# A nnual January Clearance Sale

Ladies' Warm-Lined Shoes & Fet Slippers

Mullifiers and Leggings.....

Ladies' $2.50 felt-lined Shoes—now.....$1 97
Ladies' $1.75 felt-lined Shoes—now.....$1 68
Ladies' $1.50 foxed Shoes—now.....$1 45
Ladies' $1.00 foxed Shoes—now.....93
Ladies' Fur Trimmed Mullifiers now...59c, 79c and 99
Ladies' Knit Slippers—reduced to.....59c and 79
Boys' Canvas Leggins.....39
Boys' Corduroy Leggins—reduced to.....79
Boys' Heavy Cloth Leggings—reduced to.....79

*All styles in Ladies' and Children's Leggings at reduced prices.*

H. B. MERRITT Pontiac

MEASURE VALUES

by our standard of quality and price, and it will be found that the equal of our offerings in

# Hardware

Cannot be duplicated in thiscounty.

Our stock of seasonable goods are new each season. We have no ancient goods to work off so that the newest and best in the line will be found here at

OUR USUAL LOW PRICES

R. J. Blakeslee, Birmingham Mich.



8 YEARS' EXPERIENCE

PATENTS

TRADE MARKS
DESIGNS
COPYRIGHTS &C.

Anyone sending a sketch and description may quickly ascertain our opinion free whether an invention is probably patentable. Communications strictly confidential. Handbook on Patents sent free. Oldest agency for securing patents.

Patents taken through Munn & Co. receive special notice, without charge, in the

Scientific American.

A handsomely illustrated weekly. Largest circulation of any scientific journal. Terms, $3 a year; four months, $1. Sold by all newsdealers.

MUNN & Co. 361 Broadway, New York
Branch Office, 625 F St., Washington, D. C.



FLORIDA AND NEW ORLEANS —VIA—

QUEEN & CROESCENT ROUTE

SOUTHERN RY.
AND CONNECTING LINES
Famous Chicago and Florida Special,
In Service January 6th.

Leaving Chicago at 1:00 pm., Cleveland at 12:50 pm., via the Four Route from Pittsburgh at 8:00 am., via Detroit, Toledo and Louisville via Southern Ry. at 7:25 p. m. daily except Sunday. From Detroit at 12:25 pm., Toledo 2:22 pm., Tuesdays, Thursdays and Saturdays, via Michigan Central and C. H. & D. Rys., all connecting with Queen & Crescent Route leaving at 9:15 pm. to Augustine.

Florida Limited.

Solid train with through sleeping cars daily from Chicago via Monon and C. H. & D. Rys., leaving at 9:00 pm., connecting at Cincinnati at 8:30 pm. Also through sleeping car daily via Pennsylvania and Southern Railway leaving Chicago at 8:40 pm., via Louisville, connecting with Florida Limited at Lexington, direct to St. Augustine.

The route of both trains is via Chattanooga and Atlanta. The Florida Limited also has through sleepers attached for Birmingham and New Orleans from Cincinnati.

Queen & Crescent Special.

Solid through train leaving Cincinnati at 8:00 pm., to New Orleans via Birmingham, with through sleepers attached for Jacksonville via Asheville and Savannah. Also through Sleeper to Charleston.

Drawing Room, Dining and Observation Cars on all trains.

Write for Printed Matter and Rates.

W. A. BECKER, 113 Adams St., CHICAGO, ILL.
D. E. ECKERT, 67 Wadsworth Ave., DETROIT, MICH.
H. W. BUNTAINE, T. P. A., MARIETTA, O.
C. H. W. ZELL, D. P. A., CINCINNATI, O.



PARTICULAR MEN are always pleased with the popular

DOUBLE DIAMOND BRAND COLLARS

They are Stylish, Comfortable,

GUARANTEED LINEN.

The only collar made with a heavy, 5 ply seam.

