

LISTEN, Mr. Busybody!

You Can't Let Our Discount Sale Pass Without a Look

COLORED UNDERWEAR

All sizes and big assortment of colors 25% off

COLORED SHIRTS

\$1.50 and \$2.00 qualities 20% off

STRAW HATS

Alpines—split and rough—50% off

Capitol Clothing Store,

Temporary Quarters

104-106 Montgomery St., Under Exchange Hotel

EQUAL to that of your own is the interest you take in your little ones. Of more than passing interest are the **LOW PRICES** that you can buy to-day and to-morrow.

MISSSES SKIRTS AND CHILDREN'S DRESSES

Misses plain and fancy white Pique Skirts with inverted plaits and deep hems in lengths from 22 to 28 were up to \$2.50 at

98 cents.

WHITE LAWN

Dresses for children of 8 and 10 years; not many of them, they were positively up to \$3.50, have lace yoke and embroidery trimmed, on account of being slightly mused

98 cents.

Misses Colored Percale Shirt Waists

19 cents.

A. NACHMAN,

Ladies' Outfitter.

102 Dexter Avenue.

Phone 509



HEAT OR COLD

Makes no Difference If Your Liver is Right.

LIVERINA

Relieves a torpid liver and tones the system. Pleasant to take and does not gripe nor purge. 50c. a bottle at all retail stores. Guaranteed by

GAY, HARDIE & DURR,

Proprietors, Montgomery, Ala.

HEADQUARTERS FOR HIGH GRADE BUTTER.

WHAT TO EAT

is a question that puzzles most house-keepers during the hot weather. It's so hard to get things that will be tasty and attractive. If you will come in and look over my line of canned goods you will find something that will help you.

The prices are right.

J. A. Schneider.

Imported and Domestic Groceries.

107 DEXTER AVENUE.

TELEPHONE 28.

The ADVERTISER'S HOME STUDY CIRCLE

ELECTRICAL ENGINEERING

By Arthur E. Watson, A. M.

ARTICLE IV.

Dynamos for Incandescent Lamps.

Incandescent lamps are commonly arranged in multiple—each has an independent connection with the source of current. Two wires are led from the dynamo as far as the most remote lamp and the lamps are connected across like the rungs of a ladder. Whatever current passes through one lamp does not go through any other; this method is just the opposite of the method used in the series circuit, where the current goes through all the lamps in series. Were incandescent lamps connected in series dangerously high potentials would be brought within easy reach, a large number of separate circuits would be needed to provide for the thousands of lamps to be lighted. The breaking of one lamp would interrupt a whole circuit and the dynamos could not accommodate the varying demands of the separate circuits.

The incandescent lamp system is somewhat like a water or gas system. Each faucet or jet represents an independent outlet; the reservoirs or tanks are to keep, as nearly as possible, a uniform pressure throughout the extending piping and to supply quantities varying with the demands. The dynamo for this system must impress a definite voltage, suitable for the lamps, upon the whole network of wires; though no lamp be burning there must always be the readiness of the current as soon as the key is turned. Even though large numbers of lamps be lighted the volume of current must be in measure corresponding; though accidental "short circuits" happen there must be kept up the same pressure; in its attempt to supply excessive demands there must more current flow than would be the capacity of the wires of the dynamo to withstand or the power of the engine might be insufficient, hence safety fuses are inserted in numerous places in the various branches to melt and confine the injury to an inexpensive device and prevent a general interruption of the entire system.

Instances of operating incandescent lamps in series are offered in the case of street cars—five 110-volt lamps being connected in series on a 550-volt trolley supply, and in cases of some street lamps forty twenty-five-volt lamps being connected in series on regular 1,000-volt alternating current dynamos. Even in these cases, there are a large number of lamps connected independently to the dynamos, so these individual circuits are really in multiple.

Edison was a pioneer in incandescent lighting, being contemporary with Brush in arc lighting. At first his dynamos were separately excited, later for many years he employed an ordinary shunt wound field magnet; regulation as to proper potential was effected manually by use of a variable resistance or rheostat in the field circuit; during light loads considerable resistance is inserted in this circuit, thereby weakening the field; at full load nearly all the resistance is cut out, and the magnets are fully excited. Early forms of field magnets were very long and slender, later, after Hopkinson had formulated the law of the magnetic circuit the entire line of dynamos was redesigned, having magnets about one-half as long, and of twice as great cross section; this alteration having taken place in 1885 the machines are commercially known as the "S" type. One of these is shown in figure 35.

