JAMES LEFFEL'S IMPROVED

Water Wheel

Fine New Pamphlet for 1888.
The "OLD RELIABLE" with improvements. Making it the Most Perfect Turbine in use, comprising the Largest and Smallest Wheels, under both the Highest and Lowest Heads in this country. Our new Pocket Wheel Book sent free. Address,

JAMES LEFFEL & CO., Springfield, Ohio,
and 110 Liberty St., New York City.

[Please mention this paper when you write to us.]

POOLE & HUNT'S

Leffel Turbine Water Wheel

Made of best material and in best style of workmanship.

Machine Molded Mill Gearing
From 1 to 20 foot diameter, of any desired face or pitch, molded by our own special machinery. Shafting, Pulleys, and Hangers, of the latest and most improved designs.

Mixers and General Outfit for Fertilizer Works.
For Shipping Facilities the Best in all Directions.

POOLE & HUNT, Baltimore, Md.

N. B.—Special attention given to Heavy Gearing for Pulp and Paper Mills.

[Please mention this paper when you write to us.]

WILLSON

Spring Whiffletree

Designed to Make the Burdens of Laboring Horses Easier, and to Keep them in Good Working Condition.

These trees will commend themselves to every owner of Laboring Horses, for the reason that the load is constantly balanced on the spring, making it impossible for the horse, harness or wagon to receive any sudden shock or jar. Some of the benefits derived from their use are as follows:

- Prolongs the Life of the Horses;
- Prevents Sore Shoulders;
- Stiffness of Limbs;
- Resistance in Pulling and Destruction of Harnessed.

Send for Catalogue and Prices.

AGENTS WANTED.

THE JEFFREY MFG. CO.
169 E. 1st Ave., COLUMBUS, O., U.S.A.
[Jan. 86.]

PRINZ

The Most Durable, Simple and Efficient Machine for the purpose on the market.

CENTENNIAL MILLS.
EVANSVILLE, Ind., June 14, 1886.

FAUSTIN PRINZ & Co., Milwaukee, Wis.


Manufactured in Four Sizes.

PRINZ & RAU MFG. CO., MILWAUKEE, WIS.
Write for Descriptive Pamphlet.

May 23rd, 1886.
The Cockle Machine you sold us a year ago is doing its work as well now as it did in the start and has not cost us a dime for repairs yet. Respectfully yours,

J. W. LAUBSCHE & BRO.

"GOLD SEAL" RUBBER BELTING,

GOODYEAR RUBBER CO.

OAK TANNED LEATHER BELTING.

372 and 374 EAST WATER STREET,
MILWAUKEE.

131 EAST THIRD STREET,
ST. PAUL.

201 NICOLLET AVENUE,
MINNEAPOLIS.
THE UNITED STATES MILLER.

THE JONATHAN MILLS MFG. CO.
MANUFACTURERS OF THE CELEBRATED
Jonathan Mills Universal Flour Dresser.

THE BEST BOLTING MACHINE IN THE WORLD. MORE THAN FIFTEEN HUNDRED NOW IN USE.

Our Revised Price List and other information furnished on application.

BOLTING CLOTH

We carry a full line of Heitdenger & Co.'s celebrated Crown Silk Anchor Bolting Cloths and Grind Gauzes. These cloths are famous the world over for their great strength and evenness of count. Also, Superior Wire Scouring Cloths.

GIVE US A TRIAL ORDER.

CLEVELAND, OHIO. U. S. A.

If You Want the Earth, Here You Are!

THE "UNITED STATES MILLER" AND

50 Charming Complete Novels
FOR
ONE DOLLAR!

To Foreign Countries $2.00, (8 Shillings English.)

These Novels are printed in pamphlet form, on good paper. They would cost you in the form of "Seaside" or other libraries, $10.00. If you do not want to read the books yourself, divide them up among your friends. The regular subscription price of the U.S. MILLER alone is $1.00 per year, and it is worth the money. We have been able to make a good bargain with an Eastern publisher and propose to give our subscribers the benefit of it. The following is the list of novels:


Fill out the blank below, enclose $1.00 and address plainly to

E. HARRISON CAWKER,
Publisher of the "United States Miller," Milwaukee, Wis.

$1.00.

Publisher UNITED STATES MILLER, Milwaukee, Wis.

Send the UNITED STATES MILLER for one year and 50 Novels, post paid, for which send enclosed One Dollar.

Name.

Post Office.

County.

State.

[Would be pleased also to have your mention any particulars about your mill or elevator, capacity of Power, system, etc., and the name of Head Miller.]
THE COCKRELL DUST COLLECTOR.

The above named machine was brought to the general notice of the public last summer. Before being thus introduced, a long continued series of experiments with it was had until it was believed to be about perfect. It has been placed in a large number of mills, and has proved that the judgment of the manufacturers was correct.

The manufacturers in writing concerning this machine say: "The Cockrell Dust Collector," herewith illustrated, and which we offer to millers with our indorsement, is not simply an improvement upon some other dust collector, but it is entirely novel in construction and operation, and makes a new departure in the class of machines.

Briefly described, it consists of a stationary cylinder of suitable size, provided with a hopper and conveyor below for receiving the dust, and with large openings at the center of both ends for the free escape of the purified air. Inside this stationary cylinder is a revolving cylinder composed of narrow strips of peculiar shape attached to iron spiders, which are fastened to the shaft; one end of this shaft receives the driving pulley, as shown in the engraving, and from the other end the conveyor is driven by means of sprockets and chain. This revolving cylinder is quite light, runs very easily, and as it revolves in the direction of the incoming current of air, requires but a trifle of power.

The dust-laden air from the purifier or grain cleaner is blown into the stationary cylinder, and the motion of the revolving cylinder accelerates the velocity of the incoming current of air, compresses it to some extent, and effects a complete separation of the dust and air, discharging the dust through suitable openings into the conveyor box below, and the air freed from dust escapes through the end openings out into the mill.

The machine has no cloth and cannot clog; produces no back pressure upon the purifier; is extremely simple in construction; noiseless in operation; requires but a trifle of power; can be placed on top of middlings purifiers or in any other convenient location; and better than all, it does catch the dust. In support of this statement, we cannot do better than add the following letter from the Kratochwill Milling Co., of Dayton, O.:

"Stilwell & Bierce Mfg. Co.:

GENTs: The two Cockrell Dust Collectors which have been running in this mill the last three months have been severely tested on the most difficult kinds of stock with most satisfactory results. I find them to be most emphatically Dust Collectors. They are running side by side with dust collectors of other manufacturers, and I say without hesitation that yours is decidedly the best dust collector in the mill. They give us no trouble, and without attention do their work uniformly at all times. They rather assist the fan, relieving it of back pressure. It is the only machine I ever used that catches all the dust."

(E. C. LEHMAN, Head Miller."

(Signed)."

JAMES KRATOCHWILL, Manager."

In conclusion, the manufacturers, The Stilwell & Bierce Mfg. Co., of Dayton, O., say: "We have secured the exclusive right to manufacture and sell this dust collector, and we now offer it to the trade at reasonable prices, and with full confidence that it will fill the bill. Prices and further information will be furnished on application."

MERCHANT MILLERS MEETING.

HELD IN MILWAUKEE, DEC. 17-18, 1888.

Pursuant to call representative merchant millers from several states and territories to the number of 16 met in the club rooms of the Plankinton House, at 2:30 p.m. Dec. 17.

The meeting was called to order by Mr. Greenleaf of Minneapolis, and upon his motion Mr. Edw. Sanderson of Milwaukee, was elected chairman; Mr. Jow W. Turner, of the Northwesterner Miller, was elected secretary.

Upon taking the chair, Mr. Sanderson thanked the convention and made some general remarks upon the present condition of the flour trade, which were well received.

Mr. A. A. Freeman, owner of a large mill in La Cross and also a prominent flour and produce dealer in New York, was called out and requested to answer the query, "What are we here for?"

Mr. Freeman proceeded to show that there was a glut of flour on the market now which must be sold at a loss to the millers unless a reduction of production was agreed upon and faithfully carried out. He believed that there was a sufficient supply in Eastern warehouses for four months, taking into consideration many things among which he mentioned the fact that many families, anticipating a rise, had laid in a year's supply, and that there was more economy displayed in the consumption of bread—that meat and potatoes were cheap and more of these commodities would be used than ever, etc., etc. At the conclusion of Mr. Freeman's address, a resolution was introduced restricting the output by closing all merchant mills one-fourth of the time to April 1. This called out a great deal of discussion in which Smith and Fusz of St. Louis, Seybolt of Highland, Ballard of Kentucky, Greenleaf and Martin of Minneapolis, Urban and James of Buffalo, Trow of Madison, Ind, and many others took part.

Mr. Freeman, of La Cross, then moved a substitute motion to that point, declaring it the sense of the meeting that the merchant mills of the country should shut down one-half the month of January and a week each in the two months following. This brought A. H. Smith, of St. Louis, to his feet. "The
resolution is entirely out of order," he said; "it is going in the wrong way. We want something permanent and to have a strong organization in the Northwest, Southeast and other sections, with a number of men chosen to look over that which has been done. We can effect nothing without organization. At present our organizations bind no one further than the payment of dues. A member surrenders no rights, and is free to cut his neighbor's throat at will. Voluntary resolutions amount to nothing; they only have a moral effect. What we of the Southwest, with our 75,000 barrel capacity, want is something cast-iron."

Louis Fuss thought it was unwise to lessen the output by closing down by weeks. A consideration for workingmen would suggest the increasing of capacity, as mills so run held their tried crews and kept the good will of the men. There was a prospect of endless discussion and a motion prevailed to defer voting on the resolution until next month.

Chairman Sanderson then suggested that the subject of the raising of railroad rates that affected flour men be discussed. Of course, he said, the oppression of railroad rate makers only added a little to the agony and if heaven was deciding the subject of how long he lingered was of little importance; but they had fought gamblers, thieves and thugs, and it might be well to send a committee to confer with the railways that wanted a piece of them. He thought where property was exported a reduction of the rate was but just.

A committee consisting of two members to a state was appointed to arrange a programme for the month's sessions. Before the committee was made up, a gentleman from Dakota raised a laugh by demanding that territories as well as states be recognized on the committee. Someone said that Dakota should be twice represented, and the chair was led to remark:

"Guess that's right. They're going to have two states anyway!"

The committee was made up as follows: Minnesota Fuss and Plant; Illinois, Messrs. Halliday and Seybt; Ohio, Messrs. Davis and Schumacher; New York, Messrs. James and Ogden; Dakota, Messrs. Stokes and Schraudanbach; Indiana, Messrs. Trow and Hawks; Minnesota, Messrs. Greenleaf and Palter; Kentucky, Messrs. Ballard and Miles; Michigan, Messrs. Badger and Merrill; Wisconsin, Messrs. Freeman and Brazier; and Nebraska, Messrs. Crow and Harris.

The convention then adjourned to 10 a.m. Tuesday morning.

An elegant banquet was given to the visiting millers by Milwaukee millers, mill furnishers and transportation companies. The menu was excellent, the floral decorations beautiful, and the music by Bach's full band absolutely ravishing. About 250 persons were at table. Mr. Edw. Sander-son spoke extempore upon the subject of short speeches made, although it was soon evident that oratorial display was not one of the things which afflict the big millers of this country.

TUESDAY, DEC. 19.