RETAIL TWO FOR A QUARTER AND EQUAL ANY TWENTY-FIVE CENT COLLAR MADE

Sold by live, up-to-date merchants everywhere, or one sample collars sent by mail, postage paid, for 25 cents.

Van Zandt, Jacobs & Co.
Troy, N. Y.

A Popular Collar

Mango 2½ inches
Special inducements to Dealers.

Queen & Crescent ROUTE

Excellent Through Service from Cincinnati to All Important Southern Cities.

W. A. VANDERBILT, G. P. A. DETROIT, MICH.
W. A. MURPHY, GEN'L MANAGER. W. C. RINEARSON, GEN'L PASS'R AGENT. CINCINNATI.

The Finest for Medical Uses

Sold only in Birmingham, Mich. by.

WHITEHEAD & MITCHELL
SOLE AGENTS

Aug 1'02-Feb 1'03



Rogers' Stainfloor Finish

A combination transparent stain and finish for floors, furniture or any interior woodwork.

Six Colors.

The following testimonial from Mrs. Harris, wife of Senator Geo. L. Davis, or Macomb county, talks for the goods:

Detroit White Lead Works:—Instrumentally through Mr. Faist we have used your different preparations this spring in repairing the inside of our house and find it all as it is claim them.

Your "Rogers' Stainfloor Finish" is truly a marvel in itself and I would highly recommend it in any spot or place. It gives a finish to wood work or any piece of furniture that far exceeds anything I have ever had or seen used, and I am more than pleased with the results of its use.

MRS. GEO. B. DAVIS,
Utica, Mich.

ROGERS' STAINFLOOR FINISH
Stained and Finished floors are our specialty
No Shellac! No Oil! No Wax!
Is easily Applied. Dries hard over night
Imitates Hardwoods Perfectly.
Ask us for samples of wood finished with
Rogers' Stainfloor Finish.

SOLD BY

COBB & COBB, J. R. BLAKESLEE,
WHITEHEAD & MITCHELL,
Birmingham, Mich.

GEORGE BINGHAM, Franklin, Mich.



W. M. BARNES
Optician
267 Oakland Avenue, PONTIAC
Fitting your Glasses at your Home a specialty.
*Consultation and Examination Free*
Phone Bell or Oakland Co.



Clarence L. Cowles,
Architect,
21 and 23 Chase Block,
Saginaw, E. S., Mich.
Phone { Office 547—2 Rs. 468.


## Wanted, For Sale, For Rent.

LOST—Last week, a new horse blanket, between Royal Oak and Birmingham. Finder please return to Mrs. Jerome—barn with basement. Inquire of H. S. Hamlin.

Don't make any mistake, but remember the name, Swamp-Root, Dr. Kilmer's Swamp-Root, and the address, Binghamton, N. Y., on every bottle.

FOR SALE—At your own price or will exchange for hay, straw or fodder, Guernsey and Jersey stock: One bull calf six months old, one bull calf two months old, one heifer calf two months old. The above are out of cows with butter record and by Ed. Miller's Guernsey bull.—Wing Lake Farm, one mile north of Franklin.

FARM FOR RENT—The finest farm in Oakland County, of 200 acres, can be rented on shares to the right man or will sell on the easiest terms. Wm. Satterlee, 3 miles east and 2 miles north of Birmingham, Mich. Dec26-4t

LOST—In this village on Monday last, a tender of $10 by a person who cannot afford the loss. Finder please leave at Eccentric office and get reward.

WOOD—Plenty of good hard wood for everybody for only $2 per cord. Order from Zimmerman at the Hazelle Factory, Birmingham.

FOR SALE—If you want good registered Shropshire rams, call at the Long Meadows Farm, on Troy town line, and see W. S. Walker, manager. You will be agreeably surprised.

FOR SALE—Delivered in Birmingham—hard and soft wood at $2 and $2.50. Address John Sharp, R. F. D. No. 1, Birmingham.

