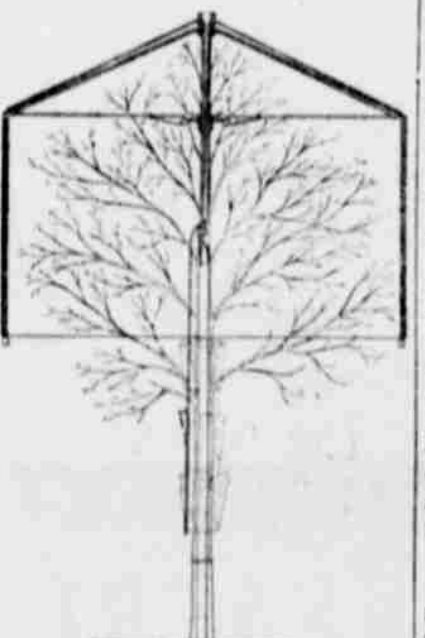


TREE PROTECTOR TO PREVENT DAMAGE BY FROST PATENTED BY LILEGRAM OF MEDFORD

Well Known Mining Engineer and Metallurgist Invents and Patents Umbrella-Like Device to Protect Fruit From Hot or Cold Spells.

Ribs Fold Upward Against Mast and Against Tree, Preventing Pest Destruction—Simple of Operation.

Ernest W. Lillegram, the well-known Medford mining engineer and metallurgist, has invented and patented a tree-protector, designed to protect fruit trees from frost or excessive heat. The device is simple, cheap and sensible and easily applied to trees or plants and will thoroughly protect them.



Five insects entering the branches of the tree. An orchard supplied with such protectors could be depended upon to produce a maximum yield and would be a paying venture for the grower.

Speaking of his invention, Mr. Lillegram writes:

Origin of Invention
January, 1912, the newspapers were depicting the loss of \$15,000,000.00 by frost to orange and lemon growers in California. Memory recalled similar announcements in previous years, but apparently not so damaging. In mentally reviewing the whole problem, it shows the frost coming, is not an unusual freak, but apt to come any time during the bloom period of all fruit-growing regions. Realizing also that our planet is reported by astronomers to be in the cooling class, such as the moon and Mars; and while the change is very gradual, it is nevertheless a certainty, and shows the reverse (warmer weather) is not to be expected, except during freak periods. It then remains to be seen that the frost problem must be accepted and met by offsetting methods, which must be so provided that not only the ordinary frost be prevented, but the hard freeze that is apt to take the tree as well as the fruit. For this reason I designed the Tree Protector as herewith shown.

Protection and Shelter
While I am not an orchardist, I recalled to mind, having seen fruit trees covered with sheets, or anything available, to save the fruit from destruction by frost. Such protection was anything but perfect shelter as there was more or less open spaces through which the warm air would naturally escape, but it gave some protection, as trees so sheltered usually rewarded the labor by a good yield. I have also noticed that gardeners cover much of their early and late tender varieties and thus avoid loss by early and late frosts. I have also noticed large and fairly closely woven spiderwebs heavily laden with dew, having prevented frost from killing leaves and berries immediately under the spider's canopy, thus showing that the theory of protection against frost by fairly closely woven fabric is practical. However, while shelter must be provided for reliable commercial results, it must be so arranged that it

will not entail prohibitive features, such as interfering with cultivation, action of bees, and excessive cost in manufacturing, mounting on the trees, and attention during protection period.

Cost of Manufacture
As to cost of manufacture I can only give approximately, based on an offer from the Ideal Machinery and Tool company of Cincinnati, Ohio, who offered to make a 20 foot diameter model for \$15.00, and give me all the tools prepared for making it, and advise as to the most suitable materials and forms for complete construction, all of which must be proportioned in size and weight, according to their respective requirements, so I think it safe to place the manufacturing costs per tree protector somewhere between \$3.00 and \$10.00, and may be even less than \$3.00.

As to mounting on the tree, with three men it should not exceed ten to fifteen minutes for each tree, and when a crew is once skilled in the duty of each move, five minutes may prove abundant. Dismounting at end of frost season should not involve any more time than mounting.

As to Manipulation
As to manipulation, night and morning when frost is prevailing, any person of ordinary intelligence can lower the canopy and curtain for protection against frost in not to exceed one or two minutes per tree. The same time in the morning to raise curtain, and if desired also the canopy in not to exceed two minutes per tree.

In the event of a heavy wind reported by the weather bureau, then it will be necessary to fold the curtain and canopy, as shown in an open part of the tree. However, high winds are seldom in evidence during frost periods.

