Congressional Library

DAVID C. SHELTON,
ATTORNEY AT LAW,
COLUMBIA, TENN.,
Will practice in the Courts of Maury and the adjoining Counties. Office second door from west corner, Whitthorne Block. [mar.25.

CHARLES CLEAR
ATTORNEY AT LAW,
Columbia, Tenn.
Special attention given to the collection of claims. April 23,1y.

J. T. L. COCHRAN,
ATTORNEY AT LAW,
AND GENERAL COLLECTING AGENT
COLUMBIA, TENN.
March 17.

JOHN B. BOND,
ATTORNEY AT LAW,
COLUMBIA, TENNESSEE.
Prompt attention given to Collections. de

A. M. HUGHES,
ATTORNEY AT LAW,
COLUMBIA, TENN.
Will attend all the Courts to be holden fo Maury and adjoining counties.
OFFICE—Whitthorne Block. [Feb24 '71

PILLOW & ALEXANDER,
ATTORNEYS AT LAW,
Will practice in the several Courts of Maury and adjoining Counties. dec16-tf

HUGH T. GORDON. C. O. NICHOLSON.
GORDON & NICHOLSON,
ATTORNEYS AT LAW,
COLUMBIA, ... TENN
Will practice in the several Courts of Maury and adjoining counties.
☞ Prompt attention given to collection of Claims.
May 20, 1871.

W. VANCE THOMPSON,
ATTORNEY AND COUNSELLOR AT LAW.
Office on Garden Street, nearly west and opposite Masonic Hall,
COLUMBIA, TENNESSEE.
Will practice in Supreme and Federal Courts in Nashville, and in the Chancery and Circuit Courts of Maury and adjoining counties.
Feb 3, 1869-tf

G. P. FRIERSON,
ATTORNEY & COUNSELLOR *AT LAW,*
COLUMBIA, TENN.
Will practice in the several Courts of Maury and adjoining Counties, and in the Supreme and Federal Courts at Nashville. Prompt attention given to collections. Office in Lawyer's Block, West Market Street, same formerly occupied by Frierson & Fleming. marfly

S. F. CYPERT. Z. MACK CYPERT.
R. P. CYPERT & BRO.,
ATTORNEYS AT LAW,
Waynesboro, Tennessee,
Will practice in the Circuit and Chancery Courts Wayne and the adjoining counties, and in the Supreme and Federal Courts at Nashville. Collections promptly attended to Sept. 15.—tf

JOHN G. HORSLEY,
Justice of the Peace,
AND PUBLIC ADMINISTRATOR.
Columbia, Tenn.
Office in Masonic Hall.

H. S. COX,
Physician and Surgeon,
Office-Whitthorne Block
COLUMBIA, TENN.
July 29 '70

DR. J. P. HERNDON,
SURGEON DENTIST,
Office Photograph Gallery,
COLUMBIA, TENN.

DR. SAMUEL BICKNELL,
DENTIST.
Having permanently located in Columbia announces to the public that he is prepared to serve them in the various branches of Dentistry, in a skillful and scientific manner. His prices will be as moderate as circumstances will admit.
Office, in Whitthorne Block.
Jany. 14, 1870.

J. R. FUSSELL. S. W. STEELE
FUSSELL & STEELE,
REAL ESTATE AGENTS,
for the
SALE, PURCHASE AND RENTING
Of All Descriptions of Property,
COLUMBIA, TENNESSEE.
Office Whitthorne Block. oct21y-1

BOOKS! BOOKS!! BOOKS!!!
PERIODICALS,
STATIONERY, WALL PAPER,
Window Shades, News, Notions, &c., at
W. H. ENGLE'S,
West Side Public Square,
COLUMBIA, TENNESSEE.

JACOB HARRIS,
TAILOR,
COLUMBIA, - - - - - TENN.
Cutting done in the most fashionable manner, and warranted to fit.
Cleaning and Repairing done in an acceptable manner, on short notice.
☞ If you want a suit handsomely made to order, bring me the cloth.
Shop—Two doors above the Nelson House
May 21, 1871. 1y.

FRANKLIN HOUSE.
Columbia, Tennessee.
Having refitted and taken charge of this Hotel, I solicit a share of public patronage. My table shall be supplied with the best the market affords. Lodgings clean and comfortable. Prices to suit the time.
July15—tf JAMES I. GUEST.

MARBLE WORKS
OF
WILLIAM SHIRLEY,
As W. Bland's Old Shop, on the Mt. Pleasant Pike, near the Institute, where I shall keep on hand
MONUMENTS
AND TOMBSTONES,
Work made to order, Ornamental or Plain. All work Warranted to give satisfaction. Limestone made to order. June 29-1y

JOHN C. LANCASTER, Carpenter. J. MACK CABLER, *Millwright.*
LANCASTER & CABLER,
CARPENTERS & MILLWRIGHTS.
Columbia, Tennessee.
Also agents for the American Turbine Water Wheel, the best brands of Bolting Cloth, all kinds of Mill Furnishing machinery, Belting, &c., &c., Saw Mills and Steam Engines. aug 1—tf.

