

OLDEN HINTS

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GOLDEN MINTS

New Series. Volume I. Number 1. January, 1900. Price 5 cents

The Orcutt Seed and Plant Company, San Diego, California.

Cable address:

Established 1882.

AS WHOLESALE SEEDSMEN AND PLANTSMEN we offer our services to the horticultural trade for the procurement of any seeds, bulbs or plants that may be desired; our correspondence extends over the entire world, and our facilities and experience as collectors, importers, and growers, allow of few competitors.

TERMS CASH WITH ORDER except by special agreement; all goods travel at the risk and expense of purchaser; boxes and bags charged at cost; complaints must be made within ten days or receipt of goods to receive recognition.

Species first introduced by us.

BULBS.

LILIES FROM NEAR AND FAR.

Twenty-five at the rate per 100; less than 25 at double these rates; 1000 of a kind at one-third discount.

AGAPANTHUS UMBELLATUS L'Herit.

African Love Flower, or Blue Lily of the Nile; an effective decorative plant; ever green, with large umbels of bright flowers that are of great merit. 25c.

ALLIUM HAEMATOCITON Watson.

The mesas and hills around San Diego are decked in springtime with the clusters of bright purplish-tinted flowers of this wild onion, which deserves a prettier name at the hands of its friends. It does not prove quite hardy in New England, but will give enough pleasure for the cost of growing in the house among its more showy cousins.

Per 100.

Allium haematociton Watson: fine.....\$ 1 00
Amaryllis formosissima a.....

Sprekella formosissima is the true name of this brilliant Mexican flower 1c.; doz \$1 50

Amaryllis longifolia roseo-alba? The true name of this showy garden flower is unknown yet to us. Large blooming bulbs, 25c.

ORCUTT, San Diego, California.

ANTHOLYZA AETHIOPICA Linn.

Excellent gladiolus-like red flower, apparently not offered elsewhere in this country. 20c

BEHRIA TENUIFLORA Greene. Grassy leaves about a foot long; flowers tubular, borne in an umbel, the stamens much exserted, brilliant scarlet in color, reminding one somewhat of Brevoortia Ida-Maia. A Mexican bulb nearly allied to Bessera elegans.

Prices quoted below are per 100 bulbs. —

Behria tenuiflora	7 00
Bessera elegans Schult. Mexico.....	2 00
Bloomeria aurea: rich yellow flowers.....	1 50
Clevelandi Watson: delicate lemon.....	3 00
Brevoortia Ida-Maia, Wood. Firecracker.....	2 25
Brodiaea capitata: large heads, lavender.....	1 00
capitata alba: charming, pure white.....	2 40
California: large, waxy pink or rose.....	3 00
congesta: violet purple, 2 to 3 ft. high.....	1 50
cocinea: Vegetable fire cracker.....	2 25
filifolia, S. Watson. Lavender color.....	3 00
g. acilis, S. Watson.....	6 00
grandiflora: dark waxy purple, showy.....	1 00
Hendersonii, S. Watson.....	6 00
Howellii, S. Watson.....	6 00
ixioides (Caliphoa lutea): yellow, pretty.....	1 00
v. minor, Hort. dwarf, yellow, banded.....	2 25
lactea: white banded with green.....	1 00
v. lilacina: larger white flowers.....	2 25
laxa (blue milla, Ithurial's spear): blue.....	1 00
minor: fine royal purple umbels.....	2 25
multiflora: umbels of violet flowers.....	1 50
v. parviflora: color of English violets.....	1 50
Orcuttii: lavender colored fls.....	5 00
peduncularis: waxy porcelain white.....	2 25
stellaris rich purple, white centers.....	1 50
terrestris: royal purple, 2 inches high.....	2 25
vo'ubilis: Twining hyacinth, climbing.....	4 50
mixed varieties \$6 per 1000.....	90
Calochortus albus: Fairy Bell, pearly w.....	1 80
amoenus: glowing rose pink.....	4 50
apiculatus: "shade of straw yellow".....	6 00
Baylardianus: drooping purple and yel.....	8 00
Bentharii: open cup-shaped flowers.....	2 25
flavus (Cyclobothra flavus): golden shell.....	2 00
flexuosus: lilac fls, a fine butterfly tulip.....	10 00

Calochortus—continued.	per 100:
Greenii: flac, barred with yellow.....	10.00
Gunnisonii: light flac, purple banding.....	10.00
Howellii: true, light yellow.....	10.00
Kennedyi: magnificent dazzling scarlet	10.00
Leitchii: much like Nuttallii.....	3.00
lilacinus: flac shading to purple, fine.....	1.50
longibarbus: fine purple, a foot high.	6.00
luteus: yellow fls, do ted with brown..	1.50
v. concolor: large bright yellow flowers	7.50
macrocarpus: large purple flowers.....	4.50
maweanus: white, silky blue hairs, fine	1.50
v. major, Hort. Twice the size of type	2.25
v. roseus, Hort. Pale rose tinged.....	2.25
nitidus: purple and green fls, flenuus.	7.50
nudus: dwarfish in habit, purple fls.....	4.50
Nuttallii: large white fls, green barred	4.50
Palmieri: a rare and beautiful sort....	7.50
Pummerae (Weedii papuascens).....	7.50
pulcherus: star outp, pendant flowers.	1.50
Purdy Greene: pale flac fls, new.....	4.50
spenders: avender color.....	3.00
v. atrovioacea: purple, with red spots.	2.00
v. rubra, Hort. "Deep reddish purple"	3.00
Tulmei: very large white pendant fls..	2.25
venus us citrinus: lemon yellow.....	1.50
venustus oculatus: finely marked fls...	1.50
venustus purpurascens: purple centers	2.25
venustus sulphureus, Hort. Clear yellow	10.00
venustus us sanguineus, Hort. Deep red..	10.00
venustus pilosus, Hort.....	2.25
venustus vesai: White, suffused with	1.50
like.....	4.50
venustus roseus: creamy inside.....	2.40
Weedii: orange butterfly tulip, fine....	4.50
Weedii alba: pure white.....	10.00
mixed varieties, choice selectors.....	7.50
Camassia "alba".....	12.50
Cusickii: purple giant, great novelty....	25.00
esculentia: dark blue fls, edible bulbs...	2.50
Leitchii.....	7.50
Chlorogalum angustifolium, dwarf size..	4.50
parviflorum and ponderosum, each....	4.50
Erythronium grandiflorum (giganteum)..	1.50
grandiflorum minor, yellow flowers....	6.00
Hartwegii, large yellow fls, beautiful..	2.25
Hendersonii, pink fls, center blackish..	1.50
Howellii, white turning pink, Oregon..	6.00
Johns: glowing pink, orange center	6.00
montanum, 3 to 4 large pure white fls..	1.50
purpurascens, rare and beautiful.....	4.50
Smithii, white fls turning purple.....	3.00
Presia refracta alba: seed \$3 per lb.....	6.00
Ptilularia atropurpurea.....	4.50
biflora: ch e late fly, white, purple fls	3.00
colorata: much like recurva, pretty fls	6.00
lanceolata, curious spotted coloring...	3.00
v. gracilis, nearly black, pretty.....	4.50
blacea, white, otherwise like biflora...	3.00
parviflora.....	4.50
purviflora: clear reddish purple.....	7.50
pubica, charming yellow or orange fls.	4.50
recurva, scarlet bell-shaped flowers....	3.00
Esper callis undulata, desert fly.....	20.00
Leucocentrum montanum, delicate white.	6.00
Lilium Bolanderi, Oregon, quite rare yet	60.00
Columbianum, like dwarf Humboldtii..	7.50
Humboldtii, orange, with black spots..	10.00
montanum, blood red flowers.....	15.00
pardalinum, red and orange.....	4.50
v. minor, canary yellow, spotted fls....	7.50
v. Bourgei, lustrous fiery red.....	20.00
Farryi, delicate lemon yellow, fragrant	15.00
pernum, scarlet spotted with brown....	12.50
rubescens, opens white, very fine.....	20.00
Washingtonianum, white, very fragrant	12.50
Washingtonianum purpureum.....	10.00
Milla biflora, Cov. A popular Mexican..	2.00
Milla maritima, small whitish flower...	3.00

	per 100:
Richardia Africana, calla.....	4.00
SCILLA HYACINTHOIDES Linn.	
Stropholirion Californicum, Torrey.....	4.50
Trillium sessile californicum.....	3.00
ovalum, white, turning to wine purple.	3.00
Zygadenus Fremontii, creamy white fls..	4.50
paniculatus, stouter and taller.....	4.50

CACTI.

Genus ANHALONIUM Lemaire.

ANHALONIUM ENGELMANNI Lem. A remarkable spineless cactus, aptly called the Living Rock, found in Texas and Mexico.

A. hispidatum Engelmann, has priority.

A. F. SURAUUM Engelmann.

"Upper and exposed part of tubercle triangular in outline, convex, carinate and almost smooth below, convex and variously fissured and thereby verrucose above, sharp and crenate on the edges."—Engelmann.

Living Rock, a curiosity. 10-100

A. FURFURACEUM—Millimillaria furfuracea Watson—near prismacum. \$2.00

A. LEWYNI—a form of Williamsii—not in stock but order shopped at W. e.

A. SLEAYTI—A form of A. of a very distinct aspect, flattened top, small growth. 2.00

A. WILLIAMSII—more properly a Echinocactus, "basal hawks"—see Lophophora. 3c

Genus ANIGOCARPUS Scheidw.

An older name than Anhalonium, recently revived by Schumann and other botanists. We prefer to retain the name by which they are all have been universally known over 50 yrs.

Genus ASTROPHYTUM Lemaire.

ASTROPHYTUM MYRIOSTIGMA Lem.

"Bird's foot," a beautiful thing & odd. 75c.

CACTUS BENSIPISUS Coulter.

Mammillaria densispina, M. fuscata. \$2.00

Genus CEREUS Haworth.

CEREUS ALAMOENSIS Coulter.

20. Source Bunge; sina barbona; 2-8 ft. high, 2-10 branches from the base with joints 1-1 ft. long, flexuous or green and, often forming arches and resting at the joints and thus widely spreading, often covering 100 feet, ribs about 7, slightly tuberculated, flower red. Mexico. \$1

CEREUS BERLANDIERI Engelm.

A small dependent species, bearing large purple sweet-scented flowers. 20c.

CEREUS CAESPITOSUS Engelm. The Lace Cactus, a beautiful little species, found in Texas and Mexico, with large magenta colored flowers, blooming when only 2 inches high, the flowers 2 inches across, and lasting 2 days. The plant is enveloped with fine white spines, and can be "handled without gloves."

25c:

C. compressus (triangularis v.), cuttings .. 20c.

CEREUS CHLORANTHUS Engelm.

A form of viridiflorus, with beautiful red and white spines and greenish flowers. 30c.

CEREUS COCHIAL Orenti.

An arborescent cactus, probably identical with geometrizans. \$1; specimen plants, \$50

Orcutt Seed and Plant Company, San Diego, California.

CEREUS COLUBRINUS Oria.

Native of Cuba; night blooming; sweet scented white flowers 6 inches across, 25c upward.

CEREUS DASYCANTHUS Engelm.

Texas; densely covered with delicately colored spines a bearing showy orange yellow fls. 20c-82

C. EHRENBERGII Pfeiffer. Mexico.

Resembles *Berlandieri*, but larger & more erect. 50c.

CEREUS EMORYI Engelm. This is one of the best-known of California cacti, the slender, thickly-set yellowish spines giving it a peculiarly beautiful appearance. The spines on the young joints are shorter, soft and flexuous; the flowers are yellowish, followed by a small edible fruit.

Large established plants, \$5; smaller 15c.

CEREUS ENGELMANNI Parry. Heads several (sometimes, though rarely, a hundred), 4 to 12 inches high, cylindric or ovae, with 11 to 13 ribs bearing bunches of about 12 pale radiating spines, and about 4 darker yellow, brown or black, stout and angular, straight or curved central spines, 1 to 3 inches long. Flowers very numerous, bright magenta, often 4 inches across, followed by delicious fruits, with much the same flavor of a strawberry, red, pulpy, filled with black seeds. Utah, California, Baja California and Arizona.

Fine clusters of 50-100 heads \$10 \$60; small 25c.

V. albispinus: ivory-white spines, 75c-86c.

V. chrysocentrus: canary yellow spines, 50c.

V. variegatus: black & white spines, 50c. up.

CEREUS ENNEACANTHUS Engelm.

Magenta fls., collected to order 10c. up.

CEREUS ERUCA Brandegee.

Chilecola; only a few remain. 25c-50

CEREUS FRIEDELERI Engelmann.

Queer rounded carnosose panes, 3-4 inches in diameter, about 6 inches high, rarely more than 12 heads in a cluster, distinguished by the unusually black central spine which often curves upward, magenta fls., variable. 35c.-85

CEREUS FLASCELLIFORMIS Lawar. The well-known whip-cord or tail-tail Cactus, so useful in hanging baskets or for grafting on columnar species; the bright rose-colored flowers are extremely attractive.

