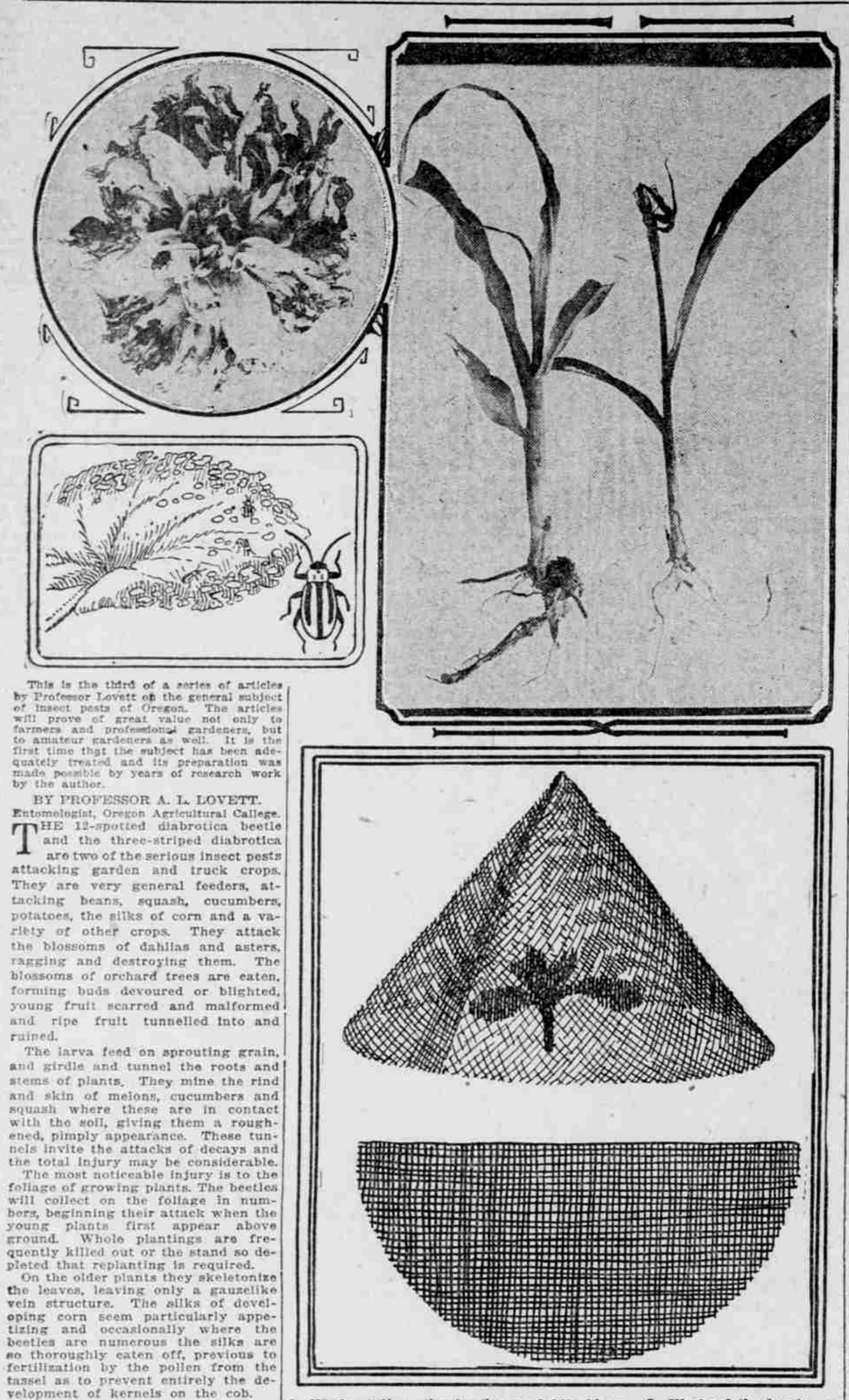
BEETLES THAT CAUSE GREAT CROP DAMAGE ARE DECLARED TO BE HARD TO EXTERMINATE

Professor Lovett Describes Habits of Twelve-spotted Insect That May Be Found in Most Gardens and Tells of Way to Reduce Pest to Minimum.



1—Work of diabrotica beetles on dahlia bloom. 2—Work of the beetles as corn bud worm. Note that while the outer leaves are still alive the inner growing whorl is dead. 3—Striped diabrotica beetle and typical injury to cucumber leaf. 4—Figure to show method of cutting wire cones for use to protect from diabrotica beetles, and finished cone in position.