After the meeting had been called to order the report of the committee on organization was received through the chairman, A. H. Smith. The report consisted of four resolutions, as follows:

"Resolved, As the sense of this committee, that we recommend to all merchant mills of this country a curtailment of their output for January to one-half of their average capacity."

"Resolved, That a committee of three, consisting of A. A. Freeman, F. L. Greenleaf and A. H. Smith, be appointed to confer with the millers of this country on or about the 20th day of each month, beginning with Jan. 20, concerning the wishes and views of the millers regarding the output of the coming month, and that this committee will be empowered to order partial shut-down whenever the wishes of millers are not fulfilled.

"Resolved, That the chair appoint a committee of five to ask the railroads to make the export rate 5 per cent. less than the interior rate."

"Resolved, That no mill shall consign any flour for three months after Jan. 1, 1889."

Ferdinand Schumacher moved that the first resolution be adopted by a rising vote. George Urban, Jr., said that the Buffalo delegation could not bind anyone by its vote. The delegations from that city had come as individuals.

The chair said he understood that the resolution was not mandatory.

Mr. Loring, of Minneapolis, objected to shutting down on export flour in January. He desired to hold off long enough to get some money back.

Mr. Freeman believed the output could not be controlled by making conditions, and moved to put the resolution on its passage.

Mr. Seybt said he believed in a shut-down in all branches, and would give the committee appointed power to shut down or raise the rates according to conditions.

A. H. Smith, said: "There is hardly a doubt that the recommendation of this committee will be accepted by the millers all over the country. There is too much flour and too much wheat in the country. What we are here for is to reduce the supply of flour. What we want is cheaper wheat and dearer flour. We are not hurt by low prices. If we can maintain the price of wheat and sell flour at a profit that is what we are here for. We aim to bring the supply and demand nearer together. If one month won't do it, let's take the dose for another month."

Mr. Urban said it had been stated that one-half of the Minneapolis men began to enough to supply the demand. He did not propose to be one of the millers to shut down all the time.

Mr. Seybt had added to the original resolution a sentence that the January shut-down was to take place as soon as the committee received a majority of the returns from the millers of the country. With this addition the resolution was adopted unanimously.

The second resolution, appointing a regulating committee consisting of A. A. Freeman of La Crosse, F. L. Greenleaf of Minneapolis, and A. H. Smith of St. Louis, had an amendment offered to the effect that the committee be empowered to terminate the shut-down whenever in its judgment the conditions of trade demanded.

Mr. Freeman modestly suggested this would be too much responsibility for the committee to shoulder. Mr. Seybt insisted, but brought in the amendment as a separate resolution.

At this point Minneapolis men began to show suspicions of getting the worst end of the bargain. Their fears were allayed when it was pointed out that they had two members of the committee, Messrs. Greenleaf and Freeman. They were not entirely satisfied, and demanded that capacity count in decision for a shut-down. Mr. Freeman suggested that there was a public opinion among millers that would afford weight.

After more argument it was decided that capacity ought to count for numbers, and an amendment that three-fourths of the millers of the capacity of the country, representing three-fourths of the capacity, must vote for a shut-down before it could be adopted.

The resolution and that of Mr. Seybt were then unanimously adopted.

The transportation resolution went through without debate. The chair appointed as a committee on transportation, Messrs. D. B. Merrill, C. Espenfleid, F. H. Foulds, C. H. Seybt, and Fahrer.

The only resolution that caused a division was that providing that no consignments should be made after Jan. 1, 1889, but this was finally passed.

After the usual passing of resolutions of thanks a roll-call of the milling capacity was made. The result showed the mills represented to have a daily capacity of 86,060 barrels the convention then adjourned.

On the three days following the adjournment the spring and winter wheat millers held separate meetings. At the former an organization was effected with Howard Sanderson, Milwaukee, as president; F. L. Greenleaf, Minneapolis, secretary; and the following board of directors: A. H. Smith, Buffalo, O. B. Pillsbury and P. L. Greenleaf of Minneapolis, A. A. Freeman of La Crosse, W. H. Brazier of Milwaukee, A. H. Smith, Minneapolis, J. H. Harris, and Freeman were appointed as a committee to confer with the winter-wheat millers to arrange the scale of prices in the higher grades of flour.

The winter-wheat millers met with L. C. Murray of Iron, O., in the chair. No organization was perfected. After the appointment of a committee consisting of Messrs. Blane, Griffin, Smith and Halliday, to confer with the spring-wheat men, the meeting adjourned to meet in Indianapolis the first Tuesday in February for a general meeting of the millers of the winter-wheat States will be held.

CONVENTION NOTES.

The milling press was represented as follows:


The appointment of Mr. Turner of The Northwestern Miller as secretary of the Millers' Convention occasioned some criticism. Mr. Turner however made a most excellent speech.

The North and South River Millers certain was entitled to the vote of thanks tendered them at the banquet which had actually advocated the meeting in its columns. No doubt most of the newspapers would have done so if their days of publication had been such that they could have published the notice given so hastily. We are informed that the publishers of several and know that the publishers of some journals personally labor to secure the meetings. Mr. Ranck of The Millstone, aided materially in getting a good delegation from Indiana. The daily press of the West also rendered invaluable service.

Two or a number of faces familiar to millers' conventions were present, as will be seen by looking over the lists of attendants.

The Milwaukee humorists, Geo. Peck and Horace Rubble got off a little harmless fun for the benefit of visiting millers at the banquet.

Geo. Rain of St. Louis, was missed from the Convention.
United States Miller.

E. Harrison Cawker, Editor.

PUBLISHED MONTHLY.
OFFICE, No. 124 GRAND AVENUE, MILWAUKEE.
SUBSCRIPTION PRICE—PER YEAR, IN ADVANCE.
To American subscribers, postage prepaid—$1.00.
To Canadian subscribers, postage prepaid—$1.00.
Subscribe.
All Drafts and Post-Office Money Orders must be
made payable to E. Harrison Cawker.
Bills for advertising will be sent monthly, unless
otherwise requested.
For estimates for advertising, address the United
States Miller.

[Entered at the Post Office at Milwaukee, Wis., as
mail matter of the second-class.]

MILWAUKEE, DECEMBER, 1888.

We respectfully request our readers when they
write to persons or firms advertising in this paper,
not to mention that their advertisement was seen in the
United States Miller. You will thereby oblige not only this paper, but the advertisers.

The millers at the recent Milwaukee Convention represented nearly 80,000 barrels
daily capacity.

The Winter wheat millers will meet in
Indianapolis, Feb. 5, 1887, to take action for the benefit of the trade.

The Illinois Millers’ Association which met
Dec. 5, elected E. C. Kreider of Jacksonville,
president, and C. H. Seyb of Highland, Secre-
tary, for the ensuing year.

Our readers will confer a favor by writing
us giving us any item of news such as
new mills, elevators, etc., or improvements in
the same, or giving information of a prac-
tical nature of general interest to the trade.

The Martin Middlings Purifier Co., of
Grand Rapids, Mich., will please accept our
thanks for a beautiful, finely illustrated copy of
a broadsheet entitled “Grand Rapids,
Mich. As It Is.” That enterprising, manu-
facturing city, has indeed a brilliant future
before it.

We have had some correspondence with
corn meal millers within the past two weeks,
and they almost unanimously report trade to be
unusually good. Johnny Cake, mush
and milk, hog and hominy, and potatoes and
meal, are being used to a greater extent than
usual, while the consumption of flour is
falling off. Verily, man does not live by
bread alone.

Data Business, (Chicago,) says:
“C. A. Pillsbury declares that he will con-
tinue to run his business in his own way,
regardless of the action of the millers’ con-
vention at Milwaukee. He says the trouble
with the millers is not so much a scarcity of
orders for flour as it is a scarcity of wheat,
and that we are naturally anxious for lower
prices—they that may be able to buy wheat
at cheaper prices. He has plenty of wheat
for his own use and will keep right on grind-
ing. But then—Pillsbury is a bull, you know.

There are three commercial papers pub-
ish in this country that everyone person
or firm engaged in the milling or grain business
should subscribe for and read. They are:
The N. Y. Daily Commercial Bulletin, New
York, (subscription price $12 per year); The
Cincinnati Price Current, (weekly, subscription
price $5 per year), Cincinnati, O.; Broad-
street, (weekly, subscription price $5 per year)
New York, N. Y. These journals are truly
valuable, and are worth the price asked for
them. Try them for a year and you will con-
tinue them surely as long as you are in the
business.

There were recently shipped from Glas-
gow, Scotland, two complete flour milling
plants for Japan, one for Spain and a rice
mill plant for Japan. Scarcely a week passes
but we hear of European shipments of flour
mill machinery to various Eastern coun-
tries and to South America. Would it not be
well for some of our American mill furnishing
houses to send out accomplished agents
to these far countries and secure a portion of the trade. Advertising special
machinery is all well enough, but it should
be closely coupled up with a commercial
traveler. The advertisement always proves
to be a good introduction for the agent.

It appears from our foreign exchanges that an effort to organize a modified form of a
trust among the millers in this portion of
England laying “between the Humber and the Tweed” is being made. The success of
the Cheshire Salt Syndicate which has
raised the salt trade from a desperate condi-
tion (at the expense of the public, of course)
to a highly prosperous industry has stimulated
similar organizations in other lines of trade.
It is referred to by the foreign press as an
importation from the United States. It may
be possible to establish a flour mill trust in En-
gland but we doubt it. Merchant millers in
the United States have come to the conclusion
that certain general rules for the disposal of
their products may be established with bene-
fit to all, public included. At the present
writing something of that sort seems indis-
ensible to the existence of a trade which
ought to be at all times reasonably profitable.

We make the following excerpt from the
letter of a correspondent in Buenos Ayres,
South America:
“All our sheep farmers have their eyes now
fixed on Washington, and if the United States
Government changes the Custom-house tariff
and opens the door to Argentine wool, we may
look forward to a new era in the sheep farming line. Furthermore, our relations with
the States would become ipso facto most important and a current of reciprocal trade would be es-
established and of such a magnitude as to aston-
ish our North American cousins. There would
then be no need of Government subventions to
start steamship communication with New
York, and the mere repeal of the wool tariff
would do more than all the ministers, commis-
sioners, treaties, and newspaper articles
rolled together in opening up a brisk trade
and giving American manufacturers a chance
to compete with European rivals in this mar-
tket to-day of one of the most important in
the world.

The Rio de Janeiro Flour Mills and
Granaries, Limited, Rio de Janeiro,
South America.—The Jornal do Commercio,
of Rio de Janeiro, of 28th October, says that
a distinguished party, including many repre-
sentatives of the press, was present at the
formal inauguration of the establishment of
this company, on 27th October, under the
guidance of Mr. Henry de Morgan Snell, the
contractor.

The works consist of two large four story
buildings, constructed almost entirely of iron
and bricks, each 90 metres long, 15 metres
wide, and 30 metres high, and which are con-
ected by two iron bridges; on these build-
ings 400 men, including 100 carpenters, have
been working continually for the last eight
months. The motive power, which is sup-
plied by two engines of 500-horse power, with
four boilers of 1,500-horse power capacity, is
communicated to the machinery through a
fly-wheel of 82 tons weight. In the mill-build-

ing, which is ready, there is a complete plant
of Simon’s roller mill machinery, fitted with
all the latest improvements, capable of
grinding 240 tons of wheat per day. This
is arranged for automatic working, so that one
man only is required on each floor. The es-
tablishment is lighted with the electric light,
for which two engines are provided, and the
most approved fire-extinguishing appliances
are being fitted to the mill, which is also pro-
vided with a special fire-engine, which on
this occasion, with 60 lbs. pressure, threw a
jet of water over the mill.