TO TRAVELLERS.
THE NELSON HOUSE,
COLUMBIA, TENN.,
H. EDSALL, - - - - PROPRIETOR.
Keeps good tables, clean and comfortable beds and rooms, and the best of servants, all at moderate prices. [nov. 18, '70.

THE PLACE FOR BARGAINS.
No. 31, Nashville, Tenn., is the place for bargains in
FINE JEWELRY, WATCHES, CHAINS, SILVER PLATED ARE AND WATCH MATERIAL.
Hair Jewelry made to order, and Watches and Jewelry repaired by practical hands. All things warranted and full satisfaction guaranteed. It is the cheapest place to buy your real Silver, and have it worked up in the latest style. A large stock of Perfumery, Powder, Combs, Work Boxes, Traveling Cases, &c
Nov. 19. K. BADAUX.

COLUMBIA HERALD.

Alfred S. Horsley. COLUMBIA, TENNESSEE, DECEMBER 1, 1871. VOL. XVII.---NO. 16.

R. ROSENTHAL & BRO.
Are now receiving their Fall Stock of
Staple and Fancy Goods,
Consisting of
Gent's Ladies' and Misses' SHOES, BLANKETS, SHAWLS, HATS, CAPS AND FURS.
Our Stock of
MEN'S AND BOY'S WEAR
Is the largest and most attractive ever brought to Columbia. We are daily receiving all the Goods in our line of trade, and offering them at prices to please.
EXCLUSIVELY FOR CASH.
We have secured the services of Mr. HENRY CHOATE as Salesman, and he will be happy to wait on all who may give him a call.
Sept. 22. 3m

GREAT INDUCEMENTS
OFFERED TO THE LADIES
OF COLUMBIA AND MAURY
COUNTY, AND THEIR
SURROUNDINGS.
Thankful for the very liberal patronage of the past, and being desirous to retain the same,
MRS. M. RUTTLE
has just returned from the Eastern Markets, from which was selected a very choice and attractive stock of goods, consisting of
Ladies' Hats and Bonnets, of all the new makes, both French and American, suitable for the Fall & Winter Trade.
New Dress Goods, a great variety, such as
SILKS,
JAPANESE SILKS,
IRISH POPLINS,
PLAIDS, striped nd plain,
RESS POPLINS, all cheap.
FURS FOR LADIES' & MISSES
at such prices that all can buy.
LADIES' AND MISSES BOOTS & SHOES
Direct from the factories, new styles, and cheap
ALSO A LARGE LOT OF TOYS & PRESENTS FOR THE HOLIDAYS.
All of the above Goods were purchased for CASH AT REDUCED PRICES, and will be sold at the SMALLEST PROFITS FOR CASH.
Be sure to call and see us, as we will try and please you. It is no trouble to show our goods.
Recollect the place. M. RUTTLE,
South side West Market St.,
Sept. 15.—3m. Columbia, Tenn.
P. S.—011 Bonnets and Hats shaped and trimmed to look like new.

WAGON !
WAGONS! WAGONS!
The attention of those desiring to purchase are invited to the fact that I am agent for the
OHIO FALL CO. WAGONS
The best and cheapest in the market. Call and examine them.
I have also a large stock of
HARDWARE,
such as
HOES, SHOVELS, SPADES, AXES, &c.
Plow-Gear, Leather, Saddles, Bridles, Harness,
Saddler's and Shoe-Makers' Findings which I am selling
Very Cheap!
T. J. HELM.
Feb. 24, 1871.

FLOURING MILLS
FOR SALE.
THE UNDERSIGNED DESIRE TO DISPOSE of their Steam Flouring Mills at Pleasant Grove, immediately on the Nashville and Decatur Railroad. The surrounding country is one of the finest wheat-growing sections in the State, and the best Southern markets are in easy and speedy connection. The Mills will be sold for money, on time, or real estate. Apply to DR. J. T. AKIN.

LAND POSTED.
The undersigned do hereby warn all persons not to hunt or otherwise trespass upon their premises. All offenders will be prosecuted to the extent of the law.
E. C. ALEXANDER, JR.,
T. B. ALEXANDER,
G. W. ALEXANDER,
A. J. ALEXANDER,
REUBEN POLK.
June 1, 1871.