Small plants 10c. up, larger specimen prices.

CEREUS FOSSILATUS Hoy. Mexico.

§Pilocereus. \$-few 10c.

CEREUS GEMMATUS Zucc. Mexico. 70c.

CEREUS GIGANTEUS Engelm.

Giant cactus or sagua, the largest known species, of 49 or more feet high. \$1 up.

CEREUS GRANDIFLORUS Lawar. "The night-flowering cactus has gained a fame which entitles it to prominent notice, and plants might well be included in every garden, for its flowering is a source of interest to the least observant persons."—Castle.

1c. up.

CEREUS GREGGII Engelm.

Night blooming fragrant white fls., numerous roots and tender branches 8c-80

CEREUS GUMMOSUS Engelm.

Pitilla agria or cord-wood cactus, a widely spreading plant with stout black or gray spines, noted for its delicious fruit. \$2 up.

CEREUS HOPPENSTEDTI.

Mexico, §Pilocereus, \$2 up.

CEREUS MAC DONALDIAE Hook. A handsome slender-stemmed species, of Honduras, Central America, and one of the finest of the night-flowering cacti. Flowers 12 to 14 inches across, with creamy white lanceolate petals, with an outer fringe of narrow yellow sepals; with a fragrant, like vanilla.

We no longer consider this distinct from *C. grandiflorus*.

CEREUS MARITIMUS M. E. Jones.

Resembles *mojavensis* in size, fls. yellow. \$1

CEREUS MOJAVENSIS Engelm.

Occurs in almost inaccessible mountain canyons in the Mohave desert, where its head and blossoms have a fancied the solitary presence; the clusters of short heads form a very symmetrical plant like a cushion of green satin filled with needles—a form of polyacanthus. \$1

V. Zunienis from Arizona—a finer form. \$2

CEREUS MULTIPLEX Hort. §Echinopsis.

Beautiful pink fls. 25c.-83

CEREUS NAPOLEONIS R. Graham.

Near triangular, probably a form only? \$1

CEREUS NYCHICALUS Link.

Yellowish fls., night blooming, distinguished from *grandiflorus* by its 4 angled stems. 2c.-84

CEREUS PACIFICUS (Engelm.) Coulter.

Form of polyacanthus, c. sp. loose, crimson fls. Original, described as a form of phyllocactus, from type locality, \$2 up to \$100 for clusters.

CEREUS PECTEN-ABORIGINUM Engelm.

Fruit about 20 feet high, branching, bearing reddish fls., a curious stony fruit resembling giant chestnut burrs, from which the Indians made combs—hence its name: 'Thecho' 85 up.

CEREUS PECTINATUS Engelm.

§Echinocereus. Fragrant magenta fls. 25c.

CEREUS PENICULOPHUS De Candolle.

R. Lued to *Berlandieri*. 40c.

CEREUS PERUVIANUS MONSTROSUS Hort.

Gothic in the extreme. 75c. up.

CEREUS POLYACANTHUS Engelm.

Hardy, crimson fls., of easy growth. \$1 up.

CEREUS PRINGLEI S. Watson.

§Echinocereus. The 'carden' of San-ra and Baja California, resembling *giganteus*. \$2 up.

CEREUS PRICUMBENS Engelm.

Near *Berlandieri*, spreading prostrate stems with fls. 3 inches across, rose purple. 20c.

CEREUS PUGIONIFERUS Lem.

None in stock, Mexico; form of *geometrizans*.

CEREUS REGELII Hort.

Form of *grandiflorus* named in honor of Dr R.

CEREUS RIGIDISSIMUS Engelm.

Echinocereus candelans of catalogs, famous as the rainbow cactus, considered by Engelm. as a form of *pectinatus*. 40c.-81

CEREUS SARGENTIANUS Orcutt.

§Echinocereus. Form of *Schottii*. 18 inch c. tips with beautiful red-colored hair. \$3; small or rooted plants 4c. up.

CEREUS SCHOTTII Engelm.

§Pilocereus. 8c. up.

V. AUSTRALIS Brandegee, new, \$4

OLD MAN CACTUS.

CEREUS SENILIS Salm-Dyck.

§Pilocereus. The old man cactus attracts universal attention, receiving it popular & very a appropriate name from the long, flexible, ivory white spines, giving the plant a most grotesque appearance, like the top of an old man's head in miniature. In Mexico it attains a height of 20 to 30 ft., 9 or 10 inches in diameter, its fluted character giving it somewhat the appearance of an architectural column. When young the stems are succulent, but with age the tissues become filled with 60 to 80 per cent. of oxalate of lime in small sand like grains. 40c.-\$2

CEREUS SPECIOSISSIMUS DC.

Mexico; bears in profusion large crimson fls., often 8 inches across. 25c-\$1

C. SPLENDENS Hort

Our plants under this name are indistinguishable from colubrinus, but have not yet fld. CEREUS STRAMINEUS Engelm.

None in stock; 50c. upwards.

CEREUS THURBERI Engelm.

Pitahya dulce a noted Mexican species, 5 ft. high, bearing delicious fruit.. \$1 upwards.

CEREUS TRIANGULARIS Miller. The Strawberry Pear bears most beautiful flowers scarcely less handsome than C. grandiflorus, measuring 12 to 14 inches across; the bright scarlet fruit, the size of a goose's egg, has a flavor compared to strawberries; the plant is easily distinguished by its triangular stems, and makes a most luxuriant growth, climbing readily to the top of its support.

Rooted cuttings usually in stock at 10c. up.

CEREUS TUBEROSUS.

The small tuberous roots produce slender stems 1-4 feet high, covered with a delicate lace-work of interlacing white spines. Flowers terminal, over 2 inches across, pale rose purple. A liniment can be made by steeping the tubers in alcohol, "said to be a 'sure cure' for rheumatism." C. Poselgerianus Coult. & probab y C. Poselgeri Hort. are other names of this plant. None in stock but quickly obtained at 15-50c.

CEREUS VARIABILIS Pfeiffer.

Engelmann's variabilis is the plant commonly sold under this name—the older stems triangular, armed with sharp straight spines, & a night bloomer, true name is C. princeps Hort. 2c.-\$1 True Pfeiffer's variabilis I have yet to see.

CEREUS VIRENS DC.

Pilocereus Houletianum & filophorus, &c.

CEREUS VIRIDIFLORUS Engelm.

§Echinocereus "Lovely purple & white spines." 25c-\$1

Genus ECHINOCACTUS Link & Otto.

E. ACANTHODES Lem.

This old name has recently been revived by Dr. Weber of Paris for the plant now familiar to us under the name of E. cylindraceus.

E. ARRIGENS Link.

Wavy ribs, straight leaf-like central spines, with dark lilac flowers. None on hand.

ECHINOCACTUS BICOLOR Gal.

Fls. 2-3 inches long, bright rose purple; plant 4-8 inches high, with spines of rainbow tints. 35c

ECHINOCACTUS BREVIHAMATUS E.

Body bright green, spines white & brown, the lower spines strongly hooked, profuse flowering 25-50c

ECHINOCACTUS CALIFORNICUS Mon.

E. viridescens has been cultivated in Europe it is said, but Dr. Weber has recently published a description of a plant from Lower California & claims it to be identical with Monville's plant. E. CAPRICORNIS Dietr. Mexico

Few deeply cut ribs spotted with white dots & entirely spineless but for a crown or tuft of interlacing spines; fl. saffron yellow with a deep red center; called an Astrophytum by some. 50c

ECHINOCACTUS CHRYSACANTHUS O.

Originally sent out as a variety of Emoryi, it is globose to cylindrical, with about 18 ribs & 10 flexuous annulated central spines 2 inches long, & 40 many slender white radial spines; saffron yellow to crimson fl. \$1-\$8

ECHINOCACTUS CRYPTOGONUS Lm.

A small growing bluish plant, with few broad upturned light colored spines lying close to the ribs, fls. striped with purple 5c-\$1 50

ECHINOCACTUS CORNIGERUS DC.

Lizard cactus—broad sharply hooked reddish spines 1/4 inch across. 20c-\$2

Var. FLAVISPINA: yellowish spined; both var have rose purple fls. & are not very distinct.

ECHINOCACTUS CRISPATUS DC.

Mexico; 30-40 compressed ribs; fls. striped, \$1

ECHINOCACTUS CYLINDRACEUS E.

Handsome, sometimes 10 feet high, fls & spines yellow, but in young plants the color of the spines is variable—hence the following:—

Var. ALBISPINUS—with ivory white spines;

Var. BICOLOR—red & yellow spines;

Var. RUBRISPINUS—with red spines.

Prices from 25c to \$50 for cristate specimens.

ECHINOCACTUS EMORYI Engelm.

\$1-\$15 for plants from 4 inches to 2 ft. in diam.

ECHINOCACTUS ERECTOCENTRUS C.

"Mamillaria Childs! A grand new Cactus from the mountains of Arizona. It is quite hardy, being found at a latitude where snow and ice is perpetual. One of the loveliest plants known to cultivation. Growth short and globular, with numerous spines which have a peculiar and beautiful luminous blue color, making it at all times a lovely object and a fine companion to the Rainbow Cactus. Its flowers are freely borne, large, white, tinted pink and with a deep pink bar through the center. 30c. each; 2 for 50c." John Lewis Childs, 1894, with figure.

Near E. intertextus—a well marked variety.

E. FORDII Orcutt, Review Caetaceae, i. 56

Globose, 6 inches or more in diameter, with about 18 tuberculated narrow ribs closely set with clusters of stout ashy gray spines, 4 central, annulated, the longest 1 1/4 inches long, and hooked; 2 slender spines above with about 14 divergent radials; flower an inch across, about 32 rose purple petals in 2 series, 9 greenish stigmata, style tinged with red, filaments red at top and yellow at base, anthers orange yellow. Near Lagoon head, Baja California, named for Lyman M. Ford, of San Diego, who has taken a great interest in these plants. Apparently the same plant was distributed in 1894 from near San Quintin bay as a form of E. peninsulae! \$1-6

ECHINOCACTUS HORIZONTHALONICUS Lem

Glaucous, globular, 8-ribbed, with clusters of rigid gray spines; fls. rose purple 25c-\$1

ECHINOCACTUS INTERTEXTUS Em.

Var. **DASYACANTHUS**—egg-shaped. 40c.

ECHINOCACTUS JOHNSONII Engelm.

This rare & handsome species grows in out-of-the-way desert places & costs much trouble to secure; numerous reddish ash colored spines—turning a deep red when wet. \$1-\$8.

ECHINOCACTUS LECOINTEI Engelm.

Typical form not in hand; the Californian var. (perhaps a form of *cylindraceus*) is the plant commonly sold under this name. 25c up.

ECHINOCACTUS LIMITUS Engelm.

Form only of *viridescens*—not distinct.

ECHINOCACTUS LONGHAMATUS Var.

Heavily notched dark green ribs with very long hooked central spines; fls. reddish. 50c.

E. LOPHOTHELE Salm. Mexico.

Ribs broken into irregular tubercles bearing long central spines. 50c.

ECHINOCACTUS McDOWELLII Rebut.

A very beautiful Mammillaria-like species of Mexico, thickly set with long bright straw colored spines which completely hide the plant. \$1

ECHINOCACTUS MULTICOSTATUS.

A remarkable species, small, with 90-120 narrow ribs. None on hand. 50c-\$3

ECHINOCACTUS ORCUTTHI Engelm.

None on hand at present \$1-\$100

ECHINOCACTUS POPYRACANTHUS E.

No living plant known in cultivation.

ECHINOCACTUS PENINSULAE Eng.

Globose to cylindrical, rarely over 18 inches in diameter but sometimes feet high, with 12-21 compressed tuberculated ribs; spines dull red, 7 stout centrals and 11 radials—the stoutest not rarely 4-6 inches long and $\frac{1}{4}$ inch broad, hooked. \$1-\$75—one of the finest species ever offered.

ECHINOCACTUS POLYANCISTRUS EB

An exceedingly rare & strikingly beautiful plant, with 2 sorts of spines—numerous hooked round & brownish pink, & a few ivory white not hooked; occurs singly at widely separated localities in the desert—hence called the "intermit cactus." \$1-\$5

ECHINOCACTUS POLYCEPHALUS E.

Mohave desert, a rare & handsome species occurring usually in great clusters; spines purplish 4-8 inches, 50-\$1; clusters \$3 upward

ECHINOCACTUS SCHEERII Sm-Dyk.

Texas, a pretty species resembling *brevihamatus* 20c

ECHINOCACTUS SETISPINUS Engelm.

Large yellow fls., coral red fruit. 25c

ECHINOCACTUS SILERI Engelm.

Utah, none on hand, will collect to order.

ECHINOCACTUS SINUATUS Dietr.