The granary, which is very nearly finished,
has storage room for 25,000 barrels of flour
and 5,000 tons of wheat. On the sea-side of
the granary an excellent quay, with steel
jelly, is being constructed, at which vessels
of heavy tonnage can discharge their cargoes.

MILWAUKEE ITEMS.

Some of the visiting millers left handsome
orders with The Prince & Rau Mfg. Co.

Quite a delegation of millers attending the
recent convention enjoyed a trip through

The Chamber of Commerce is considering
a change in its gratuity system. The number
of deaths among members during the past
year has been unusually large.

Among the recent contracts for complete
milling plants, made by Edw. P. Allis & Co.,
are the following: Voges & Kreipke, Evans-
ville, Ind., (300 bbls.); W. H. Ford, Lynch-
burg, Va., (75 bbls.); Geo. Schrumpf & Son,
Salem, N. H., (90 bbls.); and several others.

Mr. M. H. Escott of this city, for several years
actively connected with the Cockle Separa-
tor Manufacturing Co., has accepted a
responsibility position with the J. B. Alfree
Mfg. Co., of Indianapolis, Ind., and has
removed to that city. Mr. Escott has the kind-
est wishes for his welfare in his new home,
of a host of Milwaukee friends.

MESSRS. EDW. P. ALLIS & CO. now have
their 1889 Calendar ready for distribution,
and millowners desiring a copy can secure one
by writing to them, mentioning this notice.
It is “a thing of beauty” and is highly creditable to Mr. Frank Barry, the general
advertising agent of the House.

The Milwaukee Bag Company has re-
cently purchased a valuable piece of property
in this city on East Water St. They found
this movement necessary in order to secure
room for their rapidly increasing business.
MILLERS of the Northwest have found
that they save time and money by patronizing the
the Milwaukee Bag Company.
THE UNITED STATES MILLER.

POWDER TRANSFORMATION MACHINERY.

A. J. SHAW.

The original pulley was a round block of wood. To-day pulleys are in the market, of cast iron, wrought iron and steel, entirely or in part, wood and paper. Each material has advantages peculiar to itself, the relative importance of which in any particular case should determine what to use.

For most situations the standard cast iron pulley with straight arms, when symmetrical and well proportioned has not yet been improved upon, taking everything into consideration. The wrought iron, steel, wood and paper pulleys all have a decided advantage in point of weight, being much lighter and the adhesion of the belt to the surface of wood and paper pulleys is much greater than to metal. Steel and wrought iron pulleys are from 40 to 60 per cent. lighter than those of cast iron, and are considerably stronger. As for the writer's observation at large, they are at least as strong, if not stronger than the wrought iron and steel pulleys. All steel pulleys have usually been made without arms, the rim being carried on a web of corrugated steel clamped between the arms of a cast iron hub. The rim of "mild steel" is united to the web by rivets.

As the web presents a smooth surface, the air resistance of these pulleys, even at high speed, is very small, while accidents to objects getting caught between the arms are manifestly impossible.

Wood pulleys as now made have the advantage of lightness, and great holding power on the belt. A series of tests given in the American Journal of Railway Appliances would seem to indicate that with a given tension on the slack side, a belt on a wood pulley will transmit nearly or quite six times as much power at a given speed as the same belt on iron pulleys. A series of tests by Robert Grimshaw, a well known Philadelphia expert, gives the following results:

<table>
<thead>
<tr>
<th>Popular Pulley</th>
<th>Iron Pulley</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tension on pulley side in pounds</td>
<td>Tension on pulley side in pounds</td>
</tr>
<tr>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>110</td>
<td>110</td>
</tr>
<tr>
<td>120</td>
<td>120</td>
</tr>
<tr>
<td>130</td>
<td>130</td>
</tr>
<tr>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>150</td>
<td>150</td>
</tr>
</tbody>
</table>

It is doubtful whether the high efficiency indicated by the above tests can be obtained in practice, for it has been seen no tests to determine this point, but it is significant that the makers of wood pulleys claim but 22 to 25 per cent. more than can be obtained with iron pulleys.

The best wood pulleys are of the "split" pattern and clamp to the shaft instead of being dependent on set screws, hardwood bushings being furnished with them to fit the shafts of any size. This method of fastening

obviates the danger of springing the shaft which always exists when keys or set screws are used, and also ensures that the pulley if originally made "true" shall run "true." These pulleys have one disadvantage which to the writer seems to be a serious one: The thoroughly seasoned soft wood, in small sections, of which it is made furnishes the best of material with which to feed fires, and must aid very materially in speeding the flames, which, in a shop or mill of a not especially inflammable construction, might otherwise make slow headway.

For "tight and loose pulleys" the common construction provides two pulleys exactly similar, except that the tight pulley is furnished with set screws. It is perfectly as good construction to make the hub of the loose pulley of extra length, shortening the hub of the tight pulley on one side, to make room for it. There is usually no reason why the hub of a loose pulley of 3 inches face should not be at least 5 inches long, and every reason why it should. The importance of this point can hardly be over-rated.

Long bearings wear long. This is especially true of loose pulleys.

In bushing worn-out loose pulleys do not drive the bushing in the hole, but make it loose so that the pulley may run on the bushing on the shaft. Loose pulleys which become bushing has always given trouble, have been made to run in a perfectly satisfactory manner by this simple means. In one instance, a pulley running very fast under a very tight belt, which had never run six months without renewal, has now been running for the past two years, without renewal, without labor or attention. Oil-grooves should be cut on both the outside and inside of the bushing, and oil-holes should be drilled through to connect them.

Loose pulleys have been made to take up the wear of the hole. The writer has known of but one, and from the way in which that one worked must agree with "Chorale" when he says:

"There are a hundred genii in the country trying to invent a loose pulley adjustable for wear. When they succeed in doing so, loose pulleys with proper length of hub will wear out and not till then. There is a difference between "cut" and "wear." Tightening a cut journal will ruin it." A good example of a loose pulley with a long hub is the cone on an engine lathe. If it does not cut it will almost never wear out. No one ever saw one loose unless it had "cut" at some time.

Like all other bearings, loose pulleys are apt to run warmer when a little end-play is allowed, than when they are tight between the collars. The end-play has a tendency to prevent the formation of grooves around the shaft, and gives a much better distribution of the lubricant.

The proper place for oiling loose pulleys is from the center of the shaft. This is not usually practicable for counter and other overhead shafts, but on machines should be done whenever possible.

It is not well to make loose pulley hubs longer on one side than on the other, as, if the difference be great, the hole is apt to wear near the side which refuse to retain the oil and will give trouble.

Many devices have been tried to ensure the continuous oiling of loose pulleys. One of the most successful consists in making the hub hollow, and filling the cavity with Albany greases or some of the semi-fluid lubricant. The grease is retained in the cavity as long as the pulley runs cool, but as soon as it warms up a tripe the grease softens, and flows to the shaft through holes provided for that purpose. When the temperature has become sufficiently reduced by a liberal supply, the flow stops. In practice the bearing warms up just sufficient to cause a continuous, very slow feed. The only objection that can be made to this arrangement is that there is a constant demand for the power required to maintain the temperature at which the feed will take place. This loss is not large, however, and for most situations is of little or no account when compared with the advantages of certainty of action and little attention required. In some cases these pulleys run continuously for ten hours a day, for nearly a year with one filling.

[SFX]

SARCASTIC ADVICE TO ADVERTISERS.

A Connecticut journal some time since tendered the following somewhat sarcastic advice to advertisers. It will prove profitable reading for many of those who are considering the question of where and how to advertise:

If you have goods to sell, advertise the fact. Hire a man with a lampblack kettle and brush to paint your name and number on all the railroad fences. The cars go whizzing by so fast that no one can read them, to be sure, but perhaps the conductor will be obliged enough to stop the train for inspective passengers. Remember the fences by the passersby, and the sight is so attractive to the pass-by as a well-painted sign: "Mullington's Medical Mixture for Mumps." Have your cars on the hotel register, by all means. Strangers stopping at the hotel for the night generally buy a cigar before leaving town, and they need some inspiring literary food besides. If an advertising agent wants to advertise your business in a fancy frame at the depot, pay him about two hundred per cent. more than it is worth, and let him put a ring around it.

When a man has three-quarters of a second in which to catch a passing train, he invariably stops to read depot advertisements, and your card might take his eye. Of the course the street thermometer dodge is excellent. When a man's fingers or ears are freezing, or he is putting up "phewing" at the heat, the time above is the height of peapod. Let us say "no" to the advertisement. Print, in the blackest ink, a great sprawling card on all your wrapping paper. Ladies returning from a shopping tour like to be walking bulletins, and if the music trots all the while, it only calls all their finery, no matter. Don't try to advertise in every circus programme. It will help the circus to pay their bills, and visitors can relieve the tedium of the clown's jokes by looking over your interesting remarks about "ten percent..."
ARKELL & SMITHS,

CANAJOHARIE, N. Y., U. S. A.

MANUFACTURERS OF

All Rope Manilla Paper Sacks

FOR

FLOUR AND CEMENT.

We Will Guarantee Our

DOUBLE EXTRA ALL ROPE PAPER SACKS

to carry the contents—either 75 pounds of Cement, or 50 pounds of Flour—as far as can be trans. ported in Cotton Sacks.

These sacks will stand abrasion, do not sift, are air-tight and proof against insects.
THE UNITED STATES MILLER.

NO SUCH THING AS PERFECTION.

The mechanic who thinks he has arrived at perfection may be written down as an ass. There is no such think as “perfection” in the mechanical arts, and the man who claims to be a complete and finished mechanic knows in his heart that which does not belong to him, and he will soon discover his vanity, for his frantid pretensions do not deceive the employer, to any great extent. Blow and bluster will not make good work or pass for efficiency, and the man who uses that sort of weapons seldom deserves an employer.

“I never employ a man who knows it all,” said a large contractor to us the other day. “I will hold you a dollar he is a good workman and one that may be relied upon; though of course, that sort of man seldom comes in search of employment. Braggling fellows, who state they can do anything from dressing a board to designing a cathedral, are quite numerous, and may be at any moment. At any rate, this is true, but it does not argue that there are not many of the best workmen. There are plenty of them, good, reliable fellows, fellows that seldom or never have need to seek employment. They are always engaged. Most of them own their own homes, are intelligent, hardy, stout fellows, models in their own neighborhood, best citizens, have neat, thrifty wives, and healthy, happy children, and their country is proud of them, for it understands that they are towers of strength and bulwarks of true freedom. It is not from this class that anecdotes or noisy dramatics are drawn; they do nothing until they have first considered the results, and all their actions are tempered with wisdom, hence their ability to become good mechanics.—The Timber Worker.

BUCK HEAT CAKES.

This toothsome meal, eaten with maple syrup or honey or the finest quality of golden syrup, or in the absence of these, with white sugar melted, is one easy to make and easy to eat. The cooking diet, brown from the griddle, will cause your husband, young housekeeper, to leave you with a warm recollection of home, when an enthusiastic kiss is the supplement. We offer a good receipt:

For a generous supply of these cakes for five persons take on quart of buckwheat, half a pint of white cornmeal, one tablespoonful of salt, one quart and a half of warm water, two tablespoonfuls of molasses, a heaping teaspoonful of soda, and one cupful of yeast, or one cake of compressed yeast.