This is the third of a series of articles by Professor Lovett of the general subject of insect pests of Oregon. The articles will prove of great value not only to farmers and professional gardeners, but to amateur gardeners as well. It is the first time that the subject has been adequately treated and its preparation was made possible by years of research work by the author.

BY PROFESSOR A. L. LOVETT.
Entomologist, Oregon Agricultural College.

THE 12-spotted diabrotica beetle and the three-striped diabrotica are two of the serious insect pests attacking garden and truck crops. They are very general feeders, attacking beans, squash, cucumbers, potatoes, the silks of corn and a variety of other crops. They attack the blossoms of dahlias and asters, ragging and destroying them. The blossoms of orchard trees are eaten, forming buds devoured or blighted, young fruit scarred and malformed and ripe fruit tunnelled into and ruined.

The larva feed on sprouting grain, and girdle and tunnel the roots and stems of plants. They mine the rind and skin of melons, cucumbers and squash where these are in contact with the soil, giving them a roughened, pimply appearance. These tunnels invite the attacks of decays and the total injury may be considerable.

The most noticeable injury is to the foliage of growing plants. The beetles will collect on the foliage in numbers, beginning their attack when the young plants first appear above ground. Whole plantings are frequently killed out or the stand so depleted that replanting is required.

On the older plants they skeletonize the leaves, leaving only a gauzelike vein structure. The silks of developing corn seem particularly appetizing and occasionally where the beetles are numerous the silks are so thoroughly eaten off, previous to fertilization by the pollen from the tassel as to prevent entirely the development of kernels on the cob.

In certain commercial trucking sections of the state where the growing of vegetables for canneries proved to be an attractive pursuit, due to the activities of these beetles gardeners have abandoned the production of corn and beans entirely.

12 Black Spots on Wing Cover.

The beetles are about the size of ladybird beetles and are slightly more elongate, and the ground color is a greenish yellow or yellowish white. The spotted form has 12 black spots on the wing cover. The striped form has two black lines on each wing cover. The inside lines meet when the insect is at rest, thus appearing as three stripes.

The diabrotica beetles pass the winter as adult beetles concealed in protective trash about the field. They become active in early spring, attacking wild gourd and the blooms of false dandelion, wild gourd or man-in-the-ground is a favorite food plant at this time.

Whatever the food plant may be, they feed ravenously in the early spring, attacking with apparently equal gusto, dirty or clean, tough or tender, sprayed or unsprayed foliage. After about 10 days of feeding, many of the beetles become restless, rise high in the air and fly to new fields. These migratory forms constitute the early generation that attacks the young plants, just pushing through the ground.

A common practice at this time is for the beetles to collect just at or just below the surface of the soil, feeding on the stems and sprouts. The plants are often girdled or cut off, the work much resembling that of the cut worm.

Eggs Laid in April.

About the time of their flight to cultivated fields, the beetles become more choice in their food habits, avoiding anything but the more tender and clean growth. Any dust or spray acts more or less as a repellent, although where carelessly applied may but serve to increase the injury by driving the beetles down to the untreated stems where the practice of girdling may become more pronounced.

Egg deposition begins in late April and early May and continues for about one month. The eggs hatch in about two weeks. The larvae tunnel into the soil, and feed on the roots and stems of the host plant of the adult; they are particularly a serious pest on sprouting corn, and in this period of their activity they are known as the corn root worm or the bud worm.

The larvae are mature in about two months and form cells in the soil where they transform to pupae and later to adult beetles.

The new generation of beetles appear in numbers about the last of June or during early July. These beetles are present and active throughout the summer months, skeletonizing the foliage of the beans, cucumbers and similar crops, devouring the silks of corn, eating the blossoms, foliage and young fruit of squash and pumpkins, ruining the blossoms of dahlias, asters and similar ornamentals and making themselves generally a serious nuisance to crop and ornamental producers.

These beetles are unusually difficult to control and no one treatment ordinarily will prove entirely effective in checking them. The "trap crop" treatment has given excellent results in a number of commercial tests made. This practice should be supplemented, however, where practical and a number of suggestions are given from which the grower may select such as best suits his needs.

Screens Are Effective.

Protective coverings, consisting of boxes, hoops or bent wires, covered with cheesecloth serve well for the protection of small plants. Wire screen cones were prepared and used in our tests as protective coverings. These cones are made of regular screen wire, cut in hemispheres. The straight edge of the hemisphere should be about 3 inches long. Get the wire screen of this width to make the cone, then draw the straight edge of the hemisphere together and sew with wire.

These protectors, where snugly fitted about the young plants, will keep out all beetles. The cones may be used for a period of years. They should be painted with a good screen paint to protect them from the weather.

