyelets punched in with a Bernard #180 hand punch.

The resulting labels are relatively inexpensive in terms of labor and materials and are permanent and indestructible. When necessary the aluminum label may be removed from the frame with pliers and a different one attached with the eyelet punch right out in the field using only a pocketful of tools.

E. B. Risley



BAYARD CUTTING ARBORETUM

The Bayard Cutting Arboretum has used metal labels during the past four seasons. The metal labels are use as trunk labels and nailed to the trunks of trees or as stank labels, to be attached to metal stands. The life of these labels from the stand point would seem to about five years. We find the metal labels on stands get tangled up with the lawn mowing equipment regularly, causing damage to both. The metal labels that are attached to the tree trunks grow into the trees in a few years and should not be nailed close to the trunks when attached.

We are starting to experiment with plastic labels, which are legible, have proved resistant to weather, are economical and resist the vandals as well as any other label.

Henry Nye

SOME LABEL AND MARKER MANUFACTURERS

COMPANY	PLASTIC	METAL	POTS	FLOWERS	SHRUBS	TREES	ROSES
Everlasting label Co. 512 Elm Street Paw Paw, Michigan		Zinc	D*	D*	I		D*
Garden Marker Youth Opportunity 901 Findlay Street Cincinnati 14, Ohio		Alunin.		D*			D*
Hartley Plant Labels Home and Garden Company P.O. Box 618 Seattle 11, Washington		Alloy	D	D*	I		D*
Ideal Plant Marker Company 11817 Mt. Overlook Cleveland 20, Ohio	X			D*	I		D*
Lifetime Markers 10342 Lanark Detroit 24, Michigan	X		D*	D*	I		D
Lincoln Plastic Markers Northfield, Minnesota	X		D*	D*	I		D*
Perfect Garden Label Howard Hammitt 15 Lewis Street Hartford 3, Connecticut	X		D	D	I		I
Perfection Markers S-W Supply Company Girard, Kansas		Alumin.	D*	D*	D*	D*	D*
Permark Labels 1 East 57th Street New York 22, N.Y.	X		D	D*	I		D*
Serpent Garden Labels*** Home and Garden Company P.O. Box 618 Seattle 11, Washington		Lead	D	D*	I		I

D- Suitable for display labels in public gardens.

I- May be used for display, but more useful for record or identification.

* -- Holder or stand supplied for use with the label.

*** -- Requires a small, inexpensive machine to prepare the label. The labels will be custom printed by the distributor if desired.

SUPPLIERS- LABELS AND EQUIPMENT

Cut and drilled phenolic lable blanks-	Hermes Plastics 13-19 University Place New York 3, N.Y.
Engravograph Machines-	New Hermes Engraving Machine Corp. 13-19 University Place New York 3, N.Y.
Embossing Machines-	Roovers Bros., Inc. 3611- 14th Avenue Brooklyn 18, New York
Stainless steel nails* -	Steel Sales Corporation 3348 S. Pulaski Road Chicago 23, Illinois
Stainless steel springs** -	Paragon Spring Company 4613-17 West Fulton Street Chicago 44, Illinois
Engraved plastic labels- (made to order)	Beauty Marker 605 Lafayette Street Aurora, Illinois
Stainless steel plates and banks--	H.L. Yoh Company Philadelphia, Pa.

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*Eight penny common nails may be used. Price (1959) $2.31/lb. F.O.B. Chicago

**Cone Compression spring (about 16.00 per thousand)
.020 stainless steel
3/16 x 13/32 O. D.
1-3/32 O.A. C. E. N. G.