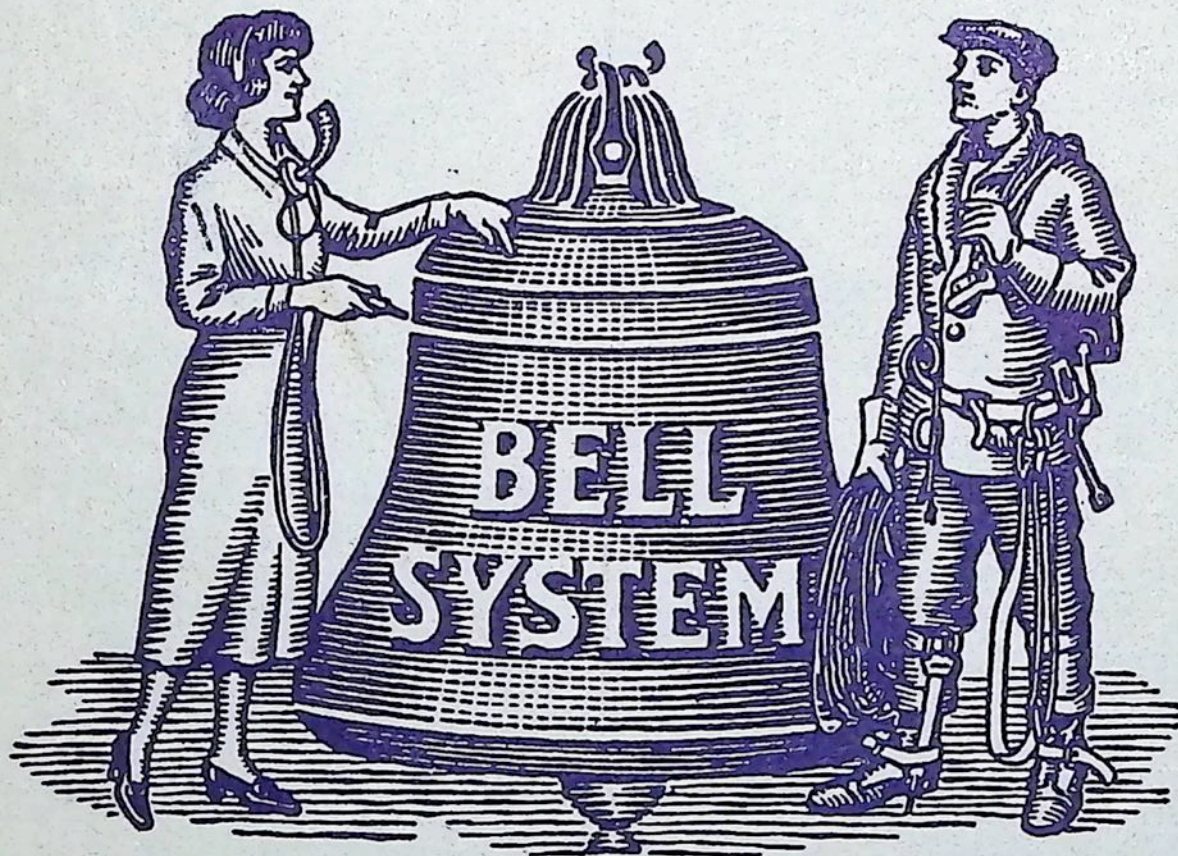
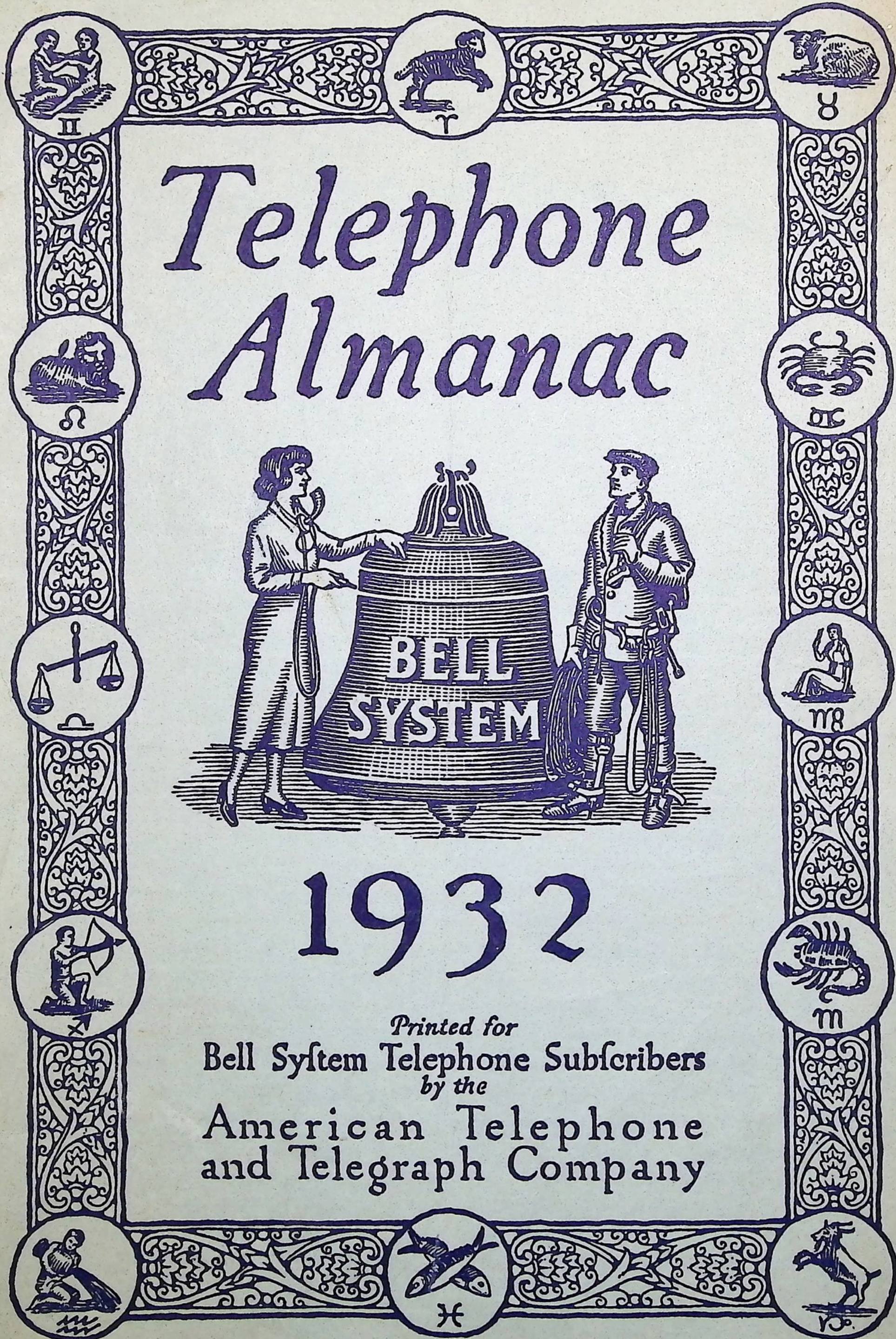


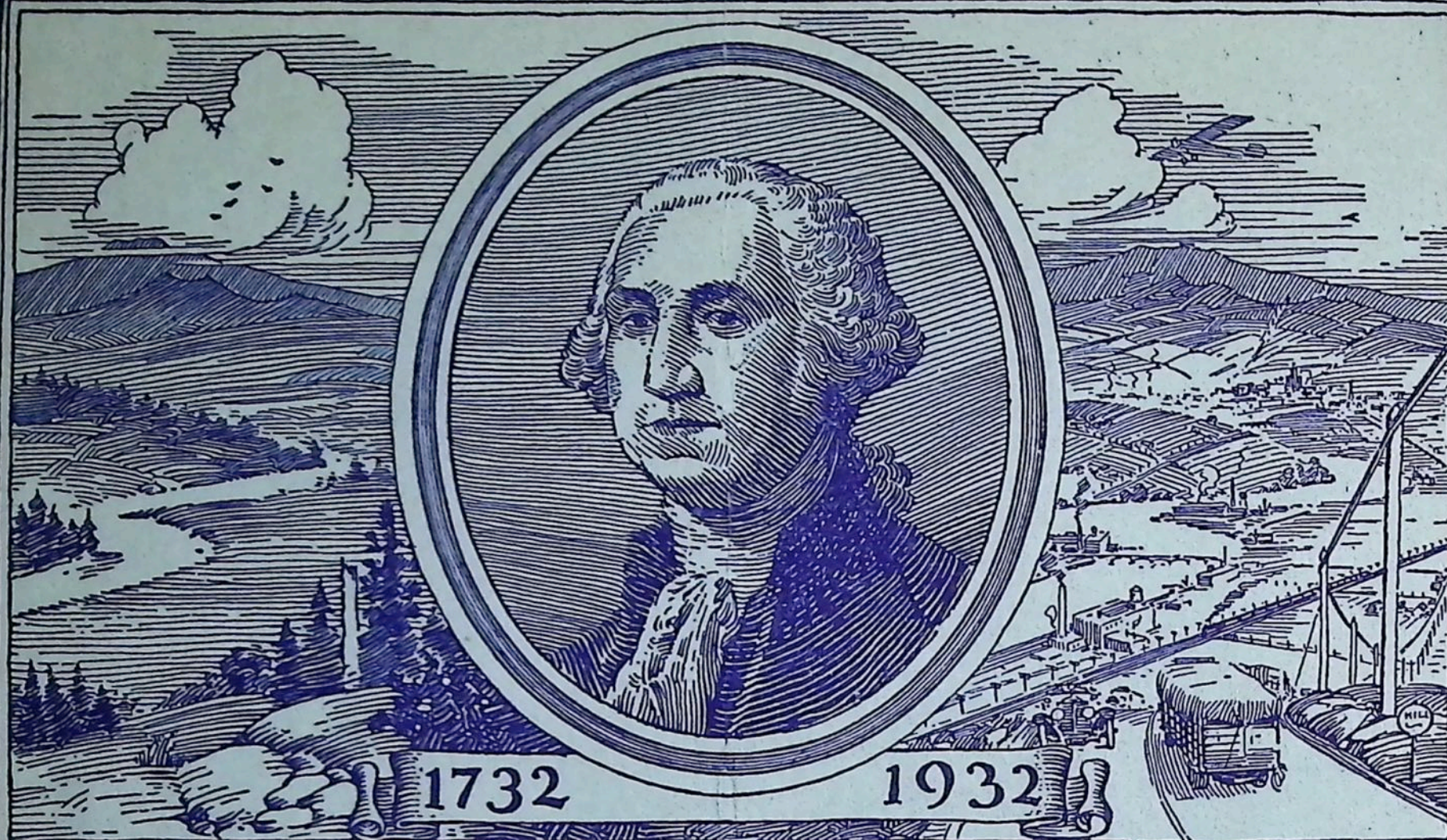
Telephone Almanac



1932

Printed for
Bell System Telephone Subscribers
by the
American Telephone
and Telegraph Company



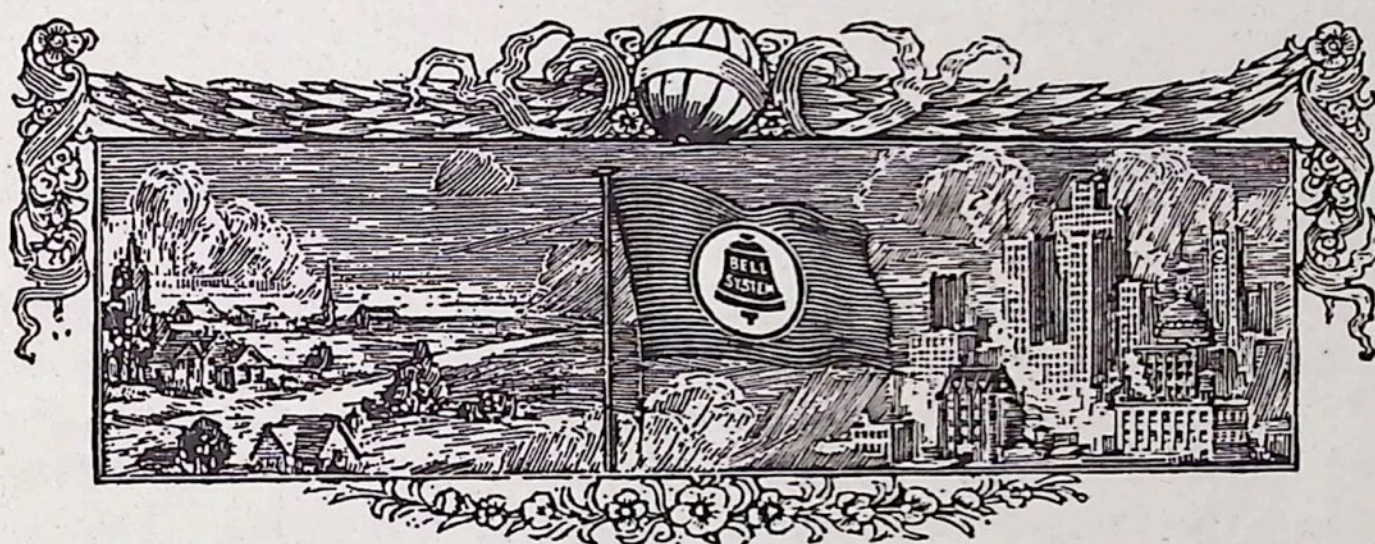


A LINK IN THE CHAIN OF FEDERAL UNION

IN observing the two hundredth anniversary of the birth of Washington, the soldier and statesman, America may well remember also the gifts he gave his country in private life, as an exponent of commonsense citizenship and practical patriotism. ¶ Washington foresaw, as few others did, the problems of growth faced by the nation he had helped to found; the dangers inherent in its expansion; the political perils arising from the isolation of its frontiers; the imperative need of communication facilities as means of promoting common understanding and cooperation. ¶ With troubled eyes he marked the march across the mountains of settlers seeking homes where they would be both cut off from their countrymen and thrown into contact with rival races. To Henry Lee he wrote: "Open *all* the communications which nature has afforded between the Atlantic States and the western territory, and encourage the use of them to the utmost The ties of consanguinity, which are weakening every day, will soon be no bond, and we shall be no more a few years hence, to the inhabitants of that country, than the British and Spaniards are today." To William Irvine he wrote: "I wish sincerely that every door to that country may be set wide open." In another letter to Lee he said: "Sure I am there is no other tie by which they will long form a link in the chain of federal union." ¶ Washington was, indeed, America's first advocate of the development of communication as a factor in assuring national solidarity. He thought, it is true, of communication in terms of canals and highways, for railway and airplane, telegraph and telephone, were as yet unborn. But across the years his words of nearly a century and a half ago ring as true as if they were uttered today: "Open *all* the communications Encourage the use of them to the utmost a link in the chain of federal union."