Tried It out Last Spring
I first made a two foot diameter protector in which I developed the perfect working features, and then made a large 20 foot diameter one to try the frost resisting properties, which came in the Rogue river valley on April 23rd and 24th, 1913.

The canopy was made of a cotton cloth known as "Aurora R." retailed at ten cents per yard, and the curtain was of "Success sheeting L.L." retailed at six and one-half cents per yard. The curtain was 15 feet long, coming to the ground, and placed over a pear tree in south Medford, and showed the following results.

I put the protector in place over the tree the evening of April 22nd, 1913, with a thermometer well up in the body of branches, and retired for the night, getting up next morning, April 23rd, and the following data is the result:

	Inside Degrees	Outside Degrees	Difference	Plus
4 a. m.	37	31	"	6
5 a. m.	36	30	"	6
6 a. m.	36	30	"	6
7 a. m.	38	33	"	5
8 a. m.	43	53	"	10

Worked Both Ways
This was gratifying, and my idea was also confirmed in that it held back the rapid rise of heat in the early morning as per showing at 8 a. m. when the rise was so very rapid outside, it was retarded to the extent of 10 degrees inside, owing to the dense dew on the canopy and curtain, and the moisture inside.

During the day the curtain was raised to the edge of the canopy, thereby letting the bees work on the bloom without hindrance. At evening the curtain was dropped to the ground and next morning I was again on the scene for data, as follows:

	Inside Degrees	Outside Degrees	Difference	Plus
4 a. m.	46	38	"	8
5 a. m.	45	36	"	9

This was simply to confirm the first morning's data, as the critical time was from about 5 to 6 a. m. I did not pay further attention to temperature data, as I am satisfied the above is sufficient to protect bloom and fruit from ordinary frosts.

In Case of Freeze
But in case of a heavy freeze being forecasted, then draw the curtain into the base of the tree below the branches and secure it with cord or other means, and have electric heating wires provided from tree to tree,

connecting cheaply constructed heaters, hung in lower branches, and thus make it a positive freeze preventer.

I was informed by a very competent electrical engineer that an ordinary 32 C. P. carbon globe (the old style Edison 32 C. P. drop light), would be sufficient to supply the required heat, and they could be bought for 20 cents each. That being the case, a more suitable and less liable to breakage (through rough handling) heater could be manufactured for not to exceed the twenty cents, which will convert all the electric current into heat in place of part heat and part light, which is the case with the old 32 C. P. drop light. However, if a special heater is made, it must be so constructed that it will respond to different heat requirements that can be turned on or off at a convenient point in the edge of the orchard, as weather temperature requires.

Like Umbrella Ribs
If a light weight, fairly tough and practically air tight material is used, so much the better for retaining the heat and excluding the cold.

As to the frame, which is very simple in construction, entailing but light steel spreading booms, which can be made for the purpose of a shaped steel, something like umbrella ribs. The mast should be made of light weight tube steel, which will give necessary bending resistance and admit passage for the cords.

The tools for making frame will be few and simple.

Making canopy and curtain will require a double stitching machine. In conclusion will state the tree protector can also be used for ordinary truck gardening, only using a post in place of a tree for support. It can also be used for camping or summer sleeping quarters, etc., etc.

URGES PRISON FOR TRUST LAW VIOLATIONS

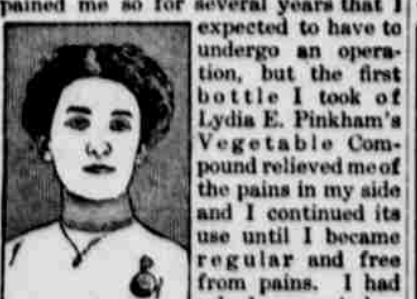
WASHINGTON, Jan. 29.—Prison for trust law violators was urged before the house judiciary committee today by Congressman Henry, Stanley and Lenroot. The three were witnesses at the committee's investigation into the best methods of breaking up monopolies. They favored doing it by defining just what corporations can and cannot do legally. Henry asked the exemption of labor and farmers' organizations from operation of the Sherman law.

WOLGAST TO MEET RUDDY UNHOLZ TONIGHT

MILWAUKEE, Wis., Jan. 29.—Ad Wolgast, former lightweight champion of the world, will meet Ruddy Unholz in a scheduled no decision ten round bout here tonight. Wolgast showed flashes of his old-time form in his recent match with Joe Rivers of Los Angeles and was not expected to have much trouble in disposing of Unholz.

