MODERN EXPLOSIVES.

An Account of the More Important Substances Now in Use.

Few would imagine, as they watch the coal quietly glow and consume away in the grate, that there are present all the materials necessary for producing an explosion; yet such is the case, and it has been found that the ignition of coal-dust laden air is a not infrequent source of disastrous explosions in coal mines.

What has occurred with coal may occur with any combustible solid which is finely pulverized and suspended in air, and in this manner the explosions of flour which destroyed several flour mills in Minneapolis in 1878 are accounted for. The explosions of sawdust in the Pullman car shops and at Geldowsky's furniture factory, the explosions of starch in a New York candy factory, of rice in rice-mills, and of dust in breweries and spice-mills, are among the many examples of the action of a similar cause; but perhaps the most unusual case of this class of explosions was that of finely-powdered zinc, which occurred in 1854 at the Bethlehem Zinc Works.

The modern high explosives are oils which contain within their molecules the elements necessary for ordinary combustion, while at the same time they are more or less endothermous; and the best example and perhaps the most important of these is the mercury fulminate. This substance was discovered by Howard in 1800, and was made by dissolving mercury in strong nitric acid, and pouring the solution into alcohol. His discovery caused the liveliest surprise, and it was immediately tested. Being placed in a musket, but though it imparted very little velocity to the projectile, and produced only a slight recoil and report, it burst the barrel of the piece completely open; and hence it was relegated to the position of a chemical curiosity until recalled for use as a priming for percussion caps.

Its adaptation to modern uses began in 1863, when Nobel discovered that by the explosion of a few grains of this substance nitro-glycerine might be detonated, and was extended in 1868, when Mr. E. O. Brown discovered that not only could dry gun-cotton be detonated by this means, but that if a small initial mass of dry gun-cotton was detonated in contact with a mass of wet gun-cotton, the latter would be also detonated, even though it were completely saturated with water.

Baron von Lenk, of Austria, took up the study of this material in 1853, and has devoted his efforts to perfect the methods of manufacture and to moderate the violence of the gun charges were attended with such apparent success that a special battery of twelve-pounders was constructed for use with it, and the position of the explosive seemed assured, until 1865, when his magazines blew up spontaneously, and the article was interdicted by the government.

Gun-cotton constitutes the best military explosive known, for, while its explosive force vastly exceeds that of gunpowder and approaches that of nitro-glycerine, it is the safest and most stable explosive we possess, since it can be stored and transported wet; and, while in this state, though it may be detonated as described above, it can not be exploded in any other way. As much as 2,000 pounds of wet compressed gun-cotton have been placed in a fierce bonfire, where it has gradually dried, layer by layer, and then consumed without exploding. Besides gun-cotton is the only military explosive which can be detonated with certainty when frozen. In collodion it is a military explosive, by means of mines, for use in torpedoes and for military mining, and not as a substitute for gunpowder in guns; but it may be, and has been, successfully used as a charge for shells fired from cannon, both in this country and abroad. Shells containing as much as one hundred and ten pounds of gun-cotton have been repeatedly fired in Germany.

The most prominent rival of gun-cotton for military uses, and the best explosive for industrial purposes, is nitro-glycerine and the mixtures of which it forms a part. This substance was discovered by Sobrero in 1847, while carrying out a series of experiments under Pelouze. Its liquid form makes it difficult to store and transport, and permits it to find its way into unexpected places, where it constitutes a source of danger. Considerations such as these led Nobel, about 1867, to invent dynamite. The name is now applied to a great variety of nitro-glycerine mixtures, but they all consist of a porous solid absorbent which sucks up the liquid nitro-glycerine by capillarity and holds it in its pores or interstices.

The most important nitro-glycerine mixture is explosive gelatine, also invented by Nobel. This is made by heating nitro-glycerine on a water bath and adding to it from seven to ten per cent. of soluble gun-cotton.

