

**The Meat Exports of the Argentine.**

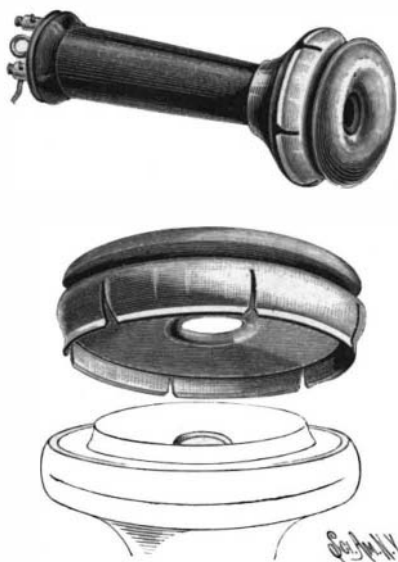
Last year England imported from abroad live stock and dead meat valued at something in excess of \$116,000,000. To the items which made up this large total the Argentine Republic contributed 1,675,600 frozen sheep, 90,000 live sheep, 29,000 quarters of frozen beef, and 28,000 live bullocks. It is alleged by those who have practical experience of the matter that in no other country in the world can cattle and sheep be produced and fattened as cheaply as in the Argentine, on account of its exceptional climate and rich natural grasses, very little artificial food being required, and the winter being so mild that the animals can be fattened in the open air in wire-fenced paddocks. During the last 15 years the best English pedigree cattle have been introduced, thousands of Shorthorn and Hereford bulls have been used, and a great proportion of the criollo cattle have been transformed into magnificent crossbreds. The heaviest of the native criollo cattle are kept on alfalfa in the provinces of San Juan and Mendoza for some time, and are then driven across the Andes into Chile. A better class of animal, cross-bred, weighing on an average about 1,150 lb. live weight, is sent to Rio de Janeiro and some other Brazilian ports, while the best, heaviest and fattest animals are shipped to England. This export of live stock has suddenly become of great importance, the official value of live cattle and sheep exported from Argentine ports in 1894 being over \$5,000,000. The English butchers find fault with the Argentine cattle as shipped at present. They are too wild, and are badly selected, cattle of all ages, sizes, and descriptions coming together. Moreover, they are purely grass-fed, and consequently the beef, though good, has not as bright a color as the North American corn-fed meat, and sells at from ½d. to 1d. per pound lower than its great rival. The sheep are better, and the butchers classify them the same as Canadians, and pay the same price for them—6d. per pound, sinking the offal.

**Frozen Pneumatic Tubes.**

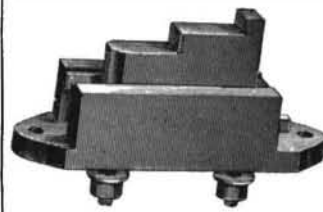
During the recent frost in London the proper working of the pneumatic tubes connecting the Central Telegraph Office with the various City and West End receiving and branch offices served by tube has caused great anxiety to the postal telegraph officials. A large number of carriers have from time to time been stopped in the tubes owing to the accumulation of ice, and these have in a few cases been freed only after considerable trouble. Many of the tubes were kept open night and day, and a current of air kept flowing through them. This air, heated by compression in the pumps, has been a very great help. In the event of a carrier stopping in the tube, another carrier partly filled with salt has been sent after it. The impact causes the salt to scatter against the imprisoned carrier, and the non-freezing mixture so formed quickly sets it free.