TELEPHONE ALMANAC 1932

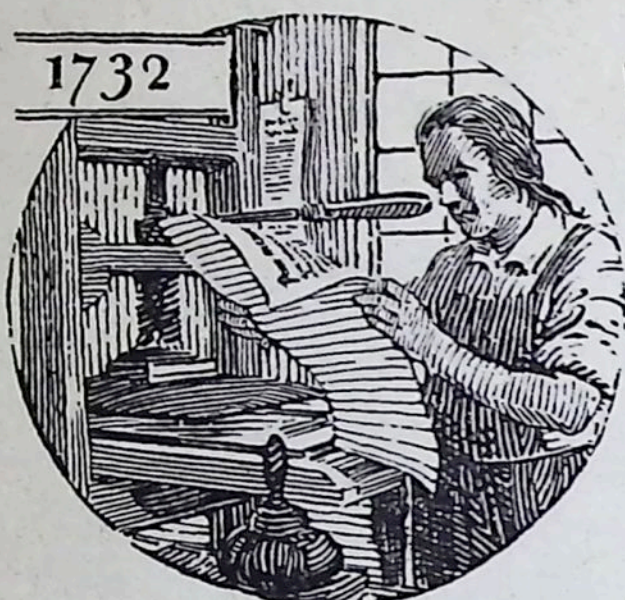
*Being (until March 10th) the 56th year of the Telephone
and (until July 4th) the 156th of American Independence*



- CONTAINING valuable information for Farmers, Business Men, Housewives, Students and other Telephone Users.
- AND ALSO a Chronicle of twelve Historical Events in the History of these United States which serve to illustrate the importance of Communications in shaping the Destiny of the Nation and in bringing its several Commonwealths together into a single, united National Community.
- AND MORE particularly, a Compendium of Fascinating information in regard to the Telephone, its Invention, its Development and its present Importance; Descriptive Matter as to the Bell Telephone System, the Men and Women who compose it, and the Buildings, Poles, Wires, Cables and divers other Mechanical Contrivances and Instruments which constitute its Material Equipment.
- *In this issue will be found various and sundry items which have been included in commemoration of the 200th anniversary of the birth of George Washington*

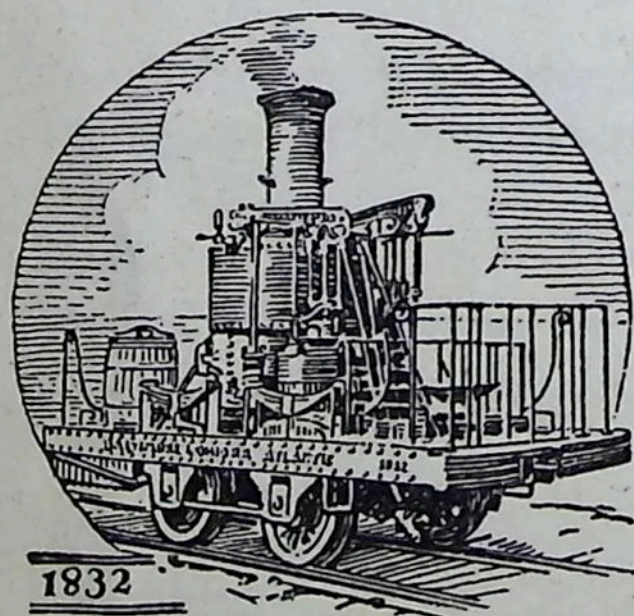
American Telephone & Telegraph Company
195 Broadway New York

WASHINGTON and FRANKLIN:



In 1732, the year of Washington's birth, another illustrious American, Benjamin Franklin, announced the forthcoming appearance of the first of a long series of "Poor Richard's Almanacks". These quaint publications were famous for their homely maxims advocating industry and frugality. Poor Richard's proverbs, however, preached more than pinch-penny penuriousness. They taught wise spending as well as wise saving. They counseled that neither time, energy nor money be spent except for that which well repays its cost in real value received. By converting thousands of readers to this homely philosophy, they had a profound and lasting effect on American social and business life.

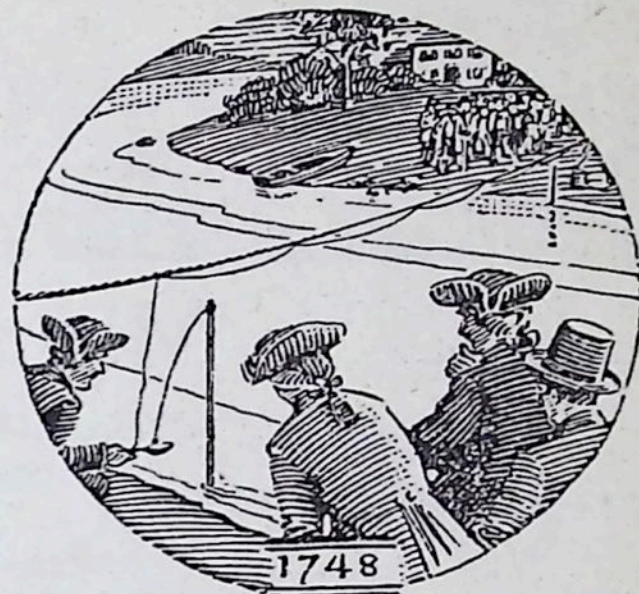
In 1748, Washington, while surveying beyond the Blue Ridge, first faced real frontier conditions. This was one of many experiences which taught him the true meaning of isolation and made him an ardent advocate of adequate communication facilities. To him, and in large measure, Americans of his day owed their recognition of the value of effective means of keeping the widely separated sections of the country in touch with each other.



At the one hundredth anniversary of Washington's birth, the few railroads which had been built in America were still innovations. Mails were carried almost entirely by post rider or stage coach. But these few puffing locomotives proved that Americans had forgotten neither Washington's pleas for better communication facilities as a means of promoting political, social and economic unity in the nation, nor Franklin's common-sense philosophy of thrift. The railroad shortly demonstrated that it could provide communication that was not only swift and dependable, but high in value in proportion to its cost.

Their Place in American Communication History

...ave more.
Chagrined a little that we have been hitherto able to produce nothing in this way of use to mankind; and the hot weather coming on, when electrical experiments are not so agreeable, it is proposed to put an end to them for this season, somewhat humorously, in a party of pleasure, on the banks of *Schuylkill* *. Spirits, at the same time, are to be fired by a spark sent from side to side through the river, without any other conductor than the water; an experiment which we some time since performed, to the amazement of many †.

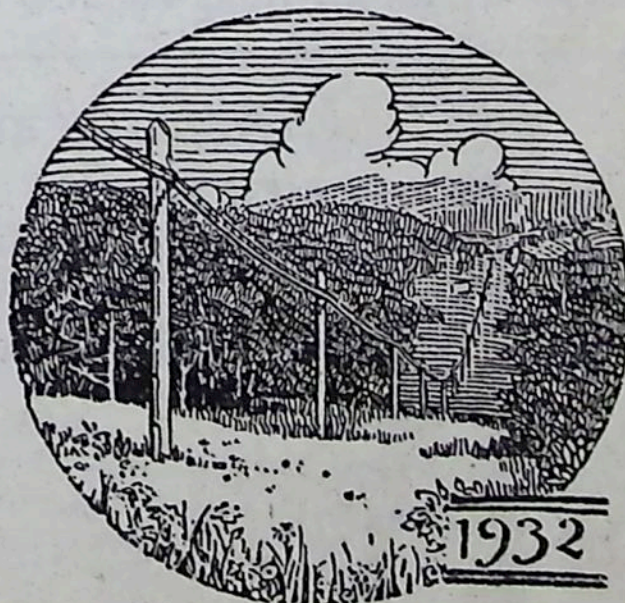


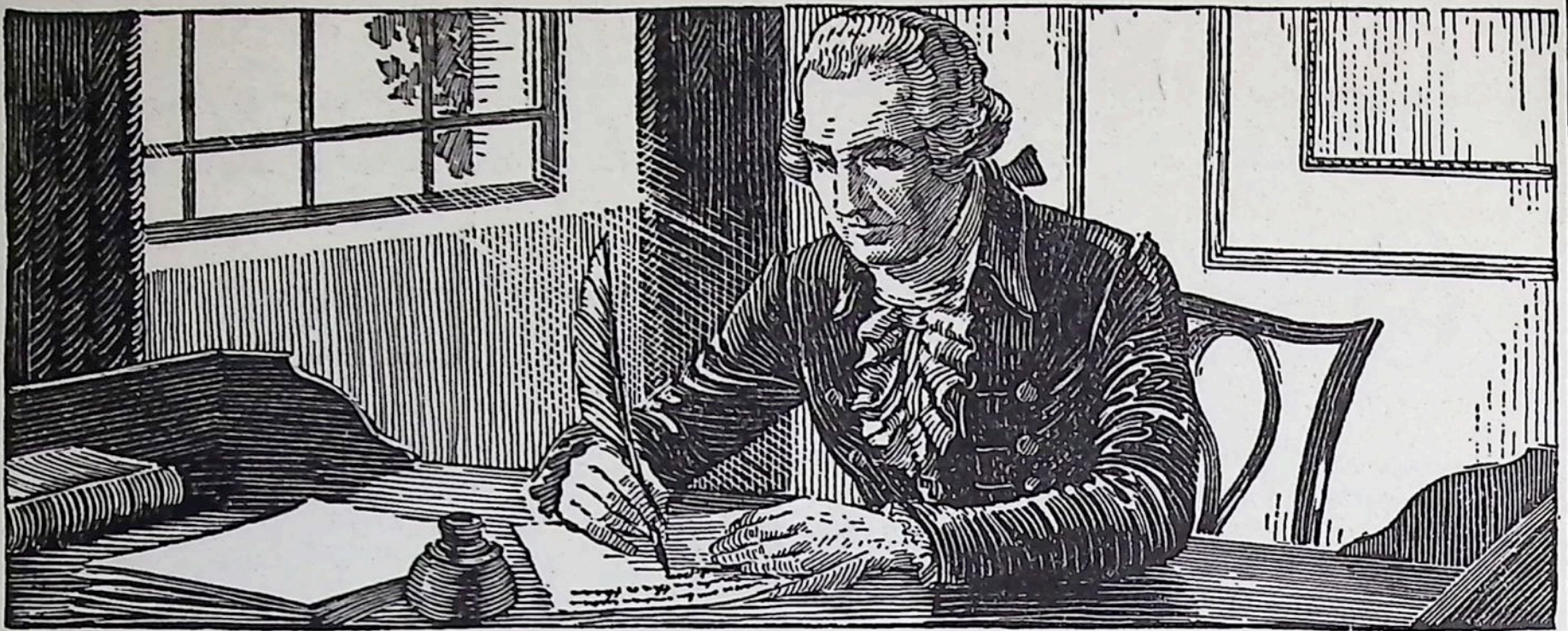
While Washington, in 1748, was beginning to see, at first hand, America's need for better communication facilities, Franklin was performing, in Philadelphia, a series of electrical experiments that indirectly played an important part in meeting this need. Reproduced above is the first record of the transmission, in America, of electricity over a distance. The spark which crossed the Schuylkill foreshadowed the far-flung systems of electrical communication now serving the United States. Franklin's entertaining accounts of his experiments prompted others to repeat them and try new ones. Performing electrical "parlor tricks" became a popular pastime. Colleges established crude laboratories for the study of "Natural Philosophy."



To such a laboratory, at what is now Princeton University, there came, exactly one hundred years ago, a young professor who had already won fame at Albany Academy for his research in electricity and magnetism—Joseph Henry. His inventions and discoveries were fundamental contributions to the communication art. He and others whom he influenced were pioneers of what has been called "the televictorian age—the age of the conquest of the far by telegraph and telephone, by radio and motor."