The largest single charges ever fired were employed in the blowing up of Hallett's Reef and Flood Rock. In the latter, which occurred October 10, 1885, the charge consisted of 240,399 pounds of rack-a-rock and 48,537 pounds of dynamite No. 1, yet so nicely was this enormous charge calculated for the work it was to do, that beyond breaking down the rock, tossing up an enormous body of water to a height (estimated for the tallest jet) of 160 feet, and generating an earthwave which was observed as far east as Cambridge, Mass., it produced no visible effect.—*Scribner's Magazine.*

It is the true secret of a happy life; to live so that by our example, our kind words and deeds, we may help some one else.

HELPING THE RIGHT SIDE.

To help the right side is not only commendable in a general point of view, but is judicious and prudent when that help is enlisted in behalf of the right side of the body, just over the lower ribs in the region of the liver. The most efficient help is afforded by Hostetter's Stomach Bitters, an anti-bilious medicine of incomparable efficacy. Inaction of the liver is accompanied by constipation, sick-headache, furred tongue, nausea, occasional vertigo, and unpleasant breath, yellowness of the skin and ball of the eye. The author of these symptoms, liver complaint, routed by the Bitters is accompanied by them in its flight. Fever and ague, which always involves the liver, dyspepsia, rheumatism, debility and kidney troubles are all maladies to the early relief and final cure of which this standard medicine is adapted. Don't use it by fits and starts, but systematically, that its full effects may result in a perfect restoration of health.

The people of Tokio, Japan, have taken to eating horseflesh, and there is quite a demand for it.

White Elephant of Siam, Lion of England, Dragon of China, Cross of Switzerland, Banner of Persia, Crescent of Egypt, Double Eagle of Russia, Star of Chili, The Circle of Japan, Harp of Erin.

To get these buy a box of the genuine DR. C. MCLANE'S CELEBRATED LIVER PILLS, price 25 cents, and mail us the outside wrapper with your address, plainly written, and 4 cents in stamps. We will then mail you the above list with an elegant package of Geographic and chromatic cards.

FLEMING BROS., PITTSBURG, PA.

Vermont in 1889 supported seven paper mills, 3 copper mines, and a marble factory.

Don't disgust everybody by hawking, blowing and spitting but use Dr. Sage's Catarrh Remedy and be cured.

The Republic of Switzerland elects a President every year.

DOGS WHO FOLLOW AND WATCH

Consumption is cured, if properly treated in time. It is shown by the following statement from D. C. Deshaw, of Sydney: "My wife had been suffering from pulmonary attacks, and gradually wasting away for the past two years. It affords me pleasure to testify that Scott's Emulsion of Cod Liver Oil with Lime and Soda has given me great relief, and I cheerfully recommend it to all suffering in a similar way to myself. In addition, I would say that it is very pleasant to take."

The term Derrick is an abbreviation of Theodoric, a hangman at Tyburn in the 17th century.

A HORSE WHO CAN TALK!

Everybody has heard of a "horse laugh," but who has ever seen an equine gifted with the power of speech? Such an animal would be pronounced a miracle; but so would the telegraph and the telephone have been a hundred years ago. Why, even very recently a cure for consumption would have been looked upon as miraculous, but now people are beginning to realize that the disease is not incurable. Dr. Pierce's Golden Medical Discovery will cure it if taken in time. This world-renowned remedy will not make new lungs, but it will restore diseased ones to a healthy state when all other means have failed. Thousands can gratefully testify to this. All druggists.

Two hundred thousand infants under two years of age are believed to be farmed out in France.

TESTIMONIAL FROM ASSEMBLYMAN EDWARD A. DARRAGH.

STATE OF NEW YORK ASSEMBLY CHAMBER
ALBANY, April 16, 1884.

Some years ago I was thrown from a wagon and fractured two of my ribs. I was so badly hurt that I had to sit up in a chair for four days and nights. The fourth day my mother placed two Allcock's Porous Plasters over my broken ribs. The next day my sufferings diminished and I was able to lie down. I continued to improve every day. Two weeks after the accident I got up and attended to business. I renewed the plasters twice, and found myself almost entirely well in a month, when I sailed for England.

My wife is subject to periodic pains in the back that give her rest neither day or night, but in two hours after applying two Allcock's Plasters she experiences relief, and in two or three days she is well. She also finds them effective in neuralgia and rheumatism. EDWARD A. DARRAGH.