Electric generators are commonly rated in kilowatts; the watts equal the product of the volts by the amperes, and 1,000 watts equal one kilowatt, 746 watts equal one horse power; then a kilowatt equals about one and one-third horse power. The cut shows a 100 k. w. size; since one sixteen candle power lamp requires about fifty-watts, the lamp capacity of any dynamo can easily be determined.

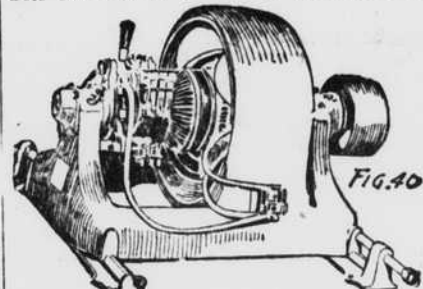
The current capacity of any dynamo is purely a matter of the size of the wire, and some data regarding wires will be appropriate. A wire is commonly round, not square, so a system of measurements of areas in round or circular measure has been devised. A wire .001 inch diameter is called of one "mil" diameter—derived from a Latin word denoting thousand; the area of cross section of such a wire is called one circular mil; a circular mil is as much smaller in area than a square mil as a circle is smaller in area than its circumscribed square. Ordinary safe limits of temperature are reached in dynamos under 50 k. w. sizes, when 500 circular mils per ampere is allowed for an armature of 1,000 circular mils per ampere for a field winding. Larger machines, in which the wire is

wound to a greater radial depth, must allow larger sizes of wire or the rise of temperature will be too great. Former Edison practice allowed a temperature limit of 213 degrees, or equal to that of boiling water; this heat is too great for cotton insulation long to endure; present specifications limit the heat to an amount not exceeding 150 degrees. Apply the test to the 6 k. w. dynamo. From a proper wire table, learning that No. 10 wire is of 10,381 circular mils in area, and remembering from the diagram of winding shown in figure 8 of article I that two wires connect to each commutator segment, each carrying half the current, 10,381 divided by twenty-six (amp.) equals about 400. No. 18 wire has 1,624 circular mils area; if two amperes flow there will be allowed only about 800 circular mils per ampere. Under these conditions the dynamo would be expected to heat to rather a high degree. Nearly automatic regulation of voltage can be secured by use of compound field winding. Its scheme can be explained in words as consisting of adding to the shunt winding a few coils of large wire or ribbon through which the entire current flows. At no load the entire field strength is due to the shunt winding; were that alone employed the potential would fall somewhat, due to previously enumerated causes, when more and more current was demanded; by sending this same current around the field coils the magnets will gain a strength just proportional to the demand. Commonly the series winding is made strong enough to maintain a constant potential not at the dynamo, but at the lamps; at no load the machine may supply just 110 volts; at full load it may generate 125 volts; yet due to resistance of main wires the lamps would get only 110. Such practice is called "over-compounding."

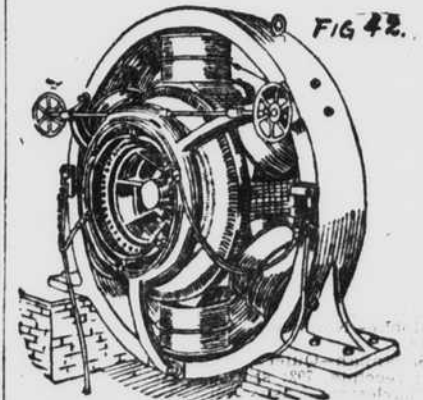
When an armature revolves in a magnetic field of two poles the conductors cut lines of force twice each revolution, once under the north pole, once under the south. By use of multipolar field magnets the cutting of these lines will occur oftener, resulting either in a higher e. m. f. or increased volume of current; whichever of these two



gains is desired is determined by the method of grouping the armature wires and the arrangement of the brushes. For generating a high e. m. f. or to get slow speed in a small machine the grouping of coils under the successive pairs of poles is in series; on only two places of the commutator are brushes needed. For large currents the grouping is in multiple and as many brushes are required as there are field poles. The ordinary winding of a ring armature adapts itself for use in a number of ways.



of poles, a drum, however, must be specially wound for a given number of poles. With multipolar dynamos the drum armature coils can be separately wound in proper forms, insulated and placed in position on the cores; an injured coil can be replaced without destroying the entire winding. Figure 36 shows a tooth drum armature core for a four-pole field; in figure 39 a number of these coils are shown in location upon the core. Figure 40 represents the completed machine.