"E. subglobose, apice rotundatus; costis 13 crassis angulato sinuatis, sinibus profundis acutis, areolis imatis demum subnudis, aculeis subnodosis, marginalibus 10-11 inaequalibus setaceis rectis, junioribus hyalinis erubescens, adultioribus albo griseis opaci, centrali unico longiore ensiformi apice hamato. Habitat in Texas."—Dietr. AGZ 1851. 345. 50c.

ECHINOCACTUS TEXENSIS Hoepf. Depressed, 13 to 27 acute ribs; spines stout, annulated, 6 to 7 radical ones and a stronger central spine; flowers rose colored; fruit subglobose, pulpy, red, covered with spiny bristles and soft wool, crowned by the wooly remains of the flower.

25-75c.

ECHINOCACTUS TROLLIETI Rebut.

Identical with *E. unguispinus*?

ECHINOCACTUS UNCIINATUS Gal.

Var. **WRIGHTII** Engelm. ann. Texas, rare. \$1

ECHINOCACTUS UNGUISPINUS Engelm.

Rare, Mexico; all sold \$2-5

ECHINOCACTUS VIRIDESCENS Nutt.

The Turk's Head cactus, that occurs at San Diego, California; very variable, but usually depressed, less than a foot in diameter, with strong, annulated reddish spines; 13 to 21 ribs; fruit greenish or sometimes tinged with magenta, very sour, enclosing numerous black seeds.

Fine plants 10c \$5

ECHINOCACTUS WHIPPLEI E. & B.

Plant 3-5 inches high, ovate-globose, 13-15 ribs, 7 compressed white radial & 4 hooked central spines. Very rare. \$1

E. WILLIAMSII Lem ex Salm.

"Lem. Cat. Cels. 1845, sine descriptione). C. humili inferne ramoso superne tuberculato cinescente viridi, vertice impresso, tuberculis latis obsoletissime polyedris is-costas subcondiuntibus pulvillisque in strictis remotiusculis lanigeris, lana cinescente densa longa in penicillum erectum collecta. Floribus parvulis roseis."—Salm. AGZ. 1845. 38

Mescal button, Dumpling, & Turnip cactus are names applied to this queer thing, which has been known for years as an *Anhalonium*, a which Coulter makes the type of his new genus *Lophophora*. 30c

ECHINOCACTUS WISLIZENI Engelm.

The strong hooked central spine gives this the name of the Fish-hook cactus said to have so been utilized by the Indians; the large size and have given it the name of Barrel cactus; to the Mexicans, in common with most species of the genus, it is the *Visuaga*, utilized in confections.

Var **ALBISPINA** Toumey, white spined,

Var. **DECIPIENS** Engelm.

Prices 25c \$30; 1 to 2 feet high \$2-\$10

E. **WRIGHTII** Engelm.—var. of *uncinatus*.

Genus ECHINOCEREUS Engelm.

Included under *Cereus*.

E. **cardians** Hort.—see *rigidissimus*.

Genus ECHINOPSIS Zuccarini.

Included under *Cereus*.

E. **EYRIESII**: short spines, white fls. 25-50c

ECHINOPSIS MULLERI. A hybrid, of rapid growth, blooming early, and with its large satiny rose-colored flowers is justly called the finest of its class.

Doubtless only a form of *multiplex*. 10-75c.

Genus EPIPHYLLUM Pfeiffer.

E. **GAERTNERI**: white fls. 25-50c

E. MACOYANUM: 25-50c ?

E. RUSSELLIANUM: 15-25c

EPIPHYLLUM TRUNCATUM Haw.

Inch, crab or lobster cactus 10c-8¢

Genus LEPISMUM Pfeiffer.

This genus is merged into Rhipsalis by some botanists, we have none to offer at present.

Genus LEUCHTENBERGIA Fisch.

LEUCHTENBERGIA PRINCIPIS Fisch.

Triangular tubercles about 3 inches long & surmounted by straw-like spines 4-6 in. long. 5¢

Genus LOPHOPHORA Coulter.

LOPHOPHORA WILLIAMSH Coulter.

Best known as Anhalonium, & more properly as an Echinocactus (which see), 30c.

Var LEWISII (Anhalonium Lewinii): 50c.

Genus MALACOCARPUS Salzm.

None to offer at present.

MAMMILLARIA ALVERSONI Hort.

"Differs from var. deserti in its more robust & branching habit. **more numerous stouter & longer *spines, all black tipped (the centrals black half way down, shading into red), a pink fl. ** Fox-tail cactus." \$1

MAMMILLARIA ARIZONICA Engelm.

§Coryphantha. The plant advertised as impatiens is a form of this, also Alversoni. 25¢.

MAMMILLARIA BOCASANA Poseg.

This beautiful plant is covered with the finest tender hair like spines. \$1

M. CARNEA, an elegant plant, 40-75c

M. COMPACTA, clusters 25c each head.

M. CORNIFERA, large showy fls. 40-75c

MAMMILLARIA DECEPIENS Schw.

Loose tubercled small growing species with delicate & pretty yellow fls. 50c.

MAMMILLARIA DOLICHOCENTRA Lm

M. clava more properly; very long tubercles & spines, of plain appearance. 25c

M. DIOICA K. Brandegee 25-8¢

M. Goodridgii Engelm (not of Scheer?), small globular species, closely set with brownish or white spines, the central one curved into a hook. The delicate yellowish white flowers are succeeded by the club-shaped, scarlet berries that possess the flavor of wild-wood strawberries, and are sometimes called "hep-pitallas," the "llavina" of the Mexicans.

MAMMILLARIA ECHINUS Engelm.

Hedgehog mammillaria heavy stout centrals, & large unique yellow flowers. 20c

MAMMILLARIA ELEGANS DC.

Neat lovely white spines, like a ball of snow, small crimson fls.—most attractive 50c-8¢

MAMMILLARIA ELEPHANTIDENS Lem.

Elephant's Tooth—so-called from the size & shape of the tubercles. 50c

M. ERECTA Lem

Several det Monte—on high mountains in the cold region of Mexico, yellow spines & fls.

M. FISSURATA—see Anhalonium fissuratum

M. FORDII Orcutt.

Ovate, 2 inches in diameter, and about 3 high,

rarely branching at base; tubercles obtuse, 1/4 inch across, short, 12 radial spines each one, 1/8-1/4 inch long, the solitary central black and hooked, 1/4 inch long, flower an inch long, white with about 9 petals and 9 sepals—the latter with purplish midvein on the back, 6 stigmata of a brownish-ten style greenish, filaments white and anthers orange yellow; flowers in July; Baja California on the west coast, collected by L. S. Ford, 1899. var M. Goodridgii \$1

MAMMILLARIA FULVISPINA Haw.

None on hand.

MAMMILLARIA GABBII Engelm.

Caeus Brandegeei & Gabbii Coulter, near M. Lecleri, with milky juice, "C. 302." \$

MAMMILLARIA GOODRIDGII Scheer.

We have just collected what is now believed by K. Brandegee to be the typical form. 5c

MAMMILLARIA GLOCHIDIATA Mart.

Once distributed as zephyrithoides. 50c

MAMMILLARIA GRAHAMII Engelm. Plant

1 to 3 inches high, subglobose, simple or branching from the base; tubercles ovate, axils naked; radial spines in one series, 20 to 30 in number, 3 to 6 lines long, rigid and whitish, surrounding a stouter and longer hooked brown one. Flowers small, nearly 1 inch wide, reddish; berry oval, green, with small pitted seeds. The well-known "Arizona Strawberry" or small Fishhook Cactus of N. M., Arizona and Utah, rare in California.

Var. ARIZONICA, a much larger, stouter set, lined plant—perhaps barbata? Fisher form, 20c-8¢

MAMMILLARIA HALEI Brandegee.

§Cochinea, cactus like, with straight, long stout purplish brown spines, scarlet fls. similar to E. i. hylum, & large red fruit \$1

MAMMILLARIA HEYDERI Muehlenpf.

Var. APLANATA Engelm (n. sp.), 15-80c

M. KRAMEI L. 50c.

MAMMILLARIA LASIACANTHA Engelm.

A beautiful feathery looking species, small & irregular looking more like a bunch of down

M LONGIMAMA DC. Mexico,

Flower 1 1/2 inches across, 18 canary yellow petals & 12 brownish sepals, 9 greenish yellow stigmata, style green, filaments white, anthers orange color; state of Hidalgo, torrid zone 75c.

MAMMILLARIA MACROMERIS Engelm.

Tubercles large, spines long, flowers 2 1/2-3 1/2 inches across of a distinct carmine & fine. 20c.

MAMMILLARIA MEIACANTHA Engelm.

Form of Heyderi, milky juice. 30c.

Var LONGISPINA, more & longer spines 50c.

M. MICROMERIS Engelm (n. sp.). Texas.

Mushroom cactus, resembles a silk covered button, can be handled without gloves 25c.

Var GREGGII, larger, 3c.

MAMMILLARIA MINIMA Reicheb. A tiny Mexican species, cylindrical, forming numerous heads around the base, which readily take root when detached. About 20 slender white spines radiate from the center of each hemispherical tubercle, enveloping the plant like a bit of delicate lace; no central spine.

Stands wet & heavy soil, 25c

M. NICHOLSONI Hort Mexico.

The plant 3 inches across, producing copious wool in the depressed top, tubercles 4 angular,

crowded, 4 cruciate centrals, the longest $\frac{1}{2}$ inch, & numerous short slender white radial spines. \$1

MAMMILLARIA PECTINATA Engelm.

A beautiful plant bearing very large yellow fls, $2\frac{1}{2}$ inches across when fully open, outer sepals reddish-green; petals sulphur yellow. 25c

M. PETER-ONI, 'long white spines interlacing the plant, fine scarlet fls.' \$1

M. PFEIFFERI, covered with golden spines which 'fairly dazzle in the sunlight.' 60c

MAMMILLARIA PHELLOSPERMA E.

Fls rose purple, blooming in the fall; many soft white radial spines, 1-6 hooked brown or black centrals, fruit clavate, bright scarlet, as it is a desert species it needs dryness. 25c & 2

MAMMILLARIA PONDII Greene.

Only one, will collect to order.

MAMMILLARIA PUSILLA Sweet.

This beautiful little cactus is always admired for its bright silvery spines, which radiate in the sun, fls yellowish white with a red stripe in center of petals. 15c

M. RHODANTHA Link & Otto. Mexico.

Fls produced in succession during the summer, bright rose, a pretty sort. 40c

MAMMILLARIA ROSEANA Bndg.

MAMMILLARIA SCHEERII Muchlplf.

MAMMILLARIA SENILIS Lodd.

MAMMILLARIA SPINOSISSIMA Lem.

Only a few left, \$1

MAMMILLARIA STELLA-AURATA Mt.

Golden-star; yellow spines in a flat-topped star-like rosette, a dwarf, much branched. 20c

MAMMILLARIA STROBILIFORMIS Shr.

Better known as tuberculosa, 2-5 in. high, often with globose branches at the base. 20c

MAMMILLARIA UNCINATA Zucc.

Our plants of this are not typical, but a very pretty distinct form from Mexico. 75c

MAMMILLARIA WILCOXI Tourmey.

Unpublished, exceeding rare, only 2, \$3 each.

MAMMILLARIA WRIGHTII Engelm.

None in stock, wanted

Genus MELOCACTUS De Candoile.

We have none of this genus, import to order.

MYRTILLOCACTUS GEOMETRIZANS C

Cereus geometrizans of old authors, probably cochal is the same, or a form.

Genus NOPALEA Salm.

NOPALEA AUBERI Salm-Dyck. A Cuban cactus, of rapid growth, assuming a tree-like form, and bearing numerous rose-colored flowers with exsert stamens; the branches armed with stout spines; readily grown from cuttings.

NOPALEA COCCINELLIFERA Salm.

The cochineal cactus; cuttings 30c.

N DEJECTA, Cuba, cuttings 40c

Genus OPUNTIA Tournefort.

Opuntia in 100 varieties, cuttings, 10c-\$1.

OPUNTIA ACANTHOCARPA E. & B.

OPUNTIA ANGUSTATA E. & B.

OPUNTIA ARBORESCENS Engelm.

OPUNTIA ARENARIA Engelm.

OPUNTIA BASILARIS Engelm. & Bigelow. Low; joints 5 to 8 inches long, triangular, proliferous from their base, pubescent, un-

armed, but beset with numerous dense fascicles of short brownish bristles, as is also the ovary. Flowers large, $2\frac{1}{2}$ to 4 inches in diameter, bright magenta, and very numerous; fruit dry, with large and thick seeds.

Var **RAMOSA** Parish. In cultivation the typical form becomes branched like the variety. One of the most satisfactory cacti that we know for an amateur's collection, flowering profusely and growing readily. In the deserts of California, Arizona, Nevada and Mexico, the whole plant sometimes assumes a brownish red, but in cultivation it seems to maintain a glaucous green color.

OPUNTIA BERNARDINA Engelm.

OPUNTIA BIGELOVII Engelm.

OPUNTIA BRACHYARTHRA E. & B.

OPUNTIA BRASILIENSIS Haw.