**A CUSHIONED EAR PIECE FOR THE TELEPHONE RECEIVER.**

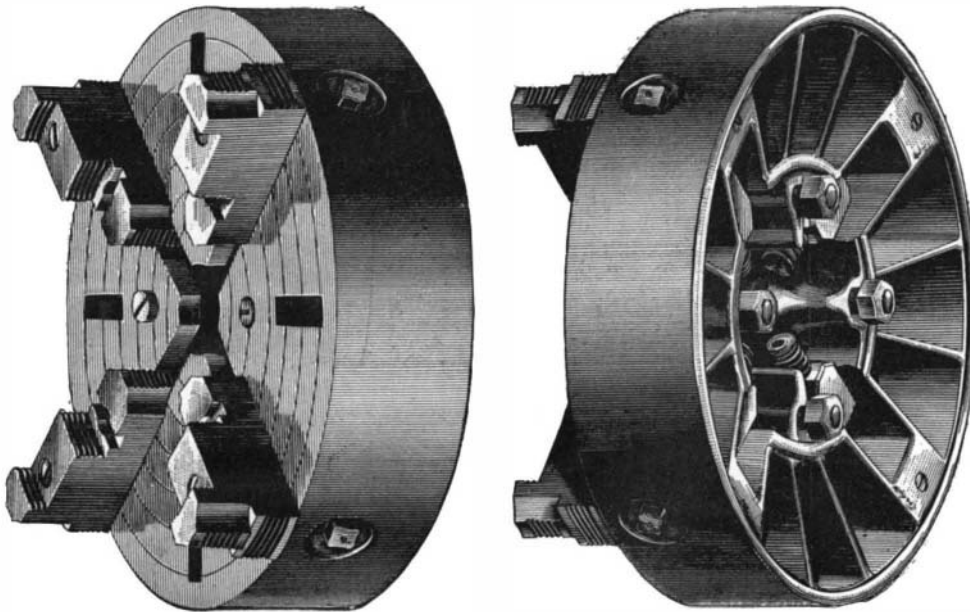
The illustration represents a simple pneumatic cushion adapted to fit all telephone receivers, and indicates the manner of placing it upon receiver. It is made of soft rubber, fitted into a metal rim which springs or clamps over the end of receiver, forming a complete air chamber designed to effectually prevent the buzzing or clucking sounds so annoying to users of the telephone. The improvement is being introduced by Mr. C. Maynard Evans, 107 to 109 World Building, New York City. Its touch to the ear is soft, and the distance to the ear drum is more conveniently regulated than with the ordinary hard rubber receiver. It has been adopted and is in use in many of our banks and public offices, scores of large new office buildings, etc.

**A NEW CHUCK.**

The illustration represents an improved chuck for heavy work, having a larger number of shell braces, a thicker face to the shell, and a greater depth to the chuck than the "National chuck," made by the same manufacturer, William Whitlock, of No. 39 Cortlandt Street, New York City. The dishing of the braces is such that the chuck may be mounted close to the bearings of the lathe, causing the least possible overhang, and the screw heads are recessed, so the workman can stop the chuck by the rim without injuring his hand. It has a reversible jaw. The small figure shows a new face plate



FACE PLATE JAW.

FACE VIEW. BACK VIEW.  
WHITLOCK'S NEW "WESTERN" INDEPENDENT CHUCK.

jaw of the same manufacturer. It carries the regular "National" solid jaw, and is designed to take the place of the larger chucks where the character of the work permits of its use.

**A SECTIONAL WATER TUBE BOILER.**

In this boiler are embodied the following essential points: It is simple in construction; is easily repaired by any ordinary mechanic; affords perfect circulation; has a large amount of heating surface in proportion to its weight. All parts are readily accessible for repairs and cleaning, and it is non-explosive. It has been patented by Mr. Samuel P. Hedges, of Greenport, L. I., N. Y. The boiler has two mud drums, into which the vertical sections of the fire box tubes are tapped, horizontal sections forming the crown of the fire box, and being tapped into a fire box header or drum, which connects with a cross drum. On each end of the cross drum is a pipe connecting with the mud drums. This pipe is to supply the heating section farthest away from the center, where supply enters from fire box drum. The small figure represents the manner of connecting the heating sections to the cross drums. The flanged end on the tube enters the socket formed in the header and seats on an asbestos ring. The sleeve on pipe is screwed into the boss on the flanged end of tube, thus making a tight, strong joint. This connection at top and bottom of each section makes it easy to remove and replace any section that may require repairs and take it out into the fire room through the front connecting doors without disturbing any part of the casing, or a washer may be put in the opening and the collar screwed down while repairs are being made, without affecting the operation of the boiler. Feed water heaters are placed on the top of heating section (not shown in cut) of such size as to allow the feed water to enter the boiler at the boiling point. These boilers are designed for 200 lb. steam pressure.