SYRUP OF FIGS



An Excellent Combination.

The pleasant method and beneficial effects of the well known remedy, SYRUP OF FIGS, manufactured by the CALIFORNIA FIG SYRUP CO., illustrate the value of obtaining the liquid laxative principles of plants known to be medicinal, laxative and preventing them in the form most refreshing to the taste and acceptable to the system. It is the one perfect strengthening laxative, dispelling colds, headaches and fevers gently yet promptly and enabling one to overcome habitual constipation permanently. Its perfect freedom from every objectionable quality and substance, and its acting on the kidneys, liver and bowels, without weakening or irritating them, make it the ideal laxative.

In the process of manufacturing figs are used, as they are pleasant to the taste, but the medicinal qualities of the remedy are obtained from senna and other aromatic plants, by a method known to the CALIFORNIA FIG SYRUP CO. only. In order to get its beneficial effects and to avoid imitations, please remember the full name of the Company printed on the front of every package.

CALIFORNIA FIG SYRUP CO.

SAN FRANCISCO, CAL.

LOUISVILLE, KY. NEW YORK, N. Y.

For sale by all druggists. Price 50c. per bottle.

Morquina and Whiskey have been treated without pain or confinement. Cure given at the California Fig Syrup Co. only. Manager, Lithia Springs Sanatorium, Box 3, Austell, Ga.

OPIMUM

WAS SENT UP FOR LIFE

ROBERT STONE, A NEGRO, CONVICTED OF MURDER.

He Killed Ben Minter, a Negro Boy, on Hayneville Road—Other News of the Local Courts.

The Criminal division of the City Court, Judge W. H. Thomas presiding, was engaged almost all of yesterday in the trial of Robert Stone, a negro charged with the murder of Ben Minter, a negro, and at 7 o'clock yesterday evening the jury returned a verdict of guilty and fixed the penalty at life imprisonment.

About nine months ago while Ben Minter, a young negro, was at a store on the Hayneville road at night with some companions, he was accosted by Robert Stone, who had served a term in the penitentiary, and after hot words Ben Minter was shot to death. Stone escaped but was subsequently captured.

Nearly father of Minter drove to the city, reaching here about 1 o'clock in the morning, and reported the shooting to the Advertiser. He was directed to police headquarters and the county jail, where he gave information of the murder.

The jury which tried the case yesterday consisted of the following citizens: F. H. Merritt, A. A. Janney, Sr., L. J. Bugg, B. C. Toole, J. T. Bedole, J. D. Terrill, T. J. Kelly, J. E. Carney, J. T. Hopkins, M. P. Cameron, A. C. Norman and T. H. Cochran.

At 7 o'clock last night the jury announced that it had reached a verdict and filed into the court room. The verdict was handed by the foreman, F. H. Merritt, to Clerk Matthews, who read it to the court.

The jury was discharged and Stone was taken to the county jail. The case against Mack Goss and Henry King, negroes, charged with maliciously obstructing a railroad was continued until the next term of court on account of absent witnesses.

An Order Vacated.

In the case of A. P. Tyson vs. the First National Bank, in the City Court in Equity yesterday, Judge Sayre vacated the order for the temporary writ of injunction.

The order vacating the writ was granted upon the ground that the relative injury suffered by the bank would be much greater than that suffered by Mr. Tyson until the equities of the bill are settled.

A renewed application was made to Hon. T. N. McClellan, Chief Justice of the Supreme Court, for a temporary writ of injunction, and if the same is refused the case will continue until the equities of the bill are settled by testimony.

The Civil Division.

In the civil division of the City Court yesterday in the case of the State of Alabama vs. Alabama Bible Society, the court held that the Alabama Bible Society is exempt from taxation, and the assessment made by the Board of Revenue was quashed.

The following cases are set for trial in this court today:

Whitfield Ellis, et al. vs. Alfred Wright.

Ochs Kohn and Co. vs. Whitehead and Son.

Ochs Kohn and Co. vs. the Brewery, garnish.

Ochs Kohn and Co. vs. Grif Bros., garnish.

W. M. Hudson and Co. vs. Erwin Bell.

Newt Tracy Bound Over.

Newt Tracy, a white man of Chilton County, was arranged before United States Commissioner Elmore yesterday on a charge of kidnapping. He was bound over to await the action of the Federal Grand Jury, his bond being fixed at \$200, which was made.