## GRAND ∴ TRUNK ∴ RAILWAY ∴ SYSTEM

**Arrival and Departure of Trains at Birmingham.**

WEST BOUND FROM BIRMINGHAM.

No. 13—Morning Express to G. d Haven ; 7.45 am
No. 15—Mail and Chicago Express to Grand Haven ..... 12.10 p m
No. 17—Steamboat Express to Saginaw and Grand Rapids ..... 4.41 p m
(Nos. 13, 15 and 17, daily, except Sunday.

EAST BOUND.

No. 16—Chicago Express to Detroit and east ..... 6.25 a m
No. 12—Detroit Express to Detroit and east ..... P. M. 12.p m
No. 18—Evening Express to Detroit and east ..... 8.30 p m
Nos. 12 and 18, daily except Sunday. No. 16 daily. Flag—12.

GEORGE E. ALDRICH, Agent, Birmingham.

GEORGE F. ALDRICH, Agent
Birmingham.

## Pontiac, Oxford & Northern Railway

TIME TABLE

Trains run on Central Standard Time.

| GOING NORTH | | | STATIONS | GOING SOUTH | | |
|---|---|---|---|---|---|---|
| Frgt Pass. No.5 | M.x. No.3 | Mix. No.1 | | Mix. Pass No.2 | Frgt No.4 | Frgt No.6 |
| A.M. | P.M. | A.M. | Detroit, G. H. & M. | P.M. | A.M. | P.M. |
| 4.00 | 1.40 | 7.45 | Mich. Cen. | 11.50 | 9.10 | |
| 4.42 | 2.04 | | | 11.08 | 8.48 | |
| 8.50 | 5.15 | 8.15 | PONTIAC | 8.05 | 10.45 | 4.00 |
| 9.15 | 5.40 | 8.28 | Rattle | 7.48 | 10.22 | 3.32 |
| 9.53 | 5.58 | 8.38 | Auburn | 7.28 | 10.02 | 3.02 |
| 10.10 | 6.09 | 8.50 | Oxford | 7.15 | 10.10 | 3.00 |
| 10.50 | | | | 6.35 | 9.30 | 2.20 |
| 11.08 | 6.40 | 9.06 | Shoup | 6.56 | 9.13 | 1.52 |
| 11.25 | 6.56 | 9.16 | Leonard | 6.40 | 8.57 | 1.36 |
| 11.55 | 6.30 | 9.35 | Dryden | 6.30 | 9.42 | 12.55 |
| 12.30 | 6.46 | 9.44 | Imlay City | 5.58 | 8.10 | 12.25 |
| 12.58 | 7.01 | 9.56 | Lum | 5.40 | 9.07 | 11.55 |
| 1.14 | 7.17 | 10.06 | Kirkpatrick Mich. | 5.25 | 8.70 | 11.39 |
| 1.55 | 7.34 | 10.20 | Wilmot | 4.24 | 8.06 | 9.51 |
| 2.30 | 7.46 | 10.30 | Deford | 4.14 | 7.56 | 9.41 |
| 3.15 | 8.28 | 11.25 | Cass City | 4.00 | 7.40 | 8.55 |
| 3.45 | 8.45 | 11.40 | Kingston | 3.40 | 7.20 | 8.35 |
| 6.05 | 8.52 | 11.55 | Owendale | 3.26 | 7.06 | 7.45 |
| 6.25 | 9.12 | 12.10 | Louvelle | 3.20 | 7.15 | 7.25 |
| 6.35 | 9.16 | 12.15 | Pigeon | 3.00 | 6.58 | 6.40 |
| 6.40 | 9.15 | 12.18 | Bentz | 3.00 | 6.58 | 6.40 |
| 7.00 | 9.35 | 12.30 | Caseville | 2.40 | 6.35 | 6.15 |
| p.m. | p.m. | p.m. | | p.m. | a.m. | a.m. |

| GOING NORTH. Mixed Train No. 5 | | GOING SOUTH. Mixed Train No. 8 | |
|---|---|---|---|
| Stations | a.m. | Stations | p.m. |
| Pontiac | 5.20 | Pontiac | 6.50 |
| Ferry | 5.34 | Farmer | 6.36 |
| Cole | 5.44 | Cole | 6.25 |
| Oxford | 6.00 | Oxford | 6.10 |