OPUNTIA CHLOROTICA Engelm.

OPUNTIA CTRASSAVICA Mill.

OPUNTIA CYLINDRICA DC.

OPUNTIA DAVISII E. & B.

OPUNTIA DULCIS Engelm.

OPUNTIA ECHINOCARPA E. & B.

OPUNTIA EMORYI Engelm.

OPUNTIA ENGELMANNI Salm-Dyck.

OPUNTIA FIGUS-INDICA Mill.

OPUNTIA FRAGILIS Haw.

OPUNTIA FULGIDA Engelm.

OPUNTIA FULVISPIA Salm-Dyck.

OPUNTIA GLAUCOPHYLLA Wendl.

OPUNTIA GRAHAMII Engelm.

OPUNTIA GRANDIS Hort.

OPUNTIA INVICTA Brandegee.

OPUNTIA LEPTOCAULIS D C. This is the widely advertised *O. frutescens*, Engelm., of Texas and Mexico; 2 to 4 feet high, with slender terete joints a fourth of an inch thick; very small yellow flowers; berries scarlet. Quite ornamental and a favorite with cactus fanciers.

OPUNTIA LURIDA Hort.

OPUNTIA MACROCENTRA Engelm.

OPUNTIA MACRORHIZA Engelm.

OPUNTIA MAMILLATA Schet.

OPUNTIA MICRODASYS Pfeiff.

OPUNTIA MONACANTHA Haw.

OPUNTIA NIGRICANS Haw.

OPUNTIA OCCIDENTALIS Engelm. A Prickly Pear of luxuriant growth, with stout woody stems and innumerable branches; joints 9 to 12 inches long and 6 to 8 inches across; flower yellowish and orange; fruit 2 inches long, very sour and juicy.

OPUNTIA PARISHII Orcutt.

OPUNTIA PHAEACANTHA Engelm.

OPUNTIA PROLIFERA Engelm. This densely-branching shrub bears a small flower of a pomegranate purple, and once grew in great abundance where the city of San Diego now exists.

OPUNTIA RAFINESQUII Engelm.

OPUNTIA ROSEA DC.

OPUNTIA RUFIDA Engelm.

OPUNTIA RUTILA Nutt.

OPUNTIA SENILIS Roelz.

OPUNTIA SERPENTINA Engelm. Pro-cumbent, with yellow flowers, comparatively rare in cactus collections.

OPUNTIA SUBULATA Engelm. A beautiful tropical species of rapid and rank growth, with persistent vivid green leaves, and long, straight spines.

OPUNTIA TENUISPINA Engelm.

OPUNTIA TESSELLATA Engelm.

OPUNTIA TUNA Mill.

OPUNTIA VULGARIS Mill.

OPUNTIA WHIPPLEI E. & B.

Genus PELECYPHORA Ehbrenb.

- PELECYPHORA ASELLIFORMIS Ehbrenb. Hatelot cactus, a small rare and interesting plant allied to the mammillarias 30c
- PERESKIA ACULEATA Mill. The Barbadoes gooseberry or Blad-apple, a cactus with leaves like an orange tree, excellent for grafting. 15c

Genus PFEIFFERA Salm.

Only one species, which we have never seen.

Genus PHYLLOCACTUS Link.

- PHYLLOCACTUS ACKERMANNI Walp. Profuse bloomer, fls. saffry scarlet with petals acutely pointed, wavy edges; King cactus. 25c
- PHYLLOCACTUS ANGULIGER Lem. Deep notches along the stems like the teeth of a large saw; fls. pure white, fragrant. 75c
- P. BOLLVIERIANA, fls. carmine-scarlet, 5 inches across. 50c
- P. Conway's Giant; fls. often 2 ft. in circumference, deep scarlet shading to purple. 75c
- PHYLLOCACTUS CRENATUS Walp.

This species, which is a native of Honduras, rivals in size and fragrance of fls. the famous Night-blooming cereus. It grows to a height of 2 feet, with round base branches, the upper portion flattened out and the margins serrated, the flower tube 4 in. long, brownish green like the sepals; petals 4 in. long, creamy white. 1.0c

PHYLLOCACTUS KAMPMANNI Hort.

Fine free bloomer, fls. of exquisite shape, purplish carmine. 50c

QUEEN CACTUS.

PHYLLOCACTUS LATIFRONS Walp.

- Popular night-blooming sort. 15c
- PHYLLOCACTUS WRAYI Hort. Fls. 8 in. across, yellowish-white. 40c

Genus PILOCEREUS Lemaire.

- Included under Cereus.
- ||angulosus Steb.
- ||albispinus Steb.
- ||auratus Salm—flavicomus
- ||barbatus
- runnowianus Haage
- Columna Lemaire & var. Trajani
- omatus Lab. cometes onsolei Dautwitzii
- gloecosus fossilatus Lab. \$1—||Fouachei
- ||giesbreghtii Haagei Poselg.
- ||Haworthii DC., see nobilis—||germanii Monv.
- ||Hoppensii Edm—||bulletii v. glaucescens
- Sarg. nianus v. reutt—form of schottii?
- Schottii v. australis new
- senilis—||virens import to order only.

Genus RHIPSALIS Gaertn.

- RHIPSALIS CASSYTHA Gaertn.
- RHIPSALIS SALLICORNIODES Haw.

PLANTS.

- AGAVE AMERICANA Linn.—The celebrated maguey or American aloe. 25c-\$30
- Var. Milleri, a glaucous form freely planted for tropical effect. 25c
- Var. striata, leaves irregularly marked with white down the center. \$1.00

- Var. variegata, leaves margined with pale yellow, very decorative. 10c-\$10
- ALBICANS Jacobi, a Mexican with broad thin light green leaves. \$1.50
- applanata..... 1.00
- atrovirens, Karw..... 50
- attenuata, Salm..... 1.00
- besseriana—see macroacantha.
- DECIPIENS Baker, foliage apple green with stout black terminal spines. 35c

AGAVE DESERTI Engelm.

The mescal of the desert, glaucous foliage. \$1

- ENGELEMANNI Trelease, one seedling only. Espadilla—see Xylonacantha.
- FEROX Koch, flat hooked deeply notched twisted spines. \$2
- geminiflora Ker-Gawl..... 1.00
- giesbreghtii C. Koch..... 1.00
- GILBEYI Hort. One of the most symmetrical and handsome species. \$1
- HETERACANTHA Zuccarini, better known as lecheguilla, from Texas. 75c

AGAVE HORRIDA Lem.

See Gilbeyi. \$1.00

AGAVE LECHEGUILLA Torr.

- See heteracantha 75c
- macroacantha, Zucc..... 1.00
- maculata Regel ["Texana"]..... 50

AGAVE MARGARITAE Brandege. A recent introduction from the islands off Lower California, and one of the handsomest of the smaller growing agaves.

A few remain at \$1-4

AGAVE MICRACANTHA Salm-Dyck.

- One only remains. \$1
- AGAVE PALMERI Engelm. A very symmetrical species, found in the mountains of Southern Arizona.

We have several yet in stock. Prices \$1-\$10.

AGAVE PARRYI Engelm.

- Perhaps properly applanata. \$1
- potatorum Zucc..... 1.00

AGAVE PRINGLEI Engelm.

- None in stock, orders booked. \$5
- rigida Mill..... —
- v. sisalana..... 25
- Salmiana Otto, our one plant under this name appears to be a Furcraea! \$1
- salmiana Otto—see atrovirens.
- Sebastiania Greene, near Shawii, from Guadalupe Island? only one plant. \$15

AGAVE SHAWII Engelm. Very compact, dark olive-green leaves, margined with stout spines. Peculiar to the coast region of Southern and Lower California.

- Fine plants 50c-\$5
- AGAVE STRIATA Zucc.
- Out of stock.
- subulata?..... 1.00
- sulcata?..... 2.00
- AGAVE UNIVITTATA Haw.

A pretty species, with slender narrow-margined leaves armed with slender gray spines. 75c

AGAVE UTAHENSIS Engelm.

Resembles a dwarfed Parryi. 50c

— *Vershaeffeltii* Lemaire, one plant of doubtful identity. 75c**AGAVE VICTORIAE-REGINAE** T. Mre.

One only in stock, orders booked. \$3

AGAVE XYLONACANTHA Salm-Dyck.

A few established plants at \$2

ALOE AFRICANA Mill.

A plant of tropical aspect, growing several feet high; leaves apple green, narrow, curving downward, margined with short erect spines; produces a spike of showy red flowers, quite ornamental in effect and being of rapid and easy growth can be recommended highly 10c-41

ALOE BREVIFOLIA Mill.

Light green leaves with short horny spines on all sides forming a beautiful rosette 6 inches or more across. 10c-41

A. GRACILIS, a tall slim species with narrow dark green leaves a green rib 50c

A. LATIFOLIA, broad dark green leaves blotched and mottled with lighter green, margined with stout short spines; of rapid growth with showy red flowers. 20c-41

A. QUATRIFORMIS XANTHOCANTHA, an arborescent species with broad short & stout leaves margined with light yellow spines, a magnificent sort. \$1

A. PIETA, resembles *latifolia* but smaller with narrower leaves. 50c

A. SUCCOTRINA Lam. Light green narrow acuminate leaves with short marginal spines—leaves occasionally spotted with white; a large showy sort. 10c-41

ALOE VARIEGATA Linnaeus. An African plant of great beauty, producing spikes of brilliant coral red flowers. It is found in many old-fashioned gardens and receives its common name from the feathery mottling of the leaves.

YERBA MANSE.

ANEMOPSIS CALIFORNICA B. & H. This is one of the favorite medicinal herbs of the old Spanish Californians, but has won a permanent place in European greenhouses, and should be given the attention it deserves in the land of its birth. It is readily grown in moist soil, the apple-green foliage, frequently blotched with crimson, showing off the rather large white flowers to great advantage. 35 cents;

BRYOPHYLLUM CALYCYNUM Salisb.—sprung leaf, so-called because a leaf roots so quick when placed on damp earth; quite curious. 5c

Caecalia repens—see *Senecio succulentus*.

CARAGUATA LINGULATA Lindl.

75c

COTYLEDON ATTENUATA Watson.

A dwarfish species resembling *calulis*, with yellowish flowers, discovered in 1886, and introduced by C. R. Orcutt; useful for borders. 10c
C. California—the true name of this pretty sp. proves to be *sempervivum calcareum*.

C. EDULIS Brewer (*Sedum edule*).

Called Finger-Tips, so-called from the round, slender leaves, said to be eaten for sand by the Indians; much larger than *attenuata*. 20c

C. LANCEOLATA Bentham & Hooker.

Does well under good treatment, producing a

spike of red or yellow flowers. The lanceolate flat leaves sometimes of a dull crimson color, but commonly green; 6 inches across. 20c

C. LAXA Bentham & Hooker

Leaves curiously twisted; flowers red or yellowish—much like *lanceolata* otherwise. 40c

C. LINEARIS Greene. Lower California.

Another plant first introduced into cultivation by C. R. Orcutt, and similar to *lanceolata*. 3c

C. ORBICULATA Linnaeus. South Africa

An old time garden favorite, attaining a height of several feet and tropical in aspect; produces large pendulous orange-colored flowers of rare beauty and permanence; of rapid growth. 10c

COTYLEDON ORCUTTI Greene.

Near *attenuata*, but different inflorescence, flowers tinged with pink; excellent border. 10c

C. PULVERULENTA Faber.

A plant of great beauty when at its best, with broad leaves covered with a thick white powder, elegant in form. 25c to \$2

C. SECUNDA Baker. Mexico.

Very beautiful symmetrical plant—used extensively in parks, rockeries, borders, &c. 10c
COTYLEDON VISCIDA S. Watson.

Handsome apple green foliage and sprays of rose purple flowers; a great novelty. 75c

CRASSULA FALCATA Wendl. A South African plant, grayish in color, producing gorgeous panicles of brilliant red flowers. 25c;

EUPHORBIA SPLENDENS Boj.

30 cents;

FURCRAEA BARILLETTI Jacobi.

25c; 75c

GASTERIA MACULATA Haw.

There are about 25 varieties of *Gasterias*, all quite similar in appearance, with tongue-shaped white-spotted leaves. 25c

G. LINGUA, NIGER, PUN TATA, VERRUCOSA,**G. SPIRALIS** var *RECEDA*, each 20c

See Wedd; not guarantee these names correct.

HAWORTHIA MARGARITIFERA, 15c

—*REINWARDTII*, 30c—10 other var. to or of.

Kleinia articulata—see *Senecio articulatus*.

—*repens*—see *Senecio succulentus*.

MESEMBRYANTHEMUM AEQUILATERALE, Haworth. Beach Strawberry or Sea-apple. An Australian and West American creeping plant, spreading readily over saline ground, whether clayey, sandy or rocky. "Sheep are very fond of this succulent plant, and require but little water when browsing on it; or in cold coast districts they will do without any water, even in summer, while thriving well on the foliage." The brilliant red flowers are very fragrant, followed by large, sweet and delicious fruit, faintly suggestive of a strawberry. An ornamental plant, easily grown from cuttings.