NOTICE.
HAVING DISSOLVED PARTNERSHIP with Mr. Shirley, I would respectfully inform my old customers and the public generally, that I have moved my stock of Marble to South Main street, near the Square, where I will be pleased to see all who desire work in my line, and will furnish work
AT LOUISVILLE PRICES.
Shall always keep a lot of Designs on hand that will enable me to please the most fastidious. All work done promptly, and warranted to please. T. J. CANTERBURY.
Columbia, Jan. 20, 1871-1y

J. P. CHOATE. BEN LIPSCOMB.
LIVERY & SALE
STABLE,
COLUMBIA, - - - - TENNESSEE.
W. C. Sheppard's Old Stand,
(OPPOSITE BANK OF COLUMBIA.)
WE TAKE PLEASURE IN SAYING TO the public that we have opened a Livery and Sale Stable at W. C. Sheppard's old stand, with an
ENTIRE NEW OUTFIT!
Our Buggies and Harness are NEW, and our Horses are the
Best to be had in the State.
We especially ask the people of Columbia to call and examine our stock, and the citizens of the county to see how well we are prepared to feed their horses. All we ask of the people is to give us a trial. [Feb24 '71-1y

LIPSCOMB BROTHERS,
GROCERS, COMMISSION MERCHANTS,
AND
Wholesale Dealers
COLUMBIA, TENN.,
Keep on hand all kinds Field Seed at very low prices.
Everything New—Everything bought low for Cash and everything sold low
FOR CASH.
Oct. 27, 1871-1y.

NOTICE
TO HUNTERS.
All persons are hereby notified not to hunt or go through my premises or otherwise trespass thereon. All persons, especially with dogs, thus trespassing, will be prosecuted to the extent of the law.
Feb24 1871. STEPHEN JORDAN.

SHALL I ASK THEE BACK?

But thou art gone—not lost but flown;
Shall I then ask thee back, my own?
Back—and leave thy spirit's brightness?
Back—and leave thy robes of whiteness?
Back—and leave thine angel mound?
Back—and leave those streets of gold?
Back—and leave the Lamb who feeds thee?
Back—from founts to which he leads thee?
Back—and leave thy Heavenly Father?
Back—to earth and sin? Nay, rather
Would I live in solitude!
I would not ask thee if I could,
But patient wait the high decree,
That calls my spirit home to thee.

SEND THE LITTLE ONES HAPPY TO BED.

Send the little ones happy to bed,
When closes the troublesome day—
Let no harsh invective be said,
To ruffle their mind while they pray.
Sore trials and trouble so soon,
The sweet sleep of childhood will ban;
And let them lie joyfully down
And cherish bright dreams while they can.

Send the little ones happy to bed,
Though they may be mischievous and wild.
Nature seldom bestows a wise head
On a rosy-cheeked, light-hea ted child.
Then let their glad spirits have play,
And brighter and stronger they'll grow,
Like a stream that runs free on its way,
And suffers no check in its flow.

Send the little ones happy to bed—
You know not what ill may be near—
Ere the morning your pets may be dead—
Then vain the regret or the tear.
So let them lie down with delight,
And fail not to give and to take
A kiss when they prattle "good night,"
And a kiss in the morn when they wake.

[From Tinsley's Magazine.]

A Glimpse of Fashionable Life in the Time of George III.

When the late Earl of Harrington was a leader of the fashion, (being at that time Lord Petersham) the evening full dress of fashionable gentlemen's legs consisted of pantaloons fitting close to the shape, and tied with thin ribbon rather tightly round the ankles The color was either black or buff though sometimes white; but black predominated, as best calculated to conceal imperfections of contour. Lord Petersham, being an Adonis in form, usually appeared in white or buff pantaloons One evening, however, he suddenly "led off" a new style which very few ventured to follow and presented himself at an elegant soiree in flesh or blush-colored 'tights,' the effect of which we leave to be imagined. His Lordship calmly justified this startling novelty by saying that buff or white, toward the close of an evening, more especially after dancing, had a tendency to look like a not very nice flesh color, whereas his present innovation gave the effect of freshness, as from a bath. Some people considered this justification as rather equivocal. It was given however, with a mild imperturbability not to be conveyed by written words; and, in any case he did what he pleased, like Brummell, who so ceeded him, always finding admirers, and in most cases many followers He was residing at this period in St. James' Palace, where George III had given him a suite of apartments. He held, I believe, some kind of office at Court, but whatever it was his Lordship never did any duty.

Returning once from a ball which had lasted a whole summer's night and much beyond, Lord Petersham sent away his carriage, preferring to walk home in order to enjoy the refreshing coolness of early morning—say—6:30 A. M., or perhaps 7 A. M.—and on the way he met the king and queen walking arm-in-arm up Bond street. None of the shops were open. Their Majesties were going to see Miss Linwood's exhibition of tapestry, which at that day was in the neighborhood of South Molton street, or very near Oxford street, and the Royal couple had no doubt sent Miss Linwood to be open at that very early hour. It thus happened that they were met as Mr. and Mrs. Guelph, walking like Darby and Joan arm-in-arm up the street, at the vacant and silent hour of seven in the morning The early habits of the royal family of that day were, however, well known. Lord Petersham was a favorite with "Farmer George and Snuffy," (as their majesties were not unfrequently designated in irreverent caricatures of the period); his lordship therefore stopped on meeting the homely pair, and they had a chat for ten minutes, while here and there a shop door began to yawn, and the drowsy shutters of one or other of the great fish-mongers and fruiterers were slowly moving down, in expectation of the market carts from Billingsgate and Covent Garden. But there were no street passengers to admire or wonder at Lord Petersham's "fleshings." Such a picture as this group presented, if painted and exhibited at the present time, would no doubt be denounced as an incredible invention.