In 1875, building on foundations laid by Henry, Alexander Graham Bell discovered the principle of the electrical transmission of speech. Inherent in the telephone is a unique ability to promote—as Washington advocated in urging better communication facilities—the political, social and economic unity of the American nation. Equally inherent in it is its ability to enable its users to obtain—as Franklin counseled in his thrift proverbs—a maximum of value for a minimum of expenditure of time, energy and money. These fundamental characteristics of the telephone have enabled it to become a nation-wide instrumentality of service.





Mightier than the Sword

*"Beneath the rule of men entirely great
The pen is mightier than the sword.*

** * * * Take away the sword—
States can be saved without it!"*

—Bulwer-Lytton; Richelieu

IN the hands of Washington and of others who with him won freedom for America, as in the hands of the French cardinal to whom the dramatist has attributed these words, the pen was a potent weapon. Many of the Revolution's crucial victories were gained because of written appeals for men, for money or for renewed devotion to the patriot cause; many of its darkest periods of despair ended in the dawning of new hope because there were pens to write as did that of Thomas Paine in his plea beginning: "These are the times that try men's souls."

For centuries the pen provided the chief or only channel by which, when men were widely separated, mind could be placed in touch with mind. It was man's most powerful instrumentality of shaping public opinion or enlisting support for country or for cause. States were saved through the power of the written or printed word.

Today, the power of the pen is supplemented by that of an instrumentality which carries the spoken word across continents and oceans—instantly. About twenty million telephones in the United States afford their users means of exchanging viewpoints and opinions, and thus make for common understanding. Hundreds of radio broadcasting stations, linked by long distance telephone wires, place the nation's millions within reach of the voices of their leaders of thought, and thus make for enlightened citizenship. Wire and radio telephone channels reach to other lands, and thus make for international amity. In her relations at home and abroad, America has been made immeasurably more secure by her far-flung facilities for communication by the spoken word.

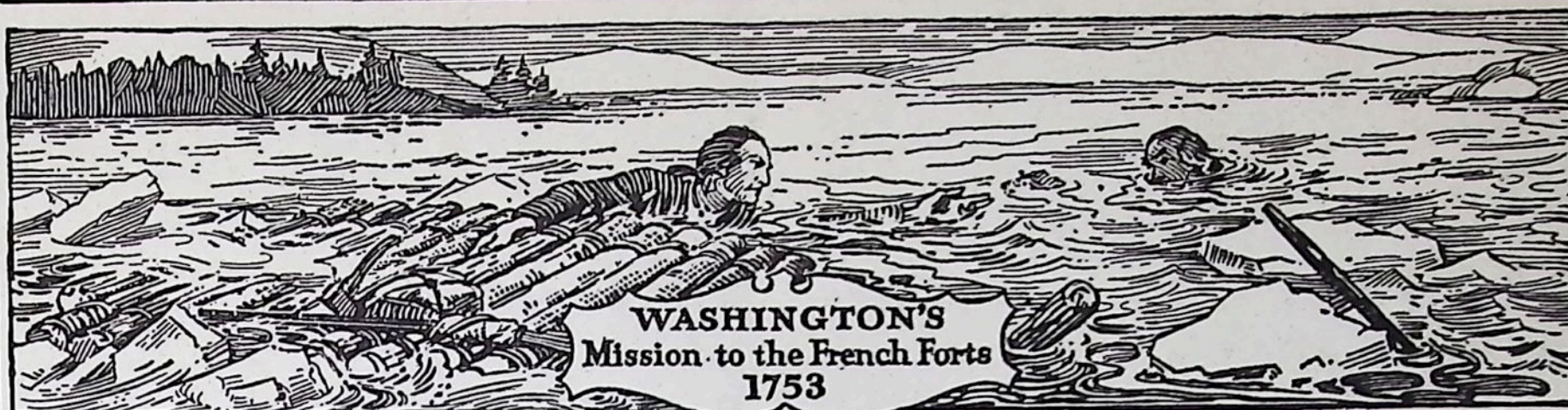
Morning and Evening Stars for 1932

MORNING

MERCURY	JUPITER
Jan. 1—Feb. 26	Jan. 1—Feb. 7
Apr. 10—June 13	Aug. 26—Dec. 31
Aug. 17—Sept. 29	SATURN
Dec. 4—Dec. 31	Jan. 16—July 24
VENUS	URANUS
Jun. 28—Dec. 31	Apr. 9—Oct. 14
MARS	NEPTUNE
Feb. 1—Dec. 31	Jan. 1—Feb. 26
	Aug. 31—Dec. 31

EVENING

MERCURY	JUPITER
Feb. 26—Apr. 10	Feb. 7—Aug. 26
June 13—Aug. 17	SATURN
Sept. 29—Dec. 4	Jan. 1—Jan. 16
VENUS	July 24—Dec. 31
Jan. 1—June 29	URANUS
	Jan. 1—Apr. 9
MARS	Oct. 14—Dec. 31
Jan. 1—Feb. 1	NEPTUNE
	Feb. 26—Aug. 31




1st mo

January

1932

On January 16, 1754, George Washington reached Williamsburg, Va., after a long and dangerous journey to the Ohio. He had carried to the French commandant at Fort Le Boeuf, near the present site of Waterford, Pa., not far from Lake Erie, a message from Governor Dinwiddie, of Virginia, protesting the French occupation of the Ohio Valley, which the English claimed. Leaving Williamsburg on October 31, 1753, Washington reached Fort Le Boeuf on December 12. While returning he twice faced death: once when fired upon by a treacherous Indian guide and once when thrown into the icy waters of the Allegheny River, which he was crossing on a raft. His delivery of Dinwiddie's message was Washington's first important public service.

MOON'S PHASES

Eastern Time D.H.M.	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.	
7 6 29 P.M.		
15 3 55 P.M.		
23 8 44 A.M.		
30 4 32 A.M.		

JANUARY hath 31 days

"Words are the soul's ambassadors."—Howell

GROWING WITH AMERICA'S NEEDS





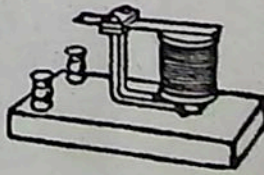


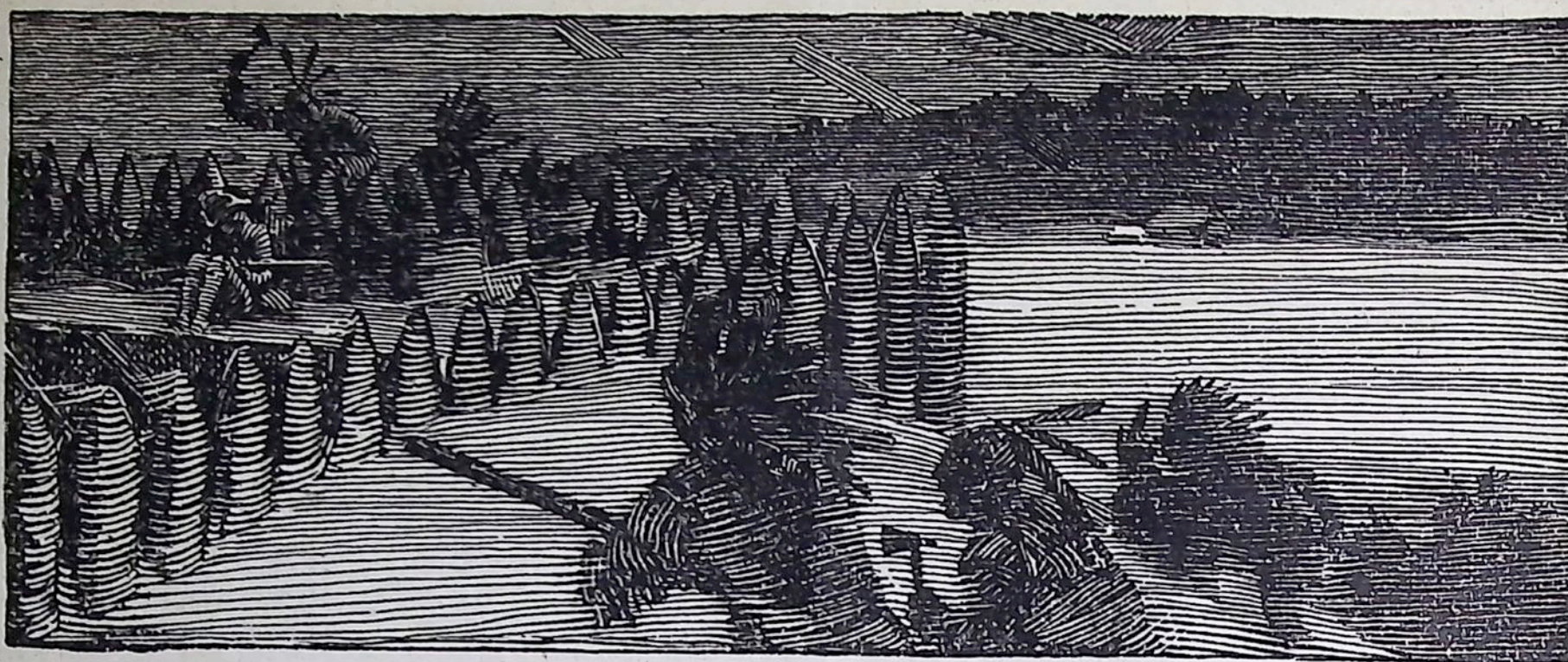
In thirty years the plant investment of the Bell System has grown from about \$200,000,000 to more than \$4,200,000,000. The amount of money invested in new plant each year, during the past five years, has greatly exceeded the entire valuation of the plant in service less than a third of a century ago.

Its total plant investment passed \$1,000,000,000 in 1917; \$2,000,000,000 in 1924; \$3,000,000,000 in 1927 and \$4,000,000,000 in 1930. At the end of 1931, its investment in plant was made up, in round numbers, of the following amounts: subscribers' equipment, \$505,000,000; central office equipment, \$1,100,000,000; aerial plant, \$1,175,000,000; underground plant, \$925,000,000 and land and buildings, \$505,000,000, making a total more than \$4,200,000,000.

This enormous growth in plant has been in response to ever-increasing demands for telephone service. Bell-owned and Bell-connecting telephones have increased from approximately 850,000 in 1900 to about 20,000,000 in 1932.

About 32,800,000 telephones, on six continents, are within reach of every Bell System subscriber.

- 1—Fr.—NEW YEAR'S DAY. First telephone exchange in Maryland opened at Baltimore, 1879.
- 2—Sa.—Georgia (4th state) ratified U. S. Constitution, 1788.
- 3—Su.—Battle of Princeton, N. J., 1777.
- 4—M.—First convention to frame Arkansas state constitution, 1836. Utah admitted to the Union, 1896. Send Thy New Year Greetings to Friends by Long Distance
- 5—Tu.—British plundered Richmond, Va., 1781.
- 6—W.—Epiphany. New Mexico admitted to the Union, 1896.
- 7—Th.— Opening of commercial radio telephone service between New York and London, 1927. Millard Fillmore, 13th President, born, 1800.
- 8—Fr.—Washington reported his troops at Morristown, N. J., "almost perishing with want," 1780.
- 9—Sa.—Connecticut (5th state) ratified U. S. Constitution, 1788.
- 10—Su.—Gas light first used in Indianapolis, Ind., 1852.
- 11—M.—Act of Congress establishing Denver mint introduced, 1862.
- 12—Tu.—Battle of Prudence Island, R. I., 1776.
- 13—W.—Bell System operators handle millions of local and long distance calls daily.
- 14—Th.—Transoceanic radio telephony from New York to London demonstrated by Bell System engineers and officials, 1923. 
- 15—Fr.—Regular Quarterly Dividend date, American Telephone and Telegraph Company.
- 16—Sa.—First legislature of Nebraska met at Omaha, 1855.
- 17—Su.— Northern Transcontinental Telephone Line, between Chicago and Seattle, opened, 1927.
- 18—M.—Weekly mail service between United States and Canada established, 1797.
- 19—Tu.—Gov. Charles Brent killed at Taos, N. M., 1847.
- 20—W.—Richard Henry Lee, Revolutionary patriot, born, 1732.
- 21—Th.—Mexico permitted Americans to colonize Texas, 1821.
- 22—Fr.—Panama Canal treaty signed, 1903.
- 23—Sa.—Battle of Encarnacion, 1847.
- 24—Su.—Septuagesima Sunday. Samuel F. B. Morse first demonstrated the electric telegraph, New York University, New York, 1838.
- 25—M.— Transcontinental Telephone Line connecting New York and San Francisco opened, 1915.
- 26—Tu.—Michigan admitted to the Union, 1837.
- 27—W.—Webster's famous "Reply to Hayne," 1830.
- 28—Th.—First commercial telephone exchange in the world opened at New Haven, Conn., 1878.
- 29—Fr.—Wm. McKinley, 25th President, born, 1843. Kansas admitted to the Union, 1861.
- 30—Sa.—Bergen County, N. J., purchased from Indians, 1658.
- 31—Su.—Harmonic telegraph receiver, on which Bell was working, June 2, 1875, when he verified his theory of transmitting speech electrically. 



The Guard Who Slept

QUEEN ANNE had declared war against the French. Rumors of skirmishes along the border, and of an occasional Indian massacre had reached the little town of Deerfield, and precautions had been taken against a surprise attack of the French and their red-skinned allies. A stockade had been built and, on this February night in 1704, a sentinel was on duty, slowly pacing his beat. All others in Deerfield had retired long since and were deep in sleep.