Plants, 25 cents each.
MESEMBRYANTHEMUM CRYSTALLINUM

In plant, we see advertised at 15-25c; as it is an annual we advise growing from seed. 1 qt 5c

M. tigrinum and other sorts, cuttings 10c.

SEDUM SPATHULIFOLIUM, cuttings 5c

—*VARIEGATUM*, tubers 15c per dozen.

SEMPERVIVUM CALCAREUM (S. californica, Cotyledon californica—native of Europe. 5c
 S. HOLOCHRYSUM, 20c
 SENECIO ARTICULATUS, 'candle plant' 5c
 —SUCCULENTUS, 'cotyledon cerulea' 25c
 STAPELIA ASTERIAS Mass.
 S. CILIOATA
 STAPELIA CONSPURCATA Willd.
 STAPELIA FUSCATA Jacq.
 STAPELIA GRANDIFLORA Mass.
 S. HISPIDA
 STAPELIA MARMORATA Jacq.
 STAPELIA PICTA Donn.
 STAPELIA PULCHELLA Mass.
 S. RECTIFLORA
 S. SISYPHUS
 STAPELIA TRISULCA Donn.
 S. VARIEGATA.

FERNS.

Adiantum emarginatum 1/2 100: \$6 00
 Aspidium munitum..... 15 00
 Asplenium trichomanes var. incisum..... 10 00
 Cheilanthes Californica Lace fern..... 10 00
 Cleavelandi, Lip fern, exquisite, rare.... 10 00
 myriophylla, Fendler's Lip fern..... 10 00
 viscidia, Desert Tea fern, rarely collected 10 00
 Gymnogramme triangularis, Gold fern... 4 00
 var. viscosa, California Silver fern..... 4 00
 Notoholena Californica (cretacea, candida) 10 00
 Parryi, the famous Cotton fern..... 6 00
 Parryi, Dr. Parry's Desert Cloak fern..... 20 00
 Pelae andromediaefolia, Wire fern..... 6 00
 ornithopus, Tea fern, easily grown... 4 00
 Polypodium Californicum, Polypody..... 4 00
 Pteris aquilina..... 4 00
 Woodsia Mexicana..... 30 00
 Woodwardia radicans, grows 19 ft. high... 1: 00

SEEDS.

CACTUS SEEDS.

Astrophytum myriostigma..... 1/2 pkt. \$30
 Anhalonium fissuratum..... 25
 —Lewinii..... 20
 —prismaticum..... 25
 —Williamsii..... 20
Cereus adustus..... 15
 —Berlandieri, chloranthus, dasyacanthus 20
 —Emoryi, Engelmanni, enneacanthus..... 20
 —gemmaeus..... 35
 —giganteus, 1/2 oz \$2..... 30
 —grandiflora, night blooming..... 25
 —paucispinus, pectinatus, procumbens... 15
 —pugioniferus & v. geometrizans..... 30
 —rigidissimus, Rainbow cactus..... 20
 Echinocactus bicolor, brevihamatus..... 20
 —capricornis, cornigerus & v. flavispinus 30
 —cottonogonus, cylindraceus..... 25
 —Lecontei, longihamatus, lophothele..... 20
 —Lathsonii, McDowellii, Orcuttii..... 25

—pilosus (steinsii), posegelianus, recurvens 20
 —rodophthalmus 20 ; Scheeri, setispinus... 15
 —Texensis 15c; turbiniformis viridescens 25
 —Wislizeni 1/2 oz \$2..... 25
 Mammillaria Alversoni, Arizonica..... 25
 —appanata 10c, bicolor, candida..... 15
 —carnea, clava (dolichoentra), elegans... 25
 —ehinus, fulvispina, fasciata, goodrichii 15
 —Grahami, macromeris, micromeris & v. 15
 —melacantha, Nickelsii, Parkinsonii..... 20
 —pectinata, phellosperma, pusilla..... 5
 —recurvata 15c; rhodantha, sanguinea.... 25
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ARENGA SACCHARIFERA Labill. The Sugar Palm, of India; the juice is converted into toddy or sugar; the young kernels made with syrup into preserves. The pitch supplies sago, about 150 lbs. from a tree, according to Roxburgh.
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The firs are magnificent trees, of pyramidal form and rapid growth.

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—1—*saccharinum* 3

Eucalyptus Cal. 3—*flava* 2—*glabra* 2—*Parryi* 7

Ailanthus glandulosus 1

Andromeda arborea 1

Arbutus menziesii 2—*unedo* 4

Arctostaphylos bicolor 3—*glauca* 1—*manzanita*

4—**purpurea* 4—*tomentosa* 2—*uva-ursi* 3—op-

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—*robusta* 3—*roezlii* 3—see Palm seeds.

Buxus sempervirens, *Evergreen Box*, 4

Callicarpa americana, dried berries 1.

Calycanthus floridus 1—*occidentalis* 3.

Carpinus americanus 2

Castanea americana ½—*Japonica* 2

Catalpa bignonioides 4—*speciosa* 8

Ceanothus divaricatus 5—*integerrimus* 5

—*thyrsiflorus* 5

Cerasus ilicifolia 1—see *Prunus ilicifolius*.

Cercis occidentalis 6

Cornus floridus ½—*nuttallii* 2

Craetagus cocinea, scarlet fruited thorn, 1

Genus **CUPRESSUS** Tournefort.

The Californian species of cypress are among the most widely planted of evergreens, & are very ornamental. The Monterey cypress is much used for hedges; the Lawson cypress is a species of *Chamaecyparis*.

C. GOVENIANA Gordon.

Low bushy shrub or tree. Per lb \$3

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Per lb \$3; 10 lb \$25; 100 lb \$200. Trees —

C. Lawsoniana—see *Chamaecyparis Lawsoniana*

C. M. canabiana, a graceful shrub, rarely over 10 feet high. Per lb \$2

CUPRESSUS MACROCARPA Hartweg. Monterey cypress, a familiar hedge-tree in California, cones the largest of the genus, about an inch thick.

Per lb \$1; trees per 100 \$—

JUGLANS CALIFORNICA Watson. The California Black Walnut is a tree or large shrub, producing small nuts of an excellent flavor, preferred by some to the Madeira nut. A grand ornamental tree, attaining a height of 60 feet, prolific, and could be advantageously grown in arid localities.

Juglans cinerea, butternut..... \$) 40
 -cordiformis..... 80
 -nigra, Black walnut..... 40
 -regia, Madeira nut..... 30
 -Sieboldii..... 1 00
 Juniperus californica Carr..... 2 00
 -occidentalis Hooker..... 2 00
 -virginiana L. Red cedar..... 60
 Kalmia latifolia, Laurei..... 5 00
 Kentucky coffee tree..... 5 0
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 Loquat..... 1 00
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 Negundo aceroides, Box elder..... 40
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 Nolina Bigelovii..... oz \$1
 -Palmeri, to order..... —
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 Oreodaphne californica..... 1 00
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 -insignis..... 2 00
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 or more, the main stems often with a circumference of 50 feet."
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 Prunus biflora..... 1 00
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 Rhamnus californica 4—carolinus dry berries, 1
 Rhododendron californicum maximum oz. \$1
 Rhynchospalina, dried berries..... 40
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 RHUS INTEGRIFOLIA Nuttall. A stout evergreen shrub, at times attaining to the rank of a tree, and a diameter exceeding five feet. The rose colored flowers produced in close panicles one to three inches long, followed by deep brilliant red berries, coated with an icy-looking, wax-like substance that is even more tart than the pleasantly acid berries. These berries make a cooling drink, equal to lemonade (almost indistinguishable in flavor.)
 In Southern and Lower California this is often called Mahogany, from the rich and beautiful color of the wood.
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METALS AND ORES.

ANTIMONY—An ore carrying about 38 to 40 per cent of this metal, and from \$5 to \$20 per ton in gold, occurs near San Diego, and awaits development.

CAESIUM—A rare metal contained in minute quantities in lepidolite. It would prove useful if an available supply existed.

LITHIUM—Amblygonite, lepidolite, spodumene, and triphylite are the principal ores of this rare metal, the lightest known.

PLATINUM—The constantly increasing demand for this widely dis-

tributed metal in the arts and manufactures of the world, and the present limited sources of supply, have in recent years greatly enhanced its price; about 80 per cent. of the present supply is derived from the alluvial deposits of the Ural mountains, but there are few if any of the gold-bearing gravel beds of the world that have failed to yield this metal. Platinum ore is usually found in the form of rounded or flattened grain or "sand," occasionally in irregular lumps of the size of peas; large nuggets are very rare—the largest as yet found weighing 21 pounds. The largest ever found in America weighed nearly 2 pounds.

QUICKSILVER.—Cianabar is the principal ore.

RUBIDIUM—One of the rare metals, more precious than gold, occurs as a by-product of the lithia mines.

MINERALS.

Twelve years ago the writer contributed to the San Diego Union a brief annotated list of the minerals then known in San Diego county. The county has since been divided into two, but more, rather than less, territory is now tributary to San Diego, hence the present list will not be confined to the arbitrary limits of the county, but to the territory naturally tributary to our bay.

ACHROITE (colorless tourmaline)—Of gem quality, has been discovered in San Diego county, California, associated with other lithia tourmalines.

ACTINOLITE—Abundant in the Colorado desert.

AGATE—Occurs in various forms in Southern California, but not in commercial quantity. The world's supply is principally received from Uruguay and Brazil, which is mainly cut and polished in Germany.

ALABASTER—An abundance of apparently good quality of this form of gypsum occurs on the Colorado desert, and in Baja California.

ALLANITE—Named for T. Allen, who discovered it among minerals from East Greenland, contains the rare metals cerium, didymium, glucinum, lanthanum, and yttrium, together with alumina, silica, lime, and iron, with traces of magnesium, manganese, soda,

copper, and water. This occurs in Pennsylvania, New Jersey, and in Southern California.

ALMANDITE—Red garnets are not rare in the California placer mines. Some few crystals of gem value have been produced in San Bernardino county; the finest having been valued as high as \$50 apiece. In the placer mines in Lower California the garnets were formerly saved, and sold for \$5 per pound—being popularly called rubies—like the garnets of Arizona and New Mexico, which are said to be much superior to the "Cape Rubies" by artificial light.

ALUM—See kalinite.

AMAZONSTONE—A beautiful semi-precious stone of the feldspar group; the finest specimens of which come from Pike's Peak, Colorado. Has been reported from Baja California, but I have seen no specimens in proof.

AMBER—See succinite.

AMBLYGONITE—Associated with lepidolite in the lithia mines of the county.

AMETHYST—Deep purple, bluish violet fading almost into pink, crystalline variety of quartz. Colorado yields many fine specimens. May be expected to occur in some of the mines of the Colorado desert.

ANGLESITE—Sulphate of lead has been reported from the Colorado desert in some abundance; composition about 73.6 per cent aside of lead, and 26.4 per cent sulphuric acid.

ANTONITE—A talc-like mineral, discovered in a copper mine at San Antonio, Baja California, not far from Todos Santos bay. It was formerly shipped to New York and used in the manufacture of decorative papers.

ARGENTITE—Silver glance is composed of about 87.7 per cent silver and 12.9 per cent sulphur. One of the most valuable of silver ores.

APATITE—Phosphate of lime has been reported from the property of the San Jacinto tin mining company.

ASBESTOS—A four-foot vein seven miles east of Elsinore, Cal., has been worked to a considerable extent, and the product manufactured into boiler covering, etc. Other deposits exist in the mountains bordering the Colorado desert on the west, but the demand on

this coast seems not to justify their development at present.

ASPHALTUM—Occurs native at various points along the coast from San Diego northward. California produced in 1896 nearly 75,000 tons, worth about half a million dollars.

ATACAMITE—A native exochloride of copper, originally found in the form of sand, in the desert of Atacama, between Chili and Peru. A specimen received of Emiliano Ybarra from a mine near Calmalli, Baja California, is identified as this species.

AZURITE—"Mountain blue" (blue carbonate of copper) occurs sparingly in some of the copper mines of Southern California. One of the most beautiful of copper ores, magnificent specimens of which have been produced by the copper mines of Arizona. Composition about 69.2 per cent copper oxide, 25.6 per cent carbonic acid, and 5.2 per cent water.

BARITE—Barytes or heavy spar is composed of about 65.7 per cent baryta and 34.3 per cent of sulphuric acid. The present supply in the United States is excessive of the demand.

BERYLS—Quite equal to those from the Ural mountains have been produced in Maine and North Carolina. Their occurrence in San Diego county has recently been predicted.

BRAZILIAN EMERALD—The emblem of the Brazilian clergy, is not an emerald proper, but a green colored tourmaline. A few green tourmalines have been found in San Diego county, in the lithia mine at Pala, and in several other localities, some of them of the finest gem quality. One beautiful specimen showing a perfectly flat termination, is banded green at the end, then a band of achroite shading into rubellite where fractured. Another specimen is green at the center, with a thin outer crust of black.