But the buckwheat and salt in a deep pail, and add to the mixture the water, yeast and molasses. Beat vigorously for twenty minutes. Cover the pail and set in a warm place until morning. In the morning rub the soda through a fine sieve, letting it fall on the batter. Beaten on a griddle, served as soon as cooked. Reserve one pint of the batter for raising the next batch of cakes. It should be kept in the refrigerator or the cellar.

Remember that success in making buckwheat cakes depends largely upon a thorough beating and careful raising.

READERS should examine carefully our premium offer on another page of “Fifty Novels.”
A NIGHT IN CHICAGO
AND A NIGHT TRAIN
TO INDIANAPOLIS

Fast Mail Line with Vestibuled Trains between Chicago, Milwaukee, St. Paul and Minneapolis.

Trans-Continental Route between Chicago, Council Bluffs, Omaha and the Pacific Coast.

Great National Route between Chicago, Kansas City and St. Joseph, Mo.

5700 Miles of Road reaching all principal points in Illinois, Wisconsin, Minnesota, Iowa, Missouri and Dakota.

For maps, time tables, rates of passage and freight, etc., apply to the nearest station agent of the CHICAGO, MILWAUKEE & ST. PAUL RAILWAY, or to any Railroad Agent anywhere in the World.

R. MILLER,
A. V. H. CARPENTER,
General Manager. Gen'l Pass. & Tkt. Agt.

For information in reference to lands and towns owned by the Chicago, Milwaukee & St. Paul Railway Company, write to H. G. Haugen, Land Commissioner, Milwaukee, Wisconsin.

THE CHICAGO AND NORTH-WESTERN RAILWAY.

The Centres of Population in
ILLINOIS, IOWA, WISCONSIN, MICHIGAN, MINNESOTA, DAKOTA, NEBRASKA AND WYOMING.

Its TRAIN SERVICE is carefully arranged to meet requirements of local travel, as well as to furnish the most attractive routes for through travel between important points.

TRADE CENTERS.

Its EQUIPMENT of Day and Parlor Cars, Dine In and Palace Sleeping Cars is without rival.

Its ROAD-BED is perfection, of stone ballasted Soil.

The North-Western is the favorite route for the Commercial Traveler, the Tourist and the Seekers after New Homes in the Golden West.

Detailed information cheerfully furnished by
JNO. S. GEORGE,
Commercial Agent, Milwaukee, Wis.

WILLIAM J. MELLON,
JAMES BARKER,
General Manager.

LOUIS BOYSTEIN,
Asst. Gen'l Pass. & Tkt. Agt.

E. F. WILSON,
Gen'l Passenger Agent.

THE UNITED STATES MILLER.
THE UNITED STATES MILLER.

NEWS ITEMS OF ALL SORTS.

A communication from Sioux Falls, S., dated Dec. 11, says: "Fidel Schlager of Minneapolis is here making a thorough examination of the Queen Bee flour mill. He is the son, we believe, of the late Mr. Schlager of Minneapolis, and the son is conducting the mill from him regarding the conditions of the property there. His four sons will purchase the mill and start it up in the fall of February. In addition to the admirable water power they will add a monster Corliss engine to prevent idleness owing to low water. A large part of the corn destroyed David Oliver's oat meal mill in Chicago, Dec. 11. Two lives were lost.


A. B. Scullin, erected and slated for the 20th Nov. The Millers of Dakota held a meeting.

The Illinois-Clark Company have purchased the water power of the Little Chicago, Wis., from the Green Bay & Mississippi Canal Company and interest in the river, paying therefor for $60 per horse power for the property. They will erect a large mill in place in fall. The mill of Davis held a meeting at Aberdeen, Nov. 25, which was largely attended. The meeting was held with closed doors, but it is pretty certain an organization was effected to control the production of flour.

H. W. Daboll of Minneapolis, appears to be a prospect which is not to be taken lightly. His name is familiar in the milling line, and has been mill owner in Tennessee, Evansville, and St. Louis, on account of change of prices, it being found more profitable to ship back to St. Louis, than to forward to Europe. Burned, Nov. 13, Watson's store, leased by the Milton Milling Co. Loss, $150 on grist, machinery and building. Fairly insured. Cause of fire was not positively known. The users of the elevator buckets made by the W. G. Avery Mfg. Co., of Cedarville, O., will be interested to learn that a new patent (No. 364,232, dated Nov. 6, 1888) has been granted to W. G. Avery of the company, on an elevator bucket. Allen & Moore, Craig Landing, Miss., have a new elevator which will handle building flour and corn mill at Lyneburg, Va., Ward & Stapp are building a merchant mill at Sheffield, Mass., in the vicinity of 200 barrels. The J. G. Chich Milling Co., Rockford, Ill., has been incorporated with a capital of $100,000. The J. B. Allfree Company, Indianapolis, is doing a large business in mill building and furnishing, and their work is being rapidly increased.

The Capitol flouring mills at Lansing, Mich., were destroyed by fire, Loss, $50,000; partially insured, Dec. 13. The Fountain City Mill Co.'s mill at Fountain City, Wis., was also destroyed, Dec. 13. The mill was a three-story mill, 60 by 80 feet, 150 feet high, and had a capacity of 300 barrels. The Georgia Cotton Mill Company, in Augusta, Ga., has been incorporated with a capital of $250,000.

Conrad, Nebraska, on the Platte River, is a growing town in every way. It has been introduced into the lists of the best towns and is always well spoken of.

The York Foundry & Machine Co., (John C. Klimes, Manager) of York, Neb., report a very prosperous season's business. Over thirty complete elevator outfits have been furnished.

The New Era Sculler manufactured by the Superlative Purifier Mfg. Co., of Milwaukee is growing in favor every day. It has been introduced into many of the best mills and is always well spoken of.

We saw a letter from the expert miller and millowner Mr. Homer Baldwin of Youngstown, O., which spoke in the most complimentary terms of the New Era Sculler manufactured by the Superlative Purifier Mfg. Co., of Milwaukee.

The J. B. Allfree & Co., of Indianapolis, Ind., has been organized with a capital of $50,000. The officers are Robert Shrever of Cumberland, Md. Jas. B. Allfree, Vice President and Gen'l Manager and M. H. Estcourt, Sec'y and Treas'. They are now in the field for everything in the line of Mill Building and Mill Furnishing.

The Jefferson Mfg. Co. of Columbus, Ohio, have had a very prosperous year. Their sales of elevating and conveying machinery has largely increased and the present outlook is very encouraging. This company also enjoys a large business in the manufacture of their Coal Scullers and Coal Pulleys, which they now have orders sufficient to keep them busy through the winter.

A NEW USE FOR GRAPHITE.—From time immemorial steam and gas fitters have used red lead in making joints and connections. It has been a matter of tradition with them that nothing else could possibly answer as well. However, after a few months have passed it is found that the red lead has "set" and it is next to impossible to open a joint. The fitter applies his tongs with all his strength, and in a large percentage of cases the joint is finally broken and the tong sprang, sometimes birding repair. Dixon's GRAPHTITE PIPE JOINT GREASE makes an infinitely better joint. It is made of properly pulverized and perfectly pure graphite, mixed with best boiled oil. The graphite being a natural lubricant, it enables the fitter to make a much tighter and, consequently, a much more perfect joint. Being several times greater in bulk than an equal weight of red lead, it is far more economical. Further, a joint so made can remain three months, three years or thirty years, and will then yield to the ordinary pressure of the tongs. It will make a much tighter joint with less leakage, and render absolutely unnecessary the breaking of joints and couplings, and the straining of the tongs. It is equally useful for bolts, screws, etc. Bolts smeared with this mixture have been easily unscrewed after having remained in the dampest places over two years.

TRADE NOTES.

THE YORK FOUNDRY & MACHINE CO. (John C. Klimes, Manager) of York, Neb., report a very prosperous season's business. Over thirty complete elevator outfits have been furnished.

THE NEW ERA SCULLER manufactured by the Superlative Purifier Mfg. Co., of Milwaukee is growing in favor every day. It has been introduced into many of the best mills and is always well spoken of.

The York Foundry & Machine Co., (John C. Klimes, Manager) of York, Neb., report a very prosperous season's business. Over thirty complete elevator outfits have been furnished.

The New Era Sculler manufactured by the Superlative Purifier Mfg. Co., of Milwaukee is growing in favor every day. It has been introduced into many of the best mills and is always well spoken of.

We saw a letter from the expert miller and millowner Mr. Homer Baldwin of Youngstown, O., which spoke in the most complimentary terms of the New Era Sculler manufactured by the Superlative Purifier Mfg. Co., of Milwaukee.

The J. B. Allfree & Co., of Indianapolis, Ind., has been organized with a capital of $50,000. The officers are Robert Shrever of Cumberland, Md. Jas. B. Allfree, Vice President and Gen'l Manager and M. H. Estcourt, Sec'y and Treas'. They are now in the field for everything in the line of Mill Building and Mill Furnishing.

The Jefferson Mfg. Co. of Columbus, Ohio, have had a very prosperous year. Their sales of elevating and conveying machinery has largely increased and the present outlook is very encouraging. This company also enjoys a large business in the manufacture of their Coal Scullers and Coal Pulleys, which they now have orders sufficient to keep them busy through the winter.

A NEW USE FOR GRAPHITE.—From time immemorial steam and gas fitters have used red lead in making joints and connections. It has been a matter of tradition with them that nothing else could possibly answer as well. However, after a few months have passed it is found that the red lead has "set" and it is next to impossible to open a joint. The fitter applies his tongs with all his strength, and in a large percentage of cases the joint is finally broken and the tong sprang, sometimes birding repair. Dixon's GRAPHTITE PIPE JOINT GREASE makes an infinitely better joint. It is made of properly pulverized and perfectly pure graphite, mixed with best boiled oil. The graphite being a natural lubricant, it enables the fitter to make a much tighter and, consequently, a much more perfect joint. Being several times greater in bulk than an equal weight of red lead, it is far more economical. Further, a joint so made can remain three months, three years or thirty years, and will then yield to the ordinary pressure of the tongs. It will make a much tighter joint with less leakage, and render absolutely unnecessary the breaking of joints and couplings, and the straining of the tongs. It is equally useful for bolts, screws, etc. Bolts smeared with this mixture have been easily unscrewed after having remained in the dampest places over two years.

THE DRIVING POWER BELTS:

<table>
<thead>
<tr>
<th>Width of belt traveling</th>
<th>Horse power</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 ft.</td>
<td>2.112</td>
</tr>
<tr>
<td>4 ft.</td>
<td>3.483</td>
</tr>
<tr>
<td>5 ft.</td>
<td>5.295</td>
</tr>
<tr>
<td>6 ft.</td>
<td>7.072</td>
</tr>
<tr>
<td>7 ft.</td>
<td>8.849</td>
</tr>
<tr>
<td>8 ft.</td>
<td>10.000</td>
</tr>
<tr>
<td>9 ft.</td>
<td>12.351</td>
</tr>
<tr>
<td>10 ft.</td>
<td>15.041</td>
</tr>
<tr>
<td>11 ft.</td>
<td>17.882</td>
</tr>
<tr>
<td>12 ft.</td>
<td>21.387</td>
</tr>
<tr>
<td>13 ft.</td>
<td>25.041</td>
</tr>
<tr>
<td>14 ft.</td>
<td>29.287</td>
</tr>
<tr>
<td>15 ft.</td>
<td>33.441</td>
</tr>
<tr>
<td>16 ft.</td>
<td>37.612</td>
</tr>
<tr>
<td>17 ft.</td>
<td>41.787</td>
</tr>
<tr>
<td>18 ft.</td>
<td>46.000</td>
</tr>
</tbody>
</table>

Example: How many horse power will a 3-inch belt furnish, traveling over a 12-inch pulley, the shaft making 150 revolutions per minute? The circumference of feet of a 12-inch pulley is equal to 3.1416 feet. Hence the speed of belt is equal to 3.1416 x 150 = 471.24 feet per minute. According to the table a 3-inch belt running at 750 feet per minute gives us 3.840 horse power, therefore at 471.24 feet per minute we have

471.24 x 3.840 = 2.184

750 horse-power, which the belt at the given speed will furnish.—American Machinist.