John McCullough's widow, who recently died at Philadelphia, left an estate valued at $30,000.

"As glares the tiger on his fare,
Hemmed in by hunters, spears and bows,
And, ere he bounds upon the ring,
Selects the object of his spring."

So disease, in myriad forms, fastens its fangs upon the human race. Ladies who suffer from distressing ailments peculiar to their sex, should use Dr. Pierce's Favorite Prescription. It is a positive cure for the most complicated and obstinate cases of leucorrhœa, excessive flowing, painful menstruation, unnatural suppression, prolapsus or falling of the womb, weak back, "female weakness," anteversion, retroversion, lacerations, bearing-down sensations, chronic congestion, inflammation and ulceration of the womb, inflammation, pain and tenderness in ovaria accompanied with "internal heat."

It takes every year a million horses' tails to keep the Lucknow (R. I.) hair-cloth factory in running order.

GOLD, SILVER ORE OR QUARTZ assayed by Oregon Chemical Laboratory, 102 First St., Portland, Or. Analysis made of all substances. Rates for assaying gold and silver ores $1.00. Package sent by mail or express promptly attended to and returns made.

A MODEL HOTEL.

Within the past few months the Baldwin Hotel has been refurnished and refitted throughout, making it the most elegant house in the country. Besides the convenience and elegance of its appointments, the table is pronounced by all to be unrivaled, making it in all, everything that can be desired. Our readers when visiting San Francisco should, by all means, stop at the Baldwin.

For Throat Diseases and Coughs, "*Brown's Bronchial Troches,*" like all other really good things, are imitated, and purchasers should be careful to obtain the genuine article prepared by JOHN I. BROWN & SONS.

For Impurities of the Blood take Allen's Iron Tonic Bitters. All genuine bear the signature of J. P. Allen, Druggist, St. Paul, Minn.

See Antisell Piano advertisement.

How to Cure Skin & Scalp DISEASES with the CUTICURA REMEDIES.

THE MOST DISTRESSING FORMS OF SKIN and scalp diseases, with loss of hair, from infancy to old age, are speedily, economically and permanently cured by the CUTICURA REMEDIES, when all other remedies and methods fail.

CUTICURA, the great Skin Cure, and CUTICURA SOAP, an exquisite Skin Beautifier, prepared from it, externally, and CUTICURA RESOLVENT, the new Blood Purifier, internally, cure every form of skin and blood disease, from pimples to scrofula.

Sold everywhere. Price, CUTICURA, 50c.; SOAP, 25c.; RESOLVENT, $1. Prepared by the POTTER DRUG AND CHEMICAL CO., BOSTON, MASS.

Send for "How to Cure Skin Diseases."

Pimples, blackheads, chapped and oily skin prevented by CUTICURA SOAP.

Relief in one minute, for all pains and weaknesses, in CUTICURA ANTI-PAIN PLASTER, the only pain-killing plaster. 25c.

MISCELLANEOUS.

—The Kentucky river is 210 miles long, and there is not an island in it anywhere.

—A man who was begging in the streets of Mobile the other day is said to have lost and paid $75,000 in wagers on Tilden's election.

—The origin of trusts has been traced back to Vermont sheep-owners, who formed a combination in the long ago to monopolize the merino sheep business.

—Mormon Elder (to wife)—"I understand that our beloved brother, Elder Brigham, has an addition to his family." Wife—"Is it a boy or girl, Joshua?" Mormon Elder—"Neither; it's a new wife."—*Epoch.*

—Chinese pheasants are so thick in the Waldo Hills, Colorado, that they have to be shooed out of the furrows by the plowmen, so greedy are they in gobbling up the angleworms. They are becoming a nuisance.

—Two lovesick Mormon maidens in New Mexico fought a duel recently. Both loved the same cowboy, hated each other intensely, and, meeting by appointment in an obscure place, "fought it out." One was seriously wounded by the fire of her antagonist, who at once fled from the scene.

—Of eighty-eight specimens of weeds described by Mr. L. H. Pammel, of St. Louis, as growing in Southwestern Wisconsin and Southeastern Missouri, forty-six are of European and thirty of American origin. One-third of the latter class, and nearly one-fourth of the entire list, are composites.