Velocity of Sound.

A powerful human voice in the open air, at the ordinary temperature is audible at the distance of seven hundred feet. In a frosty air, undisturbed by winds or currents, sound is heard at a much greater distance with surprising distinctness. Lieutenant Foster in the third polar expedition of Capt. Parry, held a conversation witl. a man across the harbor of Port Bowen a distance of one quarter of a mile. Dr. Young states that on the authority of Derham that the watchword "all well," had been distinctly heard from old to new Gibralter, a distance of ten miles. The marching of a company of soldiers may be heard on a still night, from five hundred and thirty to eight hundred and eighty paces; a squadron of cavalry on foot pace, at seven hundred and fifty paces; trotting and galloping, one thousand eighty paces distant. When the air is calm and dry, the report of a musket is audible at one thousand paces. The sound of cannonading was heard at Dover, sound's travel further and more loud on the earth's surface than through the atmosphere. Thus it is said that at the siege of Antwerp in 1832, the cannonading was heard in the mines of Saxony, which are about three hundred and twenty miles distant; the cannonading at the battle of Jena was heard feebly in the open fields of Jena but in the casements of the fortification it was heard with great distinctness.

The noise of the sea fight between the English and Dutch in 1762, was heard at Shrewsbury, a distance of two hundred miles. The greatest known distance to which sound has been carried by the atmosphere is three hundred and forty-five miles; as it is asserted, that the very violent explosions of the volcano at St. Vincent's have been heard at Demarara.

Sunshine and Sleep.

Sleepless people, and they are many in America, should court the sun. The very worst soporific is laudanum, and the very best sunshine. Therefore, it is very plain that poor sleepers should pass as many hours as possible in sunshine and as few as possible in the shade. Many women are martyrs and yet they do not know it. They shut the sunshine out of their houses and their hearts, they wear veils, they carry parasols, they do all possible to keep off the subtlest and yet most potent influence which is intended to give them strength and beauty and cheerfulness. Is it not time to change all this, and so get color and roses in our pale cheeks, strength in our weak backs and courage in our timid souls? The women of America are pale and delicate: they may be blooming and strong, and the sunlight will be a potent aid in this transformation.

A WONDERFUL PROJECT.

A New Development of the Weather Signal Service—Placing the Crop Calculation of the Whole World on a Scientific Basis,

An International System of Crop Reports Putting the Farmers on a Level with the Factor—Address by Commodore Maury.

From an elaborate paper prepared by the illustrious COMMODORE MATTHEW F. MAURY of the Virginia Military Academy, and read before the Rockbridge Agricultural Society, at a recent meeting, we extract the following resolutions and sufficient of COMMODORE MAURY's able and comprehensive address to explain his plan for an international system of Meteorological Reports and Agricultural Statistics:

RESOLUTIONS.

Resolved, That the president of this Society be and is hereby instructed to petition in behalf of the farmers of Virginia, the United States government through the State Department and the Executive in favor of the establishment by international co-operation of a general and systematic plan of meteorological observations and crop reports; and to request the government, in furtherance of this object, to invite the other nations to meet in the persons of their leading meteorologists at an early day in conference similar to that of Brussels in 1853: First, for the purpose of connecting with the plan now proposed the system that was then devised for the sea; second, for the purpose of arranging details; and, third, for the purpose also of providing for a general system of telegraphic meteorology and crop reports to the end that our knowledge of the laws which control the functions of the atmosphere may be increased, and that accurate and useful forecasts may be made at frequent intervals as to weather and crops in all countries. And the president of this society is desired also to request that the United States government will co-operate in this system of research by causing the plan that may be agreed upon in conference to be carried out in this country, and to be adopted on board of the national cruisers.

Resolved, That the president of this society transmit a copy of these resolutions to the State Governor and to each of the agricultural societies and journals in the State, inviting their co-operation and requesting them to support this measure with their influence and with similar petitions.

COMMODORE MAURY'S REMARKS.

The farmer sows in faith; but whether he shall reap in plenty or glean in famine depends chiefly upon the season. I am not fond enough to suppose, nor do I mean to convey to you the idea, that the conference to which these resolutions point is to devise any system of physical research which will enable meteorologists to regulate the seasons. But I do mean to convey the impression to your mind—because the conviction is strong upon my own—that if the object of these resolutions be carried out, the result will be far more beneficial to you than any which could possibly flow from human power over the seasons. Let us illustrate this, so that we may make it plain as we go. Some farmers grow wheat. Let us take such an one for illustration, and follow him from seed time to harvest. He has worked hard. His grain is harvested and housed; it is all ready for sale; he wants a little money, and goes to town to inquire the price of wheat of the men who want to buy. Now in doing this he is reversing the general order of business at once. Usually the buyer asks the seller the price of his wares. But with regard to all the chief agricultural staples, the producer knows so little about the yield in competing states and countries, that he is compelled to go and ask the buyers about it, and request them to fix the price. What would you think if your neighbor, who, wishing to sell a horse, should go to the man who wants to buy and ask him to fix the value and set the price? Yet this is exactly what you do with your cotton and grain, rice, sugar, and tobacco, and all your staple production. To relieve you from this, and to put you on a footing with the factor in knowledge as to the yield of the crop everywhere is exactly what these resolutions aim to do. Prices are regulated

