

VALUE OF BY-PRODUCT.

Work of Importance from Selfish and Public Standpoint.

A visit to one of the packing-houses at the stockyards will give a very clear idea of the enormous amount of money saved and made by the utilization of the portions of the animals slaughtered there which cannot be used for food.

In the earlier days of the industry the hide, tallow and grease were used, but the blood, feet, head and offal were buried or hauled out on the prairie and dumped.

Soon after this packers found out that the material had some value and began to charge for it. In the meantime quite an industry had been built up in the manufacture of glue, and in the year 1885 Armour & Co. purchased the Wahli Brothers glue factory.

They manufacture several kinds of glue. The phosphate of lime in bone is held together by a nitrogenous material which can be taken out of the bone by cooking for a long time at low temperature and the glue is taken out.

After the glue is extracted it is concentrated in a vacuum, chilled by refrigeration, cut up into thin layers, dried on wire screening in large hot air dryers and sold as sheet glue, broken glue or ground glue, as the trade may demand.

Isinglass made from animal tissues used by brewers in the clarifying of their liquors. It is a transparent white article sold in sheets, and resembles the finest grades of gelatin in appearance.

It may be said that in the fertilizer industry Armour & Co. were pioneers. In the early '80s, Peruvian being very high and a demand having arisen for commercial fertilizers, it was suggested that the meaty and boney material deposited in the bottom of large tanks be rendered lard and tallow be used as a source of nitrogen.

At the same time the blood accumulating from the killing of cattle, boiled to coagulate the albumen and dried in steam dryers was also used as a fertilizer, the entire output for a number of years being shipped to New York and Boston, as there was no demand for fertilizers in the west.

This part of the packing business has grown very rapidly, and Armour & Co. now have plants at many points in the United States for the manufacture of fertilizers, shipping their blood and tankage to those points, making their own sulphuric acid and acid phosphates and supplying the trade of each immediate section.

At the fertilizer works is now prepared blood albumen, which, up to within five years ago, had been imported entirely from Europe. It is used by calico printers in fixing certain pigment colors to the cloth, and is similar in appearance to the white of an egg.

Dried blood is used as a fertilizer and is also beginning to be used largely as a stock food. It is the most concentrated food we have, containing something like 87 per cent protein, and gives exceptionally good results when fed to horses and other live stock in connection with their regular feed.

In the bone cutting department, another branch of the fertilizer business, are made handles for knives, razors, etc., carved and dyed to resemble stag horn; also collar buttons, pipe mouth-pieces, bone screws used to connect the mouth-piece to the bowl of the meerschaum and other pipes, dice, little square blocks used by dental students for filling teeth, for nursing bottle rings and shields and bone buttons of all kinds.

In the manufacture of the fine steel parts of guns, bicycles, automobiles and other machinery, the steel is fashioned into its final shape when soft and then put into a box of hard granulated bone. This box is then put into a furnace, heated to a certain color, dumped into water, and the result is that a very high carbon steel has been formed on the outside of the parts thus treated, making them extremely hard.

Hoofs are assorted into three grades; the white hoofs being used for a certain grade of button closely resembling the better quality of pearl buttons. A striped hoof is flattened into a plate through pressure under heat and used in the manufacture of hair-pins; striped hoofs are also used in the manufacture of buttons.

The tallow and grease of carcasses are used in the manufacture of soaps. At a certain time in the boiling of soap salt is introduced into the kettle, which precipitates the glycerin of the fat together with the lye, which is drawn off and from them is manufactured glycerin. All grades of soaps are made, from the very finest toilet and shaving soaps to the mottled German scrubbing soaps. Washing powders are also prepared.

Curled hair is made in large quantities, and all grades and colors. The garnet sand used in the manufacture of sandpaper and the emery used in the manufacture of emery paper and cloth are fastened to the paper with glue. Armour & Co. own a garnet quarry in Connecticut, and some idea of the extent of their works may be obtained when it is said they manufacture daily from twenty to twenty-five miles of sandpaper.

The pharmaceutical laboratory in one of the most interesting parts of the Armour plant. Armour & Co.

are the largest manufacturers of pepsin in the world. Pepsin is a ferment something like yeast, and its function is to dissolve the albuminous parts of the food eaten so that it can be assimilated during the process of digestion.

From time immemorial people have been troubled with goiter, a disease of the thyroid gland on the throat. Some years ago it was discovered that if the thyroid gland of sheep or other animals is administered to sufferers from this disease the trouble may be relieved. Hence it is now desiccated and sold to druggists as a powder, and physicians report exceptionally good results from its use.

The suprarenal capsule, a small gland immediately above the kidney, furnished an active principle which is an extremely powerful heart stimulant. It is used in eye surgery, and in the treatment of hay fever, as it seems to have a beneficial effect in reducing irritation when applied to membranes of the eye and nose.