—The conversation was about bishops, and one fewest dame said: "How good the dear Bishop of —— is! What a gentleman!" Instantly a gentleman replied: "There is no merit in that. Bishops ought to be so. They get five thousand a year for being good, while we are expected to be good for nothing."—*Exchange.*

—By an ingenious device the management of the Battle of Gettysburg, in New York, contrives to waft warm breezes over the spectators' platform by way of adding to the illusion that the visitor is standing in the midst of a wheat field similar to that over which Pickett's charge swept. These breezes apparently blow down from the tops of the mountains.

—"Speaking about clubs," remarked Mr. Cumso, who had just been elected a member of the Manhattan, "they are the sign-posts of civilization. You never hear of savages forming themselves into societies for mutual improvement and pleasure." "O, nonsense," replied Mrs. Cumso. "I've heard of Indian clubs ever since I could walk."—*Tid Bits.*

—Two young ladies of Seith Chester, Pa., went into a store where there was a galvanic battery, and the proprietor asked them to try it. Each grasped a pole of the battery, and wondered why no shock was felt. The proprietor suggested that they kiss each other. They did so, and then there was a shock indeed. One of the young women shrieked and fell over backward. The other made no sound, but fainted. Cold water brought them both around, none the worse for the kiss.

—A tramp who was frequently seen in the vicinity of West Somers, N. Y., is known as the "Old Leather Man." He passes through the place about once in five weeks. His dress is entirely of leather, made of small pieces which he picks up in his travels. He never talks to any one, refuses money or any thing but food, which he gets at regular places on his route, which is always the same. Hnever enters a building, sleeps in the timber and tramps day by day through hot and cold and storm. Where he came from no one knows.

"TARIFF AND WAGES"—A Novel Discussion.

George W. Iliott, A. M., Rochester, N. Y., has just published in book form, through Mouon, Wenborne & Co., Buffalo, N. Y., a very original and interesting dialogue discussion between "PAUL (a young graduate) AND HIS FATHER," an American famer, which appeared serially three years so in *The American Rural Home*, and aracted wide attention. The father is a thoroughly well posted man of affairs, who theoretically a free-trader, but practicay, as an American, a strong defender of judicious tariff. He thus treats both ides very fairly and gives each, in the dialogue, a chance to be heard. He discusses general principles and under his theory that selfishness must be the secret of success of *international* comercial policy, and self-sacrifice the secret of success in national commercial policy, he makes out a strong defense of ample protection. In the matter of wags, he holds that wages begins and ends with production, as he holds, then a judicious tariff maintains the source of wages. This book makes men and boys think. It unfolds the dark mysteries of the tariff simply and should have a we reading. Mr. Elliott, as advertising manager of H. H. Warner & Co.'s safeure hous, Rochester, N. Y., has had ausual opportunities to see the effects of different commercial policies in eight seions of the globe. In cloth, 50 cts.; paper, 25 cts.; prepaid by Moulton Wenborne & Co., Buffalo, N. Y.

TRY GIMEA for breakfast.

YOU SUFFER from Biliousness, Constipation, Piles, Sick Headache, Sour Stomache, Colds, Liver Trouble, Jaundice, Dizziness, Bad taste in the Mouth, etc.—You need Suffer no longer—

Warner's SAFE Pills

will cure you. They have cured tens of thousands. They possess these points of superiority: sugar coated, purely vegetable, contain no calomel, mercury or mineral of any kind, do not gripe; never sicken; easy to take; mild in operation; and for these reasons are especially the favorites of women. Ask for

WARNER'S SAFE PILLS.

"SEAL OF NORTH CAROLINA" PLUG CUT

SMOKING TOBACCO.

Selected with great care from the choicest tobacco regions of North Carolina.

Smokes Cool—Lasts Long—Does not blow out the Pipe.

It is the undisputed leader of Plug Cut Smoking Tobacco throughout the world.

SARSAPARILLA, YELLOW DOCK, —AND— Iodide of Potass.