HOW WOMEN AVOID OPERATIONS

By Taking Lydia E. Pinkham's Vegetable Compound.



Cleveland, Ohio—"My left side pained me so for several years that I expected to have to undergo an operation, but the first bottle I took of Lydia E. Pinkham's Vegetable Compound relieved me of the pains in my side and I continued its use until I became regular and free from pains. I had asked several doctors if there was anything I could take to help me and they said there was nothing that they knew of. I am thankful for such a good medicine and will always give it the highest praise."
—Mrs. C. H. GRUFFITH, 7305 Madison Ave., Cleveland, Ohio.

NEWER VARIETIES OF ROSES NEEDED IN LOCAL GARDENS

Medford has a great many rose lovers, but not nearly enough rose growers. We have too many of the old original roses and too few of the new ones. The newer varieties are being improved all the time both in beauty and hardiness. Time was only a few years ago, when we had nothing but the common roses—now we have almost an endless variety to choose from.

There are two classes that are the very best for all around general culture—the hybrid perpetual and the hybrid tea. The Hybrid perpetual, for which we use the abbreviation H. P., is a very hardy, vigorous, easily grown plant, but as a rose the flowers are not so sweet scented as the tea, though the blossoms are larger and more showy. The Hybrid Tea for which we use the abbreviation H. T., have more flowers, smaller and are very sweet scented. They are not fragile but are not so hardy nor of such luxuriant growth as the Hybrid perpetuals.

Dean Hole who is acknowledged to have been the greatest of rosarians, has chosen the following list as being the very best for general all around purposes: Augustine Guineossau or white La France (H. T.) white, slightly tinged with blush, very fragrant; Blitty (H. T.) copper rose overspread with old gold, deliciously perfumed, a rose of great merit decidedly good as a long stemmed rose for house decoration; Caroline Testout (H. T.) bright satin rose with brighter center; Dorothy Page Roberts (H. T.) lovely shade of coppery pink, suffused apricot; Frau Karl Dmehcki (H. P.) purest white, handsome long pointed buds, of very robust habit; General McArthur (H. T.) dark velvety scarlet, very fragrant and fine; George C. Wand (H. T.) orange vermillion, flowers large, full and perfectly formed; Gustave Grunerwald (H. T.) bright carmine, center clear yellow shading to pink; Hugh Dickson, (H. P.) brilliant crimson shaded scarlet, good size and fine form, highly perfumed; Lady Ashtown (H. T.) pale rose shading to yellow at base of petals, ruffled petals silvery pink; La Tozca (H. T.) silvery pink with deeper center; Madam Mulanec Sonpert (H. T.) saffron yellow suffused carmine and pink; Molly Sharmen Crawford (T.) same as Karl Dmehcki but very fragrant; Mrs. E. G. Hill (H. T.) flush white in center, outside of petals coral red; Mrs. John Laing (H. P.) most gorgeous pink long buds, very fine; Pharon (T.) rosy flush fine buds; Prince de Bulgarie (H. T.) deep rosy flush shaded with salmon very fine; Richmond (H. T.) pure blood red, good grower, continuous bloomer, and next to the Hugh Dickson the best red rose for gardens ever introduced.

SEATTLE BANQUETS MEMBERS REGIONAL BANK COMMITTEE

SEATTLE, Jan. 29.—Representatives of northwest civic organizations and delegates from Alaska took part in the big welcome extended to Wm. G. McAdoo, secretary of the treasury and David F. Houston, secretary of Agriculture, the two members of the regional bank organization committee, last night at the commercial club dinner at the New Washington Hotel, following the automobile tour over the city in charge of Chamber of Commerce members.

Throughout the speeches of the evening the spirit of optimism was noticeable and frequent enthusiastic comments on the Wilson administration brought cheers from the four hundred guests who paid their respects to the visiting cabinet members. The expression of the two officials that something greater and larger than partisanship is prompting men to work for the success of the present administration plans, swept the house and the banquet hall echoed with applause.

"For years the people of this country have lived in the shadow of constant fear of financial panic," said Secretary McAdoo. "The currency man, and the possibility, either through natural or artificial sources, to create a financial cataclysm in this country."

Good Wood.
If you want good wood, get it from Frank H. Ray.

The Quickest, Simplest Cough Remedy
Easily and Cheaply Made at Home. Saves You \$2.