The pelts of the sheep slaughtered at the packing-house are cleaned, and the wool is pulled out, dried, graded, and sold to the wool manufacturers. The wool is so thoroughly prepared that it commands very high prices. The sheep pelts are then pickled and sold for the manufacture of gloves and other leather goods. The hides go to the tanners.

The history of the extract of beef serves to illustrate the progress of the packing industry during its rapid evolution from the old-fashioned slaughter-house to the wonderful plants of to-day, where every department is conducted under the most advanced scientific methods. Realizing that South American and Australian extracts, which are made from wild outlie, usually killed for their hides and bones, cannot possibly possess the delicious flavor of those made from the carefully fattened domestic cattle of the United States, the Chicago packers have endeavored to preserve the true flavor in a concentrated form.

As the consumption of beef extract has grown, so too have the varieties of preparation. One may obtain it as a solid or fluid, in tablets with a combination of vegetables, or in the form of asparag, which is extract of asparagus and beef extract, or in tomato bouillon, a combination of tomatoes and beef extract.

A few years ago a physician friend of the late Mr. Armour asked him why he did not make a preparation of beef that would be a nutritious food upon which life could be sustained; that this was needed particularly for the invalid and convalescent, and pointed out that his means and position as a packer made such an expensive investigation possible.

Mr. Armour gave instructions to his chemists to start the work, and as a result they have placed on the market soluble beef. This differs from beef extract in that it is the real substance of the meat (fiber and all), concentrated and predigested. An idea of its nutritive value may be had by comparing it with raw beef juice, which has a high reputation as a food for the sick. The London Lancet's analysis of soluble beef shows that it contains 54 per cent food value, while raw beef juice contains from 2 to 5 per cent only. On that basis one teaspoonful of soluble beef is equal to 10 to 27 teaspoonfuls of beef juice. It may be used with hot water without affecting the nutritive value.

William E. Curtis.

Cures Blood and Skin Diseases, Itching Humors, Eczema, Scrofula, Etc. Seed no money—simply write and try Botanic Blood Balm at our expense. A personal trial of Blood Balm is better than a thousand printed testimonials, so don't hesitate to write for a free sample.

If you suffer from ulcers, eczema, scrofula, blood poison, cancer, eating sores, itching skin, pimples, boils, bone pains, swellings, rheumatism, catarrh, or any blood or skin disease, we advise you to take Botanic Blood Balm (B. B. B.). Especially recommended for old, obstinate, deep-seated cases of malignant blood or skin diseases, because Botanic Blood Balm (B. B. B.) kills the poison in the blood, cures where all else fails, heals every sore, makes the blood pure and rich, gives the skin the rich glow of health. B. B. B., the most perfect blood purifier made. Thoroughly tested for 30 years. Cost \$1 per large bottle at drug stores. To prove it cures, sample of Blood Balm sent free by writing Blood Balm Co., Atlanta, Ga. Describe trouble and free medical advice sent in sealed letter. This is an honest offer—medicine sent at once, prepaid. Sold in Anderson by Orr-Gary Drug Co., White & White and Evans Pharmacy.

County Mutual Benefit Association of America.

The County Mutual Benefit Association of America is now organizing the Anderson Division of 1,000 members. The membership fee is \$5.00, which covers the first advance death assessment. One Dollar for every member is deposited with Mr. James M. Payne, the Secretary and Treasurer of the Anderson Division, and is held in The Bank of Anderson, subject to the order of Nelson R. Green, the President of the Anderson Division, to pay the first death loss by the Association.

The Policy is clear and simple, agreeing to pay the sum of one dollar for every member in the Division upon the surrender of the Policy and approval of the proofs of death of a member in good standing. It is a home organization, managed by honorable, high-minded business men, for the benefit and protection of home people. It reduces life insurance protection to the minimum of cost that the average of human life will allow.

19-4

Wheat Growers! TAKE NOTICE.

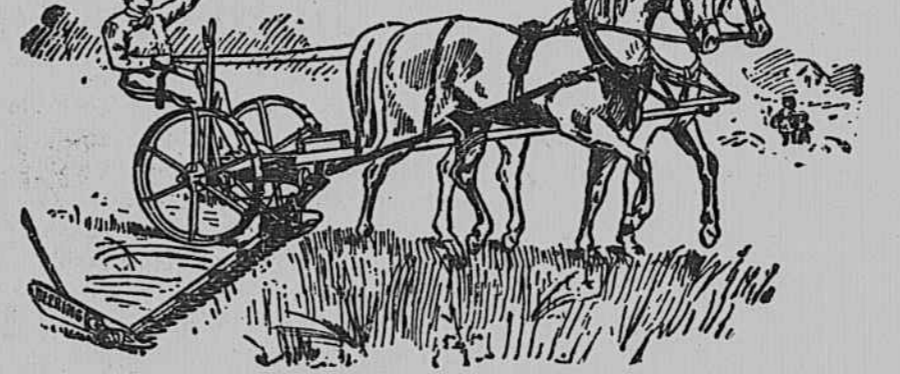
Do not Fail to try our Specially Prepared 8 1-2 2-2 Petrified-- Bone Fertilizers for Grain.