It is difficult to realize that this little Massachusetts village, now only a few hours by motor from Boston, was then a frontier outpost, completely isolated. Hatfield was the nearest neighbor on the South. Miles of wilderness lay between it and the next settlements on the east and west. To the north, three hundred miles away, was

the nearest French outpost in Canada.

Toward morning, the guard sat down to rest, nodded and fell asleep. The rest is history—the sudden onslaught of painted savages, the mingled cries of women and children as they were dragged away captives, men fighting grimly a losing fight and mercilessly killed.

The dangers of such frontier conditions have passed. There are, however, many communities—and many individual homes—which would be equally isolated and equally helpless in emergencies if it were not for the protection afforded by a communication service which never sleeps, a sentinel whose watchfulness never flags.

As a protector of life and property, America's telephone service is a national asset the value of which cannot be measured.

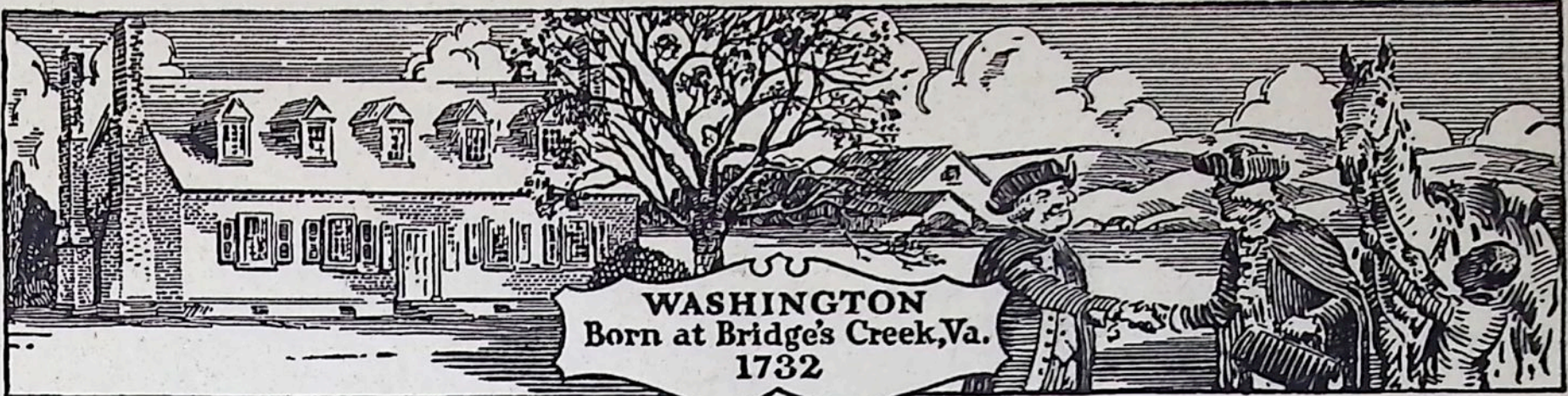
WHEN NATURE CHALLENGES

BETWEEN the more violent natural forces—snow, sleet, tornado, fire or flood—and the men who maintain America's nation-wide network of telephone facilities, there is an unending warfare. Like sentries at their post, the Bell System's repair crews stand alert, ready to go into action at a moment's notice to restore service which has been interrupted. Forgetful of self, these guardians of the wires accept Nature's challenge and unflinchingly face her in her angriest moods. Their

creed is simply stated: "The message must go through!"

Conscious of the dependence of the public on the facilities which it is their duty to keep constantly ready for service, they translate this creed into a devotion to duty that frequently is marked by the highest form of heroism. They play a vital part in providing for America a local and long distance service upon which millions of telephone users have learned that they may confidently rely.





2nd mo

February

1932

On February 22 (Feb. 11, O.S.) 1732, George Washington was born at Bridge's Creek, Westmoreland County, Va. His birthplace, a typical Virginia plantation house, was destroyed by fire in 1780, but is now being restored. Only sixteen years before his birth, the first white men had crossed the Blue Ridge. In 1732, much of Virginia between tidewater and the Alleghenies was still unsettled. The more remote plantations had little social or commercial intercourse with the towns to the south and east, and none with the regions beyond the mountains. While Washington was still a boy, however, pioneers began pushing outward the frontiers of civilization—and creating a demand for more adequate means of communication with their outpost settlements.

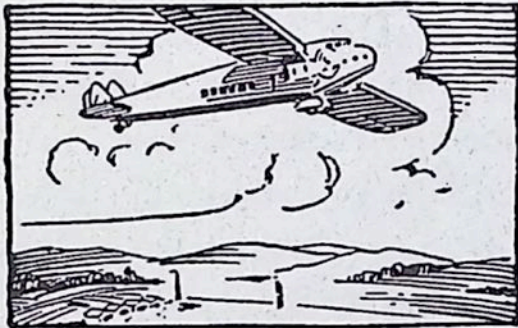
MOON'S PHASES

Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
6 9 45 A.M.	
14 1 16 P.M.	
21 9 7 P.M.	
28 1 3 P.M.	

FEBRUARY hath 29 days

"Keep wel thy tonge, and keep thy freend."—Chaucer

SAFEGUARDING AIR HIGHWAYS

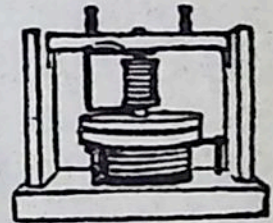


Two-way radio telephone apparatus developed by engineers and scientists of Bell Telephone Laboratories and manufactured by the Western Electric Company, together with the teletypewriter service provided by Bell System facilities have helped to make airplane travel in America immeasurably more safe for pilots and passengers.

Many leading air transport lines have linked their flying fields by teletypewriter circuits. Weather warnings and other information of importance to aviators, when typed at one of the fields, are transmitted to all of the others and simultaneously reproduced in typewritten form. The information thus supplied, together with any which may be collected locally, is relayed from each field to the pilots in the air by radio telephone. Pilots may call the fields, asking for any additional information they desire. The radio stations overlap so that a plane in flight is never out of communication with the ground. Forewarned as to weather and flying conditions they are likely to encounter, the pilots are forearmed against aviation's most serious dangers.

The wire in the Bell System has a total length of more than 78,000,000 miles.

- 1—M.—First telephone exchange in Nevada opened at Virginia City, 1882.
- 2—Tu.—Candlemas Day. Also known as Groundhog Day because of an ancient belief that if that animal sees his shadow on Candlemas Day, he goes back to sleep for six weeks.
- 3—W.—Illinois territory created with Kaskaskia as capital, 1809.
- 4—Th.—Washington unanimously elected President by electors, 1789.
- 5—Fr.—John and Charles Wesley and their fellow missionaries arrived at Tybee Island, Ga., 1736.
- 6—Sa.—Massachusetts (6th state) ratified U. S. Constitution, 1788.
- 7—Su.—Quinquagesima or Shrove Sunday. First colony of Spaniards started for New Mexico, 1598.
- 8—M.—The first telephone, made by Thomas A. Watson, for Bell, June 3, 1875.
- 9—Tu.—William Henry Harrison, 9th President, born, 1773.
- 10—W.—Ash Wednesday. Illinois Central Railroad chartered, 1851.
- 11—Th.—Abraham Lincoln left Springfield, Ill., for Washington, 1861.
- 12—Fr.—LINCOLN'S BIRTHDAY. (16th President, born 1809.)
- 13—Sa.—First passenger train entered New Mexico, 1879.
- 14—Su.—St. Valentine's Day. Oregon admitted to the Union, 1859. Arizona admitted to the Union, 1912.
- 15—M.—First telephone exchange in Minnesota opened at Minneapolis, 1879.
- 16—Tu.—Washington wrote to Gov. Clinton from Valley Forge: "For some days past, there has been little less than famine in the camp." 1778.
- 17—W.—Chesapeake and Ohio Canal completed from near Alexandria, Va., to Cumberland, Md., 1851. First telephone exchange in California opened at San Francisco, 1878.
- 18—Th.—The Bell System's investment in land and buildings is about \$505,000,000.
- 19—Fr.—Ohio admitted to the Union, 1803.
- 20—Sa.—First comprehensive postal law passed by Congress, 1792. Battle of Olustee, Fla., 1864.
- 21—Su.—Morse first demonstrated his telegraph to the President of the United States, 1838.
- 22—M.—WASHINGTON'S BIRTHDAY. (First President, born 1732.) Railroad completed to the Mississippi River at Rock Island, Ill., 1854.
- 23—Tu.—Coronado's march to New Mexico began, 1540.
- 24—W.—First telephone exchange in Colorado opened at Denver, 1879.
- 25—Th.—State University of Iowa established at Iowa City, 1847.
- 26—Fr.—Boston-Washington underground telephone cable placed in service, 1914.
- 27—Sa.—Henry Wadsworth Longfellow, poet, born, 1807.
- 28—Su.—American Telephone and Telegraph Company, organized for long distance telephone service, executed certificate of incorporation, 1885.
- 29—M.—"Great Overland Express" chartered by Kansas legislature, 1860.



THY VOICE
by Telephone
is ye Best of
VALENTINES





Caravans

ONE hundred years ago, on March 11, 1832, Nathaniel J. Wyeth, with a party of twenty-one men, set out from Boston to establish a settlement in Oregon. When he reached the Columbia, late in October, his party numbered only eight. His colonization scheme failed in attaining its immediate objective, as did another which he attempted to carry out in 1834. Yet in the results which they ultimately brought about, these long journeys were eminently successful.

Such pioneers marked across the continent paths which made possible the well defined routes followed by the great caravans of a later period. Better organized, better equipped and, thanks to the experience of those who had gone before them, better prepared to face the dangers of the trail, these caravans colonized the Northwest and extended

the borders of the United States to the Pacific.

It is thus in the realm of human knowledge also that horizons are widened and frontiers are advanced. Pioneers lead the way, traveling individually or in small groups. Pressing forward despite discouragements, they blaze the trails of science.

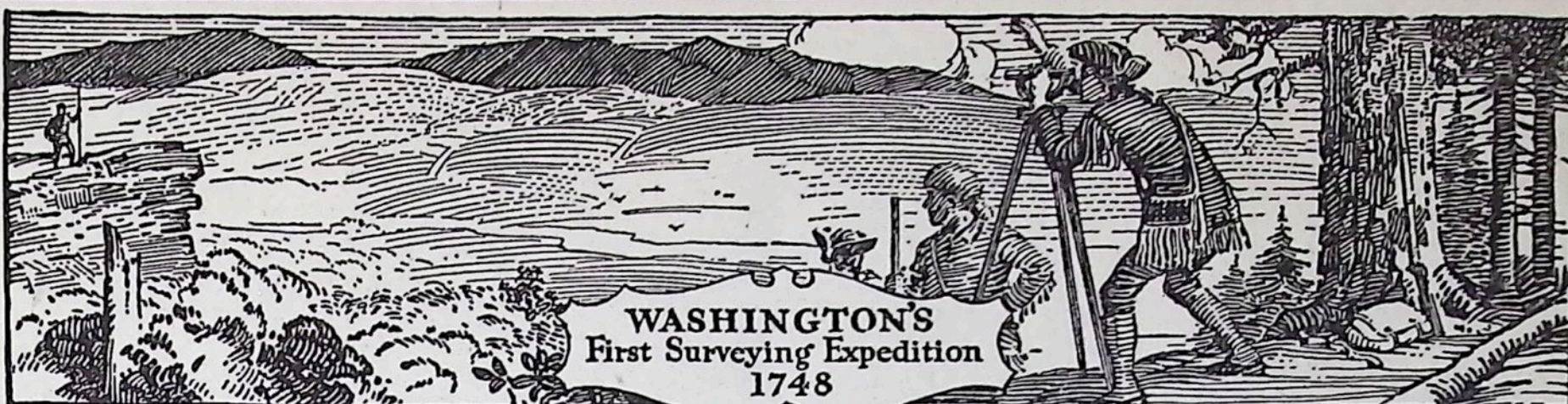
As the caravan followed the pathfinder into the West, so, in the field of scientific investigation and the application of scientific knowledge to human needs, organized research has followed in the footsteps of the individual experimenter. In the Bell Telephone Laboratories, New York, more than 5,000 trained scientists and their assistants carry on a continuous search for means of making America's telephone service more efficient, more far-reaching and more economical.

DETAILS, COST AND DEPENDABILITY



A COMMUNICATION system which performs as vitally important a public function as does the telephone service must have no weak links; it must approach as near as is humanly possible to absolute dependability. Fully to serve its purpose, moreover, it must be made available at the lowest possible cost to the public.

If these requirements are to be met, no item of telephone equipment can be too microscopic, no step in any method of operation can be too insignificant, to demand of scientists and engineers the most careful scrutiny. No detail in the development of cheap and dependable telephone service is small enough to be disregarded.



WASHINGTON'S
First Surveying Expedition
1748

3rd mo

March

1932

On March 11, 1748, George Washington, then a lad of sixteen, set out on his first surveying trip to the Shenandoah Valley and the South Branch of the Potomac. For nearly a month, with transit and chain, he tramped the hills and forded the streams of Sir William Fairfax's vast wilderness estate. This expedition—the first of many strenuous and often hazardous journeys which took the youthful Washington beyond the Blue Ridge,—brought the future soldier and statesman into close contact with frontier conditions. It is probable that Washington's lifelong interest in the development of facilities for communication with the regions beyond the mountains had its inception during this boyhood venture into the Virginia forests.