A CURIOUS fact has been noted by Arctic travelers—snow when at a very low temperature absorbs moisture and dries garments.

**The Illinois Eight Hour Law.**

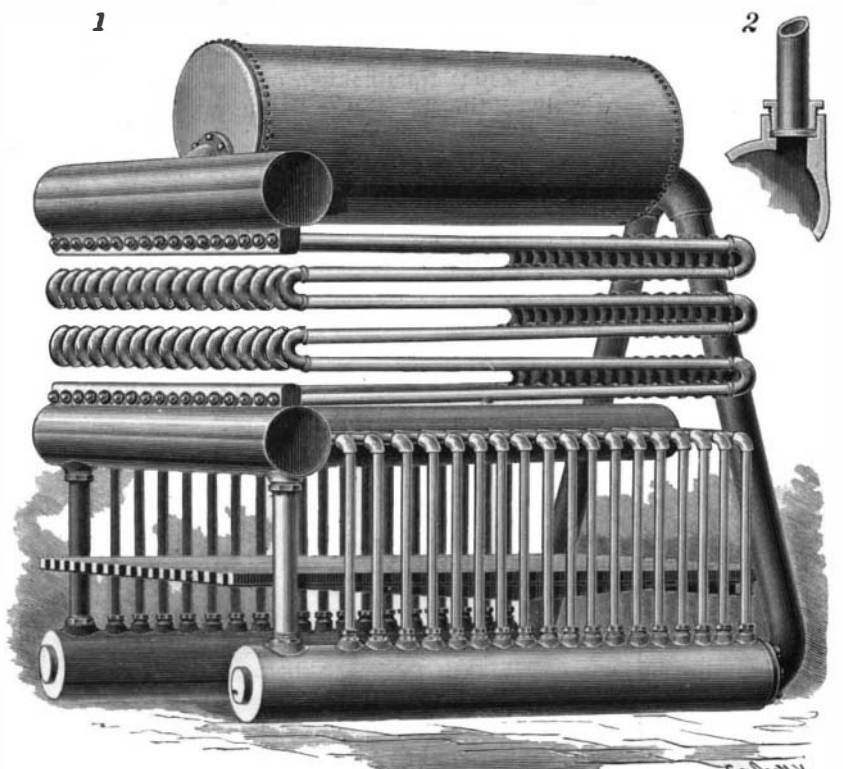
The Supreme Court in Illinois has declared the eight hour law of that State unconstitutional, and a similar decision against the progressive inheritance tax of that State. As to the Ohio decision, we have not yet seen any report full enough to enable us to pass judgment upon its merits. The Ohio law, it will be remembered, levied a tax ranging from 1 per cent on estates above \$20,000 to 5 per cent on estates above a million. But the fact that the law was good does not indicate that the decision against it was bad, for the Ohio constitution contains a general provision that citizens shall be taxed in proportion to their property, and this inheritance tax law may run counter to the phraseology of the constitution. The Illinois decision is of greater importance, because the principles laid down by the law provided that no woman should be employed in any factory or workshop more than eight hours in any one day or forty-eight hours in any one week. The court held that "This re-enactment is a purely arbitrary restriction on a fundamental right of the citizen to control his or her own time and faculty. It substitutes the judgment of the legislature for the judgment of the employer and employe in a matter about which they are competent to deal with each other. . . . The right to make contracts is an inherent and inalienable one, and any attempt to unreasonably abridge it is opposed to the constitution." The court also condemned the act because it applied only to women, and seemed to apply only to certain occupations.