This plan makes a pint of cough syrup—enough to last a family a long time. You couldn't buy as much or as good cough syrup for \$2.50. Simple as it is, it gives almost instant relief and usually conquers an ordinary cough in 24 hours. This is partly due to the fact that it is slightly laxative, stimulates the appetite and has an excellent tonic effect. It is pleasant to take—children like it. An excellent remedy, too, for whooping cough, spasmodic croup and bronchial asthma.

Mix one pint of granulated sugar with 1/2 pint of warm water, and stir for 2 minutes. Put 2 1/2 ounces of Pinex (fifty cents' worth) in a pint bottle, and add the Sugar Syrup. It keeps perfectly. Take a teaspoonful every one, two or three hours. Pinex is one of the oldest and best known remedial agents for the throat membranes. Pinex is a most valuable concentrated compound of Norway white pine extract, and is rich in gualacal and other natural healing elements. Other preparations will not work in this combination. The prompt results from this mixture have endeared it to thousands of housewives in the United States and Canada, which explains why the plan has been imitated often, but never successfully. A guaranty of absolute satisfaction, or money promptly refunded, goes with this preparation. Your druggist has Pinex, or will get it for you. If not, send to The Pinex Co., Ft. Wayne, Ind.

NOTICE
On and after January 31st we will again be located at the public market with a full line of dressed poultry and home cooking. Place your orders now for baked things better than mother ever made, Pies, cakes, cookies, breads (white excepted), desserts and baked beans
Ours are prepared in our own home ovens and we guarantee satisfaction. Orders must be placed at least one day previous to regular market days.
Janes Bros., Booth 19, Public Market
Or Phone 370-X

The New UNION LIVERY
The new brick barn on South Riverside will be open for business
Saturday, Jan. 31st
Everything new and up-to-date. Livery and ambulance service. Will be glad to welcome all former customers and many new ones
Ray Gaunyaw, Proprietor

OPENS UP NOSTRILS, CLEARS HEAD, ENDS COLDS OR CATARRH AT ONCE

Instantly Relieves Swollen, Inflamed Nose, Head, Throat—You Breathe Freely—Dull Headache Goes—Nasty Discharge Stops.
Try "Ely's Cream Balm."
Get a small bottle anyway, just to try it—Apply a little in the nostrils and instantly your clogged nose and stopped-up air passages of the head will open; you will breathe freely; dizziness and headache disappear. By morning! the catarrh, cold-in-head, catarrhal sore throat will be gone. End such misery now! Get the small bottle of "Ely's Cream Balm" at any drug store. This sweet, fragrant balm dissolves by the heat of the nostrils; penetrates and heats the inflamed, swollen membrane which lines the nose, head and throat; clears the air passages; stops nasty discharges and a feeling of cleansing, soothing relief comes immediately.
Don't lay awake to-night struggling for breath, with head stuffed; nostrils closed, hawking and blowing Catarrh or a cold, with its running nose, foul mucous dripping into the throat, and raw dryness is distressing but truly needless. Put your faith—just once—in "Ely's Cream Balm" and your cold or catarrh will surely disappear.

Latta & Hopkins Nurseries
Growers of High-Grade Fruit Trees. Apple and Pear Trees are our specialties. Stock one-year-old trees on three-year-old roots. Some of best orchards in the valley are set to our trees. Nurseries near Central Point. Medford office, room 402, M. F. & H. building. Phone 869-L. Experience shows that home grown, acclimated trees are the best.
PATRONIZE HOME NURSERIES

FREE FOR 200 OBAK CIGARETTE COUPONS
The mouthpiece on the OBAK that cools the smoke—the thin mals paper that leaves no ash—the cleverly blended pure tobaccos are making the OBAK the most popular 5-cent cigarette on the market.
Write for illustrated catalog of 500 other valuable presents that can be procured with OBAK Cigarette Coupons. Address: OBAK PREMIUM DEPT., 333 Battery St., San Francisco

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I have the largest stock of Gorham Co. Sterling Silver, Wm. B. Durgan Co. Fairfax Patterns, Gorham Co. Plated Ware, Reed & Barton Plated Ware, 1847 Rogers Bros.' Plated Ware, Alven Silver Plate. All guaranteed.
Martin J. Reddy
THE JEWELER.
Near Postoffice.

Ford
It's the prince of cars—and car of princes. Two grand dukes and nineteen princes drive Fords in Russia. And the sturdy car is as popular with both classes and masses the world over. Its unequalled merits has won it world-wide recognition.
\$595 is the new price of the Ford runabout; the touring car is \$645; the town car \$900—f. o. b. Medford, complete with equipment. Get catalog and particulars from
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