All trains daily except Sunday.
Trains No. 1, 2, 3, 4, 7 and 8 daily except Sunday.
Trains No 5 will run Monday, Wednesday and Friday. Train No. 6, Tuesday, Thursday and Saturday.
*Flag Stations, where trains stop only at signals.

CONNECTIONS—Pontiac with Detroit, Grand Haven & Milwaukee Ry. and Michigan Central Line Division of Grand Trunk Ry. Oxford with Bay City Division Michigan Central Ry. Imlay City with Detroit, Bay City & Grand Trunk Ry. Lum with Flint & Pere Marquette Ry., Pigeon with Saginaw, Tuscola & Huron Ry.

W. C. SANFORD, Gen. Supt.

## DETROIT UNITED RAILWAY

(Operates all Detroit City Lines.)

Time Table—Pontiac Division.

In Effect April 2, 1902.

Subject to Change Without Notice.

Cars leave Birmingham for Detroit at 6:00 a. m., 7:00 a. m. and 1 every half hour thereafter until 7:00 p. m., and hourly until 11:00 p. m.

Cars leave Birmingham for Pontiac at 6:30 a. m., and every half hour thereafter until 8:00 p. m., and hourly until 12 o'clock midnight.

First car leaves Detroit for Birmingham at 6:00 a. m., and every half hour thereafter until 7:00 p. m., and hourly until 11:00 p. m. Last car waits for the theaters.

On Sundays first car leaves one hour later than the time given above.

FAST ELECTRIC EXPRESS
Operated Over D. U. R. Detroit United Railway.

Giving quick express service between Birmingham and Detroit, also reaching all points on Detroit United and Detroit Rapid Railway systems.

THOS. F. COBB,
Local Express Agent.

Phone 35

## SOME NEW FACTS ABOUT APPENDICITIS.

**Why None Need Fear If Careful.**

Hospital records indicate that nearly one-third of all surgical operations are for appendicitis, and the unfortunate feature is that eighty per cent. could have been avoided altogether.

The old theory about grapes and other seeds has been discarded, and any good doctor will tell you nowadays that constipation causes appendicitis almost without exception.

The opening into the appendix is no larger than the head of a darning-needle, but if the least foreign substance enters, inflammation ensues, and there is sure to be trouble.

Constipation and appendicitis will never trouble you if your bowels are regulated with Laxakola.

"Constipation: Its Cause and Cure," a little treatise worth golden dollars, is wrapped around every 25 cent bottle.

For sale by Whitehead & Mitchell, druggists, Birmingham, Mich.

The peculiar cough which indicates croup, is usually well known to the mothers of croupy children. No time should be lost in the treatment of it, and for this purpose no medicine has received more universal approval than Chamberlain's Cough Remedy. Do not waste valuable time in experimenting with untried remedies, no matter how highly they may be recommended, but give this medicine a

## Over-Work Weakens Your Kidneys.

**Unhealthy Kidneys Make Impure Blood.**

All the blood in your body passes through your kidneys once every three minutes.

The kidneys are your blood purifiers, they filter out the waste or impurities in the blood.

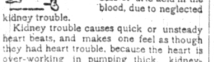
If they are sick or out of order, they fail to do their work.

Pains, aches and rheumatism come from excess of uric acid in the blood, due to neglected kidney trouble.

Kidney trouble causes quick or unsteady heart beats, and makes one feel as though they had heart trouble, because the heart is over-working in pumping thick, kidney-poisoned blood through veins and arteries.