**Darwin G. Eaton.**

Dr. Darwin G. Eaton died in Brooklyn, N. Y., March 17, at the age of seventy-three years. He was one of the best known teachers in the country, and for many years he was the leading professor in the Packer Institute, of Brooklyn. As a scientist Dr. Eaton will be chiefly

remembered for his researches on volcanoes, as he made a life-long study of them, and visited Vesuvius several times, as well as Mauna Loa. He was born at Portland, N. Y., and graduated at the State Normal School in 1846. In 1851 he accepted a professorship in the Brooklyn Female Academy, which afterward became the Packer Institute. He held this place until 1883, when ill health compelled him to retire. He had been devoted to astronomical studies all his life, and had participated in many governmental scientific observations of solar and lunar eclipses. He was a member of many learned societies, and received the degrees of M.A., M.D. and Ph.D.

MR. GEORGE P. LOW, in the February issue of the Transactions of the American Institute of Electrical Engineers, concludes that the art of rail bonding now appears to have been perfected, and the damage that



HEDGES' WATER TUBE STATIONARY OR MARINE BOILER.

has been caused by corrosive electrolysis may be attributed to defective bonding, for without doubt proper main-to-track, rail-to-rail, and track-to-dynamo bonding will cure the ill almost without exception. The problem of eliminating electrolytic corrosion is, in brief, simply one of judicious bonding.

**A Floating Cannery.**

An American schooner has recently been fitted at New York with every facility for cooking and canning fish, game, fruits, etc., for the purpose of cruising in southern waters and collecting these delicacies and canning them at sea. This novel enterprise is expected to yield encouraging profits, since many of the goods canned in this way may be brought into the country free of duty. The ship is provided with an eight horse power boiler and three 25 gallon copper caldrons. The boiler was set up in the middle of the deck and connected by pipes with a large circular cast iron "process kettle." The schooner carries six canners and a chef in addition to the regular crew. Some 150,000 empty cans have been shipped, all of which it is expected will be filled during the voyage.

The materials to be canned will be turtle, pompano, guava jelly and fish game and fruit of many kinds. The turtles will be caught in the West Indies and off the Florida coast. Much of the material will be secured by exchanging for them various manufactured articles, with which the ship is well supplied. When the actual work begins, the meats will first be boiled down in the three copper caldrons. Next they will be canned and lowered into the process kettle in steel crates and boiled at a high temperature under steam pressure in order to make them keep. The preparation of the meats, fish, jellies, etc., will be superintended by the chef in charge and cooked after the most approved receipt. The floating cannery is expected to return to New York some time in the fall. Part of the canned goods will be brought back on the schooner and part will be landed at southern ports and sent by steamsip or railroad to the North.

**THE SUMATRA RHINOCEROS IN THE LEIPZIG ZOOLOGICAL GARDEN.**

The accompanying engraving, for which we are indebted to the *Illustrirte Zeitung*, is from a drawing made directly from the specimen of the Rhinoceros sumatransis now in the zoological garden at Leipzig. This and another specimen—now in the zoological garden at Budapest—were carried to Trieste from Penang, a small island on the eastern coast of Malacca. This species was first found in Sumatra about one hundred years ago.

The engraving shows clearly the coat of stiff hair, so unusual in a rhinoceros, which covers its back, neck, ears and legs, giving it a most peculiar appearance. The folds of the skin, so marked in the Indian rhinoceros, are modified in this species, making it a con-

allowed for a year's growth. Its height at the shoulder is about 4 feet 4 inches and its color is dark brown. Specimens of this species are very rare, though more of them may be seen hereafter, for civilization, which is killing off animals of many kinds, is also bringing to light many others.