We have all grades of Ammoniated Fertilizers and Acid Phosphates, also Kainit, Nitrate of Soda and Muriate of Potash; all put up in new bags; thoroughly pulverized, and no better can be found in the market.

ANDERSON PHOSPHATE AND OIL CO.

Advertisement for Dr. Moffett's Teethina, a dental powder. Includes text: 'Cures Chelera-Infantum, Diarrhoea, Dysentery, and the Bowel Troubles of Children of Any Age.' Price: 'Costs Only 25 cents at Druggists.'

"MAKE HAY WHILE THE SUN SHINES!"



A DEERING MOWER and RAKE.

THE many advantages the Deering Mower has enables the operator to work it with much more ease than any other machine, and no time lost in going around stumps and trees. This Machine is so constructed that the driver is at no trouble in lowering and raising the cutter bar in passing stumps and trees.

BROCK HARDWARE COMPANY, Successors to Brock Brothers.

BLACKSMITH AND WOODWORK SHOPS! THE undersigned, having succeeded to the business of Frank Johnson & Co., will continue it at the old stand, and solicits the patronage of the public. Repairing and Repainting promptly executed.

LESSER & COMPANY.

Remarkable Pricing of New Fall Goods. A mammoth collection of the very best Fall and Winter Goods at LESSERS. A store full of New, Bright and Fashionable Merchandise at prices that cannot be equaled.

NEW FALL BARGAINS IN OUR NOTION DEPARTMENT.

Table listing various clothing items and their prices, such as '100 Dozen Ladies Perfect Fitting Ribbed Undershirts at only 12 1/2c'.

New Fall Bargains in our Dry Goods Department.

Table listing various dry goods items and their prices, such as '10 cent Outing, very wide and heavy, at only 47 1/2c'.

New Fall Line of Up-to-date Ladies Cloaks and Reefers.

Table listing various ladies' clothing items and their prices, such as 'One lot Ladies Fine Cloaks, all colors, Silk Lined, at only \$1.50'.

NEW FALL LINE OF MILLINERY.

We offer 250 Ladies Elegantly Trimmed Hats, any shape and color, at only 95c. One lot Richly Trimmed Children's Hats at only 48c.

NEW SHOES. NEW FALL LINE OF SHOES.

Our immense Shoe trade has forced us to increase our Shoe stock. We sell only solid leather Shoes at the very lowest prices. Our Shoe stock is now complete. We purchased all of our Shoes from the largest manufacturers in the United States and guarantee any Shoe that goes out of our Store.

NEW LINE CLOTHING AND GENTS' FURNISHINGS.

Table listing various clothing and furnishing items and their prices, such as '100 Dozen Gents Fleece Line Shirts, well worth 50c, at only 35c'.

Free, Free, Free—Hand Painted China FREE. A House-wife's delight, a nicely arranged table. Buy your Goods of US and get a set of hand painted CHINA FREE. Ask for Coupons for free Premiums.

LESSER & CO., LEADING STORE OF ANDERSON.

MASTIC PAINT?

You can put it on yourself—it is already mixed—and to paint your house would not cost you more than...

Five or Six Dollars! SOLD BY Orr-Gray & Co.

HOME SEEKER EXCURSION RATES VIA The Western and Atlantic Railway and Nashville, Chattanooga and St. Louis Railway.

To points in Texas, Oklahoma, Indian Territory and Missouri. Solid vestibuled trains between Atlanta and Memphis. Only one change of cars to principal western cities. Very low rates to all points North, Northwest and West. Best service and quickest time via the Scenic Battlefield Route.

JOHN E. SATTERFIELD, Traveling Passenger Agent, No. 1 Brown Building, Atlanta, Ga. Sept 10, 1902

Advertisement for China Mosaic. Text: '\$9.00 WILL BUY A FINE CHINA. A VARIETY OF ODD PIECES OF NOVELTIES. JOHN M. HUBBARD, JEWELER, HOTEL BLOCK.'

CELEBRATED Acme Paint and Cement Cure.

Specially used on Tin Roofs and Iron Work of any kind.

ACME PAINT & CEMENT CO.

Reference: F. B. GRAYTON & CO., Druggists, Anderson, S. C.