

Andrae

Telephones

& Electrical Supplies



Julius Andrae

& Sons Co.,

Milwaukee, Wis., U. S. A.



Julius Andrae &
Sons Co. ❁ ❁ ❁

MANUFACTURERS OF THE

ANDRAE

TELEPHONES
& ELECTRICAL SUPPLIES

MILWAUKEE, WISCONSIN

❁❁❁❁❁❁ U. S. A. ❁❁❁❁❁❁

❁ 39th YEAR ❁



JULIUS ANDRAE, Sr., President.
HERMAN ANDRAE, Vice-President.
F. T. ANDRAE, Secretary.
H. P. ANDRAE, Treasurer.



From
Possibilities
To
Realities

ANDRAE telephones need no introduction. They are known for their distinctive features and high grade quality all over the world. They have matured possibilities into realities. Their excellence has created a demand for themselves and their good service is their most satisfactory advertisement. Independent telephone companies and telephone users have passed through all the experimental stages of telephony. Their experience with poor telephones has increased the demand for the Andrae ---because the Andrae is a good telephone. We do not say the "best"---in fact, nowhere in this catalogue, with the exception of these two places, will the word "best" be found. The word has been so misused that it has lost nearly all of its good significance. It seldom tells the truth and therefore we will not use it. It suggests rivalry, a factor, which, in our case, is all upon one side, and therefore of no moment to us. We have had our own work to do and we have done it. Our work has been to attain the ultimate stage of telephone perfection. To this end we have employed busy brains and clever fingers. We accepted possibilities and returned realities; and now, in the Andrae, we offer the most ingenious and most carefully made telephone that mechanical skill, capital and energy can produce.





THE worrisome part of the telephone business is the equipment. It is the part that gives trouble or satisfaction—that makes dividends or deficits. It is a subject well worth considering. Poor equipment means poor service, poor patronage, no profit, much trouble. Good equipment means good service, little or no cost for maintenance, growing patronage and good profit. After years of experience and improvements, we claim to have mastered the various defects of telephone construction and the various changes made in the mode of our instruments make them electrically and mechanically perfect. Our circuits are so arranged as to be a means of protection against induction and prevent receiver coils from various burn outs; and at each switch point where contacts are made we insure a positive contact and action. Each set of instruments is thoroughly tested and inspected before leaving the factory, guaranteeing perfect satisfaction.



Trouble
vs.
Satisfaction



THE
TRANSMIT-
TER

Made
in
Sweden

BOTH our Bridging and Series telephones are adapted to meet the exacting requirements of toll-private and exchange service and are therefore equipped with the Ericsson Coal Grain Carbon Transmitter. All the contact points are tipped with platinum insuring positive connections and doing away with all possibility of corrosion of contact points. Our long distance transmitters are furnished with two cells of improved carbon battery especially adapted to our telephones.

THE
RECEIVER

Made
in
Sweden

It is not necessary to go into details to show the advantages of the two-pole receiver over the ordinary single pole. Telephone users know the difference. But there has been one serious drawback—weight and size. A drawback that required inventive genius to overcome. And how inventive genius conquered is best shown in the Ericsson Bi-polar receiver with which the Andrae is equipped. Without sacrificing a single advantage of the two-pole receiver, skill and brains have made the Ericsson Bi-polar as light and neat as any single-pole receiver. Its efficiency cannot be equaled, being an all metal receiver with metal head, rubber cap and genuine hard rubber shell.

Andrae
Telephone
Details

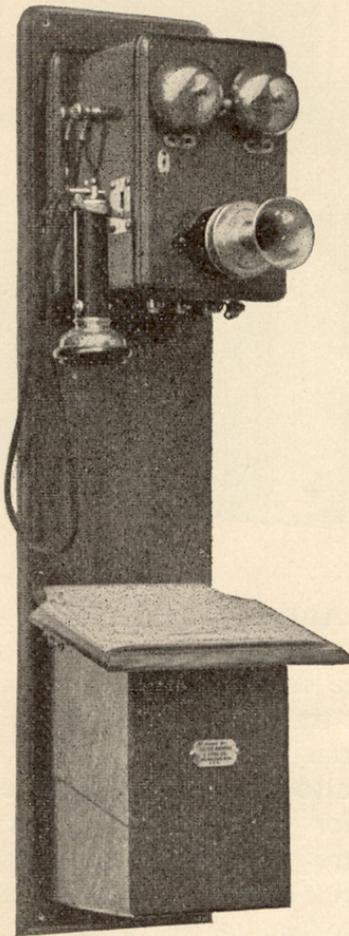
THE
MAGNETO
BELLS

Every ounce of material used in our magneto bells is of the finest quality obtainable. Nothing is used that would be apt to mar the efficiency of the telephone. Unlimited time and use cannot compel our generators to loose their magnetic force. They are high grade parts of a high grade telephone and perform the work allotted them in a most satisfactory manner. The Andrae long lever gravity switch insures a positive action and reduces switch troubles to a minimum. The contact points are always kept bright and clean, which is a very essential requirement for the good working of a telephone.