MILLS AND BAKERIES COMBINE.

The time is not very far ahead when the system of mills and bakeries combined, which is prevalent in many parts of Europe, will be common a thing in this country. There are many reasons why it is both practicable and economical. As a baker, the miller knows just the grade of flour he desires to make and furnishes in good and cheap form, and as baker, it costs him. The same motive power needed to drive the mill will drive baking machinery, and where steam is used the necessary heat wanted can be furnished with little or no additional expense.

There is no doubt but the miller-baker could make his own flour and often better bread for less money than the baker. Such one of these combinations of business would necessarily be approved only in cities and large villages, and in such localities, if properly managed they will, we think, be profitable to the projector as well as beneficial to the public.
AN AUTHENTIC BUYERS' GUIDE.

MILL AND ELEVATOR BUILDERS,
MILL FURNISHERS, MANUFACTURERS OF AND DEALERS IN MILL AND ELEVATOR MACHINE AND SUPPLIES.

Cards will be inserted under this heading in the "U. S. Miller," not exceeding three lines, copy of paper included, for FIVE DOLLARS per year, cash with order. Additional lines, $1.00 each, per year.

Ede P. Allis & Co., Milwaukee, Wis., builders of complete Flour Mill, manufacturers of Flour Mill Machinery and Dealers in Supplies of every description. [Mr. 89]

Garden City Mill Furnishing Co., Chicago, Ill., Mill Builders, manufacturers of Flour Mill Machinery and Dealers in Mill Supplies, Boiling Cloth, etc. [Mr. 89]

Bardeen, Selock & Co., 48 & 50 Lake st., Chicago, Ill., manufacturers of "HARRISON CONVEYOR" for Grain, Mill, etc., etc. [Mr. 89]

John C. Higgins & Son, 165 West Kinzie Street, Chicago, Ill., builders of Elevators of all descriptions of Mill Floors. [Mr. 89]

H. P. Yale & Co., Milwaukee, Wis., Manufacturers' Agents of Engineers and Boiler, New York Leather Belt Co. Leather Belting, Dovetail Holing, Wood Pulleys. [Mr. 89]

Peo & Hunt, Baltimore, Md., manufacturers of Steam Engines, Water Wheels, Flour Mill, Paper, Saw and Cotton Mill Machinery. [Mr. 89]

W. J. Clark & Co., Salem, O., manufacturers of Saw and Plane Mills, etc. [Mr. 89]

Thorburn & Glasser, 18-20 N. Clinton St., Chicago, Ill., manufacturers of Mill and Elevator Supplies. [Mr. 89]

R. C. McCurdy, (P. O. Box 241) Lancaster, Pa., manufacturers of Cotton Crushers, Cooper's Stoves, Casters, etc. [Mr. 89]

B. H. & L. I. Sanford, Phoenix Iron Works, Sheboygan, Falls, Ws., manufacturers of the "IMPROVED WALKES" Machinery, Roller Mills, Flour Milling Roller Mill, etc. [Mr. 89]

John C. Filley, York Foundry and Engine Works, York, Neb., Mill and Elevator machinery of all kinds, Engine, boilers, mill, line of Flour Mill Machinery, etc. [Mr. 89]

The Guth Porch & Rubber Mills Co., 150-161 Lake st., Chicago, Ill., Belting and Rubber Goods. [Mr. 89]

The Avery Elevator Bucket Co., sole owners and manufacturers of Seamless Steel Elevator Buckets, Patent, Patent Roller Mills, etc. [Mr. 89]

Richardson Mfg. Co., Lockport, N. Y., manufacturers of Grain Cleaning Machinery, Bran Dusters, etc. [Mr. 89]

N. Y. Belting and Packing Co., N. Y. Leather Belting Co., Gould & Austin, Agents, 197 and 199 Lake Street, Chicago, Ill. [Mr. 89]

Weller Bros., 44 Wendell st., Chicago, M'ts Mill and Elevator specialties, Cups, Boots, Spouts, Steel Convevors, Power Grain Shovel, dealers in Ladies' Belting and Leather Work, etc. [Mr. 89]

The Nordvek & Harmon Co., Indianapolis, Ind., Flour Mill and Mill Machinery builders, and dealers in Mill Supplies of all kinds. [Mr. 89]

The Shields & Brown Co., 249 and 249 Randolph st., Chicago, and 162 Worth st., New York. Mfrs. of Sectional Insulated Air Coverings for Steam, gas and water pipe, etc. [Mr. 89]

W. F. Avery Mfg. Co., 26 Vincent st., Cleveland, O., Specialties: Avery Lever Belt Pulleys, Avery Seamless Elevator Buckets, Belting, Elevator Steel etc. [May 96]


Situation Wanted.

A practical Stone Miller of thirty years experience, with good business qualifications and industrious habits, wants charge of a good Stone Mill by the month, or all winter on shares. Address, H. R. GARLICK, Menomonie, Wis.

EXPORT AND MERCHANDISE MILLERS AND MANUFACTURERS OF WHEAT, RYE AND BUCKWHEAT FLOURS, AND CORN MEAL AND CORN PRODUCTS, (WITH NAMES OF SPECIAL CROPS MADE) DESIRES CORRESPONDENCE WITH SOLID HOUSES WITH A VIEW TO TRADE.

Cards will be inserted under this heading in the "U. S. Miller," not exceeding three lines, copy of paper included, for FIVE DOLLARS per year. Additional lines, $1.00 each, per year.

J. B. Kern & Son, "Raglow Mills," Milwaukee, Ws. Wheat, Flour, Feed, Success. [Mr. 89]


Texas Star Flour Mills, Galveston, Texas, Patents: Tocal, Waive Neaps. extra Fancy, Sea Nymphe, Undine, Extra Choice: Sea Jewel, Melville, etc. Special: Sea Pearl, Hora. [May 89]

Grand Forks Roller Mills, Grand Forks, Dakota, Situated in the heart of the Red River hard wheat section. Correspondence solicited. [May 89]


Taylor Bros. & Co., Merchant Millers, Quincy, Ills. Capacity 1,000 barrels per day. Winter Wheat Flour exclusively. [May 89]

Prominent Flour, Grain and Provision Brokers, desiring correspondence with Millers of Wheat, Rye and Buckwheat Flours, and Cornmeal and Corn Products, with a view to Trade.

W. K. Sheppard, Flour and Grain Commission, 18 South Commercial Street, St. Louis, Mo. [Apr. 89]

L. E. Hard, Shippers of Minnesota and Dakota Spring Wheats, Minneapolis, Minn., Possessing a thorough and practical knowledge of the Economical and Flour Producing Qualities of all wheats grown in the northwest. I am enabled to make purchases with special reference to these qualities.

Better than the Best

Charles Mayer's

Commercial College.

Grand Avenue (Public Library Building), Minneapolis. Established 1878.

Instructs: Commercial, Bookkeeping, Short-hand, Grammar, Arithmetic, Grading, Bookkeeping, Typing.

Day and Evening Sessions. Students of either sex are received at any time for full course or any special branch of study.

DEPARTMENTS: Commercial, Proactive.

School is Open throughout the Year.

Most Beautifully Equipped School of its kind. Eight teachers. Perfect order. Liberal terms.

School for Address, or call, College.

Scholars from the country 20 Per Cent, Discounts allowed. Board procured. Further information, address College.

[Oct. 5th]

The publisher of the United States Miller is desirous of having the names and addresses of Head Millers, Millwrights and Head Engineers in all mills having a capacity of 160 bbls. per day or more.

Ask for Tickets via C. H. & D. R.

For full information, Tickets, Sleeping Car Space, etc., inquire of or address, W. H. Frazier, Gen'l Agent, Indianapolis, Ind. W. H. Whittles, Central Pass'g Agent, Dayton, O. John Bartable, District Pass'g Agent, Toledo, O. H. B. Treacy, Northern Pass'g Agent, Chicago, Ill. J. G. Maoe, City Passenger Agent, Chattanooga, Tenn.

Or General Passenger Agent's Office, No. 300 W. Fourth St., Cincinnati, O.

C. C. Wayne, Vice-Pres' & Gen'l Manager. Gen'l Pass'g & Ticket Agent.

CHAS. H. ROCKWELL.

THE THROUGH CAR LINE.

FROM AND TO

CINCINNATI

WITH THROUGH CAR SERVICE BETWEEN
CINCINNATI and INDIANAPOLIS,
CINCINNATI and TOLEDO and DETROIT,
CINCINNATI and CHICAGO,
CINCINNATI and DAYTON and RICHMOND,
CINCINNATI and ST. LOUIS and GRAND RAPIDS,
CINCINNATI and GREENVILLE and VAN Wert.

With THROUGH RECLINING CHAIR CAR between
CINCINNATI, DECatur and SPRINGFIELD, Ills. and KEOKUK, IOWA, (daily)

Ask for Tickets via C. H. & D. R.

For full information, Tickets, Sleeping Car Space, etc., inquire of or address, W. H. Frazier, Gen'l Agent, Indianapolis, Ind. W. H. Whittles, Central Pass'g Agent, Dayton, O. John Bartable, District Pass'g Agent, Toledo, O. H. B. Treacy, Northern Pass'g Agent, Chicago, Ill. J. G. Maoe, City Passenger Agent, Chattanooga, Tenn.

Or General Passenger Agent's Office, No. 300 W. Fourth St., Cincinnati, O.

C. C. Wayne, Vice-Pres' & Gen'l Manager. Gen'l Pass'g & Ticket Agent.
FOREIGN ITEMS.

BURNED, Martin's mill at Ottawa, Ont. Loss $14,000. Insurance $6,000.

Brazil is beginning to conserve its native industrial labor. A movement has recently been noted in connection with the milling trade, and now it is stated that a company has been formed in the province of Alagoas, in Brazil, for spinning and weaving the cotton produced in that country. Its capital is £80,000 divided into 15,000 shares at £5 each, but only 10 per cent. of this is to be called up at present. 'Two-thirds of the total capital is already subscribed. The headquarters of the company is at Maceio, and the factory is to be established at Cachoeira, near a railway, and in the midst of a cotton-producing district.

ITALY has found a novel source of revenue from Customs duties. It is stated by the British Medical Journal that in as much as cremation is illegal in France, bodies which it is desired to be sent to Italy for the purpose, and accordingly a gentleman who died recently at Paris left instructions in his will that his body should be conveyed to Milan, where it was to be cremated. This was done on July 18, the Italian Custom House, however, levied import duty on the body when it entered the country, and the same amount as export duty on the ashes as they were carried back to France. What would Cobden have said if he could have foreseen such a rabid Protectionist policy as this, at this date, in Europe?