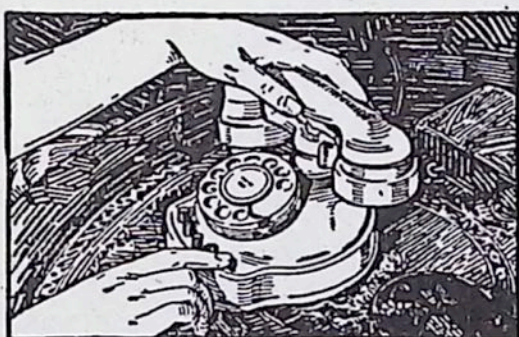
MOON'S PHASES

Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
7 24 A.M.	
15 7 41 A.M.	
22 7 37 A.M.	
28 10 43 P.M.	

MARCH hath 31 days

"Many are the friends of the golden tongue.."—Welsh Proverb


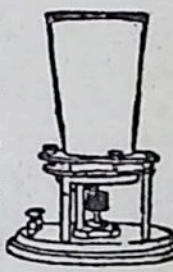

DIAL P. B. X. FOR USE IN HOMES



Telephone engineers have developed for use in large residences a switching system that is essentially a dial central office in miniature. Used in connection with special types of dial telephone instruments, this equipment provides direct intercommunication between as many as fifteen telephones installed in the home or the other buildings associated with it. Two or three separate circuits may be provided, over each of which a conversation may be carried on without interfering with those that are in progress on the others.

Direct trunks to the telephone company's central office make it possible to place outgoing or receive incoming local or long distance calls at any telephone connected with the residence system. Incoming calls may be answered at one telephone and transferred to another when desired. The use of any telephone, as for example those in the servants' quarters, may be restricted to internal intercommunication and the reception of incoming calls.

More than 100,000 Bell System employees are stockholders of the American Telephone and Telegraph Company.

- 1—Tu.—Nebraska admitted to the Union, 1867.
- 2—W.—Act of Congress creating Territory of Arkansas approved, 1819.
- 3—Th.—Florida admitted to the Union, 1845. *Alexander Graham Bell, inventor of the Telephone, born in Edinburgh, Scotland, 1847.*
- 4—Fr.—Vermont admitted to the Union, 1791.
- 5—Sa.—First settler reached Indianapolis, Ind., 1819.
- 6—Su.—"Missouri Compromise" Act approved, 1820.
- 7—M.— *First telephone patent granted to Bell, 1876. First public test of two-way transoceanic radio telephony between New York and London, 1926.*
- 8—Tu.—Fremont expedition reached Sutter's Fort, Cal., 1848.
- 9—W.—Lafayette College, Easton, Pa., incorporated, 1826.
- 10—Th.—*First complete sentence of speech transmitted over a wire by Alexander Graham Bell, Boston, 1876. The transmitter used on this occasion.* 
- 11—Fr.—Company of pioneers under Nathaniel J. Wyeth set out from Boston for Oregon, 1832.
- 12—Sa.—LaSalle landed at mouth of Arkansas River, 1682.
- 13—Su.—Naval battle between U.S.S. *Alliance* and British ship *Sybil*—the last battle of the Revolution, 1783.
- 14—M.—Mass meeting at Denver to oppose consolidation of Jefferson Territory with Kansas, 1860. Time to Give Attention to ye Income Tax
- 15—Tu.—Andrew Jackson, 7th President, born, 1767. Maine admitted to the Union, 1820. First telephone exchange in Louisiana opened at New Orleans, 1879.
- 16—W.—James Madison, 4th President, born, 1751.
- 17—Th.—*St. Patrick's Day.* Warwick and Providence, R. I., destroyed by Indians, 1676.
- 18—Fr.—Grover Cleveland, 22nd and 24th President, born, 1837.
- 19—Sa.—George III assented to repeal of Stamp Act, 1766.
- 20—Su.—*Palm Sunday.* SPRING BEGINS. Vera Cruz surrendered, 1847.
- 21—M.—Lieut. Zebulon M. Pike, first American to set foot in El Paso, Tex., arrived there as prisoner of Spaniards, 1807.
- 22—Tu.—Indians attacked every settlement in Virginia colony from the falls of James River to Chesapeake Bay, 1622.
- 23—W.—John Fitch invented his screw-propelled steamboat, 1796.
- 24—Th.—Acquidneck (Rhode Island) purchased from Indians, 1638.
- 25—Fr.—*Good Friday.* Union Pacific bridge across Missouri River at Omaha—first railroad bridge in Nebraska—completed 1873.
- 26—Sa.—South Carolina formed a provisional government, 1776.
- 27—Su.—*Easter Sunday.* Boston-New York long distance telephone line opened, 1884.
- 28—M.—Indians decided site of Passaic, N. J., to settlers, 1679.
- 29—Tu.—John Tyler, 10th President, born, 1790.
- 30—W.—Founding of Santa Fe, N. M. ordered, 1609.
- 31—Th.—About 85,000,000 telephone conversations  are held every day in the United States.



Value

POINTING a moral with a story of his own boyhood, when he had paid for a whistle which had caught his fancy four times what it was worth, Benjamin Franklin made this sage observation:

"I conceive that great part of the miseries of mankind are brought upon them by the false estimates they have made of the value of things, and by their giving too much for their whistles."

In good times or bad, wise men spend their money only in exchange for real value. Whatever finds a market with them must prove its worth. They have but little use for overpriced whistles.

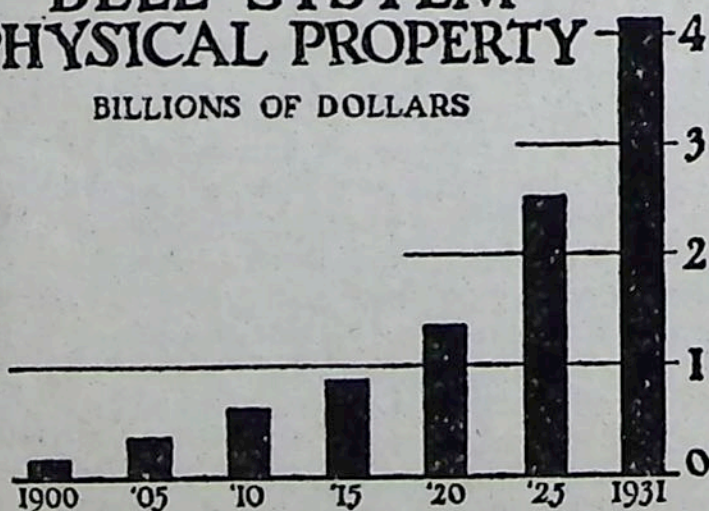
Among those things which the public buys today, there are few which pay a higher return in real value than telephone service. For a few cents or, at most, a few dollars, it bridges distance, destroys isolation. It gives protection. It cements family ties, reaches friends, spells hospitality, creates pleasures. It saves time. It conserves energy. It wins business, hunts jobs, runs errands. It brings news. It projects personality. It enlarges horizons. It carries, from individual to individual and from section to section, words which make for common understanding. It facilitates the social and business contacts upon which so largely depends the nation's faith in its future.

In effectiveness, in far-reaching extent, in promptness and in dependability, it provides maximum value at minimum cost.

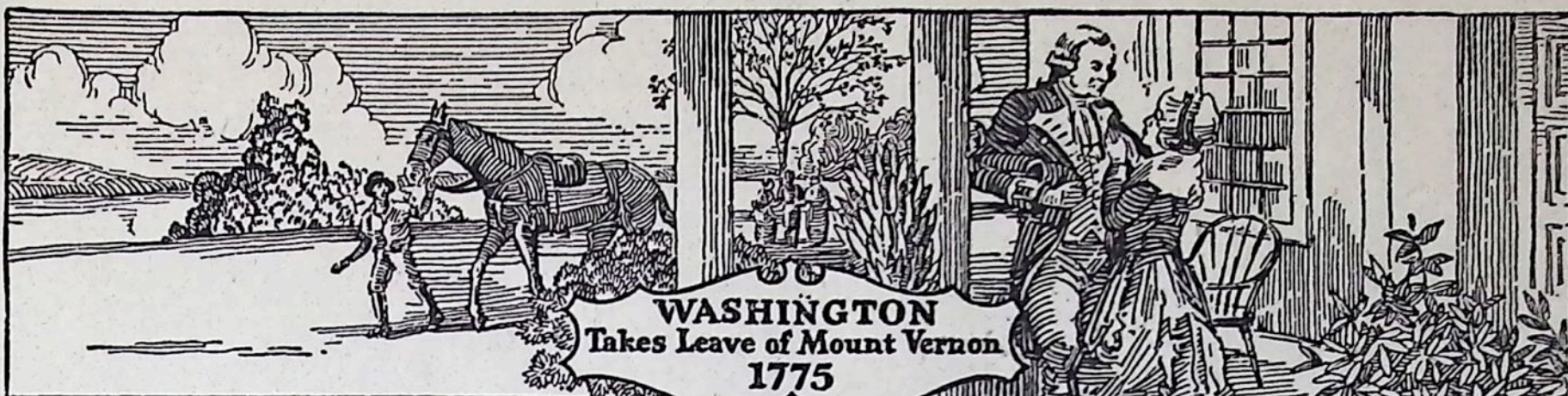
GROWTH

BELL SYSTEM PHYSICAL PROPERTY

BILLIONS OF DOLLARS



A TELEPHONE system which meets the requirements of a growing nation must increase its facilities to meet mounting demands—or else provide something less than the best possible service. The Bell System's plant investment today is more than \$4,200,000,000—twenty times what it was only a little more than a quarter of a century ago. Whenever a Bell System subscriber lifts his receiver, all of this immense amount of plant and equipment is at his instant command.



4th mo

April

1932

On April 19, 1775, the Battles of Lexington and Concord were fought and the Revolution began. Communication was slow and news of these momentous events did not reach Washington at Mount Vernon, Va., until May 2, when he was about to set out for the Second Continental Congress, at Philadelphia. Shortly afterward he wrote to a friend: "Unhappy is it to reflect that . . . the once happy and peaceful plains of America are to be either drenched with blood or inhabited by slaves. Sad alternative! But can a virtuous man hesitate in his choice?" On May 4 Washington rode away to Philadelphia and—as if to signify his acceptance of the inevitable—he wore his military uniform.

MOON'S PHASES

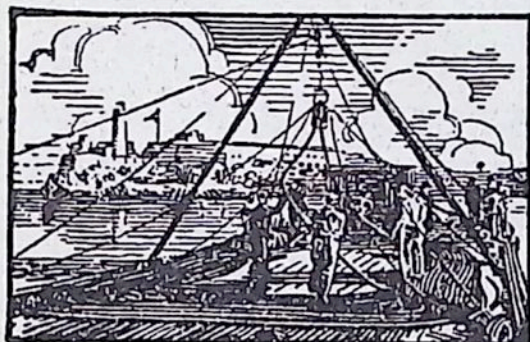
Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
5 8 21 P.M.	
13 10 15 P.M.	
20 4 27 P.M.	
27 10 14 A.M.	



APRIL hath 30 days

"The bond of society consists of reason and speech."—Cicero

NEW TELEPHONE CABLE TO CUBA


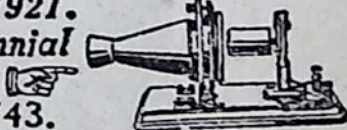



In order to meet increasing demands for additional telephone facilities linking the United States and Cuba, a new submarine telephone cable was laid in January, 1931, between Key West and Havana. This cable supplements three other telephone cables laid between the same cities in 1921.

Due to the employment of the principle of multi-channel carrier current telephony, the new telephone link between the two neighboring republics at present provides facilities whereby three telephone conversations can be carried on simultaneously over two conductors. This is equal to the telephone facilities of the three earlier cables combined. In addition, there are possibilities of making additional telephone and telegraph facilities available for future use. The cable is 108 nautical miles long—the longest submarine cable yet used for multi-channel telephony.

The cable is insulated with a new material known as paragutta, developed by the Bell Telephone Laboratories, where all four of the cables were designed.

The Bell System operates a fleet of more than 19,000 motor trucks and light cars.

- 1—Fr.—*All Fool's Day*. E. A. Sothorn, actor, born, 1826. First telephone exchange in Virginia opened at Richmond, 1879.
- 2—Sa.—Union Canal Company, to build canal between Middletown and Reading, Pa., incorporated, 1811.
- 3—Su.— *Radio telephone service between United States and Argentina, Chile and Uruguay officially opened, 1930.*
- 4—M.—*American Telephone and Telegraph Company began commercial transmission of pictures by wire, 1925.*
- 5—Tu.—First census of Indiana territory (population 24,520) 1811.
- 6—W.—United States entered the World War, 1917.
- 7—Th.—*Bell System scientists gave public demonstration of television, over long distance telephone circuits and by radio, 1927.*
- 8—Fr.—Territory of Orleans admitted to the Union as the State of Louisiana, 1812. Capture of Mobile, Ala., 1865.
- 9—Sa.—LaSalle reached the mouth of the Mississippi, 1682.
- 10—Su.—Act of Congress establishing Patent Office passed, 1790.
- 11—M.—*Three deep-sea telephone cables connecting Havana and Key West opened for service, 1921.*
- 12—Tu.—*Transmitter exhibited by Bell at Centennial Exposition, June, 1876.* 
- 13—W.—Thomas Jefferson, 3rd President, born, 1743.
- 14—Th.—Washington notified of election as President, 1789.
- 15—Fr.—Regular Quarterly Dividend date, American Telephone and Telegraph Company.
- 16—Sa.—First play written and performed in America—"The Contrast"—produced in John Street Theater, New York, 1786.
- 17—Su.—Mohawk and Hudson Railroad chartered, 1826
- 18—M.—"Paul Revere's Ride," 1775.
- 19—Tu.—Battles of Lexington and Concord, 1775.
- 20—W.—Israel Putnam rode from Pomfret, Conn. to Boston in 18 hours to join army, 1775.
- 21—Th.—Battle of San Jacinto, Tex., 1836.
- 22—Fr.—Washington issued his famous proclamation of neutrality in war between France and Great Britain, 1793. First homestead lands in Oklahoma opened for settlement, 1889.
- 23—Sa.—James Buchanan, 15th President, born, 1791. Building of first frame house in Denver, Col. begun, 1859.
- 24—Su.—*The total annual distribution of directories published by the Bell System is more than 36,000,000 copies.* 
- 25—M.—Battle of Hobkirk's Hill, S. C., 1781.
- 26—Tu.—John C. Ridpath, historian, born, 1841.
- 27—W.—Samuel F. B. Morse, inventor of telegraph, born, 1791. Ulysses S. Grant, 18th President, born, 1822.
- 28—Th.—James Monroe, 5th President, born, 1758. Maryland (7th state) ratified U. S. Constitution, 1788.
- 29—Fr.—American sloop *Peacock* captured British sloop *Epervier*, 1814.
- 30—Sa.—Louisiana Purchase treaty executed, 1803.