Andrae Telephones

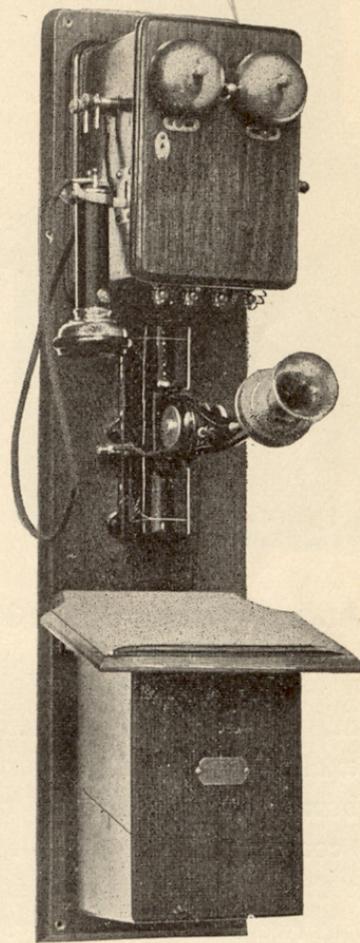
They never
Disappoint



Andrae Standard No. 1

Is our regular exchange style instrument, and is furnished with one cell wet, or two cells dry battery. Finished in oak or black walnut, as preferred.

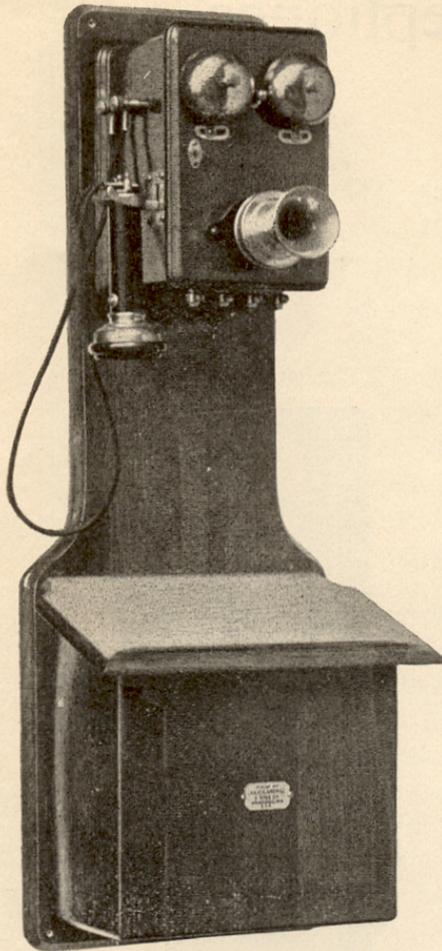
Price, \$17.00



Andrae Standard No. 2

Is another style of exchange instrument, with transmitter fitted on and an adjustable arm. Also furnished with one cell dry or two cells wet battery. Finished in oak or black walnut.

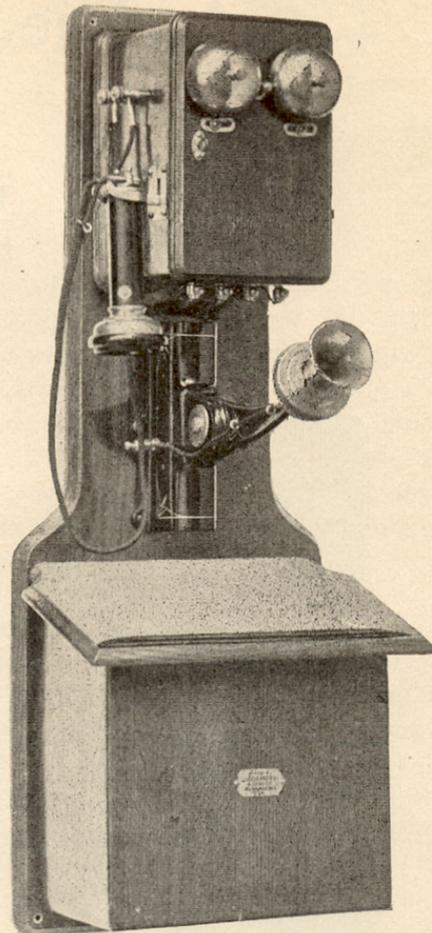
Price, \$18.00



Andrae Standard No. 3

Illustrates our standard bridging instrument, which we recommend for use in exchange service. Where several subscribers are connected on one line of considerable distance, terminating at the exchange, No. 3 is supplied with two cells wet battery. Finished in oak or black walnut, as preferred.

Price, \$18.50



Andrae Standard No. 4

Is the same style instrument as No. 3, with transmitter fitted on an adjustable arm.

We also recommend this style instrument for party and toll lines where they are not connected with the exchange. This style instrument is especially adapted for what are termed "farmer's" lines, where the different telephones are connected all on one line.

Price, \$20.00

Nos. 1, 2, 3 and 4 are equipped with the Ericsson Swedish coal grain carbon transmitter, which is the recognized standard of the world; also having Ericsson bipolar all metal Samson receivers. Especially adapted for long or short distance work. These telephones cannot be equalled for service and durability.



Andrae Standard No. 5

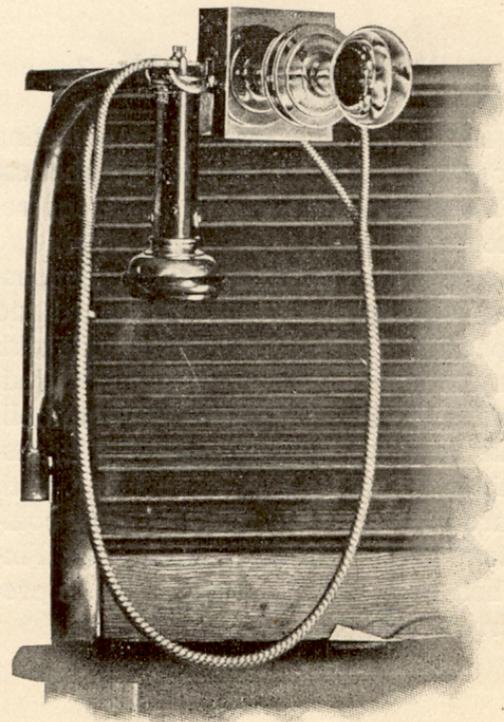
Illustrates our standard long-distance desk telephone, all nickel, fitted with Ericsson coal grain microphone and double pole receiver. Contact points tipped with platinum. A beauty of workmanship.