NOT BY THE YIELD IN TENNESSEE,

or Minnesota, but by the yield in all parts of the world, both at home and abroad, whence wheat is sent forward from here. Now, I cannot keep it too prominently before you that the object of these resolutions is to give you as well as the merchant

AS ACCURATE AND FAMILIAR INFORMATION

as to the yield of the crop in every part of the United States, in England, the basin of the Black Sea, Egypt, and the Danube, as you have in your own neighborhood. Like mistakes as to yield happen with tobacco, sugar, rice, hemp, and all the agricultural staples of commerce. How should it be otherwise, seeing the information is so one sided? It is collected by the buyer, of course, in his own interest, for by it he sets prices. This information ought to be collected by the government and be in the interests of truth and science, and therefore impartial. The relations between buyer and seller are antagonistic, in so far as one wants to buy low and the other to sell high. For the lack of just such a system of co-operation and research as I propose, it continually happens that the producer, who knows nothing as to the commercial wants of the world for his staple, has to sell at prices that are based upon estimates which dealers not producers, form as to the extent of the crop, not in our land but in all lands from which commerce draws her supplies. Surely, considering the progress that has been made and is now making in physical research and scientific discovery,

IT IS NOT MUCH OUT OF THE WAY

to ask the government so to direct these discoveries and researches, so encourage them that you too, in your husbandry, may have the benefit of them. The cost will be trifling; the machinery for carrying out this plan is already provided in most of the States of Christendom, and it only requires to be geared together and put into operation. The wires of the telegraph lead all over the world. their total length at present is nearly a million of miles, and it is increasing at the rate of 100,000 miles a year. In all countries there are meteorologists with their systems and plans for observing and discussing the movements of the atmosphere, and such countries have their agricultural bureaus or other offices, where information is sought and disseminated touching the soil, crops, and cultivation. And all that is needed is to bring these meteorologist, offices, implements, and means together in a spirit of friendly concert.

In 1853 I obtained leave to invite the powers of Europe to send their men of science and leading meteorologists to me in conference at Brussels, that we might there take counsel together and devise a uniform of co-operation and research at sea. The invitation was promptly accepted, the conference met, a plan was agreed upon, and immediately ships of all kinds were, without the cost of one cent, converted into floating observatories. Thus, alone, and at an expense not exceeding $1,000, if I accurately remember, I got together the conference of meteorologists at Brussels, and brought under one comprehensive and co-operative plan of physicial research more than two-thirds of the earth's surface. Surely your, government, backed by all the moral weight and influence of the country, can bring the remainder under this system, and by so doing confer upon agriculture, commerce, and the industries of the country a boon such as they have never received—no, not since you have knocked off poling up the Mississippi.

In order that you may fully understand the defect of the present system and fairly comprehend the benefits that are to be expected from the plan proposed, let us see how the data are now collected for

FORECASTING THE CROPS

in this country. One or more houses in New York still issue circular letters from time to time, telling of the promise and forecasting the yield of the crops. This is done from data the most scant, but from the best that is to be had. Some rely on the merchants in the interior towns and cities for their information; and some on newspaper reports; and some will send agents to ride over a few plantations "taking a tramp of ten miles," and from data thus collected the crops are forecast. As a rule, these aim at accuracy, but we cannot forget that there is the principle of antagonism between the factors whoboy and forward, and the farmers who grow and sell the crops. And I fancy that generally—not always, but frequently—the crop as it begins to come forward, is over-estimated; and, as a rule, these errors in estimating are not detected until the crop has left the hands of the producers and entered the channels of commerce. The discovery is then to late to do you any good. Perhaps I can bring this home to you more clearly and closely. Let us see some of the over-estimates that have been made in cotton during the last generation. Here is a table which I got from one of the first authorities in the land. The cotton prepafter it had all gone forward, and had been delivered for shipment was found to fall below the estimates in the following named years, the real crop of

	Per cent.
1823 fell below the estimated crop	[illegible]
1838 fell below the estimated crop	1½
1841 fell below the estimated crop	2½
1843 fell below the estimated crop	15
1846 fell below the estimated crop	15½
1849 fell below the estimated crop	2½
1856 fell below the estimated crop	18
1860 fell below the estimated crop	2½
Average, 2 ¾.	

These are not all the erroneous estimates that occured during the period of thirty-four years. They are only extreme cases; but they show that on the average, every fouth crop is overestimated to the extent of more than one-fifth. In other words—and I wish you to mark this fact—that through lack of what these resolutions seek to accomplish for you, you lost during those thirty-four years one entire crop and three-fourths of another; that is

YOU GAVE IT AWAY.