BIOTITE—Black mica occurs in various localities in Southern California and in Baja California.

BOLEITE—A rare mineral described from the copper mines at Santa Rosalia, Baja California, on the west coast of the Gulf of California. Occurs in perfect cubes.

BORAX—Originally obtained from a lake in Thibet; composition about 36.6

per cent boric acid, 16.2 per cent soda, and 47.2 per cent water. Of a white color, sometimes grayish, or with a shade of blue and green. The deserts of California and Nevada produce annually about half a million dollars' worth, the product in 1896 being 13,508,000 pounds, worth \$675,400.

CALCITE—Carbonate of lime, consisting of lime and carbonic acid. Rhombohedral in crystallization. Includes marble, limestone, calcareous tufa, etc. The cement rock of San Diego county (notably in Jamul valley) is a form of calcite, especially adapted for the manufacture of cement. Thino-lite, occurring on the Colorado desert, is another form.

Limestone occurs abundantly in various places in Southern California, and is mined at Colton and San Jacinto.

Marble occurs in San Diego county in various colors, but the quarries are as yet wholly undeveloped. Some delicate yellow marble—the most highly prized color among the ancients—occurs on the Colorado desert.

Ophiolite, or Veid—Antique marble, occurs on the Mojave desert, where large quarries of this beautiful and highly prized ornamental stone have been partially developed.

CASSITERITE—Tin stone from Cornwall, England, is composed of 78.6 per cent tin, and 21.4 per cent oxygen. It occurs in the Black Hills, South Dakota, at Temescal, Riverside county, California, and near San Diego. The two latter localities may yield specimens equal to that from Durango, Mexico which is polished as a gem.

ARGENTITE—“Horn silver” (white ore of silver), composed of about 87.3 per cent silver, and 12.7 per cent oxygen, yields 245 pounds per cubic foot, 5.3 cubic feet making a ton.

OPAL—An uncrystallized translucent or clouded variety of quartz, white, yellow, brown or blue (usually whitish), having a luster nearly like wax. When arranged in stripes or bands of different colors it is called onyx. Portions of the Colorado desert in San Diego county are strewn with water-worn fragments of a variety of different colors, across of the mesa-like formation, near the boundary line between

the United States and Mexico, being covered with pebbles of every conceivable color and as smoothly laid as a piece of mosaic work.

CHALCOPYRITE—Copper pyrites exist in large deposits in Baja California, and a mine of this ore is now being developed near Encinitas.

CHRYSOCOLLA—Silicate of copper, composed of 45.2 per cent copper oxide, 34.3 per cent silica, and 20.5 per cent water. Beautiful specimens of this ore occur on the Colorado desert, near the Colorado river, and in Lower California. It is sometimes mistaken for turquoise.

CHRYSOPRASE—The locality near Visalia, Cal., yielded to the value of \$400 in 1896, more than half of it for cutting, the rest for specimens. Chrysoprase is a translucent, pale bluish-green or yellow-green chalcedony.

CINNABAR—Composition 86.2 per cent mercury, 13.8 per cent sulphur, weighing 549 pounds per cubic foot per ton. This is the principal ore of quicksilver, and has been reported from Riverside and San Diego counties, but I have seen no specimens in proof. The writer has five specimens from two distinct sources, alleged to have been found in Baja California. The industry in this county is practically confined to California, the product in 1896 being reported worth over one million dollars.

CORUNDUM—Reported from Los Angeles county by Dana.

CUPRITE—Red oxide of copper; red copper; reported from the Colorado desert.

CYANITE—Large quantities of small crystals occur in the Cargo Muchacha district, on the Colorado desert. None of gem value have been yet discovered.

DENDRITE—“Footprints of the fern”; some beautiful specimens have been collected on the Mojave desert, by Mr. Ira J. Gray.

DIAMOND—A small stone was reported in 1898 as having been found in Baja California, about 50 miles south of Ensenada. Diamonds have not been found in such numbers and size in California as to render the search for them profitable, but no serious prospecting for them has yet been attempted.

ed. Itacolumnite or flexible sandstone, an alleged native of the diamond has been reported from San Diego county.

den as occurring 25 miles from Ogilby, on the Colorado desert.

EPIDOTE—The United States produced \$250 worth of this semi-precious stone in 1895. Crystals in masses have been obtained by the writer near the Alamo, and associated with crystals of calcite from near the coast south of Santo Tomas, Baja California.

ERYTHRITE—Occurs at the Kelsey mine, near Compton, Los Angeles county, Cal., associated with an ore of silver and of cobalt in dark colored earthy masses in a gangue of heavy spar. This occurrence was noted in 1881, and is described in the report of the state mineralogist for 1882, page 207, and in the fourth report, page 279.

FLUORITE—Colorado desert, in a massive form.

GALENA—Lead sulphide, composed of about 86.6 per cent lead, and 13.4 per cent sulphur, is one of the heaviest known ores, weighing 461 pounds per cubic foot, 4.34 cubic feet making a ton. It occurs in considerable abundance in some portions of the Colorado desert, carrying a greater or less quantity of gold and silver.

GARNET—See Almandite.

GILSONITE—A hydrocarbon, reported from Utah and Southern California.

GRAPHITE—Plumbago or black lead is a carbon like the diamond, with some iron oxide and clay. A good quality of this mineral occurs near the Jacumba valley, in San Diego county, California, in some abundance, but remains undeveloped. It also occurs in other parts of the country, but not in sufficient quantities to be of any commercial importance.

GYPSUM—Sulphate of lime, when pulverized the plaster of paris, of commerce; when crystalized known as selenite; the finer granular variety is known as alabaster. Composed of about 22.5 per cent lime, 46.6 per cent sulphuric acid and 20.9 per cent water. Very abundant near Riverside, on the Colorado desert and Baja California.

HALITE—The salt fields of the Colorado desert, of San Quintin bay, and of Scammons Lagoon, Baja California,

ensure San Diego an abundant supply aside from her own product, and promise to add considerably to our commerce.

HEMATITE—This iron ore occurs sparingly on the Colorado desert, in greater abundance on the Mojave desert and in Baja California, where the writer obtained some fine specimens of hematite in quartz in the Santo Tomas valley.

HYALITE, or Muller's glass—A variety of opal, is described by T. Beck as occurring in Beaver valley, Utah. A fine quality of this stone occurs near San Diego.

INDICOLITE—Blue tourmalines are reported as occurring in San Diego county.

ITACOLUMNITE—Flexible sandstone has been reported from the Jacumba valley, but has not been seen by the writer.

JASPER—Baja California.

JET—A fine black jet, evidently in some quantity, is reported from the vicinity of Santa Fe, New Mexico.

KALINITE—Alum occurs in considerable abundance in the sulphur mines of Baja California, especially in the region of the Cocopah mountains.

KAOLINITE—The kaolin found at Cajon mountain, now being independently tested by the owners of the numerous claims, has attracted considerable attention, and so far seems to meet with favor. An analysis by H. Boedeker & Co., gave the following result: Silica, 62.30 per cent; alumina, 20.50 per cent; iron (trace) .00 per cent; lime, 2.20 per cent; magnesia, .25 per cent; water, 11.60 per cent; moisture, 3.10 per cent. Rational analysis: Clay substance, 67.2 per cent; feldspar, 15.6 per cent; quartz, 17.2 per cent.

LEPIDOLITE—Lithia mica occurs in an immense deposit near the old mission at Pala—probably the largest and richest lithia mine in the world—upon which about \$4,000 were expended in development work during 1899. Lithia of American production—the product of this mine—was for the first time placed upon the market, and thus a new American industry inaugurated at the close of the century.

LIGNITE—A vein 4 feet thick, 12 miles north of San Diego, was reported by Dr. Le Conte years ago, but seems

to have been since lost sight of and remains undeveloped.

LIMESTONE—About 11.5 cubic feet weigh a ton, or 174 pounds to the cubic foot. See calcite.

MAGNETITE—Occurs eight or nine miles north of Mesquite station, on the Colorado desert. I have also found magnetic iron ore in the mountains north of Salton; in the Encantada mine near Alamo (rich in gold), in the Santo Tomas valley, and at San Ysidro, Baja California.

MALACHITE—Green carbonate of copper, composed of about 71.9 per cent copper oxide, 19.9 per cent carbonic acid and 8.2 per cent water. forms the most beautiful of copper ores, at times becoming a semi-precious stone. The finest specimens are probably found in the Ural mountains, but magnificent masses have been mined in Arizona, and it usually occurs in copper mines where azurite, chrysosolla or cuprite are present, in the Colorado and Mojave deserts, and in Baja California.

MICA—The mica of commerce is a form of muscovite, but no mine in San Diego county has yet become a producer. See biotite, lepidolite, and muscovite.

MOLYBDENITE—Composed of 60 per cent molybdenum and 40 per cent of sulphur; a soft, black lustrous, foliated mineral, often mistaken for graphite. Occurs sparingly in granitic veins near the Jamul and Jacumba valleys and at Campo, in San Diego county, and in Baja California, but not yet known to occur in this region in paying quantity. The United States produced this mineral for the first time commercially in 1898—about 10 tons, worth \$50 per ton.

MUSCOVITE—Common throughout the granitic formations.

ORTHOCLASE—Feldspar is not rare near Eallena, and occurs at Julian and in Baja California in considerable quantity, and of a quality suitable for the manufacture of fine ware.

OBSEDIAN—Reported to occur in immense quantities near the head of the Gulf of Cortes, in Baja California. I have found small fragments in San Diego county, evidently brought from a distance by the Indians, who valued volcanic glass for the manufacture of arrow and spear points.

OPAL—Occurs on the Colorado desert, and also credited to the limits of the city of San Diego, but only the inferior varieties are yet known in California. Banded opal has been described as occurring in Beaver valley, Utah, some three miles from Granite Peak. See hyalite.

PECTOLITE—"A silicate of aluminum, calcium, and sodium." Has been reported as occurring in Southern California.

PERIDOT—New Mexico.

PLATINUM—This metal is found only in metallic condition, sometimes alloyed with iridium or osmium. A nugget weighing nearly two pounds (only $2\frac{3}{4}$ x 3 inches in size) from Colombia, South America, has been reported as the largest in America, with an intrinsic value of \$350. It contained 85 per cent pure platinum and 15 per cent of gold, palladium and rhodium, and had a bluish-white lustre. This metal is almost as soft as copper and as ductile as gold. It can be rolled so thin that a thousand sheets in a pile would not exceed an inch in height.

PLUMBAGO—See graphite.

PREHNITE—San Ysidro, Baja California, associated with calcite.

QUARTZ—A cubic foot weighs 162 pounds, 12.34 cubic feet making a ton. Occurs in an endless number of varieties. See agate, carnelian, chalcedony, jasper, etc.

Rose quartz in magnificent masses has been found by the writer near Mesa Grande.

Silicified wood occurs in various parts of San Diego county, but in the greatest abundance and variety on the Colorado desert; while Arizona is noted for its Chalcedony park, where an entire forest is preserved in a beautiful agatized form.

Diatomaceous earth occurs on the sea coast near San Diego.

RHODONITE—"Between San Diego and Colton."

RUBELLITE—Beautiful radiations and masses of crystals of pink tourmaline occur in the lepidolite at Pala. A few crystals of gem quality, resembling those from the Isle of Elbe have been found in the county. The largest crystals measure two inches in diameter.

RUTILE—This rare mineral was discovered by the writer at Mesa Grande.

SALT—See halite.

SCHORL—Black tourmaline; quite common in San Diego county and in Baja California, disseminated through quartz or feldspar. Crystals six inches in diameter have been observed.

TALC—A foliated variety occurs at Elnore, Cal. See antenite.

TGURMALINI.—See achroite, Brazilian emerald, indicolite, rubellite and schorl.

TURQUOISE—Reported from the Colorado desert, but no specimens have as yet been seen by the writer. Certain copper ores are easily mistaken for this stone. Mines of this gem of great extent are being worked in the Mojave desert region northwest of Vanderbilt.

WULFENITE—Very fine crystals of molybdate of lead were obtained by the writer in 1888 from some of the mines north of Salton, in the Colorado desert.

MINES.

CLEVELAND COPPER GROUP.

One claim of 20.66 acres, patented.
Four contiguous claims, unpatented.
Total area: 85 acres, 4,533 square feet.
Located on the west side of the Penos Altos range, Penos Altos mining district, Grant county, New Mexico, 2 miles west of the town of Penos Altos, and 8 miles north of Silver City, the county seat and railroad station. Altitude, 7,500 feet. Altitude of Silver City, 6,000 feet.

Good roads from Silver City to the mines.

Permanent water on the mines for camp use; sufficient to run a large smelting plant can be developed at a small expense.