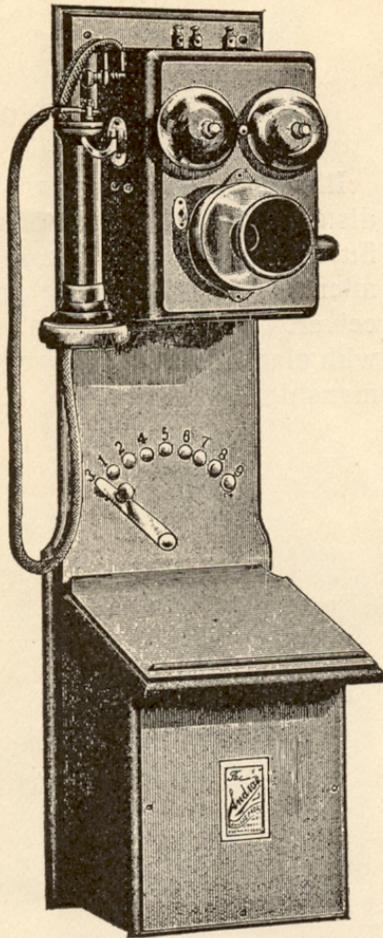
Price, \$17.35

Andrae Standard No. 6

Illustrates our long-distance, swinging arm desk set, nickel, fitted with Ericsson coal grain microphone and double pole receiver. Just the thing for a busy man to expedite business. Always at command, and never in the way.

Price, \$16.00

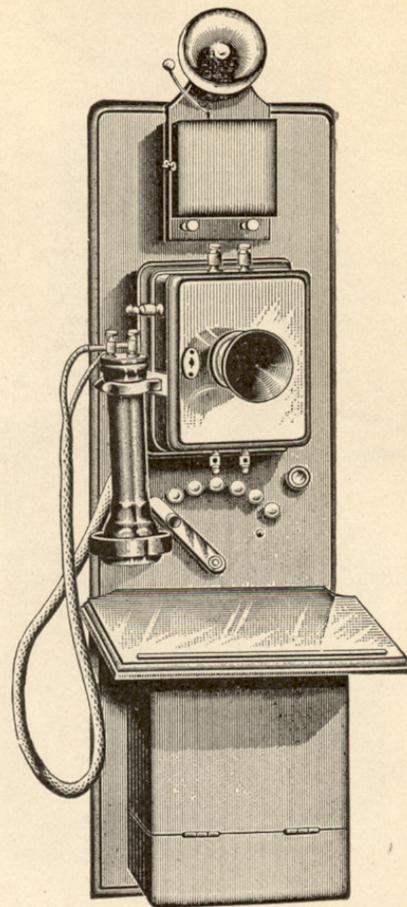




Andrae Standard No. 7

Illustrates our inter-communicating or warehouse system of telephones. This instrument meets the requirements of a telephone for extensive factories and office buildings, dispensing with the use of a switch-board and operator. This instrument is made with any number of switch buttons desired, and is equipped with a 5,000 ohm bell, our improved Andrae carbon transmitter and single pole receiver with hard rubber shell, making a very complete and efficient instrument. Finished in oak or black walnut, as preferred.

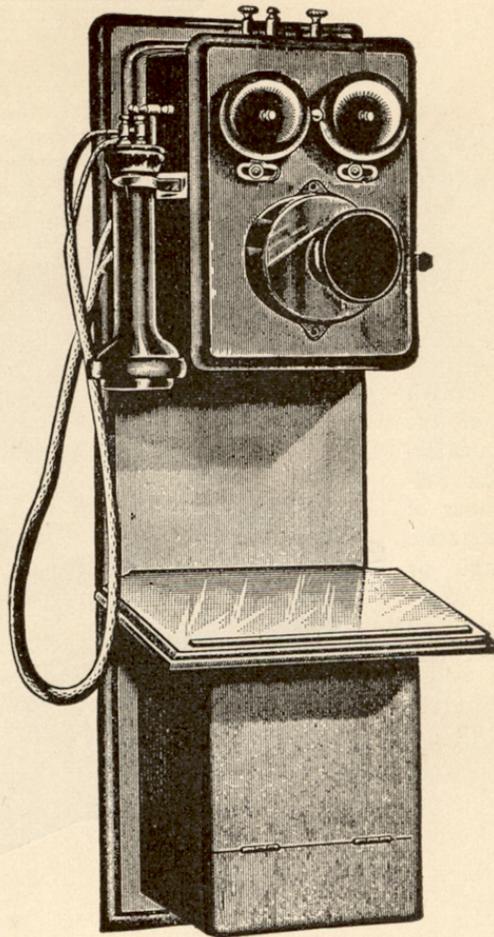
Price, \$16.00



Andrae Standard No. 8

Illustrates another type of our inter-communicating telephone, and is identically the same as No. 7, the only difference being that it is equipped with a regular vibrating bell instead of a magneto call bell. Especially adapted for hotel service.