It cures RHEUMATISM, NEURALGIA, Boils, Pimples, Scrofula, Gout, Catarrh, Tumors, Salt Rheum, and Mercurial pains. It Purifies the Blood, Restores the Liver and Kidneys to healthy action, and makes the Complexion Bright and Clear.

J. R. GATES & CO., Proprietors, 417 Sansome St., San Francisco.

DR. SPINNEY & CO. Call or address Dr. Spinney & Co. 183 First St. Portland, Or.

NERVOUS Debility, Loss of Vigor, Seminal Losses, Weak Memory, Despondency, &c., due to excesses or abuse, cured.

YOUNG MEN suffering from the effects of youthful follies or indiscretion should avail themselves of our treatment. A positive cure guaranteed in every case. Syphilis, Urinary and Venereal Diseases all unnatural discharges, promptly and safely cured.

MIDDLE-AGED MEN Who are troubled with disease of Kidneys or Bladder, Weak Back, Nervous Debility, Wasting of Sexual Strength, etc., cured and restored to healthy vigor.

N. B. Persons unable to visit us may be treated at their homes, by correspondence. Medicines and instructions sent by mail or express. Consultation Free. Send 4 cents in stamps for The Young Man's Friend or Guide to Wedlock.

Cures in 1 TO 5 DAYS. Guaranteed not to cause Stricture. Mf'd only by the Evans Chemical Co. Cincinnati, Ohio. Trade Mark.

Big G has given universal satisfaction in the cure of Gonorrhœa and Gleet. I prescribe it and feel safe in recommending it to all sufferers. A. J. STONER, M.D., Decatur, Ill. PRICE, $1.00. Sold by Druggists.

ASTHMA CURED

German Asthma Cure never fails to give immediate relief in the worst cases, insures comfortable sleep; effects cures where all others fail. A trial convinces the most skeptical. Price 50c. and $1.00, of Druggists or by mail. Sample FREE for stamp. Dr. R. SCHIFFMAN, St. Paul, Minn.

$5 To $8 a Day. Samples worth $1.50, FREE. Lines not under the horses feet. Write BOWSER'S SAFETY REIN HOLDER CO., Holly, Mich.

STEINWAY, KRANICH, PEASE & BACH, Gabler, Roenisch Pianos; Burdett Organs, band instruments. Largest stock of Sheet Music and Books. Band supplied at Eastern Prices. MATTHIAS GRAY CO., 206 Post Street, San Francisco.

PIANOS. 1st Premiums. 25,000 in use, 20 years Established. New patented Steel Tuning Device, in use in no other Piano, by which our Pianos stand in tune 20 years, good for 100; not affected by climate. No wood to split, break, swell, shrink, crack, decay, or wear out; we guarantee it. Elegant Rosewood Cases, 3 strings, double repeating action; finest ivory keys; the Famous ANTISELL. Call or write for Catalogue, free. T. M. ANTISELL PIANO CO., Manufacturers, Odd Fellows' Hall, Market and Seventh Streets, San Francisco.

C. H. STREET & CO.,

Successors to the IMMIGRATION ASSOCIATION OF CALIFORNIA,

415 MONTGOMERY STREET, S. F., CAL.

We are offering the following in 20, 40, 80 or 160 acre Farms:

			ACRES
Rosenthal Colony.	Tenama Colony		9,000
Monte Vista "	Shasta	"	1,500
Dehesia "	"	"	1,420
Lutheran "	"	"	6,000
Shingletown "	"	"	16,000
Anderson "	"	"	1,920
Miramonte "	Kern	"	2,640
Greenwood "	San Luis Obispo		500
Waukena "	Tulare		11,000
Point Reys "	Martin		14,000

—ALSO—

Other lands for general farming, fruit growing or stock raising.

A HOME FOR EVERYBODY—SECURE a home on easy terms in the country, while retaining your present residence, position and salary; 10, 20 or more acres of land, with or without a house, on the installment plan in one of our colonies; we will plant the same to your order with fruit trees or raisin grapes and will keep it in good condition until full bearing, with or without irrigation; these lands lie north or south of San Francisco, in the coast or interior counties, near or distant from railroad or town and vary in price. C. H. STREET & CO., successors to the Immigration Association of California, 415 Montgomery street. Send for particulars and full descriptions.