For in the above eight years, you sold each crop on the assumption that it was one-fifth larger than it really was; and therefore you got it for one-fifth less than it really was worth. This I believe is the way cotton planters generally would put the case. It may not be quite the true way, but it will answer for the purpose of illustration, and serve to show—though it may give figures that are too large—that the sum total which you lose through

ERRONEOUS FORECASTS

amounts annually, on the average, to millions of dollars. Illustration, with example, will make this clearer. A crop while coming forward is, let us suppose, estimated at 4,000,000 of bales, and the word is passed across the ocean and circulated in all the cotton marts of the world that the American crop is enormous, and prices are pitched accordingly. You sell, suppose, at 16 cents; but by the time most of you have sold at these figures, and before much of the crop has gone into consumption—though most of it has gone forward—it is discovered that the crop is but 3,000,000 bales, and up goes the price to 20 cents. Now if you had the means of correct estimates, and if the crop had been correctly forecast at 3,000,000 you would have sold perhaps at 20 cents, instead of 16 cents. The fluctuations in commerce, the loss to producers, and the expense entailed upon consumers are far greater and more grievous than those who have not studied this subject are aware of. It extends to all your articles of export. I estimate that the cotton planters alone of the South have from such fluctuations during the last six years only lost

THE LION'S SHARE OF $375,000,000.

That is in consequence of erroneous estimates, and the lack of such authentic crop statistics as we now seek, the planters have received for their last six crops millions of dollars less than they would have received had they known before selling the actual amount of the crops as accurately as it was known after they were sold. Our total cotton production since the war is in round numbers 16,000,000 of bales; and the fluctuations in price are owing chiefly to the lack of correct information as to yield. Supposing planters to have sold on the average only half the crop of each year at the lowest figures;—then according to this way of putting the question they have lost on the crop of 1865, $96,000,000; on the crop of 1866, $44,000,000; 1867, $67,000,000; 1868, $30,000,000; 1869, $60,000,000; and on the crop of 1870, $70,000,000; total, $375,000,000, or an average of $62,000,000 per crop. Now I maintain, that had this system of observations which I now propose, and which I advocated before the war, been in operation, this extreme fluctuation could not have occured, and farmers would have received millions more from that single crop than they did. Like fluctuations, as I have already said, take place with your other staples. I can give you those for

WHEAT IN LONDON

for the last eight years—not the extremes of high and low prices as in cotton, but the yearly average—therefore the fluctuations will not appear so great. The average price per imperial quarter (eight bushels) was: 44s. 1d. for 1863; 40s. 2d. for 1864; 41s. 10d. for 1865; 48s. 11d. for 1866. But the statistician says that in October of this year (1866) when the quality and quantity of the yield were approximately known—that is when the grain had mostly left the hands of the growers, the price went up to 53s. 1d. and continued to rise until it averaged 64s. 1d. for 1867, 68s. 8d. for 1868, 48s. 2d. for 1869; 46s. 11d. for 1870. All your staples will vary in price according to the crop, but accurate information, such as is now proposed, as to the promise and yield, will, with the aid of steam and the telegraph to satisfy demands, tend mightily to forbid speculation by preventing fluctuations and maintaining uniformity in prices.

THE MACHINERY

for putting this plan into operation is—so far as this country is concerned—all ready; all it wants is the gearing up. You have your signal-offices where weather reports are continually received by telegraph, an whence telegraph forecasts are issued daily, and though this work is so new to officers engaged in it their progress so far is in the right direction. You have also the Agricultural Bureau, in the service of which reports, embodying many of the facts and observations required, are already made, or might be without any additional expense. Many of the data which the two offices seek to obtain stand somewhat in the relation of cause and effect to each other, as, for instance, a dry season and bad crops. Your fields have the same area and soil this year that they had last. Your labor upon them is the same. Why is not the yield the same? Simply because the seasons were different.

THE AGRICULTURAL INTERESTS

are not the only interests to be benefitted by forecasting the weather and crops; and that the money articles that are issued daily from the financial centres of the world, as the great emporiums of commerce, abundantly show. Hence, in the city articles of the London *Times* and other journals are such expressions as these: "The weather for the last few days has been unfavorable to the crops; consols and securities generally have been dropping." Or, "The weather is glorious for all growing crops; securities are looking up; even Nottingham laces and stockings feel its influence, and are active." To the relations between the weather and the crops in England effect the public securities not only there but all over the world. Touch the weather and you touch the crops; touch the crops and you touch consols; touch them and you touch the value of all leading articles in trade and the credit and security of every State, city, and corporation in this country that has paper on the stock boards of Europe or America. I believe

THE AGRICULTURAL BUREAU

has already in its employ agents in the various States to collect agricultural information. Its organization for receiving the monthly, or tri-monthly reports as to the staple crops of the various sections may, for aught I know, be complete, for I am not informed as to the details of that office. I am under the impression, however, that there is in this bureau abundant room for improvement, as well in organization as in conduct and management; for its utterances as to the yield of crops are not, in commercial circles, received even with as much confidence as are the private circulars of produce dealers. The conference would deal with these defects and give efficiency to both.