Price, \$16.00



Andrae Standard No. 9

Illustrates our standard exchange and long-distance instrument, fitted with our improved Andrae carbon transmitter and single pole receiver with hard rubber shell. The magneto bells are wound to 40,000 ohms for bridging service, and 10,000 ohms for regular exchange service. Finished in oak or black walnut. Also single or double backboards with one cell wet or two cells dry battery.

No. 9, Bridging Style, without arms,	Price, \$16.00
No. 9, " " with arms,	" 17.00
No. 9, Series or Exchange, without arm,	" 14.50
No. 9, " " with arms,	" 15.50

Magneto Generators

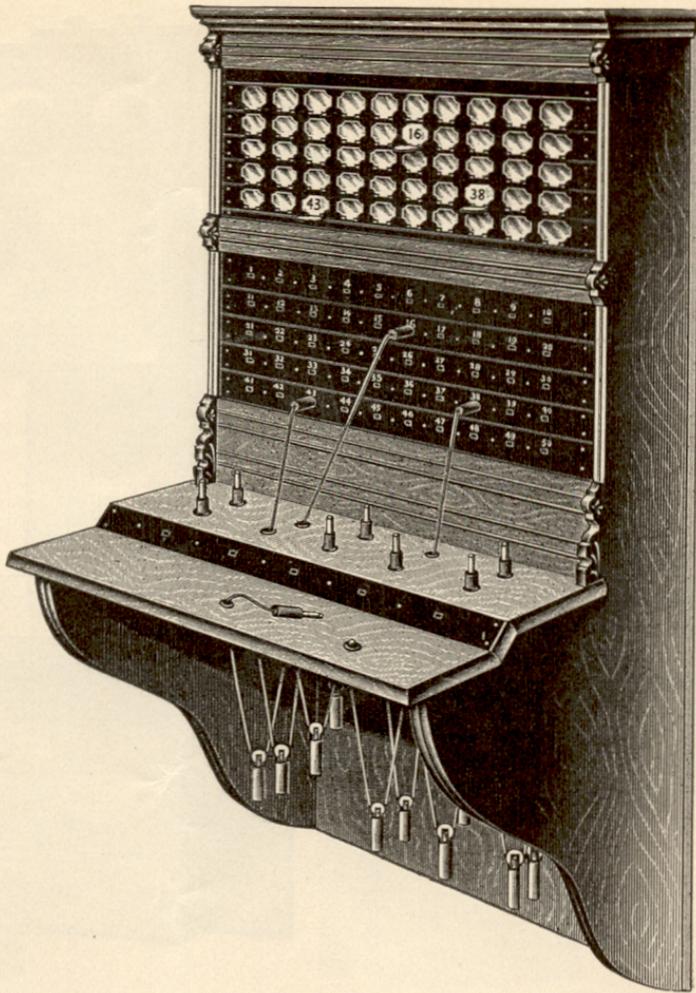
Our generators are of special design, having large field magnets, made from the highest quality of magnetic steel, improved armatures of the latest design, securing thereby a large quantity out-put, and are wound to ring through a resistance of 15,000 ohms at 90 volts. They are equipped with an automatic shunt of positive action. The ringers are of the polarized type, with centrally pivoted armatures, electrically and mechanically reliable, same being provided with a simple means of adjustment.

Our bridging type generators are wound to ring through a resistance of from 25,000 to 40,000 ohms, and are equipped with ringer coils wound to a nominal resistance of 1,000 ohms, making them extremely sensitive to magnetic current.

Telephone Switch Boards.

We are in a position to furnish telephone switch boards of the latest and most improved type, finished either in oak or black walnut, and having any number of drops required. In ordering state whether required for single or metallic circuit service. Furnished with or without night bell attachment. The most complete board on the market.

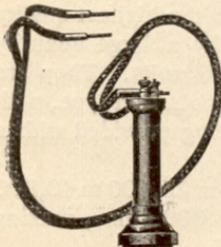
Special prices quoted on
this line.



Lightning Arresters.

We carry a full line of "Maxstadt Cut Outs Lightning Arresters" and "Multiple Style Blocks."

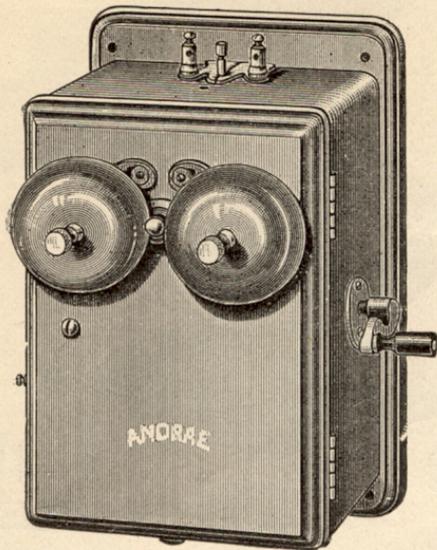
Prices on application.



Telephone Cords.

Worsted Telephone Cords, with patent tips, guaranteed the very finest in the market.

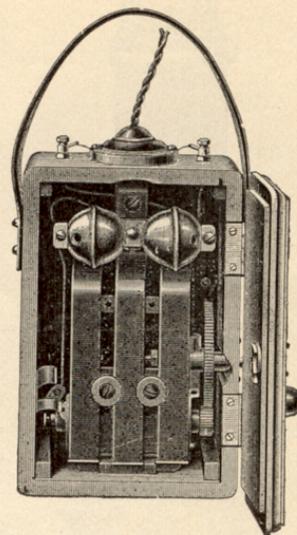
Price, . . . \$.30



Standard Magneto Bells

Furnished with gravity lever switch hook.
Finished in oak or black walnut.