WELL DRILLS FOR EVERY PURPOSE. Sold on Trial!

Investment small, profits large. Send 25c for mailing large illustrated Catalogue with full particulars. Manufactured by CHILDS & AUSTIN, 162 & 164 Lake St., CHICAGO, ILL.

GENERAL AGENTS WANTED! $100 to $300 a month easily made selling the Farmers' Friend, a bag holder and scales combined. Don't miss this. Send for circulars. E. E. BAIR, Manager Puget Sound Mfg. Co., Tacoma, Wash. Ter.

TO THE LADIES!

Jacobs

MANUFACTURERS AND IMPORTERS OF LADIES' CHILDREN'S & INFANTS' 113 KEARNY STREET, S. F.

Illustrated Catalogues sent free on application.

The BUYERS' GUIDE issued March and Sept. each year. It is an encyclopedia of useful information for all who purchase the luxuries or necessities of life. It can clothe you and furnish you with all the necessary and unnecessary appliances to ride, walk, dance, sing, eat, fish, hunt, work, go to church or stay at home, and in various styles and quantities. Just figure what is required to do all these things COMFORTABLY, and you can make an estimate of the value of the BUYERS' GUIDE, which will be sent on receipt of 10 cents to pay postage. MONTGOMERY WARD & CO., 111-114 Michigan Avenue, Chicago.

CLOSING OUT

OUR IMMENSE STOCK OF SUMMER UNDERWEAR, at 50c and $1.00.

Latest designs in PERCALE SHIRTS, the style Collars and one pair Cuffs, $1.50 each.

Wolf & Frank's

Gents' Furnishing Goods

232 Kearny St., near Bush

Send for Illustrated Catalogue.

To introduce with such a price of splendid (patented) Crayon Outfit, IDEAL CRAYON OUTFIT CO. Cleveland-Thurman Block, Cleveland, O. with Im'ed Frame border for 50c. Geo. P. Hoffman, Send 2c. for List of Campaign requisites.

AN ACTIVE MAN WANTED IN EVERY COUNTY to sell the Two BEST CAMPAIGN Books in the market. Address F. PERSON, Flood Building, San Francisco.

PISO'S CURE FOR CONSUMPTION

Paine's Celery Compound

A NERVE TONIC. Celery and Coca, the powerful ingredients, are the best of Nerve Tonics. It strengthens and quiets the nerves, cures Nervous Weakness, Hysteria, Sleeplessness, &c.

AN ALTERATIVE. It drives out the poisonous humors in the blood purifying and invigorating and so overcoming those troubles resulting from impure or diseased blood.

A LAXATIVE. Acting mildly but surely on the bowels, it cures habitual constipation, promotes a regular habit, tones the stomach, and aids the digestion.

A DIURETIC. In its composition the best and most active diuretics of the Materia Medica are combined, making it the most effective remedies for diseases of the kidneys. It can be relied on for quick relief and speedy cure.

Hundreds of testimonials received from persons who have used it with remarkable benefit. Send to Druggists for full particulars.

Price $1.00. Sold by Druggists.

For The NERVOUS The DEBILITATED The AGED.

WELLS, RICHARDSON & CO., BURLINGTON, VT.

DWIGHT'S COW BRAND SODA

THE COW BRAND.

— TO MAKE —

DELICIOUS BISCUITS OR WHOLESOME BREAD

USE

DWIGHT'S COW-BRAND SODA OR SALERATUS

ABSOLUTELY PURE.

ALWAYS UNIFORM AND FULL WEIGHT.

Be sure that there is a picture of a Cow on your package and you will have the best Soda made.

O! YES, YES! CERTAINLY!

A singed cat dreads the fire. I plead guilty. I am selling a "new-fangled" Thresher.

LOOK AT IT—AIN'T IT A DAISY?