Porphyritic-syenite hanging and foot walls, with quartzite, porphyry, syenite, dolomite (lime), porphyrite, iron and quartz alternating between the several ore bodies. The ore bodies vary in width from 3 to 150 feet each, iron capped and in places quartz. The surface shows the copper ore in bunches in the strata varying from 1 to 10 feet wide. The character of the ore is copper-iron carbonates, showing a little native and oxides of copper, and copper sulphides below the water level, the latter carrying a large percentage of iron and zinc at the south end of the ground, where a tunnel is run. The zinc only shows at this end and will disappear at depth, as is evidenced near the surface.

Ores free smelting, 3 to 60 per cent. content, containing lime in a few places ad-

joining dolomite wall. Silver content of average 8 to 15 per cent. copper, iron and silver neutral.

Ore can be marketed at the Silver City reduction works.

Cost of mining, assaying and hauling to Silver City estimated at 35 per cent. on small shipments; shipping charges 20 per cent. On large shipments, under development, the cost will be reduced 15 per cent.

Net profit per ton (on a 10 per cent. ore) estimated at \$33.

A 3 per cent. copper ore can be smelted on the ground and marketed in the east at a profit.

This great deposit has the same geological and mineralogical characteristics of the mines of Clifton, Arizona, and the Copper Queen mine, of Bisbee, Arizona. Copper in this formation does not play out, but gets richer and better defined as depth is attained, the ore existing in surface bunches and chambers, and ore shafts below the water level.

The trend of the ore bodies and formation is N. E. Surface dip of ore bodies is 15 to 10 degrees N. W. from the vertical towards the vertical hanging wall. Development shows the same to be both vertical and dip S. E. into the mountain at depth.

Very little gold and silver is found in these surface ores. Silver 6 to 7 oz.; gold 0 to \$1 per ton.

Surface workings, cuts, shafts and tunnels, from 5 to 150 feet each in length or depth, have been made by old-time gold prospectors, and the present owners in mining surface ores, which show the formation, ore bodies in place, and their permeability.

A 20-foot open cut, and 220 feet of tunnel, crosscutting 3 ore bodies on the south end of the copper, extending below water level, has been made, approximately a depth attached, 125 feet.

Very little timbering will be required. Pine, oak and juniper wood for all purposes on the ground. Wood can be purchased for \$1 per cord.

This group of copper mines embraces the only surface copper ores in the district. The expenditure of \$100 in development will probably open up pay ore bodies of chalcopryite in the extension of the tunnel.

Price, \$7,000; six months' developing bench shafting privileges.

COPPER GROUP, P. L.

SILVER CITY, NEW MEXICO.

A Gold Mine

A free milling gold "prospect" has been placed in our hands for sale, said to have an 85-foot shaft, and other workings, with a 5-foot ledge of ore assaying \$150 per ton. Good roads, wood and water. Price, \$25,000. An examination and conservative report will be made on reasonable terms. Address the editor.

BOOKS.

FOR SALE — BOOKS AND MAGAZINES.

MOHAVE DESERT IRON MINES.

In May, 1882, the writer first visited the region known as the Mohave desert, in San Bernardino county, California, and found it to be in fact a delightful garden, filled with a great variety of brilliantly colored flowers. The usually leafless and thorny shrubs were a mass of deep indigo flowers, while each open space displayed a bed of delicate annuals unknown to more favored localities.

The mountains on either hand of the Cajon Pass were still covered partially with snow, darkened with the masses of evergreen—spruce, cedar and pine, which render these peaks a delight in summer to the pleasure seeker.

The tree yucca, the wild datile, and large quantities of juniper, growing over a large part of these slopes, render the name desert somewhat of a misnomer; as one leaves the base of the mountains, however, large areas of very uninteresting country—from a horticultural standpoint—are met with, but the wealth of its minerals will be found a redeeming character.

About 16 miles due south from a point midway between Newberry and Hazlitt stations, 275 miles from San Diego, Cal., and 180 miles from Los Angeles, Cal., by the Santa Fe route, occurs probably the largest deposit of iron ores on the Pacific Coast. It is variously estimated by conservative men that fifty to one hundred million tons of magnetic and hematite ores lie above and convenient to a suitable railway grade, which can be quarried rather than mined—if we restrict the word mining to the English sense of underground workings.

The writer is indebted to Mr. H. C. Gordon, of San Diego, Cal., one of the owners in this vast property, for many of the facts here presented concerning the Bessemer Iron District, the 320 acres of patented lands covering the more valuable and accessible portions of this remarkable body of ores.

The chief chemist of the U. S. Geological Survey, after an examination of the magnetite, says: "A very high grade of magnetic ore with but a trace of titanium."

Prof. Pierce de P. Ricketts, the well

known ex-chief of the school of mines and metallurgy, of Columbia College, New York, secured the following results from an examination made for the following elements only: Metallic iron, .68.48; Manganese, .038; Sulphur, .076; Titanium, .02; Phosphorus, (trace) per centum.

Prof. Woulfe, chemist of the Union Iron Works, San Francisco, Cal., secured the following results from a car load each of the Magnetite (M) and Hematite (H): Sesqui oxide of iron, M 68.8, H 81.94; Proto oxide of iron, M 25.5, H 8.28; Alumina, M 2.843, H 3.24; Manganese oxide, M .52, H .43; Lime, M .72, H .82; Magnesia, M 3.83, H 3.18; Phosphorus anhydride, M .013, H .066; Sulphur, M .038, H .47; Silica, M .845, H .061 per centum.

Samples of surface ores from all the workings, aggregating 50 lbs., gave: Iron, 66.25; Silica, 1.65; Lime, 1.35; Magnesia, 3.32; Sulphur, .031; Phosphoric acid, .554; Tannic acid, 0; Alumina, .81; Manganese, .25; Iron peroxide, 72.21; Iron proto oxide, 20.16; Manganese oxide, .39; and Phosphorus, .024 per cent. (analysis by Mr. Curry, of Pittsburg, Pa).

There is an abundance of good water at the junction of a proposed railway to the mines with the Santa Fe, and a good supply can probably be developed on or near the property. A uniform grade of one (not to exceed three) per cent., with no cuts, fills or expensive bridging makes a connection with the existing railroads comparatively easy of accomplishment. The cost of mining the ore is estimated not to exceed 50 cents per ton f. o. b., and freight to tide water, \$2 per ton. Fuel and timber can be obtained in large quantities from the mountains in sight, estimated to be about 8 miles away.

The 9th and 11th reports of the California state mineralogist give very able and conservative estimates of the quantity and quality of the ore bodies.

The recent discovery of oil at Victor, on the Mohave desert, should hasten the development of our latent iron industries, which have lain dormant for an abnormal period, owing in part to the death of one of the owners in these iron lands.

C. R. ORCUTT.

1 2

GOLDEN HINTS

Volume I., No. I.

June 1907

Published monthly (or otherwise) at the
TWENTY-FIFTH ST GROCERY
C. R. ORCUTT,
1045 25th street (near D),
San Diego, California.

Advertise in Golden Hints—10 c a line.
African plants at 25th & D.
American Plants

Vol. I will contain descriptions of
about 1200 species, chiefly natives of the
southern counties of California. Sample
pages free.

Beans, Lima, 10c per lb; 3 lb 25c

Lady Washington, white, 5c per lb

Books—price list free; late ones rented
at 10c a week.

Bulbs—wholesale and retail list free.
Business and ranch properties to ex-
change.

Butter fresh daily to order.

Cacti—catalog in preparation.

Clay ave., 50 x 140, \$400, \$450 & \$500.

Coffee roasted in San Diego, 25c per lb.

CORONADO BEACH.

West 100 ft of lot 5, blk 45, \$1500.

Lot 1, blk 74, \$400. Large corner.

Lot 24, blk 115, \$600.

CITY HEIGHTS.

We offer a large list of choice lots
in this tract.

CULVERWELL & TAGGART'S ADD.

N. E. cor. 23d and E sts., 65x75 ft.,
large house and room for another,
\$7500, or west half for \$3000.

CULVERWELL'S ADDITION.

S. E. cor. 17th and D, 50x100, 100
ft. on D, with house, \$5000; or sub-
mit offer.

D STREET LOTS.

75 feet, cor. 26th, \$12,000. (House
cost \$9000).

Escondido.

Blk. 126, Lot 6, \$100.

EXCHANGES.

Farms and homes in nearly every
state in the Union are offered in ex-
change for Southern California prop-
erty.

Ferns of California to order, \$10 per 100

Groceries, Etc.

Anything furnished to order at 25th & D.

Butter fresh every day to order

Candy made in San Diego.

Soda Water, bottled in San Diego.

Stationery and School Supplies.

25th and D.

H. M. HIGGINS' ADDITION.

Lots 46, 47, and 48, block 29, \$3500.

Lots 25 and 26, blk 27, and store, on
easy terms, for \$3500.

Lots 37 and 38, blk 27, \$3700.

HOITT'S ADDITION.

S. 1/2 Blk. 8, \$4500.

Horses for sale, \$100 and \$135 each.

HORTON'S ADDITION.

7th st. lot near D; \$25,000 cash.

KENTUCKY.

80 acres on the Big Sandy, lot 356,
Carbon Dale Tract, Johnson Co. Coal
and timber, \$8000.

L. W. KIMBALL'S ADDITION.

Lot 40, block 22; \$200.

MINING STOCKS, ETC.

American De Forest Telegraph Co

Empress of Aspen Mining Co.

Manitou, Colo.

Golden Sun Mining and Milling Co.

Tacoma, Wash.

Gray Eagle Mining Co.

Goldfield, Nevada.

Harrison Lake Stee Mining Co.

Vancouver, B. C., Canada.

Italian Mountain Mining Co.

Aspen, Colo.

Libbet Gold Reefs Mining and Milling Co.

Vancouver, B. C., Canada.

Mineral Creek Gold Mining Co.

Nanaimo, B. C., Canada.

Melson Navigation Co.**Press Claims Co.**

Washington, D. C.

Stocks of above and other companies for sale or exchange.

MOUNTAIN RANCHES.

New 5-room house, shaded with oak trees, over 11 acres, spring (rarely dry), well that never rests, barn, etc., 1 mile east of Ramona on Julian road, \$1200; \$200 cash, balance like paying rent.

N. E. $\frac{1}{4}$ of N. W. $\frac{1}{4}$ Sec. 2, T. 17 S., R.

2 E., S. B. M., 40 acres of good land with perennial springs, \$1000.*

Four miles east of Jamul P. O., San Diego Co., Calif.

Submit offer.

NATIONAL CITY.

Lot 13, block 273, N. W. Cor. 17th St. and 8th avenue, with brick building 25x60 feet, 2 stories, cost over \$8,000, lot 25x100; \$8,000.*

Submit offer.

Terms.

OREGON.

Blk. 4, 1st Add to E. Klamath Falls, 14 lots, \$100 each.

PACIFIC BEACH.

Lots 1-5, blk 169, \$1250.

Lots 16-20, blk 207, \$1250.

PIERMONT.

Lot 3, block 12, \$150.*

Questions answered for \$1 each

REED & HUBBELL'S ADDITION.

S. E. cor. 26th and Grand ave., 50x140, \$

Lot 18, blk. 16, Reed & Hubbell's Roses 35¢ each 5 for \$1

Sand and Gravel Pit, 35th and F, half acre, che up at \$500

TREES.

Orders received at 25th & D for every variety of trees, plants, and bulbs.

Our 32 page catalog of books, seeds, bulbs, etc., issued in April, mailed free.

University Heights, lots 22-23-24, blk 99 \$1200

U R invited to inspect our stock.

Visit 25th & D st Nursery.

WANTS.

The director of the United States Geological Survey, Washington, D. C., wishes to obtain numbers 1, 2, 70-73, 96 and 97 of the West American Scientist to complete their set.

The librarian of the New York botanical garden wishes numbers 1, 2, 4, 9, 11, 96 and 97 of the West American Scientist.

The Library of Congress lacks numbers 1, 9, 27, 28 and 96 of the West American Scientist, which the librarian wishes to obtain.

The Smithsonian wants Nos. 2, 4, 6-8, 20, 21, 23-25, 29-31, of the West American Scientist, and the U. S. National Museum wants Nos. 2, 4, 6-9, 50-54, 66, 68, 69 and 70.

WASHINGTON.

Lots in Union Pacific 2d add. to Port Angeles, \$100 each—what have you to offer in exchange?

ALEGRIA!

Joy! Delight! Exhilaration!

Orcutt's subdivision of a part of New Riverside, adjoining San Diego city.

Beautiful view of ocean, city and mountains.

Railroad surveyed in front of the tract.

With the development of water this will become an earthly Paradise.

Beautiful native shrubbery—manzanita, shrub oaks, yucca, etc., growing luxuriantly on every lot.

Lots contain half-acre each.

Lot A is over $\frac{1}{2}$ acre, corner, price, \$600.

Price: Lots B, C, D, E, each \$500.

Lots K, L, \$400 each.

Lots M, N, O, P, Q, R and S, \$500 each.

Terms: \$10 down, \$5 a month, or discount for cash. No interest or taxes.

All prices subject to change without notice.