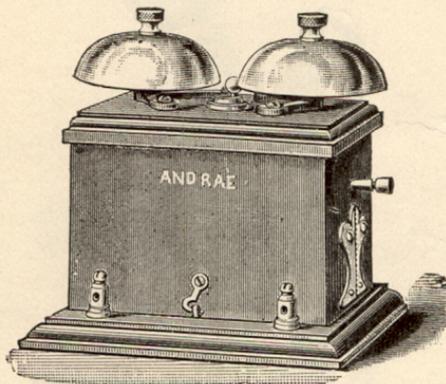
5,000 ohms,	price,	\$5.50
10,000 ohms,	"	6.75
25,000 ohms,	"	8.00
40,000 ohms,	"	10.00



Standard Testing Bells

A neat and compact testing apparatus, with the bells inside the box, thereby guarding against moisture and breaking of bells.

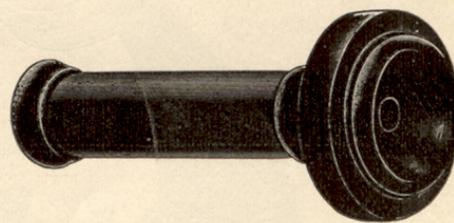
25,000 ohms,	price net,	\$5.00
35,000 ohms,	"	6.50
50,000 ohms,	"	7.50



Telephone Extension Bells

For bridge and regular service these bells are a great convenience in connection with telephones, either in your residence or factory, as they can be distributed about in different places, and whenever your telephone rings they will give the alarm and call your attention to it.

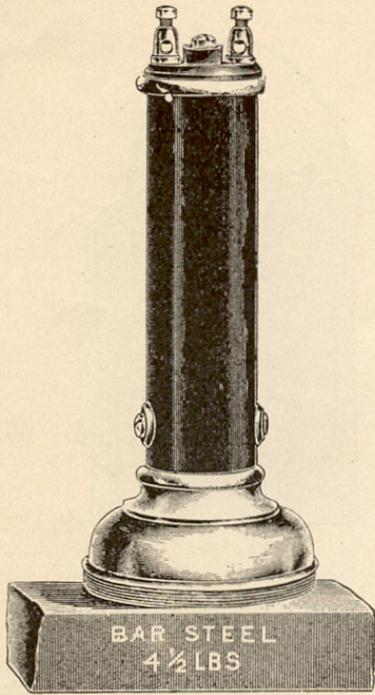
90 ohms,	price,	\$3.50
1,000 ohms,	special,	7.50



Telephone Receivers

We are prepared to furnish American telephone receivers either in genuine hard rubber or composition shells at the very lowest prices. All our receivers have compound bar magnets and box wood spools, wound with silk magnet wire. No better receiver of this standard pattern can be purchased at any price.

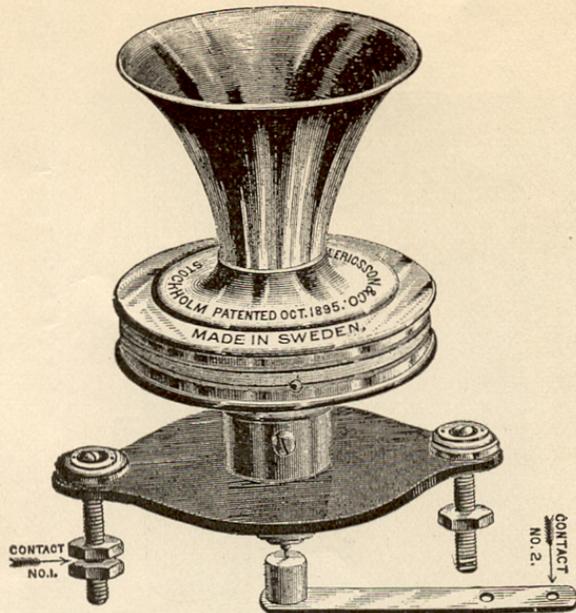
Hard rubber type,	price,	\$1.75
Composition type,	"	1.50



Ericsson's Swedish Bipolar

All metal, Samson receiver, no adjustment, never changing.

Price, \$3.20



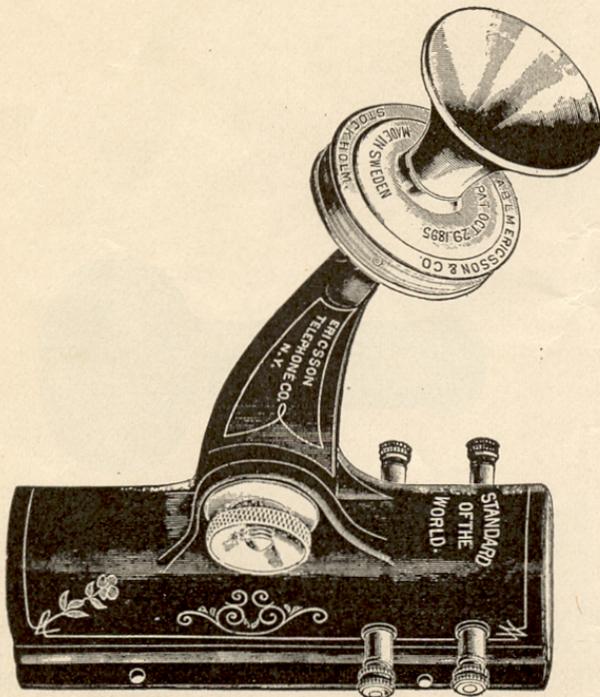
Ericsson's Swedish Coal Grain Microphone

No packing, no adjusting, no bad contacts. Why? They have all platinum contact points.