THE MOUTH-LOESE EXPRESS, (London) says: This, in that Uncle Sam wants a "national flower" to wear as a buttonhole decoration, and to use as an "emblem" of the great country of his birth, and to "size up" alongside of the English rose, the French fily, the Irish shamrock, and the Scotch thistle. The American Society of Florists are supposed to be on the look-out for such an emblem, and to be in favor of the sunflower, because it is "big, hardy, reminds one of gold, and thrives on any soil." A better could not be found. It must be neat, as it is all of one color, yet its brightness makes it grand enough to satisfy the tastes of those who live in the "hub of the universe;" further its flowers increase in size on the scale that would enable it to fit out an entire family from one plant from the youngest girl up to the old man. And then, last but not least, its seeds are "mightily good victuals for hens."

THE MAIZE "RING" IN VIENNA.— The Vienna maize "ring" has now been in existence about a year. The speculation was based on the deficient yield of 1897 crops, and it was proposed to "corner" the Austro-Hungarian market with a view to dictating prices to consumers. According to Vienna letters the scheme has not succeeded so far as the buying up oil supplies in concerned. Only occasionally has the syndicate been able to control prices against the opposing "bear" speculators, consumers having meanwhile successfully resisted the "bull" movement so far as their own actual requirements have been concerned. They have always been able to buy for delivery at lower prices than the published syndicate rates. The total quantity originally bought by the syndicate is put down at 1,500,000 cwt., of which 507,000 cwt., were delivered to their account in Vienna alone. The syndicate have still to continue buying large quantities in order to prevent "corn" prices from falling. At the conclusion of the August settlement the prices rose momentarily by 8 ft., but it has since continually receded to 6 ft. 5 kr., and new crop maize can be obtained at even as low a rate as 6 ft. The syndicate have made great efforts to induce consumers to reduce the large stock now held, estimated at 700,000 cwt., but without much success, as contracts for delivery of new maize can be made on more favorable terms than the syndicate appear willing to accept. It is said to be now beyond doubt that the "corner" must end in a great deficit for the speculators. An immediate dissolution of the syndicate is not expected, as the bulk of the stocks will be held against the May-June settlement in order to defeat the "bears;" but in commercial circles it is argued that if the interests on the capital invested, the warehouse rent, the carrying over, and other charges are added together, the total will be equivalent to as much again as the cost of the grain to the syndicate, and therefore that the losses of the syndicate must amount to much more than those of the speculative "bears," who, having made uncovered sales, have been obliged to buy at any price against the settlements.

THE STRENGTH OF WOOD IS GREATER THAN STEEL.

American Manufacturer: A statement recently appeared in this paper giving the results of a comparative test of hardwood and iron. The test was made by steel, and showing that the advantage of strength in proportion to weight was with the wood. This fact seems to have been untold, excepting recently, and has occasioned much surprise to some of our readers, one of whom writes to us that the fact is "worth the price of the paper for one year" to him, but does not say to what use he puts it. But no matter it is still the fact that hardwood is stronger than steel in resistance to breaking weight. Some further advantages in favor of wood are thus stated by an engineer, that when an all steel machine is brought into sharp contact with some unyielding obstacle, its frame is liable to spring, and when once sprung its usefulness is at an end. It cannot be straightened without resort to the shop for repairs. If a wood frame, it is not thus affected. If bent under a violent strain, it at once springs back to its original shape. A piece of steel one foot long and a half inch square weighs double as much as a piece of seasoned ash one foot long 11 inch square. In other words, the steel in proportion to bulk is 16 times heavier than ash wood, whereas for the same frame of a machine which is one-fifteenth as large as a wood frame, weighs exactly the same as the wood, but even with this difference in size, the wood has four times the strength. These are simple problems which every one can solve in a trice.

On the other hand, evidence as to the use of steel in place of wood for railway ties, which have been very reluctantly adopted, has proved that steel is the most economical. In Burmah, as we learn from Indian Engineers, several hundred miles under a careful test for the past four years, on different parts of the line, are now displacing the teak railroad ties hitherto used on the open line of the State railways. So far it has been found the best timber yet used for this purpose, and has been found to last as long as ten years; but the use of steel ties economizes on the expense of spikes, and is reported to last from 40 to 50 years. The low price now ruling has been a great inducement not only of substituting steel ties, but also a large quantity of steel rails is now being used in this province. With the growth of this idea, which must result from the rapid depletion of our hardwood forests, no doubt a method of preserving metal ties from rust will still further lengthen the period in which it may be used and make it still cheaper as a permanent sleeper for railway tracks.

TRANSMISSION OF POWER BY CABLE.

For the first time in America the principle of the cable as used in street railways, applied to the transmission of power to machinery in widely separated parts of a building, was tested recently at the Union Steamboat Company's warehouse on Market street, Chicago, with the most satisfactory results. The cable weighs a mile rope seven-eighths of an inch thick and 750 feet long. The rope went round the driving wheel and winding sheaves three times, and then was carried 150 feet north on twelve-inch pulleys of the same pattern as with the North Side street-car cable. There it furnished power to a moving incline, and then was carried 200 feet south and then eastward seventy-five feet, where it drove a barrel-lift. Forty feet northward it furnished power to another barrel-lift, and then returned to the driving wheel, where it moved a second incline. The slack in the rope was taken up by a sliding wheel on the same principle as in the street car cable. The driving wheels had V-shaped grooves in which the rope was pinched and prevented from slipping.

The cable was tested running at the rate of 1,800 feet a minute. It was found that about five-horse power was taken up in driving the machinery when not loaded. The engine is forty-horse power, which gives ample power for the work. T. S. Miller, with the Link Belt Machinery Co., was the inventor of the plan.

THE FLOUR MARKET.

The N. Y. Daily Commercial Bulletin, Dec. 21, has the following:

The action of the conference of millers at Milwaukee yesterday in forming an organization for the purpose of curtailing the output of flour was the topic of conversation in flour circles on the Produce Exchange yesterday, and the subject of discrimination on through rates was again freely discussed. As a result, flour trade approved the resolution adopted by the Milwaukee conference in regard to curtailing the output for January to one-half the average capacity of the mills, and it also approved the resolution advocating the appointment of a committee to be empowered to order partial shut-downs by mills to regulate the subsequent production.

The resolution providing for the appointment of a committee to ask the railroads to make the export trade 5 percent. less than the internal rate received the severest criticism, however, and the Produce Exchange Committee that has the question of rate discrimination in charge was freely criticized for their inaction. A member of the Committee was seen on the subject that the whole matter had been placed before the
The Gardner Flour Feeder and Mixer.

THE ECONOMIST AND MILLER'S FRIEND.
THOUSANDS NOW IN USE.

Saves the labor of one man. Can be quickly adjusted to feed from ten pounds to five barrels per hour. Requires no attention, and will feed any amount at which it is set, with the regularity of clock-work. It is easily set up, and requires speed of only 20 to 30 revolutions.

The Cheapest and Most Perfect Machine ever offered to the Milling Public.

Write for Circulars to

The STEPHEN HUGHES MFG. CO., Hamilton, O.

A STRONG ENDORSEMENT OF THE

COCKRELL DUST COLLECTOR
From One of the Best and Most Experienced Millers in the Country.

Rochester, N. Y., Nov. 3, 1888.


Gents—The Cockrell Dust Collectors, five in number, on our wheat cleaning machinery in this mill are doing great work. I am willing to go on record as saying I have never seen anything to equal them, and in my best judgment they are catching 98% of the dust, and that is pretty near good enough. This may sound a little strong, but they are running every day, and can be seen by anybody at any time, and I assure you, gentlemen, they will talk louder and more convincingly than I can.

Yours truly,

GEORGE WILSON.

Machinery For Sale

ONE PAIR 4-FT. MILLSTONEs; new.
SEVEN PAIR 4-FT. MILLSTONEs; used about three months.
ONE PAIR 9 X 18 CHILLED ROLLS; smooth.
ONE NO. 1 THROOP SMUTTER AND SCOURER.
ONE 24-INCH MIDDLING MILL.
ONE 1000-LB. PALMER POWER SPRING HAMMER.

ADDRESs

The Filer-Stowell Co.
CREAM CITY IRON WORKS,
Milwaukee, Wisconsin.

DO NOT DELAY YOUR SUBSCRIPTION FOR LIPPINCOTT’S MAGAZINE, which now stands in the front rank of monthly publications and occupies the position of A LEADER AMONG LEADERS.
Each number contains a COMPLETE NOVEL, as well as a liberal quantity of miscellaneous matter of an interesting and instructive nature. One year’s subscription gives A LIBRARY OF 12 COMPLETE NOVELS by American authors, together with a BIBLIOGRAPHY OF SHORT STORIES, POEMS, ESSAYS, and masters of unusual interest to general readers.
A VOLUME OF NEARLY 2000 PAGES.
The success of Lippincott’s stands unapproached in the annals of Magazine publishing, and to-day by familiar title is welcomed in every hamlet, village, town, and city throughout the United States.
The best writers of the age have been secured and new features will, from time to time, be added which will give to Lippincott’s A DISTINCTIVE PLACE OF ITS OWN.
Amelia Boree, Edgar Rice, John Higgin, Edgar Fossett, Captain Charles King, U. S. A., Granville King, M. Elliott Shewell, Selma Delano, Maurice Short, and many others will contribute to its pages for the coming year.
Lippincott’s Magazine, Philadelphia, 25 cents single number. $3.00 per year. Send for sample copy.

Cawkner’s American Flour Mill and Elevator Directory for 1888, issued March 3, is meeting with much praise from all departments of the trade. While not claimed by the publisher to be perfect, it answers FULLY the requirements of the trade. It is the only list published. The demand is limited and the price (Ten Dollars per copy) is cheap, considering the labor required in compiling, printing and selling. It contains lists of flour mill and grain elevator owners, miscellaneous kinds of mills such as corn, rye, oatmeal, rice and hundreds, millwrights, and dealers in various sections of the United States and Canada, and a good list of European flour and grain importers. King of power used, rolls or stones, capacity and millers supposed to be worth $10,000 or more are indicated in thousands of cases.
PHILADELPHIA DIMINISHING EXPORT TRADE.

The grain trade of Philadelphia is fast becoming a matter of past history. Statistics show that while our grain trade has fallen to a very low ebb, that of Philadelphia, having facilities for shipping equal to or not so good as Philadelphia, has either increased or fallen in very much less proportion than that of this city. The query very pertinently arises as to why this state of things should exist. There were once splendid facilities with its harbor facilities, with its enterprising business men, and other great resources which go towards making an important commercial port, should be deprived of its share of the large grain trade of the country.