Planting an excess of seed will be of some value where a stand is desired at all hazards.

Fertilization with some quick-acting fertilizer has been suggested to aid young plants in making a quick growth and thus outgrow the injury.

Taking advantage of the apparent preference of the beetles for squash and beans, these crops may be alternated where either is desired as a main crop or either of them may be used in conjunction with other crops as a trap. The squash is probably the more inviting under most conditions.

The trap should be planted about the border of the main field or a hill here and there.

Proceed as follows: About 10 days before planting the main crop, plant a few hills of the trap. At the time of planting the main crop, plant more of the trap crop. Some two weeks later make another planting of the trap crop.

When the first beetles appear, spray or dust the main crop with an arsenical poison. The treatment should be repeated as often as the effect of the previous application is lost. This treatment of the main crop must be thorough and care should be taken to treat every portion of the plant above and below. The treated vines will prove distasteful to the beetles and they will collect on the trap plants, where they may be destroyed by mechanical means.

Where no trap is used, the beetles will either work below the treated portions of the plants, girdling the stem, or they will "sit with folded hands" and await the growth of new tender unsprayed portions. It is only for a short time in the early season and again when the new brood appears in July that the beetles can be effectively poisoned.

Various substances have been recommended for treating the main field, such as wood ashes, air-slacked lime, tobacco dust and sulphur dust. All of these materials are fairly effective, but where used excessively some of them may stunt the young plant.

For very small plants, use a dust consisting of one part of calcium arsenate or lead arsenate to eight parts of sifted wood ashes, air-slacked lime, or finely divided sulphur dust. This same treatment may be used on the older plants or the regular arsenical spray of lead arsenate, one pound to 25 gallons of water used.

Where no regular trap crop has been planted, or planned, it is advisable to leave an occasional row or series of plants of the main crop untreated with dust to serve as a trap to attract the beetles.

PENDULUM OF PORTLAND'S PIONEER TOWN CLOCK STOPS AFTER 50 YEARS' SWINGING

Timepiece in Oddfellows' Tower, at First and Alder Streets, Has Watched City Develop From Swaddling Clothes Into Busy Metropolis.

BY DAVID S. STEARNS.

READERS of the Morning Oregonian and the Oregon Daily Herald of a little over 50 years ago frequently ran across articles in these papers descriptive of the work in progress toward erecting the magnificent Oddfellows' temple, on the southwest corner of First and Alder streets, these items generally ending with the statement, "When completed the building will have a tower in which will be installed Portland's first town clock." I can remember, boy as I then was, wondering what kind of a clock it could be, large enough to put on the top of a building. My mother being a widow with several small children, and widows' pensions, as with many other latter day luxuries, unknown, stern necessity decreed if I wished to attend school I must work nights—so carrying papers and lighting street lights (then of coal oil) became my vocation. For this reason probably that old clock became very dear to me, its bell tolling the hours or its bright face illuminated and telling the time were constantly in my thoughts, especially so by reason that boys of that early period were not blessed with watches.

The fancy retail district ended on the north at Ankeny street, at what was then called the New Market block, in which was the market proper, about 70x200 feet, running through the center of the building, which was located about midway between Pine, Ankeny, First and Second streets. The ceilings were very high, not only for the first, but the second and third floors as well. The lower story, as the name of the building indicated, was used solely for market purposes. The stalls were on each side and a wide arcade ran entirely through the middle from First to Second streets. A band stand occupied a mezzanine floor or platform in the center and from this was given band concerts on Saturday evenings. The two upper floors were really quite a large and commodious theater, called the New Market. The entrance both to main floor and gallery was by stairway from First street. Frank C. Barnes, James King and T. M. Papworth were all occupants of the market stalls, the first two as retail grocers, the latter in the butcher business.

Portland's first coffee and doughnut shop was run by a Frenchman, Frank Fabre. Among First street merchants were A. Delschneider, William Beck, John Wilson (now Olds, Wortman & King), A. Meier (now Meier & Frank company), Clarke & Henderson (now Lipman, Wolfe & Co.), B. L. Stone (now A. & C. Feldenheimer), C. H. Woodard (now Woodard, Clarke & Co.), J. Kohn (now Lion Clothing company), Hurgren & Shindler, Leon Vial, L. C. Henrichsen, Andrew Roberts, Steve Skidmore, C. S. Silver, Edward Cahalin, Ackerman's Dollar Store, Dr. Weatherford, Alisky, Hegele & Co., Gilman and Occidental hotels, in which the postoffice was then located, and in the first named was Matthew Keith's famous oyster house; John Cran, P. E. Brigham, L. C. Henrichsen, David Cole and many others whose names cannot now be recalled.