It used to be considered that only urinary troubles were to be traced to the kidneys, but now modern science proves that nearly all constitutional diseases have their beginning in kidney trouble.

If you are sick you can make no mistake by first doctoring your kidneys. The mild and the extraordinary effect of Dr. Kilmer's **Swamp-Root**, the great kidney remedy is soon realized. It stands the highest for its wonderful cures of the most distressing cases and is sold on its merits by all druggists in fifty-cent and one-dollar sizes. You may have a sample bottle by mail free, also pamphlet telling you how to find out if you have kidney or bladder trouble. Mention this paper when writing Dr. Kilmer & Co., Binghamton, N. Y.




## WHIST AT A GLANCE

Being the conventional leads of the modern scientific game as practiced by all of its masters with hints to beginners. A beautiful booklet of thirty-two pages, printed in two colors, black and red, on enameled paper with the card arrangements appearing in their natural colors. The cover is in three colors with a very attractive design on the title page. This is a work of interest to all whist players and will be sent to any address upon receipt of six cents in postage.

C. L. STONE
GEN'L PASSENGER AGENT
Louisville & Nashville R. R.
LOUISVILLE, KY.


A. R. PARKS
DEALER IN
*Fresh, Salt and Smoked.....*
MEATS
*OYSTERS, GAME and VEGETABLES*
*of all kinds in season*


## COUNCIL PROCEEDINGS

[OFFICIAL]

COUNCIL ROOM, Monday, Jan. 12, 1902.
Regular meeting.
President Rundel presiding.
Trustees present: Whitehead, Snow, Johnston, O'Neal. Absent—Daines and Parks.

Whitehead moved, supported by Johnston, the following bills be allowed as read and orders drawn for same. Voted by call of roll. Ayes—O'Neal, Johnston, Snow, Whitehead. Nayes—none.

O'Neal moved, supported by Snow, the Allen Bro's. bill of $19.50 be allowed and an order drawn for same. Voted by the call of roll. Ayes—O'Neal, Johnston, Snow, Whitehead. Nayes—none.

Whitehead moved, supported by Johnston that we transfer $500 from general expense fund to the highway fund. Voted by the call of roll. Ayes—O'Neal, Johnston, Snow, Whitehead. Nayes—none.

GENERAL EXPENSE FUND.

| | |
|---|---|
| F. Hagerman | $ 8 70 |
| Samuel J. Sorrell | 10 00 |
| V. Nixon | 6 50 |

WATER WORKS FUND.

| | |
|---|---|
| The J. A. Roe Co | 862 50 |
| E. R. Smith & Co | 44 21 |
| Mich. Telephone Co | 3 75 |
| C. E. Mudge | 3 49 |
| Geo. Schaefer | 5 1 |
| Ren Shaibolt | 1 40 |
| Geo. Shaibolt | 50 |
| Al Hutton | 53 |
| Detroit United Railway | 40 |
| E. H. Randall | 45 00 |

HIGHWAY FUND.

| | |
|---|---|
| Allen Bro's | $219 55 |
| E. R. Smith & Co | 10 70 |
| Birmingham Brick & Tile Co | 10 63 |
| C. E. Mudge | 32 86 |
| George Spencer | 8 75 |
| Wm Hathaway | 7 80 |
| Ed Hoolway | 6 64 |
| Samuel Masters | 1 29 |
| M. D. Masters | 2 05 |
| Al Hutton | 12 00 |

Johnston moved, supported by Snow, the water works committee be instructed to purchase a fire whistle for the water works. Voted by call of roll. Ayes—O'Neal, Johnston, Snow, Whitehead. Nayes—none.

Minutes read and approved.
Moved to adjourn—carried.
WM. W. W. CAMPBELL, Clerk.
J. F. RUNDEL, President.