Time for Wives to Undertake ye Customary House-Cleaning



“The Matrons of America”

WASHINGTON had won, at Yorktown, the crowning victory of the revolution. Surrounded by a group of American and French officers, he was riding northward toward Mount Vernon. At Fredericksburg, he left the party and, alone and on foot, sought the home of Mary Ball Washington—his mother.

All through the strenuous years of his campaigns he had kept in as close touch as the slowness of communication would permit with this woman who in his boyhood, youth and young manhood had been his counselor and his inspiration. With her he had shared his anxieties and his achievements. Now, in his hour of triumph, he sought the touch of her hand, the sound of her voice.

Impressed by the quiet dignity and charm of manner of the mother of Washington,

Lafayette is said later to have exclaimed: “If such be the matrons of America, she may well be proud of her illustrious sons.”

Much that is best in its history and in its present life, America owes to its mothers. Not alone on a single day set apart for the purpose, but throughout the year, the nation acknowledges its debt to “the matrons of America.”

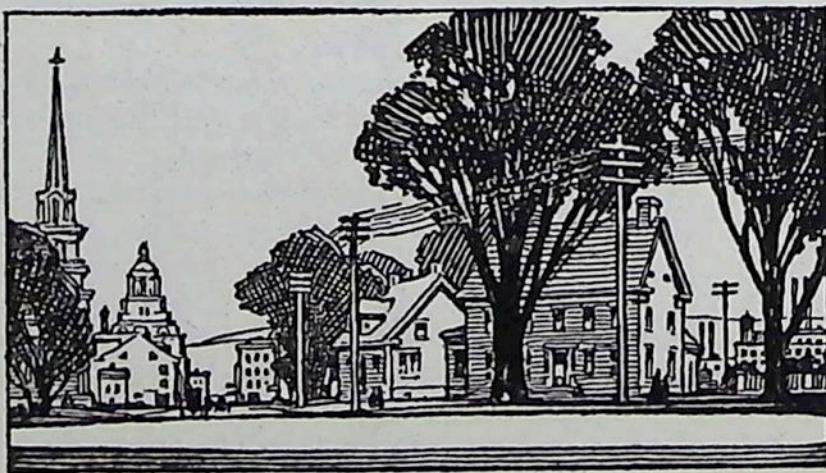
One of the most fitting ways in which to pay tribute to one's mother is to use to the full—as did Washington—all available means of keeping in touch with her. Of these, one of the swiftest and surest—and the most intimate and personal—is afforded by a nation-wide system of communication by the spoken word. Long distance telephone calls keep home ties unbroken.

THE TELEPHONE IN THE HOME

IN constantly increasing numbers, Americans are giving evidence of an appreciation of the value, not only of telephone service in the home, but of telephone equipment that is adequate, both in amount and in design, to meet each home's special requirements.

The widespread and rapidly growing

use of extension telephones and of special switching apparatus or wiring arrangements is a proof of public recognition of the fact that telephone service in the home pays the highest returns in real value when provided with the greatest possible comfort and convenience to the telephone user.





WASHINGTON Announces the French Alliance 1778



5th mo

May

1932

On May 6, 1778, Washington announced to his army at Valley Forge that France had become an ally of the United States. France's espousal of the American cause was prompted largely by receipt of news of Burgoyne's surrender. When, on November 1, 1777, at Portsmouth, N. H., John Paul Jones was handed dispatches announcing this event, for the American commissioners in Paris, he boasted, "I will spread this news through France in thirty days." Crowding on canvas, he reached Paris, December 5, but learned that John Loring Austin, having left Boston, October 30, with duplicate dispatches, had beaten him by about twelve hours. Negotiations with France were renewed and treaties of commerce and defensive alliance were concluded on February 6.

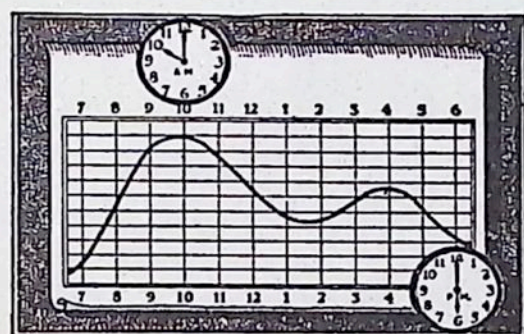
MOON'S PHASES

Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.	
D.H.M.		
5 11 P.M.		 8
13 9 2 A.M.		
20 12 9 A.M.		 II
26 11 54 P.M.		

MAY hath 31 days

"It is generally better to deal by speech than by letter."—Bacon

CHARTS OF THE TELEPHONE TIDE



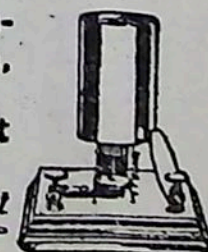
From hour to hour, day to day, month to month, the number of telephone calls made during a given period rises and falls in a veritable ebb and flow of traffic. Each central office has its own characteristic curves showing morning, afternoon and evening peak loads, as well as fluctuations extending over longer periods.

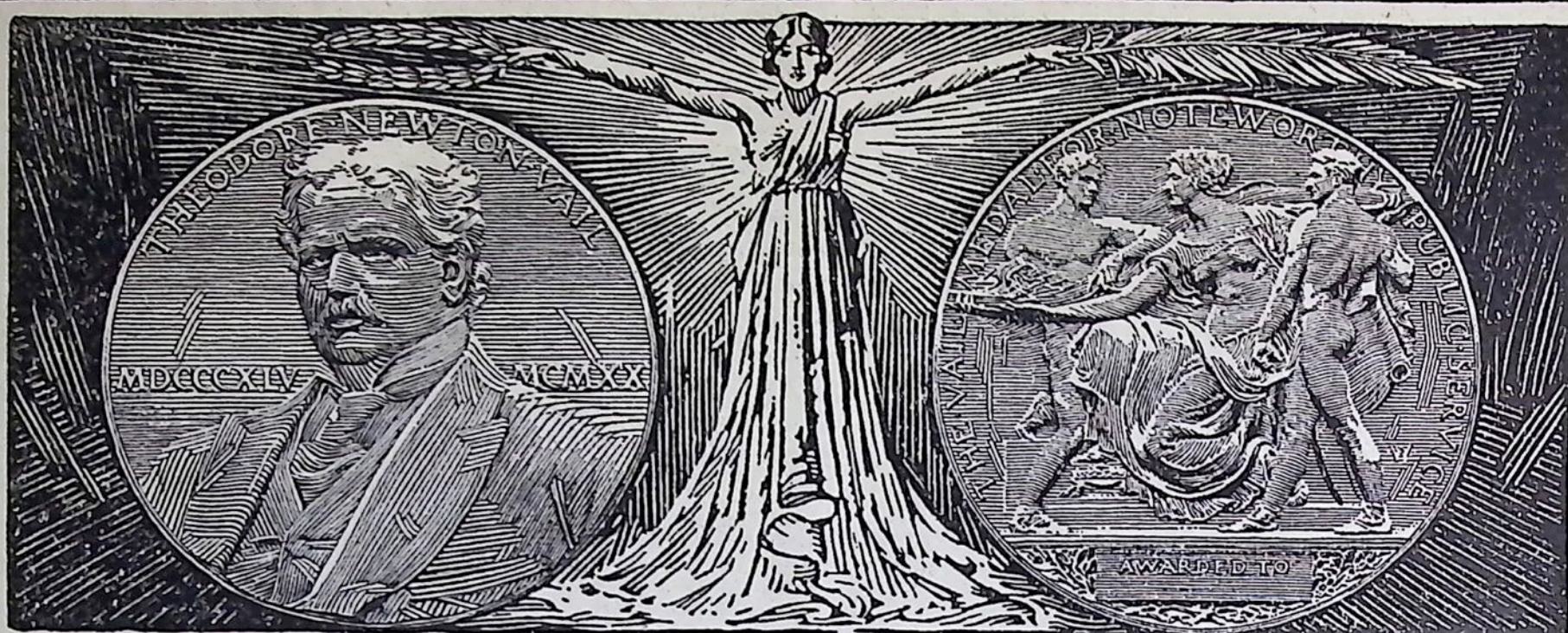
Effective and economical operation of the telephone system makes it necessary to study the records of these traffic fluctuations as carefully as a navigator studies data as to the rise and fall of tides. Efficient service requires that there must be enough operators to handle the heavy loads the moment they manifest themselves, without an instant's delay. Economical management requires that additional operators be provided only when they are needed. By carefully adjusting the operating force to the traffic load, service is kept at all times at a high standard. Demands for service are met without delay as they arise, at the lowest possible cost.

During 1931 the number of American Telephone and Telegraph Company stockholders increased more than 50,000.

- 1—Su.—Paterson and Hudson Railroad, in New Jersey, put in operation with horse-drawn trains, 1832. First telephone exchange in Missouri opened at St. Louis, 1878.
- 2—M.—Washington ordered holding of divine services every Sunday in each brigade, 1778.
- 3—Tu.—First union station in America begun at Indianapolis, 1850.
- 4—W.—Rhode Island renounced allegiance to Great Britain, 1776.
- 5—Th.—Arensin Bay. Battle of the Wilderness began, 1864.
- 6—Fr.—Post Office first established in Omaha, Neb., 1854.
- 7—Sa.—More than 75,000 employees are required in the Bell System for construction and repair work.
- 8—Su.—Mother's Day. New York-Denver telephone line opened, 1911.
- 9—M.—First Concord coach expresses reached Denver, 1859.
- 10—Tu.—Ethan Allen's "Green Mountain Boys" captured Fort Ticonderoga, 1775.
- 11—W.—Minnesota admitted to the Union, 1858.
- 12—Th.—Baron Steuben joined American revolutionary army, 1778.
- 13—Fr.—Jamestown, Va., settled, 1607. First telephone exchange in Massachusetts opened at Cambridge, 1878.
- 14—Sa.—Lewis and Clark began ascent of the Missouri on their expedition to the Pacific, 1804.
- 15—Su.—Whit Sunday. First telephone exchange in West Virginia opened at Wheeling, 1880.
- 16—M.—British garrison at Fort Sandusky, O., murdered by Wyandot Indians, 1763.
- 17—Tu.—Royal governor of Virginia dissolved the House of Burgesses, 1769.
- 18—W.—Law against human slavery enacted in Rhode Island, 1652.
- 19—Th.—Transmission of pictures over telephone wires demonstrated by Bell System engineers, 1924.
- 20—Fr.—Cornwallis and Arnold joined forces at Petersburg, Va., 1781.
- 21—Sa.—Stephen Girard, financier and philanthropist, born, 1750.
- 22—Su.—Trinity Sunday. First newspaper in Washington, D. C.,—the *Impartial Observer and Advertiser*,—published, 1781.
- 23—M.—South Carolina (8th state) ratified U. S. Constitution, 1788.
- 24—Tu.—Cornwallis marched against troops of Lafayette, 1781.
- 25—W.—Washington elected President of Constitutional Convention at its opening session in Philadelphia, 1787.
- 26—Th.—First meeting of colonial assembly in New Jersey, 1668.
- 27—Fr.—U. S. Navy plane NC-4 reached Lisbon, Portugal, completing its transatlantic flight, 1919.
- 28—Sa.—Washington attacked French in Great Meadows, Pa.,—beginning of French and Indian War, 1754.
- 29—Su.—Rhode Island (13th state) ratified U. S. Constitution, 1790. Wisconsin admitted to the Union, 1848.
- 30—M.—MEMORIAL DAY. Washington hurriedly built Fort Mifflin, in Great Meadows, 1754.
- 31—Tu.—Telephone receiver exhibited by Bell in 1876 at Philadelphia Centennial exposition.

At About This
Time ye Trout
Fishermen Will
Be Abundant





For Noteworthy Public Service

TO the making of America's telephone service as it exists today, many men, in many ways, have made important contributions. Scientists and engineers have spent their lives in the improvement of apparatus and equipment; executives have played their part in the formulation of wise business policies; manufacturing and construction forces totaling thousands upon thousands have toiled to build the network of wires and other facilities which provide pathways for the spoken word.