About 25 years ago business commenced to move westward and from high-class department, dry goods, clothing, drug, jewelry, notion stores and others as newer and, to Portland, a stranger kind of business began to appear. The show windows took on an untidy appearance. The merchandise displayed looked shopworn and old. The merchants themselves had a different appearance. Instead of being inside waiting to courteously greet a probable customer, they frequently were at the door or sidewalk curb. Goods were put farther out on the sidewalks. Stores were reduced in size. The glass in the windows did not glisten as formerly nor the clerks present such a dapper appearance. The people on the streets were not as spry in their movements, nor did they walk with the air of confidence possessed by the former pedestrians.

Joe Holladay's one-horse bobtail cars, hauled by old, broken-down horses, still ambled up and down, but they did not haul the crowds as in the palmy days, and thus came into being Portland's first old district.

Frank Dekum built a fine eight-story stone and brick building on Third and Washington streets, the ground floor for the use of Lipman, Wolfe & Co. and the upper floors for offices. Ted Holman and William Fleidner put up the Washington building, Fourth and Washington streets. H. W. Corbett erected the Worcester and the Hamilton buildings. The splendid Hotel Portland was completed and the Perkins and Seventh and Washington 100x100 corner of the Imperial constructed. W. S. Ladd erected a four-story brick, 100x100, way up town, on the southwest corner of Fourth and Washington streets for Olds & King and a two-story building on the northwest corner of Third and Washington to be occupied by A. & C. Feldenheimer, Olds & Summers and the Portland Trust company. Meier & Frank, not to be outdone by their competitors, purchased the 100x200 on the west side of Fifth street, between Alder and Morrison, and built a four-story structure covering the same. An old pioneer lawyer, P. A. Marquam, owned the entire block north of the Hotel Portland. On the Morrison street side, 60x200, he built a nine-story business and office building with an entrance to a new theater, the Marquam, now the Baker, which also he erected to the rear on Alder street.

H. L. Pittock and Harvey W. Scott put up the Oregonian building, on Sixth and Alder, putting a tower on it, in which is installed the second town clock. When these and other kindred improvements were completed First street's prestige waned. The Oddfellows' building, with its clock, no longer interested our people. The organization has, however, till lately kept it running. About the time of the heavy November storm the south dial was broken; since then no attempt apparently has been made to preserve its usefulness.

Some 18 years ago I moved to the east side of the river, and being fond of walking, on my way to my office of a morning passed the intersection of First and Morrison streets, from where the clock is plainly visible. I am sure I but speak the sentiment of many old-timers when I say we all would like to see it set to work again. We have too few of the old landmarks left in Portland now. As the youngest pioneer must have reached Oregon territory prior to 1860, it will not be long till the last of that historic band will have passed to the hereafter.

Memory associates that clock with faces of Luzerne Besser, Chief of Police Lappeus, Phil Saunders, J. C. Carson, Dave Monastes, Patrick Holland, James B. Stephens, C. P. Rodgers, D. D. Bunnell, B. F. Starr, William Grooms, Jake Hoffman, O. N. Denny, Captain Nelson, P. G. Stewart, A. B. Richardson, Philo Holbrook, W. K. and Albert T. Smith, Speck & Wilson, Drs. Chance and Dickson, C. A. Alisky, Leon Vial, Nick Versteeg, A. G. Marshall, J. R. Witherell, Tony Noltner, Aaron Bushwiler, Billy Church, T. A. Wood, A. G. Walling, Andrew Roberts, Sam "Muck-a-Muck" Smith, Steve Skidmore, Charley Sitton, Bob Bybee, Walter Moffett, Dan McKercher, Dan Sprague, J. W. and Captain Horatio Cooke, Bill Taylor, H. B. Litt, Lord Russell, Colonel Fleischner, Owen Summers, P. E. Brigham, J. Put Smith, Isom and Levi White, Henry Failing, W. S. Ladd, H. W. Corbett, W. H. Fechheimer, J. W. Whalley, George C. Sears, Charley Grout, Joe N. and Cyrus Dolph, John H. Mitchell, W. W. Page, Charles E. and Ferd Smith, George H. Chance, J. R. and B. P. Cardwell, Ralph M. Dement, U. K. Arnold, George H. Williams, Sylvester Pennoyer, Dick Everding, Sylvester Farrell, Van B. DeLashmutt, H. B. Oatman, Matt Keith, Billy Eppinger, Harry Morgan, Tom Wood, William Wadhams, A. B. Hallock, C. A. Alisky, Bill Andrus, A. D. Shelby, F. M. Arnold, William Bennett, George V. James, Charles P. Bacon, William and Samuel Sherlock, C. S. Silvers, Ned Chambreau, Ira F. Powers, E. J. Northrup, J. D. Holman, Charles E. McGinn, Leonard & Green, George L. Story, H. L. and George W. Pittock, Harvey W. Scott, W. M. Wisdom, L. G. Pfunder, William Shanahan, Philo Holbrook, John F. Caples, C. J. Mulkey, Theodore Wygant, S. G. Reed, D. D. Bunnell, Archie Williams, Dr. W. H. Saylor, Dr. J. H. Chapman, C. H. Lewis, Al Zieber, Jake Stitzel, Eugene Semple, John and Dick Holton, John R. Foster, John Catlin, J. Lowenberg, Albert Bartsch, P. Selling, Frank and Joe Hacheney and many others of that old band of rugged pioneers too numerous to enumerate.