## Finds Way to Live.

The startling announcement of a discovery that will surely lengthen life is made by editor O. H. Downey, of Churubusco, Ind. "I wish to state', he writes, that Dr. King's New Discovery for Consumption is the most infallible remedy that I have ever known for Coughs, Colds and Grip. It's invaluable to people with weak lungs. Having this wonderful medicine no one need dread pneumonia or consumption. Its relief is instant and cure certain." For sale by Whitehead & Mitchell and Cobb & Cobb. Guarantee every bottle and $1.00 bottle, and give trial bottles free.

## HUMOR OF THE DAY

### Tricks of the Trade.

"The goods we are putting on the market now," said the manager, "are not as pure as those we have been selling."

"They're not!" exclaimed the manufacturer.

"No. Competition has been so fierce that we have to cut the price, and we can't afford to put out the pure articles at the present quotations."

For a moment the manufacturer was thoughtful.

"Well," he said at last, "have 'Beware of Imitations' printed on the labels in larger type than ever before."

### Taking No Chances.

"Now, Freddie, go and kiss your little sweetheart and make it up," said Freddie's mother.

"No, I won't."

"Go and tell her how much you love her and how sorry you are."

"No, I won't. Pa says he got into a breach of promise case by telling a girl that and had to marry the old thing. I won't run any risks, I won't."

### Call.

Father—So you want to marry my daughter? Can you support her, young man?

Algy—Why-er-can't you?

### The Curtains.

"What lovely lace curtains you had a week ago, Mrs. Binks."

"Weren't they beauties?"

"But you haven't them now."

"No."

"Didn't they please you?"

"They did. I bought them on approval, you know. And now that the cold has frosted the windows it makes little difference whether we have curtains on or not, so I've sent them back."

### The Busy Idlers.

Advertiser—You've started painting that big sign for me, have you?

Sign Painter—Yes; we're keeping about a hundred men busy down there every day.

Advertiser—What! That job doesn't take that many men!

Sign Painter—Two men are engaged on the painting and all the rest are kept busy watching them.

### An Unfortunate Experiment.

"Heard the latest on Charlie Wimble?"

"No; what?"

"Somebody told him it was the latest fad to have your brains photographed by means of the X-rays, and he promised his photograph to half a dozen girls, and when he had it done the plate didn't show a thing."

### Provided She Gets the Chance.

"Which would you rather be if you were 27 and could have your choice, a widow or just a girl?"

"Oh, a widow, by all means. A widow always has a big advantage. She can try an entirely different kind the next time."

### The History of His Case.

"And what brought you to this?" asked the good man who was passing through the police station.

"De hurry-up wagon," replied the tough boy he'd find the bars; "did yer think I come in a tallyho wit somebody on top tootin' a horn?"

### Got Off Easy.

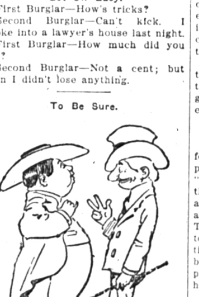
First Burglar—How's tricks?

Second Burglar—Can't kick. I broke into a lawyer's house last night.

First Burglar—How much did you get?

Second Burglar—Not a cent; but then I didn't lose anything.

### To Be Sure.



Reggie—My girl has such lovely red lips.

Algy—Oh! pshaw! I'll put mine up against hers any day.

### In the Glad Christmas Time.

"Are you going to do anything especial for your wife this Christmas?" asked Fussyboy.

"I am—something that I think will please her—although it will cost me an effort," replied Crustyboy.

"What's that?"

"Wear a necktie she gave me last year for a whole week."

## POPULAR SCIENCE

### Detonating Burglar Alarm.

A new burglar alarm is one for which the inventor claims simplicity, durability, cheapness and capacity for ready application to any window or door. It comprises a leaf spring of considerable expanding force, the lower half of which is firmly secured to a vertical rectangular frame. The upper half of the spring carries a small cup for the insertion of a cartridge or percussion cap. The two ends of the spring extend beyond the frame, and are thin enough for insertion in the crack of a window or door. With the upper member in a depressed position, and both terminals of the spring clamped into the crack of a door, the two ends of the spring will fly apart when the door is opened and throw the cartridge holder into violent contact with the hammer sus-

Will Guard Any Door or Window.

pended in the top of the frame, causing an explosion, the force of which is governed by the size of the cap used in loading the alarm.