Price, \$4.00

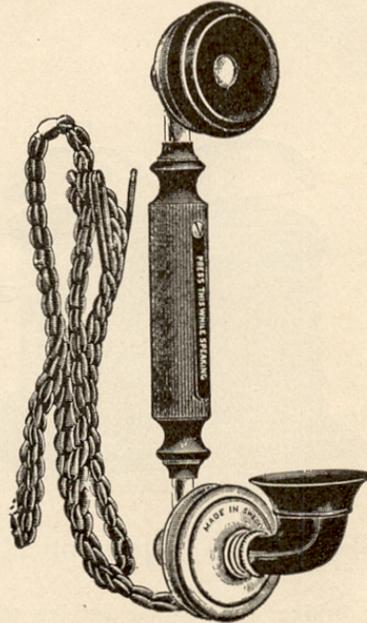
Beware of imitations. All genuine microphones are stamped "A.B.L.M. Ericsson & Co., patented Oct. 29, '95. Made in Sweden."

This transmitter has a reputation in all civilized countries, and is being used not only on our instruments but by a great many of the leading manufacturers of telephones in this country, and we say, without fear of contradiction, that it is perfection as a transmitter. It can be attached to any make of telephone, and will operate equally well on long or short lines. In ordering see that you get the genuine goods. See that all goods are stamped, "Made in Sweden." They are the only genuine.



Ericsson's Swedish Adjustable Arm Transmitter

No. 577. Price, with induction coil, \$6.55
 No. 578. Price, without " " 6.00



Ericsson's Coal Grain Hand Micro-Telephone

With contact. Regular extension telephone or desk set. A complete telephone within itself, so far as talking and receiving are concerned.

Price, \$10.00



Batteries and Battery Zincs

Andrae Carbon Batteries,	price each,	\$.45
Samson Batteries, No. 2,	“	1.25
1900 Dry Batteries,	“	.35
Andrae Dry Batteries,	“	.35
O. K. Dry Batteries, (Style C.)	“	.50



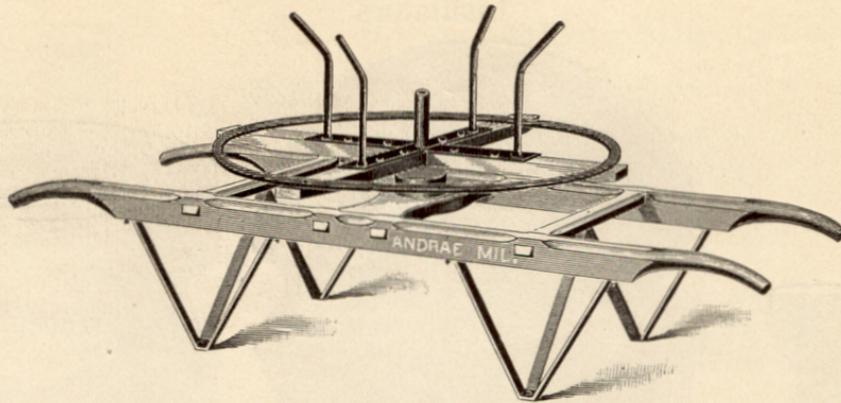
We carry a full line of Battery Composite, Mercury Zincs and the regular LeClanche and Laclede amalgamated zincs.

We furnish with telephones the necessary batteries, either dry or wet. We recommend the wet cell on bridge or long distance work, and the dry cell for local or exchange work. The dry battery requires very little attention until exhausted. Their average life on exchange work is not less than twelve months. After making exhaustive tests on wet cell batteries for telephone work, we are able to put on the market a simple carbon sal ammoniac cell, perfect in construction, particularly adapted to telephone work. The carbon is supplied with heavy non corrosive connectors, and forms in itself a practically air tight cover for the jar. It long since passed the experimental stage, and is recognized by the leading telephone companies of the country as the most serviceable battery in use for telephone work.

Electro-motive force is 1.5 volts, and its internal resistance is .7 of an ohm at the start, and continues until the zinc is consumed, or the solution exhausted. The great advantage claimed for this battery is that in case of a short circuit, the battery can be made as strong as when first set up, by thoroughly washing in warm water, drying the carbon cylinder, and substituting new zinc and fresh sal ammoniac. The zinc furnished with this battery is made from the finest rolled zinc and well amalgamated.

We wish to call special attention to the Andrae 1900 dry battery for telephone and open circuit service. This battery has the highest E. M. F., and the largest current yet produced by any dry battery. We positively guarantee every battery manufactured by us, to be free from local action or deterioration while on open circuit, and in service to show the greatest recuperation and longest life.

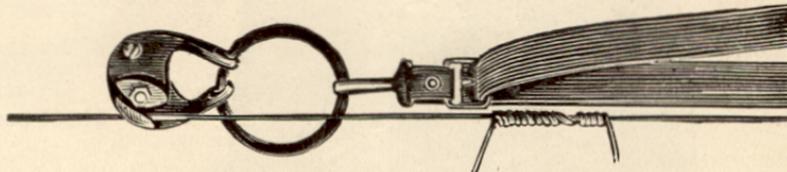
It will pay you to investigate its merits for telephone work. Telephone companies who have used this battery, show their appreciation of a good thing by duplicating their orders.



Our Combination Pay-Out-Reel

Is thoroughly first-class in every respect. Built of hardwood and well braced. Will last a life-time. Woodwork painted red. Ironwork black.