The old New Market theater comes into mind—the crowds that on Saturday nights thronged the market proper. Stores of L. K. G. Smith, Louis Pfunder, S. L. and B. L. Stone, Joe Penney's "Gem," John Green's "Cosmopolitan," "Walter Moffett's "Webfoot," Drouilhat's French restaurant, Matt Kleth's oyster house, Ackerman's Dollar Store, stately William Currier's clothing palace, Clarke & Henderson, John Wilson, C. S. Silver, Arthur Kohn, Meier & Frank's, Wiberg's, Lewis & Strauss, Ira Powers, Dr. B. F. Starr, David Cole, Olds & Summers, Alisky & Hegele's candy, confectionery and ice cream parlors and hosts of prominent stores that then made up the life and light of Portland.

Just a few of the old guard remain. To that few the old clock with its now dilapidated setting is almost sacred, despite the fact but a small percentage of our people know or care of its existence. We old-timers would like to see its broken dial replaced and the old clock again set to running. If perchance City Engineer Lauergard's dream becomes a fact, probably the hall and with it the town clock will come down.

If so, let us hope the papers of that day will from time to time contain articles detailing progress in the construction of the splendid new building being erected on the site of the old Oddfellows' temple, southwest corner of First and Alder, coupled with a statement that the building will have a tower surmounting the main structure, within which will be placed Portland's first town clock, that clock which for over half a century has so faithfully served the people of this city.

Science Lesson Today Is on "Matter."

Week's Programme Is Announced by Portland Set of Churches.

THE Churches of Christ, Scientist, in Portland will hold regular services this morning at 11, and all the churches except Fifth and Seventh will hold Sunday evening services at 8. The subject of the lesson sermon today is "Matter."

All the churches hold Wednesday evening testimonial meetings at 8 o'clock and maintain two sessions of Sunday school. The session for the older classes up to 20 years of age convenes in all the churches except Third and Fifth at 9:45 and the session for the younger classes convenes at 11. In Third and Fifth churches the sessions are 9:30 and 11.

Free public reading rooms are maintained on the 11th floor of the Northwestern bank building, at 266 Burnside street, at 148 Killingsworth avenue and at East Sixth and Holladay.

Christian Science churches are located as follows: First church, Nineteenth and Everett streets; Second church, East Sixth and Holladay avenue; Third church, East Twelfth and Salmon; Fourth church, Efferson street and Vancouver avenue; Fifth church, Sixty-second street and Forty-second avenue Southeast; Sixth church, Pythian Temple, 388 Yamhill street, and Seventh church, Holbrook block, St. Johns.

Fourth Church of Christ, Scientist announces a free public lecture on Christian Science to be given by William D. Kilpatrick, C. S., of Detroit, Mich., to be given in the municipal auditorium Thursday evening, March 25, at 8 o'clock. Mr. Kilpatrick is a member of the board of lectureship of the mother church, the First Church of Christ, Scientist, in Boston, Mass.

A cordial invitation to visit the reading rooms, attend church services and to lectures is extended to all.

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Evangelist L. K. Dickson will speak in Christensen's hall Sunday night at 7:30 o'clock on the subject "The Seven Last Plagues of Bible Prophecy." These plagues are still future and Mr. Dickson will explain what they will be and what will happen just prior to their fall. A special programme of music will be rendered, including a male quartet and instrumental solo. A big congregational sing under the direction of Professor L. C. Colcord will precede the sermon-lecture. Seats are free and the public is invited.

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At First Spiritualist church, East Seventh and Hassalo streets, a lecture is to be given at 3 P. M., followed with messages, and evening services at 7:45 P. M., followed with messages by C. W. Shaw. Mid-week messages services every Wednesday at 7:45 P. M.