### The Sensations of Insects.

Investigations of the intelligence of the lower animals are always of deep interest. We seem to gain some insight into our own natures in this way. Dr. Forel, the celebrated neurologist, has passed from his researches on the diseases of the human brain to study the nervous systems and the sensations of ants and bees. His book has just been printed at Paris. Some of his results are summarized in what follows. Dr. Forel concludes, with Muller, that the vision of insects is in "mosaic." That is, an insect perceives an object like a mosaic—as if it were made up of bits separated by dark lines, the lines corresponding to the edges of the facets of the insect's eye. The image is usually not sharp, though when the number of facets is considerable (12,000 to 17,000), the definition is good. It is by sight that flight is directed. When the eyes are covered with a thin layer of varnish the insect is powerless to direct its movements. The antennae serve as organs of touch and almost as if they were smelling organs also. By them insects find their food and recognize their companions and their enemies. The enmity of certain species of ants for others is well known. If they are put in the same pen a fight to the death at once ensues. When the antennae are cut, however, the different species are entirely friendly. Certain insects cease to lag eggs the moment their antennae are cut. They can no longer "smell" the decaying meat that is fit for a resting place for the egg. Dr. Forel concludes that the instinct to lay eggs is not destroyed; the sensorial impression that sets the instinct at work is no longer operative. It is his conclusion that insects have more than instinct; they have a soul, so to say, at any rate, a mind capable of forming judgments, of choosing. Bees have, for example, an astonishing memory of localities. Instinct and automatism are far from constituting all their mental life.

### Electric Heating.

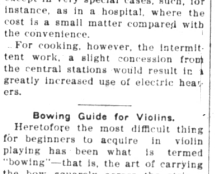
For electrical heating, the apparatus is simple, being nothing more than a suitable form of resistance, and its cost should not be excessive. For continuous heating, the disadvantage—the question of cost not being considered—lies with the electric system.

Considering the final test of the applicability of any system—the cost of operation—we find no reason for the poor showing, comparatively, of the electric heating system. When the question of cost is the deciding one, electric heating cannot compete with any of the other systems, with the price for electrical energy at its present figure. It seems evident that the electric power companies are not trying to build up this branch of their business. Electric heaters may be operated from a power circuit and station. But electric heating of buildings can hardly be considered at this time, except in very special cases, such, for instance, as in a hospital, where the cost is a small matter compared with the convenience.

For cooking, however, the intermittent work, a slight concession from the central stations would result in a greatly increased use of electric heaters.

### Bowing Guide for Violins.

Heretofore the most difficult thing for beginners to acquire in violin playing has been what is termed "bowing"—that is, the art of carrying the bow squarely across the strings and at right angles thereto, and also at a certain distance from the bridge. This is absolutely necessary in order to get the proper tone effect, and until the pupil has acquired the art of bowing he cannot become an accomplished player. In some cases this has required years of constant prac-



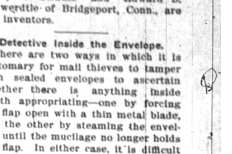
tice, but with the aid of the invention shown in the illustration it is claimed that the task is simplified to the point where no effor is required, as with its use there is no chance of the hand getting out of position.

As will be seen, a supporting clamp is secured to one side of the instrument, to carry the adjustable wire tongue, which prevents the bow from traveling too far from the bridge, and also providing a pivot, for the rod extending toward the player's right hand. On the right wrist is secured a bracelet, having an eyelet to slide on the rod, and it is obvious that, while free movement is permitted in the proper direction, there is no chance for the hand to swing downward toward the neck of the instrument.