None of these contributions, however, has been more important than that of those who have helped to give substance and vitality to the aims and ideals, the sense of loyalty to the public and of devotion to its service, that for more than half a century have been traditions of the Bell System.

Among those who have had a part in the creation of the telephone worker's service creed, a leader was Theodore N. Vail, who at the time of his death in 1920 was Chairman of the Board of Directors of the American Telephone and Telegraph Company. From a fund created in Mr. Vail's memory, medals of bronze and of gold or silver are awarded annually to telephone employees throughout the United States for acts which conspicuously illustrate his ideals of public service.

The Vail medals are not awarded merely for acts of heroism or spectacular achievements, although noteworthy courage often characterizes the services performed. Rather, they honor the memory of Mr. Vail by special recognition of a few of the more noteworthy examples of the many deeds inspired by the Spirit of Service to the creation of which he contributed so greatly.

The bronze medals are awarded by committees appointed by the Associated Companies of the Bell System. Medals of gold or silver are awarded in certain cases of outstanding merit by a national committee which reviews cases recommended for bronze medal awards and any other cases that may be submitted. In addition, bronze plaques are presented to the telephone companies whose employees have received gold or silver medals.

For acts performed in 1930, awards have been made calling for the presentation of thirty-eight bronze and three silver medals, bringing the total number of medals awarded since the establishment of the Vail Memorial Fund in 1920 to 868.

National Awards

SILVER MEDALS—WITH CASH AWARD OF \$250

MISS HAZEL HILAH HAASE

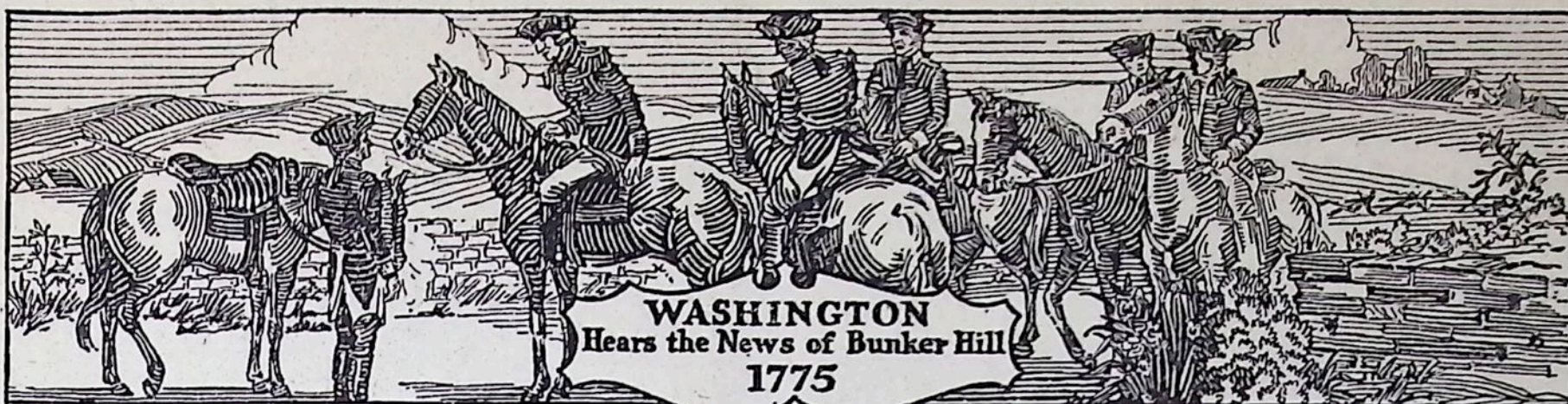
Chief Operator, Indiana Bell Telephone Company
Clinton, Indiana

LEONARD J. STRANG

Window Washer, The Ohio Bell Telephone Company
Cleveland, Ohio

IVAN F. VANNOY

Repairman, The Chesapeake and Potomac Telephone
Company of Virginia
Winchester, Virginia





6th mo

June

1932

On June 15, 1775, Washington was elected by the Second Continental Congress, sitting at Philadelphia, as commander-in-chief of the American army, then encamped outside Boston. He received his official commission on June 20, and the next day set out for New England. After proceeding about twenty miles from Philadelphia, Washington's party was met by a courier bringing dispatches for Congress, describing the Battle of Bunker Hill. This news prompted Washington to hurry on his way with all possible speed, but it was not until July 2 that he reached the army at Cambridge. He thus required twelve days of hard riding to complete a journey which now can be made in less than as many hours.

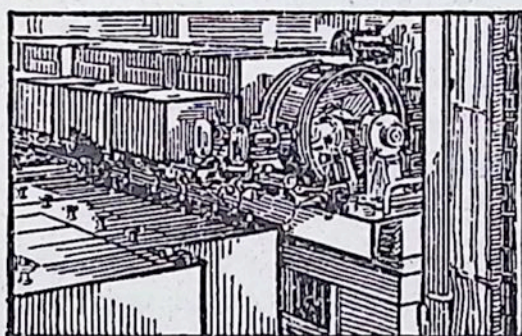
MOON'S PHASES

Eastern Time D.H.M.	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.	 II
4 4 16 A.M.		
11 4 39 P.M.		
18 7 38 A.M.		
25 3 36 P.M.		 OC

JUNE hath 30 days

"Better one living word than a hundred dead ones."—German Proverb


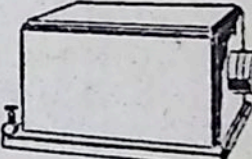
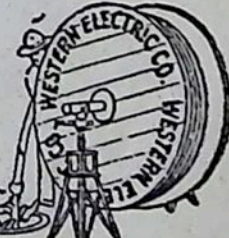
TALKING FILMS AND TELEPHONES



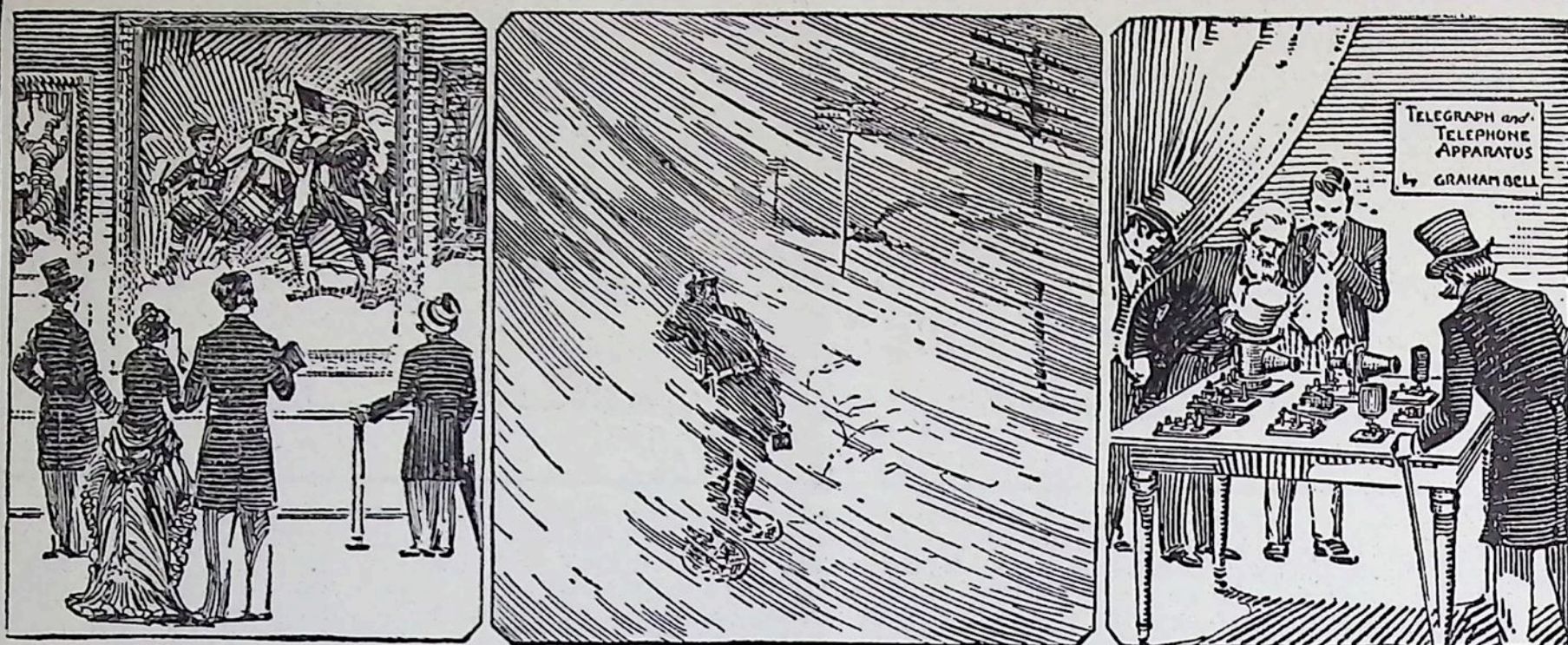
A relatively recent development in telephone research is the call announcer, which under certain conditions forms a link between dial and manual telephones. One of the essential parts of the device is a drum on which are mounted strips of film carrying voice records of the ten digits and the party line letters, made by the method used in making film-recorded talking motion pictures.

The selection of the required digits or letters is controlled by electrical impulses corresponding to the called number sent to the call announcer by the dial equipment. A beam of light, passing through the film, falls on a photo electric cell with an intensity which varies in accordance with the density of the sound record on the film. The cell converts the changes of light intensity into fluctuations in the strength of an electrical current, which in turn are reproduced as spoken words in the receiver of a headset worn by an operator at the manual switchboard, who completes the desired connection.

On an average, about 3,000,000 telephone toll conversations take place daily over Bell System lines.

- 1—W.—Kentucky admitted to the Union, 1792. Tennessee admitted to the Union, 1796. First telephone exchange in Vermont opened at Burlington, 1879.
- 2—Th.— *Principle of the electric speaking telephone verified by Bell, 1875.*
- 3—Fr.—Sir Edmund Andros appointed governor of New England, 1686.
- 4—Sa.—Missouri established as a territory by Act of Congress, 1812.
- 5—Su.—Telegraph first employed commercially on line between Philadelphia and Baltimore, 1846.
- 6—M.—Fray Augustin Rodriguez started for New Mexico, 1581. Nathan Hale, patriot, born, 1755.
- 7—Tu.—*Box telephone, used in Bell's lectures and in commercial service, 1877.* 
- 8—W.—One hundred followers of George Rapp began the New Harmony Colony, Ind., 1814.
- 9—Th.—First postal route from Boston to Rhode Island, 1693.
- 10—Fr.—Lafayette reinforced by troops under Gen. Wayne 1781.
- 11—Sa.—U. S. Marines captured Belleau Wood, France, 1918.
- 12—Su.—First through train from Omaha reached San Francisco, 1869.
- 13—M.—Department of Labor established by Act of Congress, 1888.
- 14—Tu.—FLAG DAY. Congress adopted the Stars and Stripes, as prepared by Betsey Ross, as the flag of the United States, 1777.
- 15—W.—Arkansas admitted to the Union, 1836. First telephone exchange in Iowa opened at Dubuque, 1879. First telephone exchange in Oklahoma opened at Oklahoma City, 1893.
- 16—Th.—Oregon Short Line started railroad across Idaho, 1882.
- 17—Fr.—Battle of Bunker Hill, 1775.
- 18—Sa.—First telephone exchange in Oregon opened at Portland, 1878.
- 19—Su.—Washington elected first President General of the Society of the Cincinnati, 1783.
- 20—M.—West Virginia admitted to the Union, 1863. First telephone exchange in Dakota Territory opened at Fargo, 1880.
- 21—Tu.—SUMMER BEGINS. United States Constitution established between nine states when ratified by New Hampshire, 1788.
- 22—W.—*Over ninety-three per cent of the total wire mileage of the Bell System is in cable.* 
- 23—Th.—Duke of York conveyed New Jersey to Lord Berkeley and Sir George Carteret for ten shillings, 1664. William Penn's treaty with the Indians, "never sworn to and never violated," 1683.
- 24—Fr.—George Rogers Clark left the Ohio Falls for his conquest of the Northwest, 1778.
- 25—Sa.—Virginia (10th state) ratified U. S. Constitution, 1788.
- 26—Su.—First telephone exchange in Illinois opened at Chicago, 1878.
- 27—M.—British fleet attacked Charleston, S. C., 1776.
- 28—Tu.—Treaty of Versailles signed by delegates, 1919.
- 29—W.—British under Gen. Howe arrived at Sandy Hook, 1776.
- 30—Th.—Michigan separated from Territory of Indiana, 1805.