**A LETTER COPYING BOOK WITH WHICH A PRESS IS NOT NEEDED.**

The illustration represents a perfect letter-copying book in which copies may be made of letters written



BUSHNELL'S ROLLING COPYING BOOK.

with any kind of good copying ink, without the use of a press. The copies are made by simply rolling up the book around a roll which forms an integral part of its back, as shown in one of the views, the written letter having first been placed on a manila sheet beneath a blank leaf of the copy book, and the leaf covered by a damp cloth and a second manila sheet. After rolling up, the book is held firmly, close rolled, for about ten seconds, to insure an excellent copy, as good as can be obtained in a press. This book is manufactured by Alvah Bushnell, of No. 403 Chestnut Street, Philadelphia, in two sizes, letter size and note size. It affords a cheap, quick and always satisfactory way of making copies, and being so light and

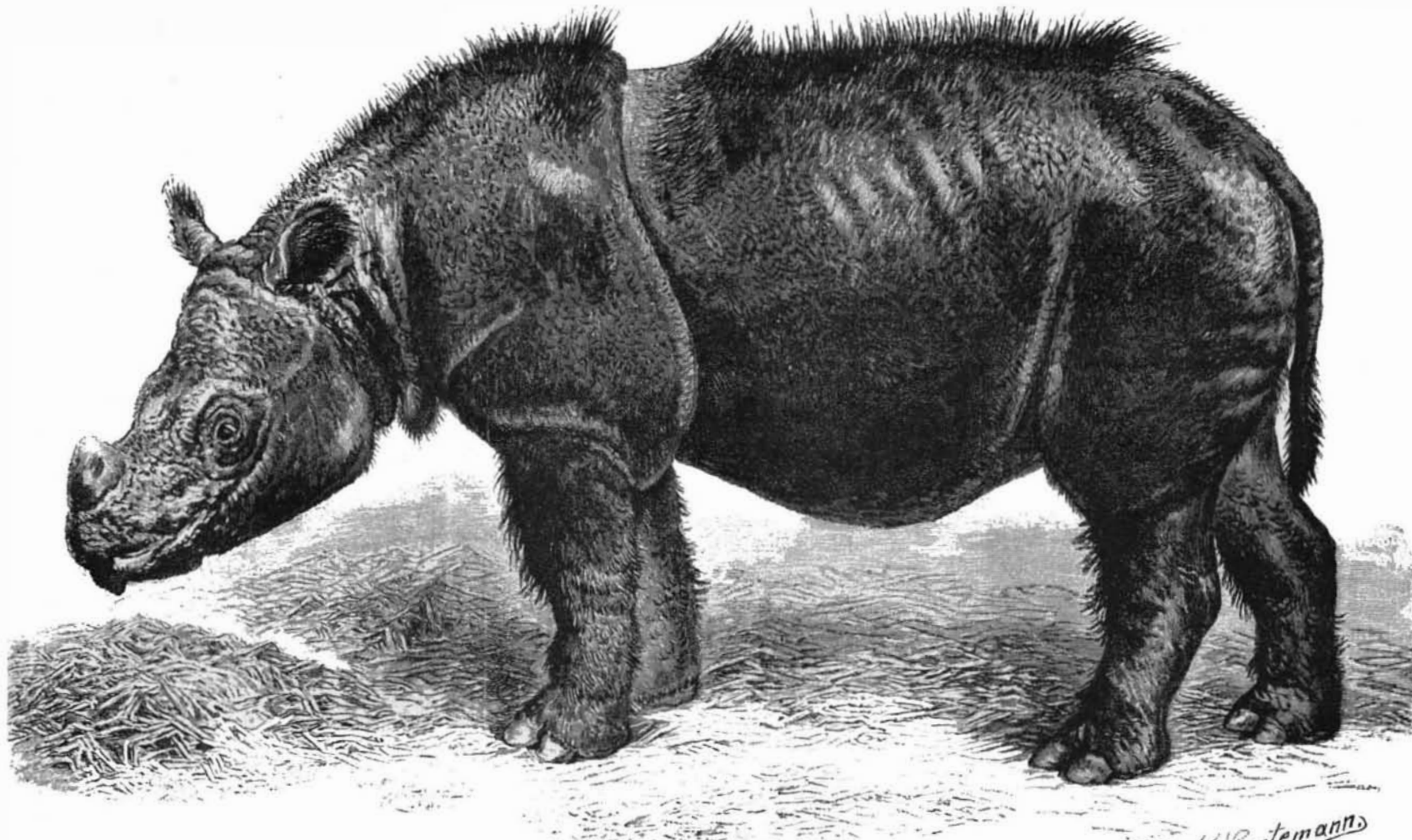
**Electric Light Mains and Their Dangers.**