THE "ADVANCE" THRESHERS AND ENGINES

I guarantee the **New-Fangled Advance Separator** to be the best grain-saving, best Thresher and most durable Separator ever made. But, **remember**, it is not an experimental machine, as the **Old Fogy** machines are. You are well aware of the time you have to pay for) in experimenting with **Old Fogy** machines. **The New Fangled Thresher leads** the way. The growling and kicking of the Old Fogy agents is only equaled by the amount of grain kicked out in the straw by the **Old Fogy** machines. Of course, if you wish a cheap machine, Old Fogies will supply you at your own price; but their machines are dear at any price. You cannot afford to buy a thresher without examining the **ADVANCE**. Do not be talked into buying a machine because it is cheap and **Old Fogyish**. Ask the **Fogy agents** if they will set beside the **new-fangled** machine and let you see which is the experimental machine, and sold on its **merits**. I have never yet had to call on any one to help decide the merits of the **new-fangled** machine. Please examine the court record in reference to the **Old Fogie's** plan. Many years ago a man built a **new-fangled** machine, called a steam engine. **Old Fogies** then, as now, stood back and said they would ruin the country. **Do you not want to be ruined in the same way?** Remember, the **new-fangled** machine is past all **experimenting**, while **Old Fogy's** machines are being experimented with all the time, and at **your expense**. Do not fool with them any longer, your grain is going to **waste**.

Remember the new-fangled machine is sold on its merits entirely, no member, your whole dependence is upon your crop proceeds, and if you allow **Old Fogy** machines to **waste your grain**, you are just that much out of pocket. To **prevent** this the party that does your threshing procures a **new-fangled ADVANCE Thresher**, as they are constructed so as to save your grain, and have a better record than any other machine. Write for further particulars. I am prepared to prove all my statements. The **ADVANCE machine will do more** and **better** work than any other.

I hereby challenge any old fogy agent to name ANY case where the ADVANCE machine has failed to do as represented since its introduction on this Coast. Show up or shut up.

Remember that old fogy agents saying the contrary does not make it so. It will pay you to investigate. **I can prove all I say.**

I also sell the well known **DINGEE WOODBURY POWER.** A number of manufacturers make them on a **royalty** but I do not know of any **imitations**, but am inclined to look out for those that talk of imitations. I also deal in **Laundry and Machinery**, Farm, Church and School Bells, General Machinery, Swift Oilers, Gate Valves, Miller Pumps, Hancock Inspirators, Park & Kennedy Injectors, Acme and Alligator Wrenches, Blacksmith Drills, Self-Heating Bath Tubs, the Westinghouse Engines. Low prices: 10-horse on wheels, $900; Traction, $1075; 15-horse Traction, $1400. Special discount for cash. General Agent for Colburn's **Dynamos** and Lamps for **Electric Lighting, 200 lights.**

THE RAWSON LIGHT RUNNING REAPERS AND MOWERS

THE LINDGREN CHEMICAL FIRE ENGINE

Your village cannot do without one. You must have one for your mills. You cannot afford to be without a small one in your house. For particulars, address

Z. T. WRIGHT, Foot of Morrison Street, Portland, Oregon.

ARM & HAMMER BRAND

To housekeepers and Farmers.—It is important that the Soda or Saleratus you use should be White and Pure same as chemical substances used for food. To insure obtaining only the "Arm & Hammer" brand Soda or Saleratus, buy it in "pound or half pound" cartons which bear our name and trade-mark, as inferior goods are sometimes substituted for the "Arm & Hammer" brand when bought in bulk. Parties using Baking Powder should remember that its sole raising property consists of bicarbonate of soda. One teaspoonful of the "Arm & Hammer" brand of Soda or Saleratus mixed with sour milk equals four teaspoonfuls of the best Baking Powder, saving twenty times its cost, besides being much healthier, because it does not contain any injurious substances, such as alum, terra alba, etc., of which many Baking Powders are made. Dairymen and Farmers should use only the "Arm & Hammer" brand for cleaning and keeping Milk Pans Sweet and Clean.

OUR TRADE MARK

CHURCH & CO'S SODA

ON EVERY PACKAGE.

CAUTION. See that every pound package of "Arm and Hammer Brand" contains full 16 ounces net, and the ½ pound packages full 11 ounces net, Soda or Saleratus same as specified on each package.

Packed in Card Board Boxes. Always keeps Soft.

SODA OR SALERATUS