The Recorder's Court.

Yesterday Belle Ennis, charged with disorderly conduct, was continued until Saturday.

Henry Snipes and Marlon Matthews, two small negroes, charged with fighting were held for their parents to punish.

J. W. Smith, charged with violating the Sunday liquor laws, was discharged.

ESTABLISHED 1890.

The Oldest and Best Dye House in Montgomery.

Holt's Dye Works began business at 109 S. Court St. in December, 1890. They are still there with more business, more capital, more machinery, more men and more experience. —adv.

At Auditorium Aug 12.

Season of vaudeville opens for ladies and children; only 15 and 25 cents. —adv.

Held Up by a Burglar.

Caught in a fire, or being run over by a car, is an accident. The Advertiser Accident Policy would be the thing in such an event. Every reader can have one. —sun-wed-fri.

Notice Infirmary Aid Society.

The members of the Infirmary Aid Society are requested to meet this afternoon at 5 o'clock at the home of Miss Mary Kirkpatrick, on Court Street.

If the Baby Is Cutting Teeth.

Be sure and use that old and well-tried remedy, Mrs. Winslow's Soothing Syrup, for children teething. It soothes the child, softens the gums, allays all pain, cures wind colic and is the best remedy for diarrhoea. Twenty-five cents a bottle.

Special Low Rates via M. & O. R. R.

to Colorado and Utah.

Tickets on sale August 1st to 10th and September 1st to 10th, good returning until October 31st. Particulars, No. 2 Commerce Street. —adv-8t.

A Man can be more kinds of a fool than a woman, but a woman can get more fool-ness into her one kind than he can in all his.

Pitt's Carminative

Cures Teething Children. It cures all Stomach and Bowel Troubles. It will cure your baby. Try it. Price 25c. —tu-fr-su.

What if you walk up to a man and tell him he looks terribly bad? Do you think it makes him feel better?

Cascade Restaurant.

The best market affords served in first-class style. At Galt's, Prop., opposite The Advertiser office. —adv.

For the Finest HAVANA CIGARS,

wholesale or retail, go to Hermann Ross, Mfr., No. 9 N. Court St. —fr

What if the horse ran away? Have you an Accident Policy? The Advertiser's Puritan Accident Policy would be handy. It's practically free to readers. —sun-wed-fri.

Your Last Chance!

Don't Miss This Opportunity!
Mens, Boys and Children's

SPRING SUITS...

At Cost! CASH ONLY.

Geo. P. Haardt & Bro.

Phone 399.

13 Commerce Street.

Wait For Our

Rummage Sale!

Bargains a Plenty.

See Sunday's Advertiser.

SAM TRUM, PURVEYOR TO THE TRADE, 203 DEXTER AVE.

"The Mill Will Never Grind Again With The Water That Is Passed."

This Maxim should impress you with the interest

offered you in our

20% Discount Sale.

It Closes August 15th.

And we don't believe that you will have an opportunity again to procure such excellent House Furnishing goods at such prices as this discount figures the goods down to. For instance, we have:

One Dinner and Tea set of 110 pieces, in best porcelain, decorated and gold traced, regular price \$20.84, less 20 per cent makes it.....

One set of same composition \$19.47, less 20 per cent makes it.....

One set of same composition \$18.12, less 20 per cent makes it.....

Three sets of 101 pieces; one each pink, blue and green, regular price \$12.50, less 20 per cent makes them per set.....

One set of 100 pieces, green print, regular price \$10.65, less 20 per cent makes it.....

These will be on our center table Monday morning and the first comers get them.

This Discount is for cash only and applies to all goods in our stock, except Fruit Jars, Rubbers and Jelly Glasses.

24 N. Court

Street. . .

KLEIN & CO.

McLean's STRENGTHENING CORDIAL

Promotes Ap-

petite. Aids Di-

gestion. Tones

up the System. Re-

lieves Cramps and

Pains. Clears the

Mind. Regulates the

Stomach. Is an Imme-

diately Bracer, as well

as a Permanent Effectual Tonic.

It Has No Equal

as a hot weather remedy for lassitude and heat exhaustion. It benefits all the functions of the body, making them healthy and strong. Your druggist has it, or will get it. It means health and comfort for \$1.00.

Made by

The Dr. J. H. McLean Medicine Co., St. Louis, Mo.

YUNG'S RESTAURANT.

BY D. FLEMING.

26 N. Court St

—THE PLACE FOR—

The Choicest The Market Affords