REAL ESTATE.

Come to us for bargains in residence and business property, also tracts and vacant lots.

Go to

CHARLES RUSSELL ORCUTT,

Twenty-fifth and D streets,

SAN DIEGO, CALIFORNIA.

Visitors welcome.

167 TRANSLUCENT FABRIC.

A useful nonbreakable substitute for skylights, porches, windows (where view is not desired), bungalows, etc. All sheets are 3 feet 3 inches wide, made in the following lengths:—

4 ft. 6 inches=14.625 sq. ft. \$3.00

4 ft. 6 inches=14.625 sq. ft. \$3.00

5 ft. 3 inches=17.0625 sq. ft. \$3.50

6 ft. 3 inches=20.3125 sq. ft. \$4.20

7 ft. 3 inches=23.5625 sq. ft. \$4.80

8 ft. 3 inches=26.8125 sq. ft. \$5.40

9 ft. 0 inches=29.25 sq. ft. \$6.00

Prices f. o. b. manufactory in Massachusetts.

200 sq. ft. or more, f. o. b. San Diego, California.

Terms, cash with order.

ORCUTT SEED AND PLANT Co.: San Diego, Cal.

Established 1882.

The ORCUTT SEED and PLANT Co.,
San Diego, California.

Collectors, Importers, and Growers.

Wholesale and Retail.

Cable address: ORCUTT.

We offer our services for the procurement of any seeds, bulbs or plants that may be desired. Our correspondence is world-wide, and our facilities and experience insure satisfaction to our patrons.

Terms: CASH WITH ORDER, except by special contract. All goods travel at the risk and expense of purchaser. Packing and material (boxes, bags, etc.) charged at cost. Complaints must be made within ten days of receipt of goods to receive recognition.

We pay special attention to the desiderata of our patrons, depending largely upon collecting each season to order, though we have hundreds of plants of many species constantly in stock, and a smaller number of many varieties.

PERENNIAL PLANTS.

AGAVE AMERICANA Linnaeus.

American aloe; commonly called the century-plant, as it was formerly supposed to flower only after the lapse of a century. It produces a tall flowering stem at an age of 15 to 20 years, when it dies after maturing seed. It is the famed pulque plant of Mexico, the fermented juice forming an intoxicating liquor known as pulque. The juice of this, and various other species, when distilled, forms mescal—nearly pure alcohol. Ex-

tensive plantations are cultivated near Mexico City for the production of these drinks—the greatest curse of the nation. Various large varieties are widely planted in California for tropical effect, being a valuable decorative plant, withstanding drought and frost.

Variety MACULATA Hort.

Foliage patched with yellow.

Variety MILLERII Hort.

Plain glaucous foliage.

Variety STRIATA Hort.

Foliage irregularly striped with yellow.

Variety VARIEGATA Hort.

Leaves richly bordered with yellow.

Plants 20 cents to \$1.00 each.

AGAVE DECIPiens Baker.

Plants 55 cents each.

AGAVE deserti.

Plants 50 cents to \$7.00 each.

AGAVE Shawii.

Plants 1.00 to \$20.00 each.

ALOE AFRICANA Mill.

Flows \$1.00 to \$5.00 or by.

ALOE BREVIFOLIA Mill.

Plants ten to fifty cents each.

ALOE LATIFOLIA H. worth.

Plants 17 cents to \$1.00 each.

ALOE MITI FORMIS Mill.

Variety Axiomatica Hort.

Plants 50 cents to \$5 each.

Aloe picta.

Price 25c. each.

ALOE VARIEGATA Linnaeus.

Partridge-breast aloe. An African plant of great beauty, producing spikes of brilliant coral red flowers. It is found in many old-fashioned gardens and receives its common name from the feathery mottling of the leaves.

Plants 25 cents to \$1.00 each.

HOUSTONIA CALIFORNICA B. & H.

Plants 50 cents to \$2.00 each.

Opuntia basilaris.

Plants 50 cents each.

Opuntia prolifera.

Plants ten to fifty cents each.

Opuntia serotina.

Plants ten to fifty cents each.

Strophylum Orcuttii.

Price 10c. each.

PALMS.

ERYTHEA ARMATA Watson.

The Tecos grandes is the fruit of the beautiful blue palm of Lower California, and forms an important article of food with the Indians, ripening in July and August. The fruit is the size of a common marble, with sweet mealy pulp surrounding the large stone ($\frac{1}{2}$ inch in diameter). The tree grows 40 feet high, bearing its fan-shaped glaucous leaves in a very graceful manner. This palm was first found in the Cantillas canyon, Lower California, which opens out onto the Colorado desert, by Dr. Edward Palmer.

Dr. J. N. Rose has since found it in Mexico, east of Mazatlan, I believe. The seeds require from six months to three years in which to germinate—the older seeds germinating more quickly than when fresh from the tree. I have had them germinate readily when over ten years old.

PHOENIX CANARIENSIS Hort.

The Canary Islands date palm is an elegant, hardy, ornamental species, often planted in Southern California lawns.

Seeds 10c. a packet, \$1.00 per 100.

PHOENIX DACTYLIFERA Linn.

The well known date palm of northern Africa and Arabia, is often planted for quick tropical effect in Southern California, where space permits its luxuriant growth. On the Colorado Desert and in Arizona this palm has been planted more extensively, with a promise of becoming of commercial importance for its fruit.

Seeds 50 cents per 100.

LA MESA.

La Mesa Springs, a most picturesque suburb of San Diego, 11 miles via the Cuyamaca Ry., 8 miles from the Normal School via El Cajon Boulevard (where an electric car line is soon to build), at an altitude of 539 ft. at the station, you will find charming villa and village lots and acreage at moderate prices and on easy terms of payment.

*** Ceylon Tea ***

10c cans—finest in the world.

KRAKERS

Variety with or without spice.
Kall for School Boys—baked!

CORONADO BEACH.

What! 95 feet frontage on 4th St., for only \$300? Yes, and it has two sides, 140 and 165 feet, respectively, 35 feet at the back, with alley the whole length, between Pomona avenue and the Boulevard; \$200 down, balance in monthly payments. Act quick.

REAL ESTATE.

- Arlington Heights lots 9 to blk 1, \$600
- Breed & Chase lot 8 b 2 \$2400
- South Park—half blk
- 100 x 140 C st corner 25th - \$6500
- same inside - - - \$5500
- same cor. 24th \$7000
- same D S. W. cor. 25th \$8000
- same NE corner \$6500
- same D bet 24th & 25th \$6000
- Grant Hill lots 1 & 2 b 20 \$2500

SEEDS.

- | | |
|--------------------------------------|----------------|
| | Per lb. |
| Abies Douglasii | \$ 2.00 |
| Menziesii | 2.50 |
| Arbutus Menziesii | Lb. \$2 |
| ATRIPLEX HALIMOIDES Tineo. | |
| Seeds 10c. per packet. | |
| ATRIPLEX HORTENSIS Linnaeus. | |
| Seeds 10c. per packet. | |
| BEANS, Ataran. pkt. 5c. | |
| BEANS, Green Neapolitan. pkt. 15c. | |
| Calycanthus floridus | 2.00 |
| CARPINUS AMERICANA Michx. | |
| Seeds, 10 cents per packet. | |
| CARROT, Large Oxheart. pkt. 5c. | |
| CARROT, Long white. pkt. 5c. | |
| CATALPA, American. pkt. 10c. | |
| CATALPA BIGNONIOIDES Walt. | |
| Seeds, 10 cents per packet. | |
| CATALPA, Japanese. pkt. 10c. | |
| Catalpa speciosa | 1.50 |
| CEANOTHUS THYRSIFLORUS Eschw. | |
| Seeds, 10 cents per packet. | |
| Ceratonia siliqua | 1.50 |
| Cercis Canadensis | .75 |
| CLIFTONIA NITIDA Gaertn. | |
| Seeds, per packet, 10 cents. | |
| CORNUS STOEONIFERA Michx. | |
| Seeds 10 cents per packet. | |
| CUCUMBER, Eskimoso. pkt. 10c. | |
| CUCUMBER, Moravian. pkt. 10c. | |
| Cupressus Goveniana | \$5.00 |
| macrocarpa | 4.00 |
| guadalupensis | 2.25 |
| CYNOCLOSSUM CAESTINUM Lindl. | |
| See Paracaryum caelestinum. | |
| Delphinium cordiale | Oz. \$2 |
| DIOSPYRUS VIRGINIANA Linn. | |
| Seeds 10 cents per packet. | |
| ELDER, Box. pkt. 10c. | |
| GHERKIN, New Golden. pkt. 5c. | |
| COURD, Giant. pkt. 10c. | |
| HESPEROYUCCA WHIPPLEI Baker. | |
| Seeds 10 cents per packet. | |
| Heteromeles arbutifolia | Lb \$1 |
| Lathyrus splendens. oz \$1 | 10.00 |
| LONGICERA HISPIDULA Douglas. | |
| Seeds, 10 cents per packet. | |
| Magnolia glauca, dried berries | 1.50 |
| grandiflora, do. do. | 1.50 |
| NEMOPHILA INSIGNIS Bentham. | |
| Seeds, per packet, 5 cents. | |
| Variety ALBA. pkt. 5 cents. | |
| Variety PURPUREA. pkt. 5 cents. | |

GOLDEN HINTS

June, 1919.

Advertising Rates:

10 cents a line each time.

PRICE LIST OF SHELLS

- Acanthina* engonata 10c; lapilloides 10c; lugubre 20c; paucilirata 15c.
- Achatinella* adusta 10c; bilineata 15c; cista 15c; citrina 10c; decipiens 10c; gravida 15c; nucleola 15c; orophalia 15c; ovata 10c; prasina 15c; producta 15c; recta 15c; stewarti 15c; tetrao 10c; tristris 10c; turritella 10c; variegata 10c; ventricosa 10c; vulpina 15c; zebraia 15c.
- Acicula* lineata 10c.
- Acmaea* asmi 10c; costata 15c; depicta 10c; fascicularis 10c; insessa 15c; limatula 10c; mesoleuca 15c; mitra 15c; occidentalis 10c; paleacea 15c; patina 10c; pelta 10c; persona 15c; saccarina 15c; scabra 15c; scutum 10c; spectrum 10c; testudinalis 10c.
- Acmea* hungerfordiana 20c.
- Actaeon* bullata 20c; punctocaelata 15c; punctostriatus 20c.
- Adeorbis* subcarinatus 10c.
- Adamsiana* variabilis 20c.
- Alaba* supralirata 10c; tervaricosa 10c.
- Alectrion* cooperi 25c; fossata 25c; gayi 35c; mendica 15c; perpinguis 15c; versicolor 10c.
- Alexia* myosotis 10c; personata 15c; setifer 15c.
- Amalthea* antiquatus 10c; australis 20c; barbatus 10c; cranioides 15c; pilosus 10c; tumens 15c.
- Ambloxis* decisa 5c; integer 10c; obesa 10c; ponderosa 10c; rufa 15c; subsolida 10c.
- Amiantis* callosa 50c.
- Amnicola* balearica 10c; cincinnatiensis 10c; cubenana 10c; dupotetiana 5c; emiliana 10c; globulus 10c; limosa 5c; lustrica 10c; macepa 10c; pallida 5c; panamensis 10c; parata 5c; walkeri 10c.
- Amplidromus* chloris 25c.
- Amphipepla* quadrasii 25c.
- Ampullaria* depressa 10c.
- Ancylus* caurinus, costulatus, desperditus, engraptus, filosus, fluvitilis, fuscus, gibbosus, lacustris, nuttalli, papillaris, parallelus, rivularis, tardus, each 10c.
- Anomia* electrica, ephippium, lampe, each 10c.
- Aperostoma* dysoni 25c.
- Aporhais* pespeficari 10c.
- Arca* americana 20c; multicostata 50c; pexata 10c; ponderosa 15c.
- Arca* arcularia, complanata, luteostoma, scarbrinscula, thersites, each 10c.
- Assiminea* brevicula, californica, philippinea, each 10c.
- Auricula* auris-midae 25c; elongata 10c; parva 15c; solida 10c; sulculosa 25c.
- Auriculella* auricula, crassula, patula, each 10c.
- Bankia* fasciata 20c.
- Balea* perversa 10c.
- Barbatia* gradata 15c; solida 10c.
- Barleeia* subtenuis 5c.
- Bifidaria* arnifera 5c; contracta 5c; hemphilli 20c; holzingeri 15c; hordeacea 10c; hordeocella 15c; protera 5c; servillis 15c; tappaniana 15c.
- Bittium* armillatum, asperum, assimillatum, filosum, granarium, lacteum, nigrum, quadrifidum, reticulatum, varium, vasum, each 10c.
- Brachypodella* subtilis var. pulchella 25c.
- Bryozoa* concretata 10c.
- Bulinulus* alternatus 5c; deabatus 5c; elongatus 10c; ingloriosus \$1; mooreanus 5c; schideanus 5c; serperastrus 10c.
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