An accident occurred at Bristol, England, on February 25 which resulted in the death of a workman and was probably due to a momentary inadvertence on his part. It appears that it was the duty of the man in question to remove the dust from a high tension fuse board, and while doing this with the right hand covered by an India rubber glove, the left hand (bare) seems to have touched a fuse terminal, and thus his body made contact to earth with the 2,000 volt main. It appears from the evidence of the corporation engineer that there were no printed regulations for the guidance of workmen employed on this particular duty, but it was the rule that when engaged on high tension work one hand only should be used, and that hand covered by an India rubber glove. The story of this accident, says the *Lancet*, is no doubt the old story of carelessness; but there may be room for doubt as to whether this carelessness was entirely on the part of the workman who suffered. Assuming that it was necessary to clean this apparatus while the electric current was passing over it, were the insulation precautions adequate? As a matter of fact, ought this man to have been at work on this "live" high tension apparatus without being duly insulated from the earth? Might he not have been provided with an India rubber mat and boots as well as with gloves for both hands, with at the same time an imperative caution staring him in the face never to relax the paramount rule of working only with one hand?

**The Clearing Out of Insects in Florida.**

Mr. H. G. Hubbard, the entomologist of the Department of Agriculture, writes that the cold weather which desolated the gardens and orange groves of Florida killed unnumbered millions of injurious insects. All cockroaches in sight, and even those in houses, unless they were exceptionally well protected, were killed. The young scale insects which had not passed their second moult were killed, although many eggs survive, and some adults of both sexes. The nitidulid beetles in decaying fruit were also killed, small gnats in flowers were frozen, and not a living colony of plant lice is to be seen on any orange or other tree.

No living specimen of the destructive white fly, *Aleyrodes citri*, was found, and as the eggs are laid on the leaves, every one of which will drop before the new growth appears, the cold wave would have almost exterminated this pest but for the fact that, besides the



THE SUMATRA RHINOCEROS.

necting link between the former and the African rhinoceros. It differs from both of these species also in regard to the number and development of its horns, for although it has two horns they are not nearly as much developed as those of the two-horned African rhinoceros. The second horn between the eyes is scarcely perceptible in the creature in the Leipzig zoological garden, while the other is only about half as large as it is represented in the cut, the artist, who had formerly painted an older animal of this kind, having

readily portable, may be conveniently carried in any traveling bag. When thus taken on a journey it is better folded as shown in the bottom view, than rolled, thus preventing the curling of the leaves.

It is stated that the Canadian Customs Department has decided that electricity generated on the American side of the Niagara Falls and conducted by wires to the Canadian side must pay a duty of 20 per cent as "an unenumerated article."

orange tree, it also infests the cape jessamine, and as the leaves of these plants have not all fallen, Mr. Hubbard is advising the orange growers to cut down their jessamines and burn them. Since the breeding of injurious insects has been suspended now for some weeks an excellent opportunity has been offered to clear the trees of scale with comparatively mild insecticides. On the other hand, the trees have been so enfeebled by the cold that they will be an easier prey to injurious insects than they were before.