Price, - - - \$12.00



"Come Along" Wire Stretcher

Regular size, No. 8 wire, and finer, price, \$.60
Larger size, - - - - - " 1.25



The Andrae Loy

The most useful construction tool made. Used in digging holes for setting telegraph poles. Handle 7 feet long.

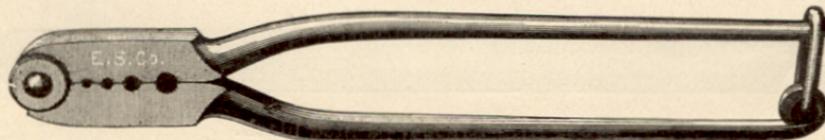
Price, - - - \$4.00



Dicke Western Pattern Climber

Climbers in Eastern or Western pattern.

Western pattern, - per pair, \$1.25	Eastern pattern, - per pair, \$1.50
Straps Western pattern, " .75	Straps Eastern pattern, " 1.00



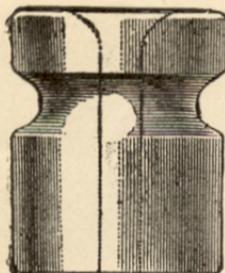
Dicke Splicing Clamps

2 or 4 hole pattern. Made of finest steel.
Price, - \$1.70

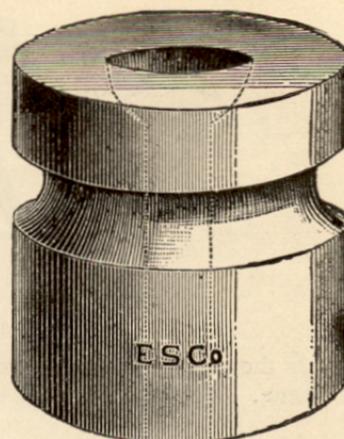
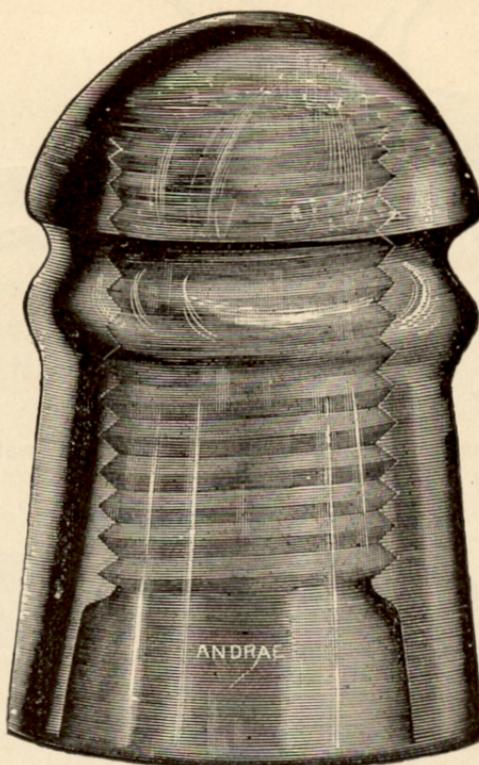
We carry in stock a full and complete line of linemen's tools of every description. We are in a position to fill all orders for tools promptly.

Prices quoted on application.

Insulators



STYLE "C"
Porcelain Insulator,
Price,
\$10.00 per M.



STYLE "A"
Porcelain Insulator,
Price,
\$12.00 per M.

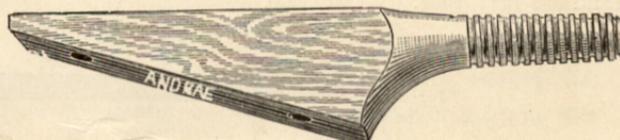
Pony Glass insulators, price, \$30.00 per M.
We carry a full line of every glass insulator manufactured.

Wood Pins

	Small Lots.		Thousand Lots.	
1 1/4", oak,	-	-	-	price, \$18.00
1 1/2", oak,	-	-	-	" 18.00
1 1/4", locust,	-	-	-	" 30.00
1 1/2", locust,	-	-	-	" 30.00
1 1/4", oak,	-	-	-	price, \$14.00
1 1/2", oak,	-	-	-	" 14.00
1 1/4", locust,	-	-	-	" 27.00
1 1/2", locust,	-	-	-	" 27.00



Standard Oak Pin, painted red.



Standard Oak Bracket, painted red.



Standard Cross Arm, painted two coats red.

Finished size 3 1/4 x 4 1/4 bored for 1 1/2 pins; bored for 2 1/2 bolts unless otherwise specified.
Special light telephone arm made from 2 3/4 x 3 3/4 stuff, bored for 1 1/4 pins.



Cross Arm Braces, painted black.

Spikes, Lag Screws, Washers, furnished at lowest market prices.

Galvanized Telephone Wire

We are in position to furnish the finest Galvanized Iron Telephone Wire at closest market prices. We carry a large stock constantly on hand and can make prompt shipments.

A mile of No. 12 weighs 164 lbs. A pound contains 33 ft.
A " No. 14 " 96 lbs. A pound " 55 ft.

Special prices on application.



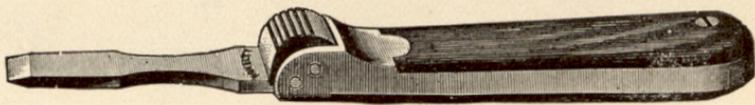
Soldering Salts

Cheaper than acid. Saves time and labor. No fumes or smells. Full directions on evrey bottle.