The following table presents, in the aggregate, the number of bushels of wheat and corn shipped from the four chief ports during the five years from 1883 to 1887, inclusive, together with the number during the present year up to Oct. 31:

<table>
<thead>
<tr>
<th>Year</th>
<th>Philadelphia</th>
<th>New York</th>
<th>Baltimore</th>
<th>Boston</th>
</tr>
</thead>
<tbody>
<tr>
<td>1883</td>
<td>7,441,061</td>
<td>30,692,094</td>
<td>21,565,090</td>
<td>5,596,074</td>
</tr>
<tr>
<td>1884</td>
<td>7,441,061</td>
<td>30,692,094</td>
<td>21,565,090</td>
<td>5,596,074</td>
</tr>
<tr>
<td>1885</td>
<td>9,013,061</td>
<td>30,692,094</td>
<td>21,565,090</td>
<td>5,596,074</td>
</tr>
<tr>
<td>1886</td>
<td>10,050,061</td>
<td>30,692,094</td>
<td>21,565,090</td>
<td>5,596,074</td>
</tr>
<tr>
<td>1887</td>
<td>10,050,061</td>
<td>30,692,094</td>
<td>21,565,090</td>
<td>5,596,074</td>
</tr>
<tr>
<td>1888</td>
<td>8,700,411</td>
<td>30,692,094</td>
<td>21,565,090</td>
<td>5,596,074</td>
</tr>
<tr>
<td>1889</td>
<td>7,600,411</td>
<td>30,692,094</td>
<td>21,565,090</td>
<td>5,596,074</td>
</tr>
</tbody>
</table>

It will be observed that while there is a noticeable falling off in the exports from all the ports this year as compared with last year, that of Philadelphia is by far the greatest. A better idea of the exact relation which Philadelphia bears towards its three rival ports both in receipts and exports of grain may be gained from the following tables, the first of which shows the proportionate receipts and exports of both wheat and corn of each of the ports during the five years from 1883 to 1887, inclusive, and the second table the same during 1888 up to Oct. 31:

<table>
<thead>
<tr>
<th>Philadelphia</th>
<th>New York</th>
<th>Baltimore</th>
<th>Boston</th>
</tr>
</thead>
<tbody>
<tr>
<td>Receipts</td>
<td>Exports</td>
<td>Receipts</td>
<td>Exports</td>
</tr>
<tr>
<td>1883</td>
<td>10.0</td>
<td>5.6</td>
<td>3.0</td>
</tr>
<tr>
<td>1884</td>
<td>10.0</td>
<td>5.6</td>
<td>3.0</td>
</tr>
<tr>
<td>1885</td>
<td>10.0</td>
<td>5.6</td>
<td>3.0</td>
</tr>
<tr>
<td>1886</td>
<td>10.0</td>
<td>5.6</td>
<td>3.0</td>
</tr>
<tr>
<td>1887</td>
<td>10.0</td>
<td>5.6</td>
<td>3.0</td>
</tr>
<tr>
<td>1888</td>
<td>10.0</td>
<td>5.6</td>
<td>3.0</td>
</tr>
<tr>
<td>1889</td>
<td>10.0</td>
<td>5.6</td>
<td>3.0</td>
</tr>
</tbody>
</table>

One of the results of decreased grain receipts has been the driving away of vessels from this port. The big grain elevators at Girard Point and at Richmond and elsewhere are put to but little use, while hundreds of vessels that might otherwise load with grain for foreign ports are forced to go away with empty holds or loaded with ballast to other Atlantic ports, which are thus using up their trade at Philadelphia’s expense.—Philadelphia Record, Dec., 1888.

FLUSH TIMES ON THE RIVER PLATTE.

The packet leaves the Platte in the midst of a boom that finds no precedents in our annals. The country is going ahead like a fast express train, and such is the velocity of its course that the few who find breathing time to pause turn giddily at the sight of the great rush that is now an extraordinary tide and in the march of nations. No other country on the face of the globe is advancing at the feverish pace of the Argentine Republic. Argentine progress is a solemn vindication of the Latin family, and proves to the world that the descendants of Spaniards and Italians, under liberal democratic governments, can thrive and compare favorably even with the irrepressible vitality of the German or Saxon.

The busy season is dawning with exceptional prospects for sheep-farmers and wheat growers. The clip is expected to exceed last season’s by at least 30,000 bales; the flocks are in splendid condition, the lambing has been very large and mortality has been small, owing to the benign winter from which the country is emerging. For very many years sheep-farmers do not remember to have witnessed such a favorable winter. The cattle lords report an increase of forty to forty-five per cent. in their herds all over the country; they do not know what to do with their fat animals; the dead-lock in the cattle market threatens to become more pronounced after such a heavy increase in the province.

Wheat farmers, meantime, look forward to a gigantic crop, as double the area of ground has been cultivated and the plantations promise a rich yield. What with the expectations of an extraordinary clip and crop, and the great improvement in prices in the European consuming markets, it need not be wondered at if people in the Platte are preparing for a golden year in 1889; and, verily, everything promises such development at the present moment that we wonder what magical turn we shall see in River Platte affairs next year. We may witness exchange at 45d and a steady flow of gold from Europe, and on its heels a steady appreciation of paper and gradual return to specie payments.

Whilst we mention the possibility of a return to specie payments on the strength of a good season and a rising exchange market, the great majority of financial authorities in this city are convinced that gold will go to 200 next year, in view of the sweeping avalanche of paper money that is expected in 1889. In this respect, we may add that sixty million more paper money will be issued next year under the provisions of the free banking law of Dr. Pacheco. But in this country we are never quite sure whether we are on the roof or in the cellar; and just as all the wiseacres were wrong when they agreed that the Pacheco banking law would remain a dead letter, we may prepare for another paradox in the shape of a falling gold market in the midst of showers of paper money; at present we are witnessing a steady depreciation of paper in the midst of a gold blizzard from the Bank of England, Bank of France and Imperial German Bank.
A GREAT MAGAZINE.

The Century for 1899.

His question has often been asked, "What does The Century over its great circulation in the Christian Union once answered this by the statement that "it has been fairly won, not by advertising schemes, but by the excellence which characterizes it in every department." In their announcements for the coming year the publishers state that it has been their desire to maintain The Century the one in dispensable periodical of its class, so that whatever other publication might be desirable in the family, The century could not be neglected by those who wish to keep abreast of the times in all matters pertaining to culture. And the unprecedented circulation of the past year is the result of the response of the public to this intention.

With the November number The Century begins its thirty-seven volume. Two great features of the magazine which are to continue throughout the new volume are already well known to the public, the Lincoln history and the papers on "The Siberian Railway System." The first of these, written by Messrs. Nicolay and Hay, President Lincoln's English correspondence, contains the inside history of the dark days of the war, as seen from the White House.

The Siberian Railway Papers, by George K. Warren, following the attention of the civilized world. The Chicago Tribune says that "no other magazine authors printed in The Century this year, its subject which so vitally interests all thoughtful people in Europe and America." As is already known, copies of The Century are being sent to Austria these articles turn out by the customs officials on the frontier.

DURING 1899

The Century will publish the most important art feature that has yet found a place in its pages. It is the Circumcision of four years' work of Mr. Timothy Cole, the leading magazine engravers of the world, in the galleries of Europe, engraving from the originals the greatest pictures by the old masters. A series of papers on Iris, land, its customs, landscapes, etc., will appear, and there are to be illustrated articles on Biblical scenes, treating especially the subjects of the International School Lessons. George W. Cable will write "Strange, True Stories of Louisiana." There will be novels and short stories by American, occasional articles on war subjects (supplemental to the "War Papers") by General Grant and others, which have been appearing in The Century. The Century costs four dollars a year, and it is published by The Century Co., of New York, who will send a copy of the full prospectus to any one on request.

ESMUEHLER & BARRY, St. Louis, Mo., Millbuilders and Millfurnishers have purchased the entire plant of the St. Louis Roller Repair Co. They will retain that Co.'s skilled workmen, and it is needless to say that they now have one of the very best flour mill building establishments in the West.

A STUFFED stomach irritates the nervous system and provokes choler while a comfortably filled one, quietes the nerves, provokes good nature and nourishes the body. The celebrated Dr. Abernethy is quoted as saying: "Always arise from the table full, as if you could eat a good deal more, and under ordinary circumstances your life will be long and the working of your mind clear and your thoughts pleasant."
the water, the ponds below being small ones, were quickly filled, and much water was wasted over the dams. The previous owners of H's mill used both steam and water in the dry season, and so permitted the stream to run, one of the mill owners below, being unable to get any relief from H, brought a suit to enjoin him from preventing the usual flow of the stream, and the Supreme Court of Errors of Connecticut in deciding the case (Mason vs. Hoyle), on appeal, directed M., though Judge Loomis said: "The right of property obtains its jurisdiction, as recognized by all the authorities, is that the use made by mill owners of a stream must, in relation to other mill owners on the same stream, be a reasonable use. Whether the use be reasonable must depend less upon any general rule than upon the particular circumstances of the case. But there are certain conditions essential to a reasonable use so long recognized by common consent, or so obviously just, that we may safely generalize with regard to them. The use must be as near as possible the most advantageous use of the water power and the stream run on. B sides the inimmoral local custom, down to H's time, to let the water go unimpended to the mill's below, has an important bearing upon the question here. And there remains this further significant element in the case, that the benefit to defendant is much less than the damage to plaintiff in stopping the usual flow; for whilst a full reservoir will run the former's mill but five hours, the latter is interrupted in the use of his mill about as many days. The injunction must be granted, otherwise the beneficidal use of the stream will be absorbed by the defendant." — From Legal Decisions in N. Y. Com. Bulletin.

[From Bradstreet's.]

LEGAL NOTES.

NEW YORK ELEVATOR LAW VALID.—The test case (People vs. Annan et al.) brought to determine whether or not the McEvoy Elevator law is constitutional, has been decided by the General Term of the New York Supreme Court, which has decided in favor of the constitutionality of the law. The decision of the court is based upon that of the Supreme Court of the United States, in the case of Munn vs. Illinois.

EMPLOYER'S LIABILITY.—"MACHINERY."—A section of the Alabama Code makes the employer liable for injuries to an employee as if he were a steward when the injury is caused by any defect in the machinery used in the business of the employer. The Supreme Court of Alabama lately decided, in the case of The Georgia Pacific Railway Company vs. Brooks, that a hammer used for driving spikes into crossties on a railroad was not "machinery" within the meaning of this section.

PATENT LAWS IN SWITZERLAND.—The Swiss government has recently adopted a patent law, following the examples of civilized nations generally in providing for the protection of inventors and inventors. The law is not yet in force, and some time is expected to elapse before all the provisional requirements are fulfilled. The features of the new law is that it protects only material objects and not processes. This feature, Consul Gifford says, is largely due to the efforts of chemical and color manufacturers whose interests would not have been conserved by more comprehensive laws.

UNQUESTIONED CREDIBILITY.

Now and then a funny thing crops out in the hum-drum monotony of this somewhat dreary world. It is related that a package of bonds was received at the treasury in Washington from Boston with the numbers cut out. All was a mystery, and the secret service people came in force and held their chins in their hands and looked wise, while the general response continued around what sort of new trick wounded innocent honest hearts or shook the unhappy government. But the solution is that the owner of the bonds, happening to be in this city at the time, but desiring to present his bonds for redemption, wrote to his wife, directing her to send them her numbers, and to send the bonds themselves on to Washington. The faithful woman followed instructions without inquiring into the reason, thereby setting an example for all Boston wives. She is the relative of the other woman whose husband, having to be absent quite a long time, opened a bank account in her name, and procured for her a neat little check book, which he presented with careful explanation of the mode of working. Before his return he received word from her that she wanted money; and when he returned and inquired of her, she said that the hateful people at the bank wouldn't let her have any more. The husband looked over the check-book, and cried out, "No wonder they wouldn't—you've overdrawn already." "So the bank people said," responded her spouse, "but I know better for the checks in the book aren't half gone yet."—Washington Post.