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"The Comforter" Center holds two services, at 11 A. M. and 8 P. M., in the assembly room, Portland hotel. Florence Crawford speaks in the morning upon "The Healing Pool of Bethesda." In the evening both Florence McFarlane and Florence Crawford will speak, the topic being "What Is That to Thee?" The regular healing meeting of the center is held each Thursday evening.

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Services will be held at the Metaphysical Library, room 312 Central building, Sunday at 11 A. M. and 8 P. M. and Tuesday, Wednesday and Friday at 8 P. M., by Nettie Taylor Kloh.

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Rosicrucian Fellowship, Columbia hall, Second and Oak, will have an illustrated lecture by Prentiss Tucker at 8 P. M. Sunday and Monday, March 21 and 22. The subject is "Do the Dead Still Live?" Free admission.

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Rev. H. Edward Mills will address the Realiziation league at 148 Thirteenth street at 11 A. M. on "The Meaning of the Fourth Dimension" and at 8 P. M. on "Mastering the Mysteries."

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Religious services are being held today at the Patton Old People's home under the auspices of the B. Y. P. U. of the White Temple. Webber's juvenile orchestra has been engaged and F. A. Hilton will give a short talk. These services are a regular feature of the young people's work.

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T. M. Minard, pastor of the First Divine Science church, blue room, Portland Hotel, will hold services at 11 A. M.; subject "Changeless Truth." Mid-week meeting Thursday, 8 P. M., room 301 Tilford building.

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At Kenilworth Presbyterian church, Gladstone avenue and East Thirty-fourth street, Rev. L. K. Grimes will preach this morning at 11 on "What God Thinks of His Word," and this evening at 7:30 on "Sin and Fire."

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At the Third Baptist church this morning the subject of the pastor, Rev. R. E. Close, will be "Intercession and the New World Movement," and the evening subject at 7:30 P. M., "All That God Can Do."

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Rev. H. E. Ryder, pastor of Sellwood Christian church, will be the speaker at the men's resort meeting at 4 P. M. today. The men's resort orchestra, with Alice Johnson leader, will give special music and play for the songs by the men. Tuesday evening the East Side Baptist Young People will be at the resort at 8 o'clock, and Wednesday the First United Brethren young people. These will be the young people's meetings of the season, and they will put on special programmes.

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At the Tualatin Methodist Episcopal church this morning Rev. Alfred Bates, the pastor, assisted by the orchestra and choir, will sing "Keep Sweet," and will preach at 11 A. M. Service this evening at 8 o'clock. The pastor will preach at the Wilsonville church, and the men's trio, Henry Aden, Sherman Seely and the pastor, will sing special music. Mr. Alva O. Westgate is the new Sunday school superintendent at Wilsonville.

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At the Glencoe Baptist church, corner Forty-fifth and East Main streets, Rev. F. C. Laslette has been holding revival services every night this week, with good crowds, and many are accepting Christ. He will preach Sunday morning at 11 o'clock on "A Message of Jesus to the World Toilers." At 7:30 Dr. S. J. Reid, the Irish evangelist, will preach. The ordinance of baptism will be observed. Dr. Reid will hold services every night from March 21 to March 28.

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Dr. J. J. Staub, pastor of the Sunnyside Congregational church, is preaching a series of sermons on vital pre-Easter topics, supported by special selections from an exceptionally fine chorus choir, under the direction of Prof. J. A. Hollingsworth. The subject for the morning service will be "The King's Guest Chamber." In the evening the pastor will speak on "The Triple Test of Christian Experience."

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What Kind of Blood Have You?

Thin, Pale and Watery—Keeping You Weak, Nervous and Run-Down—Or Rich, Red, Healthy Blood With Plenty of Iron in It to Give You Strength, Energy, Power and Endurance

Physician Says Iron Is Red Blood Food

Explains How Nuxated Iron—Master Strength-Builder of the Blood—Helps Give Renewed Vim and Energy to Men and Puts Roses Into the Cheeks of Women.

Plenty of Iron makes rich, red corpuscles like these. | Highly magnified drop of blood of anaemic woman, showing lack of healthy, red corpuscles.

If you tire easily, if you look pale, haggard and worn, if you feel generally weak, nervous and run-down it would probably astonish you to look at a drop of your own blood under a powerful microscope and compare it with a drop of pure, healthy blood—rich in iron. Actual blood tests show that a tremendously large number of people who are weak and ill lack iron in their blood and that they are ill for no other reason than lack of iron. Iron deficiency paralyzes healthy, energetic action, pulls down the whole organism and weakens the entire system.