Price, per ½ lb. bottle, \$.50

Solder

Wire Solder, per lb., \$.25
Bar Solder, ½x½, per lb., .25



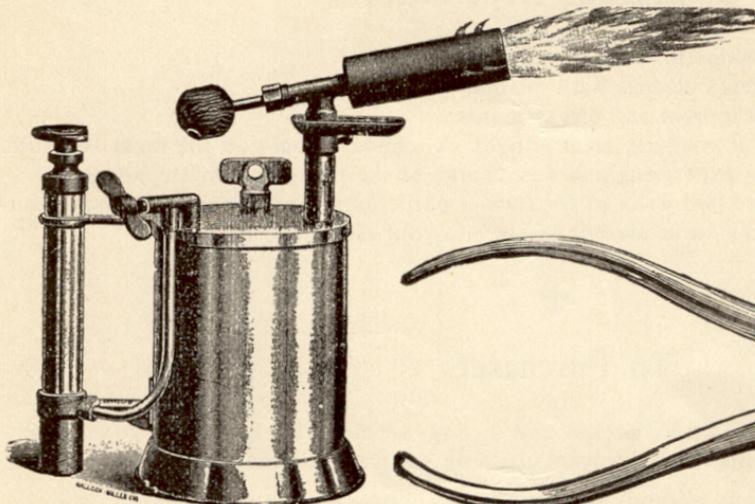
Novelty Screw Driver

Blade made of finest cast steel. A handy tool for making connections on telephone extension bells and switch boards. A most useful pocket piece and one you cannot do well without.

Price, each, \$.50

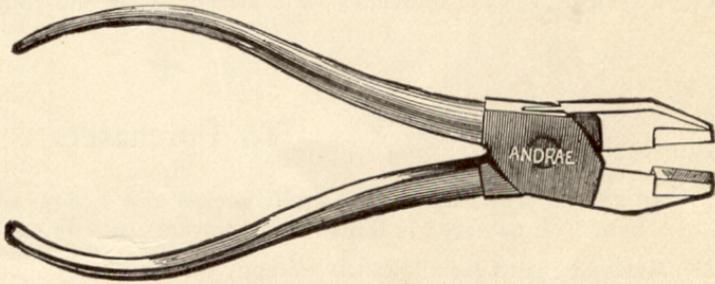
Wood Cleats

For fastening insulated wire.
Price, per C. \$.50



Staples

Round head coppered,
Price, per lb. 25c
Square head blued,
Price, per lb. 25c

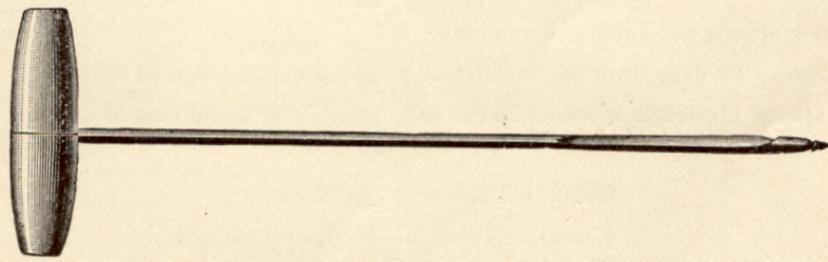


Gasoline Blow Torch

Just the tool required by your lineman for soldering joints. Will not blow out in the strongest wind.
Price, \$5.00

Pliers, All Steel, Side Cutting

Price, each, 5 in. \$1.00
" " 6 in. 1.25
" " 7 in. 1.50
" " 8 in. 1.75



Bell Hangers' Gimlets

Made of one piece finest English steel.
¼x20 inches, per doz., \$5.00
¼x24 " " 5.50
¼x30 " " 6.00
¼x36 " " 7.50

Electrical Supplies

In connection with our extensive Telephone Department we carry a complete line of electric door bells of every description; hotel and house annunciators, burglar alarms, in fact, everything electrical. Also an up-to-date line of high grade electric light supplies. We are in position to make prompt shipments and are always ready to quote goods at the lowest market price.



Dynamos and Motors

We are western agents for the Sprague Electrical Company and carry a full line of their dynamos and motors in Milwaukee stock which enables us to make prompt shipment. This Company's apparatus is too well known to need any introduction. Each and every machine is put through a thorough test and rating before leaving the factory; a guarantee accompanies each machine as to its efficiency, durability and workmanship.



Contracting Department

We make plans and estimates for all kinds of wiring.

We install private or isolated electric light plants.

We install complete electric light and power plants.

We are pioneer makers of modern electric light switchboards built on the most scientific plans and specifications, having expert engineers in charge of the Construction Department.

We should be glad to have you write us for further particulars if you are contemplating putting a system of power transmission or electric lights into your factory or town.



To Purchasers

1. All apparatus and material carefully packed and receipts obtained for same "in good condition." If damaged in transit make prompt claim on the transportation companies.
2. Make all claims for allowance promptly on receipt of shipment.
3. We are ready at all times to correct errors.
4. We aim to fill all orders promptly and correctly. Please state when order is placed how you want shipment made.
5. Number, quantity and description of apparatus should always be given on orders.
6. When telegraphing use catalogue numbers.
7. Terms cash or 30 days from date of invoice unless otherwise agreed upon.
8. In case special apparatus is wanted write fully in order to avoid loss of time.

Write for Discounts and Net Prices.

Correspondence Respectfully Solicited.

Respectfully yours,

JULIUS ANDRAE & SONS CO.

MILWAUKEE, WIS.