THE METEOROLOGICAL OFFICE,

though the more recently established, is the more deserving of commendation. Its forecasts of the weather are instructive, but they are too vague as yet to be of much practical value. Here is a fair sample of its predictions, called "Probabilities," as any of you may see in the daily papers. I took this from the first paper I happened to lay hands on, with its paragraph of

WEATHER PROBABILITIES.

WASHINGTON, August 11.—Clear and warm weather will probably be experienced on Saturday from Missouri to Lake Huron and westward. A low barometer with cloudy weather will probably continue from Louisiana to West Virginia and eastward. A low barometer with cloudy weather and local storms will probably extend during the afternoon over New York and new England.

There is nothing in these "probabilities' that you can utilize. There is no reason why, with the means and appliances under the control of that office, you should not reasonably expect to have timely warning—at least of certain great changes in the atmosphere that you can profit by. After a while the information—as knowledge and experience increase—may be more specific. But as they are, these "probabilities" are so vague that shipmasters and farmers who felt a lively interest in them at first, are beginning to ask each other, "*Cui Bono?*" Nevertheless, considering this office is new it has made a good beginning. *But the time is coming, and his plan will hasten it, when these "probabilities" should become "certainties," and be more specific and practical;* for how can such vague things as I have quoted be utilized? Of what use can it be to any living soul to know that a "low barometer with cloudy weather and local storms will probably extend during to-morrow afternoon over New York and New England!" Now, if it had said what counties and parts of New York and New England these "local storms" would reach, and give some idea of their character and severity—whether thunder, wind, rain, or hail storm—we should have something that might be of practical account. But let us suppose, merely for the sake of illustration and by way of showing the main features of the plan, that the proper meteorological stations have been occupied and that the observers and co-operators report upon the crops as well as upon the weather, and that at first and in a tentative way

A SPECIAL CROP REPORTER

be assigned to every district of 10,000 square miles in the States. It is his business to travel over his beat continually and put himself in communication with intelligent farmers in all parts of it, and through them, together with his own observations, to keep the central office posted by regular reports (say monthly at first) as to the state and promise of each one of the staple crops of his district. At the same time the meteorological observers in the district would send forward their observations and reports in detail, for the same period, also by mail, while the telegraph observers keep up their daily reports, both as to matter and crops. This would give five crop reporters for Alabama, five for Tennessee, four for Kentucky, and four for Ohio—and so on for this country. In Europe, twelve for Great Britain, nineteen for France, one for Holland, one for Belgium, and so on. These reporters would have their attention at the first going off, so as not to be lost in a wilderness of data, directed chiefly: in Alabama to cotton and corn; in Tennessee to corn and wheat; in Kentucky to corn, wheat, hemp, and tobacco; in Ohio to corn and wheat; and in each State and county to its chief staples only. So far the plan is simple enough, and may be carried out easily for this country by itself. But it now requires to bring other nations into the plan and to include within it.

THE SYSTEM FOR THE SEA

which has been so rich in its results, but which I could not carry out to full harvest through lack of co-operation on the land. The atmosphere must be observed by observers stationed in all parts of the world and acting in concert, before we can hope to understand its movements and comprehend the laws which govern them. Until some such system of observations be established we may hope in vain for our children's children to see the

SCIENCE OF METEOROLOGY

assume the dignity or claim the accuracy that belonged to astronomy in the days of our great-grand-fathers. I appeal, to you, therefore, not only as husbandmen, for your own sake but as philosophers, philanthropists and friends of science also, to lend me your assistance in this scheme. Europe is ripe for it. There has just been held there a grand international congress for the advancement of commercial, geographical, and commercial knowledge. I submitted this plan then. A correspondent writes: "Your resolutions for an agricultural and meteorological conference—international—were received with cheers, and by unanimous vote ordered to be printed with proceedings." This is a good omen and a happy auspice. It is now or you to help me "put the ball in motion" here.

Surface Movements of the Earth.

The old geological theory that from time to time the surface of our earth has been changed by a grand catastrophe, which, destroying plants and animals were, on an immense scale, similar to the local catastrophes produced by volcanic eruptions and earthquakes, has been abandoned by reason of our more correct knowledge, founded on careful observations which investigators have been making for many years. These observations have proved that sudden catastrophes are always merely local; but that all the great changes in the surface of our earth, as the upheaval of mountain ranges and the depression of valleys and their ultimate change into lakes and oceans, are gradual and go always on, even at the present day. The mountains bordering the Pacific Ocean—in fact, the whole coast of California—are perpetually raising; and have probably been doing so for half a million years, while all the land containing in its bosom our great American lakes is slowly sinking, with a probable corresponding upheaval in the State of Kentucky, of southern Indiana and the surrounding countries. Geological investigations prove that once our lakes had their outlets south, till by depression at the north a new outlet was first formed, about forty thousand years ago, through Niagara to the St. Lawrence river. The division line of the water-shed of the lakes and the Missi-sippi valley has been slowly traveling southward since that time; and when the city of Chicago recently turned the waters of Lake Michigan up the Chicago river into the Mississippi valley, she re-established the old state of affairs, which, if the motion in question continues, will be more difficult to maintain in the future than it is now. Fortunately this motion is very slow, and only a very remote posterity, some thousands of years hence, will meet with the difficulties we now foresee, when the bed of the Chicago river becomes lower and lower at its junction with Lake Michigan.