As soon as the natural tendency to move the hand improperly is overcome there is no further need for the guide and the pupil is then free to devote his time to fingering practice. Harry S. Strauss and Edward S. Schwerdtle of Bridgeport, Conn., are the inventors.

### Detective Inside the Envelope.

There are two ways in which it is customary for mail thieves to tamper with sealed envelopes to ascertain whether there is anything inside worth appropriating—one by forcing the flap open with a thin metal blade, and the other by steaming the envelope until the mucilage no longer holds the flap. In either case, it is difficult for even the person to whom the letter is addressed to ascertain whether the envelope has been opened, unless something has been extracted. It is to serve as a sure indicator of wrong doing that the envelope illustrated in the accompanying drawing has been designed by Harry G. Starmer of Newark, N. J. The improved envelope differs from the ordinary kind only in



Indicates Tampering with Sealed Envelopes.

having a sheet of tissue paper attached to the flap and extending down inside the pocket. This sheet attaches itself to the surface of the envelope with the sealing of the letter, and it is obvious that any attempt to force the envelope will lead to sure detection.

### To Foretell Thunderstorms.

Father Odenbach of St. Ignatius college in Cleveland, Ohio, has invented an instrument to foretell the coming of distant thunderstorms, utilizing the principles at the base of wireless telegraphy. The various parts of the apparatus are a relay, a sounder, a coherer, a choking coil, two batteries, a recording chronograph and a copper collector on the roof, connected by a copper wire with the observatory. A lightning flash sends out in all directions rays of electromagnetic waves. These strike the collector and descend through the wire to the primary circuit of the relay. Their way is blocked by the choking coil, and, therefore, they pass in great part through the coherer. The moment they do so this tube becomes a conductor for the primary current; the relay acts, and closes a secondary circuit; the recording-magnet moves a pen and makes a record; and at the same time the grounder in the secondary circuit clicks, shakes the coherer and all is over until a second distinct flash sends out a wave to be recorded in the same manner. The first form of the apparatus has been improved by using a graphite coherer, and records distant thunder storms from one to three hours before they reach Cleveland. It appears that at least an hour's warning can almost always be given of the approach of distant storms.

### A Problem in Digestion.

A theory as to why the digestive fluids of the stomach do not act upon the stomach walls and intestines is advanced by Howard R. Baker in American Medicine as follows: "The 'secretions' that are manufactured by cells are substances that they do not need—are, in fact, their excretions. Bacterial cells are poisoned and their processes brought to a standstill by accumulation of the products of their own activity. It is probable that this is more or less true among living things. It would seem from Beaumont's observations that the stomach is normally empty without food. If this is so, then undigested gastric juice does not normally lie on the lining membrane of the stomach. The essential idea is that in the glands there is an inhibition of cell activity when the normal excretions accumulate."

### The Niagara Power Tunnel.

For the first time in five years the great tunnel of the Niagara Falls Power company was emptied during the past summer in order that it might be thoroughly inspected. The managers wished to know the condition after 32,400,000 cubic feet of water had rushed through it every hour for five years. Accordingly the tunnel was inspected for signs of wear. Every one of its 13,000,000 bricks was in place and perfect. No signs of wear were found, although one-thirtieth part of the stream of Niagara is constantly in use.

### Power of Radium.

Prof. George F. Barker of the University of Pennsylvania, has shown that radium, the singular element obtained from pitchblende, which possesses the power of throwing off an invisible radiance, may be used as a cheaper substitute for X-rays to photograph concealed objects. No energy has to be expended upon the radium, for it acts spontaneously and continuously, without apparent loss. It readily defines the bones through the flesh and other tissues, and a photograph can be made from it in half a minute.

### Safety Pins for Hats.

A safety hat pin is one of the reason's novelties. It differs only from the regulation type by the addition of an ornamental cap, which is adjusted to the point of the pin after it has been slipped through the hat.

A bachelor who has been rejected by seven girls says that feminine beauty is on the decline.