There are thousands whose bodies are ageing and breaking down at a time when they should be enjoying that perfect bodily health which cries defiance to disease simply because they are not awake to the condition of their blood. By allowing it to remain thin, pale and watery they are not giving the natural life forces of the body a chance to do their work. Yet others go through life apparently possessing, year after year, the elasticity, the strength and the energy of earlier days, through their bodies courses the energy and power that comes from plenty of red blood—filled with strength-giving iron. Iron is red blood food and physicians explain below why they prescribe organic iron—Nuxated Iron—to build up the red blood corpuscles and give increased power and endurance.

Commenting on the use of Nuxated Iron as a tonic, strength and blood-builder by over three million people annually, Dr. James Francis Sullivan, formerly physician of Bellevue Hospital (Outdoor Dept.), New York and the Westchester County Hospital, said: "Modern methods of cooking and the rapid pace at which people of this century live has made such an alarming increase in iron deficiency in the blood of American men and women that I have often marveled at the large number of people who lack iron in the blood—and who never suspect the cause of their weak, nervous, run-down state.

"Many a woman who is run-down, easily tired out, nervous and irritable, suffers from iron deficiency and does not know it. I am convinced that there are thousands of such women who, simply by taking Nuxated Iron might readily build up their red corpuscles, increase physical energy, and get themselves into condition to ward off the millions of disease germs that are almost continually around us. I have seen frequent instances where it gave renewed strength and energy, increased power and endurance, steady nerves, and the rosy bloom of health in about ten days' or two weeks' time.

"I consider Nuxated Iron one of the foremost blood and body builders—the best to which I have ever had recourse."

Dr. H. B. Vail, formerly Physician in the Baltimore Hospital, and a Medical Examiner, says: "Throughout my experience on Hospital Staffs and as a Medical Examiner, I have been astonished at the number of patients who have vainly doctored for various diseases, when in reality their delicate, run-down state was simply the result of lack of iron in the blood. Time and again I have prescribed organic iron—Nuxated Iron—and surprised patients at the rapidity with which the weakness and general debility was replaced by a renewed feeling of strength and vitality. I took Nuxated Iron myself to build me up after a serious case of nervous exhaustion. The effects were apparent after a few days and within three weeks it had virtually revitalized my whole system and put me in a superb physical condition."

Dr. T. Alphonsus Wallace, a physician of many years' experience in this county and abroad, says: "I do not make a practice of recommending advertised medical products but I have found Nuxated Iron so potent in nervous, run-down conditions, that I believe all should know it. The men and women of today need more iron, in their blood than was the case twenty or thirty years ago. This because of the demineralized diet which now is served daily in the thousands of homes and also because of the demand for greater resistance necessary to offset the greater number of health hazards to be met at every turn."

Manufacturers' Note: Nuxated Iron, which is prescribed and recommended above by physicians, is not a secret remedy, but one which is well known to druggists everywhere. Unlike the older inorganic iron products, it is easily assimilated and does not injure the teeth, make them black nor upset the stomach. The manufacturers guarantee successful and entirely satisfactory results to every purchaser or they will refund your money. It is dispensed by all good druggists.

NUXATED IRON

For Red Blood, Strength and Endurance

FREE TO Pile Sufferers

Don't Be Cut—Until You Try This New Home Cure That Anyone Can Use Without Discomfort or Loss of Time. Simply Chew Up a Pleasant Tasting Tablet Occasionally and Rid Yourself of Piles.

Let Me Prove This Free

My internal method for the treatment and permanent relief of piles is the correct one. Thousands upon thousands of grateful letters testify to this, and I want you to try this method at my expense.

No matter whether your case is of long standing or recent development, whether it is chronic or acute, whether it is occasional or permanent, you should send for three free trial treatment.

No matter where you liveno matter what your age or occupation—if you are troubled with piles, my method will relieve you promptly.

I especially want to send it to those apparently hopeless cases where all forms of ointments, salves and other local applications have failed.

I want you to realize that my method of treating piles is the one most dependable treatment.

This liberal offer of free treatment is too important for you to neglect a single day. Write now. Send no money. Simply mail the coupon—but do this now—TODAY.

Free Pile Remedy

E. R. Page,
947B Page Bldg., Marshall Mich.

Please send free trial of your Method to:

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AN OLD RECIPE TO DARKEN HAIR

Sage Tea and Sulphur Turns Gray, Faded Hair Dark and Glossy.

Almost everyone knows that Sage Tea and Sulphur, properly compounded, brings back the natural color and luster to the hair when faded, streaked or gray. Years ago the only way to get this mixture was to make it at home, which is mussy and troublesome.