It appears, that the State of New Jersey is sinking, and this is even complained in by the city of New York, Brooklyn, Long Island, &c., at the rate of some sixteen or seventeen inches per century. This is insignificant, to be sure; but let it only go on for a thousand years and it is some fifteen feet, so that the new stone docks now commenced in New York city at that time will be totally submerged; but then they will probably not last so long, and the soil of the lower part of the city may be very easily raised half a foot every thirty years. It is evident that the most correct data may be obtained at the sea-shore, as the main height of the ocean possesses a perfect stability. This main height is, of course, obtained by continual observations, and if any where the highest tides reach a higher level than they did one hundred or two hundred years ago, it is a proof of depression or sinking of the land.

This depression is going on along the coast of northern France, Belgium, Holland and north-west Germany, while the coast of Sweden, along the Baltic is slowly rising, including the capital of Sweden, the city of Stockholm.

The latest scientific journal's report two very striking contemporary upheavals in Spain, entirely authentic. M. de Botello describes them in detail and the most curious fact is that the short time of scarcely a quarter of a century was sufficient to produce an effect which has surprised every inhabitant who observed the circumstances formerly, and compared them with the present condition. In the province of Jamora, it is observed that from the village of Villar den Diego, it is now possible to see the upper half of the church-steeple of Ruflarra, in the province of Valladolid; whereas, twenty-three years ago, the summit of this steeple could only just be perceived. The same thing occurs to the same degree and under the same circumstances in the province of Alava, where, from the village of Salvatierra, the whole of the village of Subiende can now be seen, while in 1847 the vane of the church steeple could barely be perceived. These four points are on a line parallel to the system of the Sierra Mountains, while the extreme points are one hundred and forty miles apart.

All the movements we speak of here have nothing to do with volcanic eruptions; they are, of course, caused by changed conditions of the interior of the earth's mass, which by these facts is proved not to be solid, the opinion of some modern geologists notwithstanding; the earth, if not liquid inside, must at least be soft and plastic, in order to make depressions in one place with simultaneous elevations in another.

One other interesting fact we must mention in this connection; it is that the highest mountains are not the oldest, as one would naturally suppose, but belong to the systems last elevated; so the high Swiss Alps are much younger than the lower Jura, and the Catskills younger than the lower Shawangunk mountains.—*The Manufacturer and Builder.*

A Tragedy.

How many acts are there in a tragedy? Five I believe.

Act. I.—Young man starting from home. Parents and sisters weeping to have him go. Wagon passing over the hill. Farewell kiss thrown back, ding the bell and let the curtain drop.

Act. II.—Marriage Altar, Bright light, Full organ. White veil trailing through the aisle. Prayer and congratulation, and exclamations of "How well she looks!" Ring the bell and let the curtain drop.

Act. III.—Midnight. Woman waiting for staggering steps. Old garments stuck into the broken window pane. Many marks of hardship on the face. Biting off the nails of bloodless fingers. Neglect, cruelty, disgrace. Ring the bell and let the curtain drop.

Act. IV.—Three graves in a very dark place. Grave of child who died for lack of medicine. Grave of wife who died of a broken heart. Grave of husband and father who died of dissipation. Plenty of weeds but no flowers. O, what a blasted heath with three graves! Ring the bell and let the curtain drop.

Act V.—A destroyed soul's eternity. No light; no music; no hope! Despair coiling around the heart with unutterable anguish, blackness or darkness forever! Word wont work! I cannot bear long to look. I close my eyes at this last of the tragedy. Quick! Quick!—Ring the bell and let the curtain drop.—*Rev. T. De. Witt Talmadge.*

Wilson county, North Carolina, claims to be the banner cotton county of the South. The first, second, and third premiums for the finest staple of upland cotton from the Southern States were awarded to the citizens of Wilson county at the St. Louis fair. Contesting for these premiums were several thousand bales of cotton, representing every cotton-growing state at the South.

Important Discovery in Tanning.

It appears from investigation that Western Texas has, in inexhaustible quantity, two of the best tanning materials known to the world. The wood as well as the bark of the mesquite, a species of timber that abounds in great quantity, is found to be rich in tannic acid, but live oak is even better, yielding by chemical demonstration fifty per cent. of tan, while mesquite yields but thir