THE HUNGARIAN FLOUR TRADE.—A Pecht subscriber writes as follows: "The prospect is for a much larger business with England than hitherto in Hungarian flour. Up to the present the Pecht mills have not profited much from the improved position of the trade, and the usual stock of old flour carried over from the last crop, which were sold for France and England at low prices. There is, however, now a lively demand for Great Britain, although the prices offered are not very remunerative, and much too low compared with American, quality for quality; in fact much higher prices could ever now be obtained if the Hungarian mills would work more together. America, in which in ordinary years sends 8 to 9 millions bags to Great Britain, will probably have only 8 to 9 millions bags this year, while Hungary can supply a maximum of 20,000 at a large proportion of which, however, will be taken by France, Holland, Switzerland, etc. From this it is apparent that Hungarian flour will shortly be improving in price, probably to the extent of 2 3/4 per sack, and then will be comparatively cheap.—Millers Gazette.

A LOCOMOTIVE MASQUERADOR.

An engineer on the Warash railway, whose run is between Danville and Springfield, has a cat which he would not part with for love or money. It belonged to his wife who is now dead, and for a year past it has been his constant companion in the cab. Ordinarily it sits perched up in the cab window between the fire, but occasionally it strolls out to the pilot, where it will ride for hours at a stretch, winking knowingly at the dogs that bark at the trains as they thunders by the crossroads. Sometimes, when the train is approaching a station, the adventurous animal makes its way to the top of a sandbox and calmly roosts there, undeterred by the shriek of the whistle or the clang of the bell. The engine has a large group of friends ever since the animal became an occupant of the cab, and the trainmen look upon it as a mascot.—Flushing Gazette.

To every Lover of Good Reading:—Due to an error in our last issue, the date of publication of the "Eleven Men and a Dog" is incorrect. It was not published in February, as stated, but in January. We apologize for the error and hope that our readers will look for this volume in the January issue of "However, 2023 Edition of the PUBLISHER," before January 1st, and you will receive

THE ART AMATEUR

From October, 1888, to December, 1889.

33 Beautiful Colored Plates, Portrait, Fruit Flower, Marine, and Landscape Studies (for copying or framing), and charming designs for China Painting.

150 Pages of Useful Designs in black and white, working size, admirably adapted to Oil and Water Color Painting, China Painting, Church and Home Embroidery, Wood Carving, Brass Hammering, and other Art work.

350 Pages of Practical Text, highly illustrated, and crowded with valuable articles on Art and Home Decoration. Secure Now.

3 MONTHS FREE

Including 12 month color studies, a "STORMY COAST SCENE" in October; a "WATER LILY" and a "MOONLIGHT MARINE" in November; a "WINTRY LANDSCAPE" and a charming female figure, "HEARTS ARE THE TRUE TRUMPS," in December.

Now is the time to subscribe to this Magazine, which is packed with beautiful designs and useful articles for Home Decoration, and to have the Easter present of this bound volume, containing FOUR EXTRA ILLUSTRATED STORIES by Lewis Carroll, plus "Ferret," "Birds of Paradise," making 36 LOVELY COLORED PLATES.

FOR THOSE WHO SUBSCRIBE IN DECEMBER

The Christmas number contains luxurious color plates of Autumn Landscapes, Winter Landscapes, Sunset Landscapes, Summer Landscapes, Champions, Caravans, Buffaloes, Apples, Girls' Heads, and others not yet chosen. You are sent a present for a gift without any delay.

Address MONTAGUE MARKS, 23 Union Square, N.Y.
CHICAGO & GRAND TRUNK R'Y
NIAGARA FALLS AIR LINE

In the Shortest and Most Direct Route East.
THROUGH SLEEPING AND EARLY CASE TO
New York, Montreal and Boston.
The Only Line running Through Sleeping Cars between
CHICAGO and PHILADELPHIA.
Via NIAGARA FALLS Without Charge.

Steamships leave Dearborn Station at 9:05 a.m.,
3:35 p.m., and 8:15 p.m. 8:15 p.m. train has
ellegant Pullman Sleeping Cars to deposit daily.

Chicago and Milwaukee.

STEAMSHIP TICKETS
To or from Europe at lowest rates, by all lines.
Cabin or berth can be consulted and best accommodations
secured as far in advance as desired.
Information free on request, or reply on receipt
at office, 69 Wisconsin St., southwest cor. Broadway.
B. C. MIDDAGA, Gen. S. & A. Agent.

WIDE AWAKE

SIRL STORIES.

The adventures of David Vance and David Greene. A charming little story, swelling
with real Yankee young folk.
The best of these three.
8]) Folk Tales. Charles R. Talke. Story of the fishermen and seamen.

SERIES OF ARTICLES

Early Days in the Wild West. By Jessie Benton Fremont. Thrilling true tales, of all which Mrs. Pre-

Cookery in the Public Schools. By Sallie Joy White. Introduces the successful brand cookery to other

Stories of the Famous Scenic Ruins. By Mrs.

MISS RINSEY SEWARD'S TRUE STORIES.

1. The Navagio. By Miss Margaret W. Hooker. 'Mr. and Mrs. Henry Perry. III. Tom the Star Boy. IV.

REMARKABLY SHORT STORIES

Who won the Toddlidieiit Prize? By Elizabeth Smith. Pretty Tales.

The Silver Hen. By Mary E. Wilkin. Who ate the Queen's Luncheon? By Susan Cool-


America in Clay. By Emily Paulson. A Charming little novel, following the manner and form of the


How many Indians in the United States? By

A CHARMING LITTLE NOVEL: 
BY EMILY PAULSON.

Ever in the history of the trade have furs been so plentiful, so valuable, and so expensive as this season, owing to the

The book Five Little Peppers and How They Grow, by Margaret Sidney, will be presented to every one

The book Five Little Peppers and How They Grow, by Margaret Sidney, will be presented to every one

Three dollars must be remitted at one time, direct to the pub-

The book Five Little Peppers and How They Grow, by Margaret Sidney, will be presented to every one

D. Lathrop Company, Boston, Mass.
American Flour Mill and Elevator Directory

For 1888 (Copyrighted)

Is now Ready for Delivery. This Directory is far more complete than any of the five preceding ones. Our long experience has taught us the wants of the trade, and we have used our best endeavors to meet them. The principal features are as follows:

1. List of Flour Mill owners of the United States and Dominion of Canada, with Post Office address, County and State, and when information is obtained, the capacity in barrels of flour per day of 24 hours, kind of power used (steam or water), roller or stone system.

2. Lists of Corn, Oatmeal, Rice, Feed Mills, etc.

3. List of Grain Elevators and Warehouses.

4. List of Millwrights.

5. List of prominent American Flour and Grain Brokers.

6. List of Foreign Flour and Grain Importers.

7. List of Mill Furnishers, etc.

8. Statistics valuable to the Trade.

This directory gives the address of 16,062 Flour Mills in the United States and 1,634 in the Dominion of Canada. The additional lists of Feed, Corn, Barley, Oatmeal and Rice Mills, Elevators and Warehouses, Millwrights, Flour and Grain Brokers, Importers, etc., add to the number of addresses several thousand. The COUNTIES are included in the address, and in cities, the street and number in most instances. We have had valuable aid in compiling this work from Secretaries of Boards of Trade, of Bureaus of Labor Statistics and Manufactures, from Railroad and Steamship Companies, from the milling and commercial press generally, and from mill and grain elevator owners themselves. That the work is perfect, we do not claim, for in the nature of things that is an impossibility, but as it is, it is indispensable to all desiring to reach the flour and grain trade of this country, and is well worth the price asked. The total number of addresses contained in this volume is 22,827.

Price of Directory, $10 per copy, post paid, to any address.

If desired Directory will be sent by express C. O. D. Remit by Express or by Exchange on New York, Chicago or Milwaukee, or Post Office or Express Money Order. Address,

E. HARRISON CAWKER, Publisher,

No. 124 Grand Avenue,

MILWAUKEE, WIS.
THE DUNLAP * BOLT

"A Great Acquisition to Milling."

HUNGARIAN ROLLER MILL CO.,
BLOOMINGTON, ILLS., September 14th, 1888.

THE BRADFORD MILL CO., Cincinnati, Ohio.

Gentlemen: I have had your Dunlap Reel in operation about 15 days and nights, and on new wheat which was very soft, and it has accomplished its work admirably; greatly exceeded my expectations. I have operated quite a variety of Reels, but have to say the Dunlap surpasses any I have ever seen or used.

It gives me pleasure to state that its work has given entire satisfaction, and moreover, am surprised at its close separation, capacity and light running. The Dunlap Reel can certainly be considered a great acquisition to milling.

I to-day forward you, per mail, samples of material upon which your Reel is working.

Yours truly,

A. G. BOBOLD,
Head Miller Hungarian Roller Mill Co.

The BRADFORD MILL CO.
CINCINNATI, OHIO.

Rolled or pressed Wire Cloth is now conceded to be the best for Scalpers and Reels. We manufacture it, and can fill all orders promptly from Furnishers or Millers. Cloths made up with Patent Metallic Fastening at lowest prices.

RELIANCE WIRE WORKS CO.,
MANUFACTURERS OF
Wire Cloths and Wire Goods of Every Description,
MILWAUKEE, WIS.

STILL ON TOP.

Perhaps the highest compliment that could be paid the "SALEM" Bucket, is the fact that, during the past few years, its shape has been so closely imitated by other manufacturers, as to infringe our patented rights; but experience reveals the imperfections of imitations, and, we therefore, take it as a further compliment to the "SALEM" Bucket, that some of its old patrons who were induced to try the imitations, have now returned to the Salem Bucket, thereby acknowledging it to be the most satisfactory. Don't be deceived by other makes of Buckets that are claimed to be "just as good." Insist upon having the ORIGINAL AND RELIABLE "SALEM" BUCKET.

W. J. CLARK & CO., Sole Manufacturers, - SALEM, OHIO.
THORNBURGH & GLENNER, Gen'l Agents, CHICAGO.
MILWAUKEE BAG COMPANY,
Successors to H. P. LEAVENS & CO.
MANUFACTURERS OF
Cotton, Paper and Jute
FLOUR SACKS

DEALERS IN
TWINES, CENTALS, ETC.,
No. 134 West Water Street,
TELEPHONE NO. 427.
MILWAUKEE, - - WISCONSIN.

EVERY MILLER WHO HAS SEEN
THE NEW ERA SCALPER

Read what a Head Miller says about it:

THOS. C. CLARK

MINNEAPOLIS, MINN., Oct. 21st, 1888.

To the Superiority Purifier Mfg. Co., Milwaukee, Wis.

Gentlemen,—In answer to your inquiry regarding the
New Era Scaler, I will say they are a great middlings saver, and,
that is all that I have to say for them. Yours very truly,
THOS. C. CLARK.

Read what a Mill Owner says about it:

A. M. HART

LANESBROOKE, MINN., June 24th, 1888.

To the Superiority Purifier Mfg. Co., Milwaukee, Wis.

Gentlemen,—Your New Era Scaler is a saving of
100 per cent. in the process of Scalloping all stock from Break
middlings than any other system of Scallops. The working of
machines can be seen at our Mills. Yours truly.

SAYS IT IS THE FINEST SCALER EVER PUT ON THE MARKET. It does not Scour the Bran or Middlings, or Pulverize the Stock, consequently making but little Break Flour, with a corresponding increase in the Higher Grades, and what break flour is made is as white as any in the mill. One machine will do all the scalping for a 75 bbl. mill, or handle one break in a 500 bbl. mill.

Millers who wish to make good flour, address

SUPERLATIVE PURIFIER MFG. CO., - MILWAUKEE, WIS.
Also Manufacturers of the SUPERLATIVE PURIFIER and SUPERLATIVE BRAN DUSTER.