Nowadays we simply ask at any drug store for "Wyeth's Sage and Sulphur Compound." You will get a large bottle of this old-time recipe improved by the addition of other ingredients at very little cost. Everybody uses this preparation now, because no one can possibly tell that you darkened your hair, as it does it so naturally and evenly. You dampen a sponge or soft brush with it and draw this through your hair, taking one small strand at a time; by morning the gray hair disappears, and after another application or two, your hair becomes beautifully dark, thick and glossy and you look years younger.—Adv.

Try Making Your Own Cough Remedy

You can save about $2, and have a better remedy than the ready-made kind. Easily done.

If you combined the curative properties of every known "ready-made" cough remedy, you probably could not get as much real curative power as there is in this simple home-made cough syrup, which is easily prepared in a few minutes.

Get from any druggist 2½ ounces of Pinex, pour it into a pint bottle and fill the bottle with syrup, using either plain granulated sugar syrup, clarified molasses, honey, or corn syrup, as desired. The result is a full pint of really better cough syrup than you could buy ready-made for three times the money. Tastes pleasant and never spoils.

This Pinex and Syrup preparation gets right at the cause of a cough and gives almost immediate relief. It loosens the phlegm, stops the nasty throat tickle and heals the sore, irritated membranes so gently and easily that it is really astonishing.

A day's use will usually overcome the ordinary cough, and for bronchitis, croup, hoarseness and bronchial asthma, there is nothing better.

Pinex is a most valuable concentrated compound of genuine Norway pine extract, and has been used for generations to break up severe coughs.

To avoid disappointment, ask your druggist for "2½ ounces of Pinex" with full directions, and don't accept anything else. Guaranteed to give absolute satisfaction or money promptly refunded. The Pinex Co., Ft. Wayne, Ind.—Adv.

FREE TO ASTHMA SUFFERERS

A New Home Method That Anyone Can Use Without Discomfort or Loss of Time.

We have a new method that controls Asthma, and we want you to try it at our expense. No matter whether your case is of long standing or recent development, whether it is present as occasional or chronic Asthma, you should send for a free trial of our method. No matter in what climate you live, no matter what your age or occupation, if you are troubled with asthma, our method should relieve you promptly.

We especially want to send it to those apparently hopeless cases, where all forms of inhalers, douches, opium preparations, fumes, "patent smokes," etc., have failed. We want to show everyone at our expense that this new method is designed to end all difficult breathing, all wheezing, and all those terrible paroxysms at once.

This free offer is too important to neglect a single day. Write now and begin the method at once. Send no money. Simply mail coupon below. Do it today.

FREE TRIAL COUPON.
FRONTIER ASTHMA CO., Room 507, Niagara and Hudson streets, Buffalo, N. Y.

Send free trial of your method to:

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—Adv.

New Method of Reducing Fat

A news item from abroad informs us that the American method of producing a slim, trim figure is meeting with astonishing success. This system, which has made such a wonderful impression over there, must be the Marmola Prescription Tablet method of reducing fat. It is safe to say that we have nothing better for this purpose in this country. Anything that will reduce the excess flesh two, three or four pounds a week, without injury to the stomach, the causing of wrinkles, the help of exercising or dieting, or interference with one's meals is a mighty important and useful addition to civilization's necessities. Just such a catalogue of good results, however, follow the use of these pleasant, harmless and economical little fat reducers. We say economical because Marmola Prescription Tablets (made in accordance with the famous prescription) can be obtained of any druggist or the makers, the Marmola Co., 884 Woodward ave., Detroit, Mich., for one dollar the large case, which is a decidedly economical price considering the number of tablets each case contains. They are harmless.—Adv.

Your Hair Needs Danderine

Save your hair and double its beauty. You can have lots of long, thick, strong, lustrous hair. Don't let it stay lifeless, thin, scraggly or fading. Bring back its color, vigor and vitality. Get a 35-cent bottle of delightful "Danderine" at any drug or toilet counter to freshen your scalp; check dandruff and falling hair. Your hair needs stimulating, beautifying "Danderine" to restore its life, color, brightness, abundance. Hurry, Girls!

LUDEN'S
GIVE QUICK RELIEF
FOR COLD IN HEAD

Insurance Man Tells of Friend's Recovery

"He suffered considerably from gas in stomach and colic attacks, and at times was very yellow. His doctors diagnosed his ailment as gall bladder trouble and that an operation was necessary. Someone persuaded him to try Mayr's Wonderful Remedy. Since taking it one year ago he tells me he has been able to eat anything." It is a simple, harmless preparation that removes the catarrhal mucus from the intestinal tract and allays the inflammation which causes practically all stomach, liver and intestinal ailments, including appendicitis. One dose will convince or money refunded. At all druggists.—Adv.