Time to Call
Up and Order
ye Gift for
ye Graduate



Two Pictures

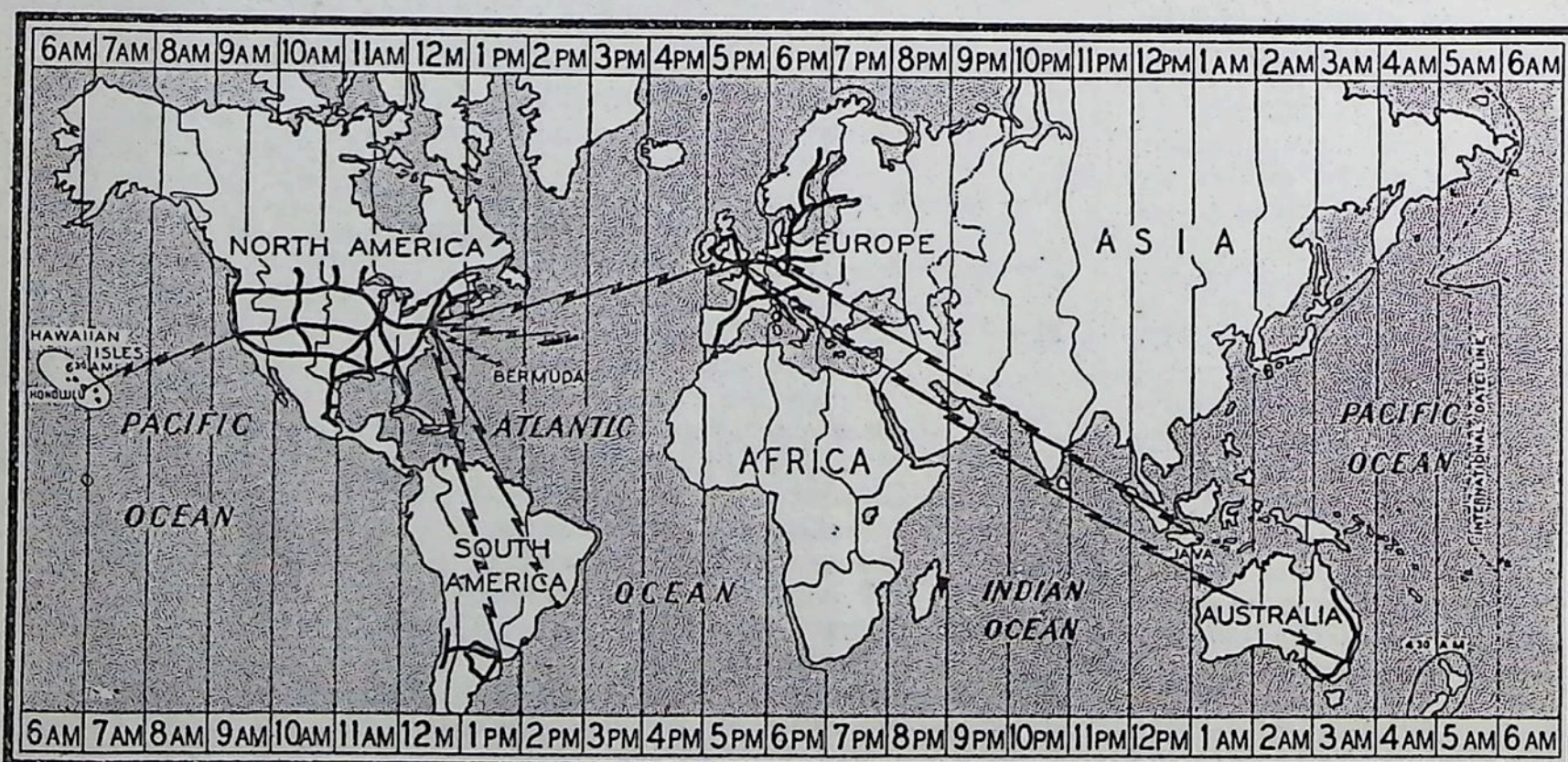
It was the summer of 1876. Great crowds had come to Philadelphia and were thronging the buildings of the Centennial Exposition—America's tribute to one hundred years of independence. In the Art Gallery, men and women paused to look upon a painting, since become famous, which symbolized the traditions of the stirring days when the thirteen colonies achieved their dearly bought freedom—"The Spirit of 1776."

In another building, unobtrusively placed, was another exhibit, which at first aroused but little interest. Soon, however, an emperor's attention was to be drawn to it; the world's great men of science were to pay to it their highest praise; it was to become one of the marvels of the exposition.

This was Alexander Graham Bell's telephone. His crude apparatus was destined to become an instrumentality of independence—a means by which man's voice might win freedom from the limitations of time and distance.

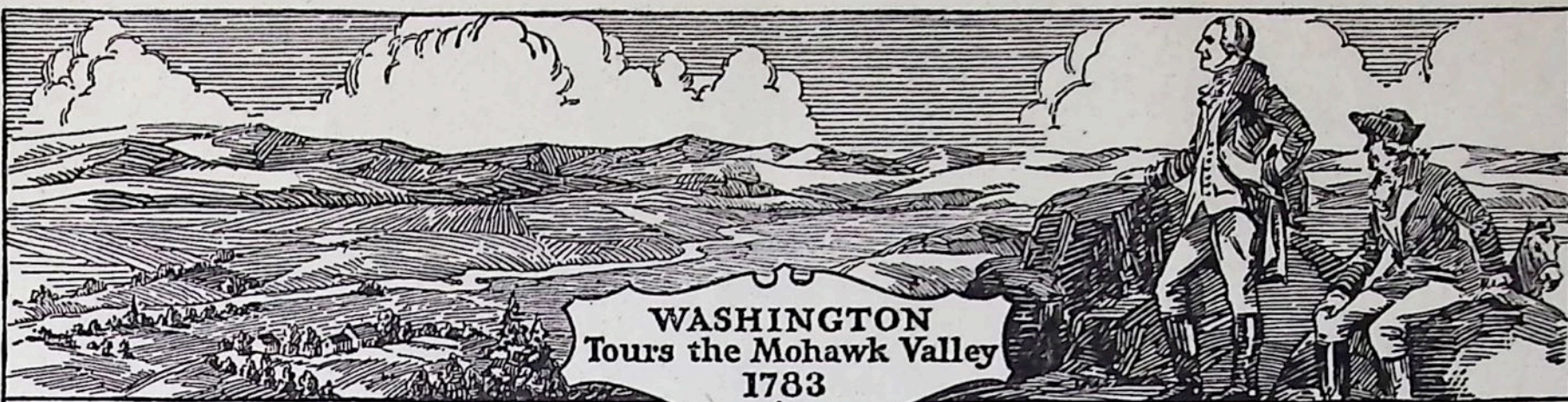
Around the telephone there were to grow traditions as real and vital as those which had been born and nurtured in the early days of the republic—traditions of devotion to duty, of loyalty to the public interests on the part of the men and women responsible for the construction, maintenance and operation of America's nation-wide telephone system.

These traditions have been symbolized in another painting, here reproduced as a tribute to the telephone workers of America,—"The Spirit of Service."



The above chart shows International Standard Time (relative to Noon, Eastern Standard Time, New York)

at various points reached by Bell System long distance telephone service.



7th mo

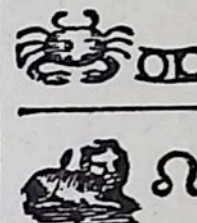
July

1932

On July 18, 1783, Washington left his Newburgh headquarters with Governor Clinton, of New York, for a tour of the Lake Champlain region and the Mohawk Valley. After reaching Fort Schuyler (now Rome, N. Y.) they crossed over to Wood Creek, which affords water communication with Oneida Lake and Lake Ontario. Of his observations Washington wrote: "I could not help taking a more extensive view of the vast inland navigation of these United States . . . and could not but be struck with the immense extent and importance of it, and with the goodness of Providence which has dealt its favors to us with so profuse a hand; would to God that we may have wisdom enough to improve them."

MOON'S PHASES

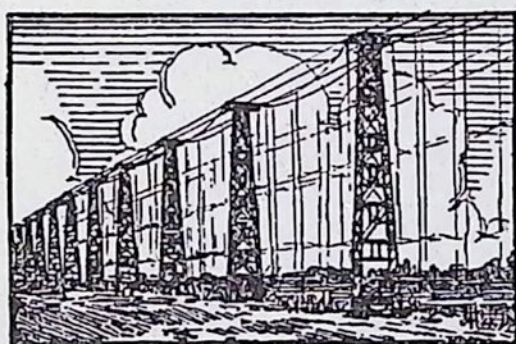
Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
3 5 20 P.M.	
10 10 7 P.M.	
17 4 6 P.M.	
25 8 41 A.M.	



JULY hath 31 days

"It hurteth not the tongue to give fair words."—Heywood

WHERE OVERSEAS TALKS 'TAKE OFF'



A considerable part of the commercial telephone messages from the United States to Europe and all of those from this country to South America are sent out from the short-wave transmitting antenna systems of the American Telephone and Telegraph Company at Lawrenceville, N. J.

An aviator flying over this little town near Trenton would see beneath him a gigantic letter "L" formed by steel structures interconnected by networks of wire. For transmission to Europe, the antenna system is supported on twenty-one towers in a row laid out at right angles to a line extending from Lawrenceville to the short-wave receiving station near London. Similarly the towers supporting the antenna which transmit to South America are set at right angles to the direction to Buenos Aires. The towers, spaced 250 feet apart, are 180 feet high.

The four short-wave transmitters, together with supplementary apparatus, are housed in two two-story brick buildings. Short-wave telephone messages from Europe and South America are received at Netcong, N. J.

The Bell System's investment in plant and equipment is more than \$4,200,000,000.

- 1—Fr.—Battle of Gettysburg, Pa., began, 1863.
- 2—Sa.—Washington reached Cambridge to take command of American army, 1775. Resolution of independence adopted by Congress, 1776.
- 3—Su.—"Wyoming Massacre," 1778. Idaho admitted to the Union, 1890.
- 4—M.—INDEPENDENCE DAY. Declaration of Independence approved, 1776. Calvin Coolidge, 30th President, born, 1872.
- 5—Tu.—Father Hennepin discovered St. Anthony's Falls, at present site of Minneapolis, Minn., 1680.
- 6—W.—U. S. Congress adopted decimal system of money with the dollar as a unit, 1785.
- 7—Th.—Wall type of telephone used in Meriden, Conn., in 1878.
- 8—Fr.—Liberty Bell cracked as it tolled for funeral of Chief Justice John Marshall, 1835.
- 9—Sa.—Articles of Confederation signed, 1778.
- 10—Su.—French fleet and army under Rochambeau arrived off Newport, R. I., 1780.
- 11—M.—John Quincy Adams, 6th President, born, 1767. Wyoming admitted to the Union, 1890.
- 12—Tu.—The *Missouri Gazette*, first newspaper west of the Mississippi, began publication at St. Louis, 1808.
- 13—W.—Washington accepted post of Lieutenant General and Commander-in-Chief of U. S. Army, 1798.
- 14—Th.—Gold discovered at Last Chance Gulch, now Helena, Mont., 1864.
- 15—Fr.—Regular Quarterly Dividend date, American Telephone and Telegraph Company.
- 16—Sa.—President Washington approved the Act of Congress establishing the Federal Capital on the Potomac, 1790.
- 17—Su.—First steam ferry crossed the Hudson from Jersey City to New York, 1812.
- 18—M.—Western Electric Company, manufacturer for the Bell System, organized, 1881.
- 19—Tu.—Twenty-six pirates hanged at Gravelly Point, Newport, R. I., 1723.
- 20—W.—First railroad train entered Washington, D. C., 1835.
- 21—Th.—First Battle of Bull Run, or Manassas, Va., 1861.
- 22—Fr.—Battle between American patriots and Tories and Indians at Minisink, now Port Jervis, N. Y., 1779.
- 23—Sa.—Western Minnesota purchased from Sioux Indians, 1851.
- 24—Su.—Detroit founded by Cadillac, 1701.
- 25—M.—Dedication of Liberty Tree, Providence, R. I., 1768.
- 26—Tu.—New York (11th state) ratified U. S. Constitution, 1788.
- 27—W.—Washington established headquarters at Newburgh, N. Y., 1782.
- 28—Th.—First Legislature of Territory of Arkansas met at Arkansas Post, 1819.
- 29—Fr.—The wire in the Bell System would go around the earth more than 3,100 times.
- 30—Sa.—Champlain defeated Iroquois near Ticonderoga, 1609.
- 31—Su.—Lafayette commissioned Major General by Congress, 1777.



Motor Tourists
Who are Wise
Reserve Rooms
by Telephone





Sperm-oil Lamp and Signal Pole

IN the early 'forties, when Nantucket stood well among the leaders of the world in the whaling industry, a line of signal poles, each with three movable arms, the positions of which indicated the letters of the alphabet or prearranged code messages, provided communication between this little island and the Massachusetts mainland, by way of Martha's Vineyard.

The days of the whalers have passed. The sperm-oil lantern has given way to the kerosene lamp, to the gas burner and, finally, to the electric light. The cry of "Thar she blows!" echoes no longer along Nantucket's surf-beaten shore. The island itself has been transformed from a center of industry to a mecca for summer vacationists.

The line of signal poles, too, has given way to a submarine telephone cable which brings Nantucket's thousands of summer visitors within voice-reach of their homes and places of business. However earnestly these vacationists may seek the seclusion of this sea-encircled island, they would not long remain content without facilities for direct and personal communication, such as the telephone alone affords, with the outer world.

Nantucket is typical of every community in the United States. Americans everywhere would as soon return from electric light to sperm-oil lamp as substitute any means of communication less prompt, direct and personal for the far-flung facilities of a nationwide telephone system.

BELL SYSTEM OWNERSHIP

WHEN, on January 1, 1881, The American Bell Telephone Company, then the parent company of the Bell System, paid its first dividend, its stockholders numbered 540. By 1890 the number of the owners of the Bell System had increased to more than 3,300. In 1900, after becoming the parent company, the American Telephone and Telegraph Company had about 7,500 stockholders.

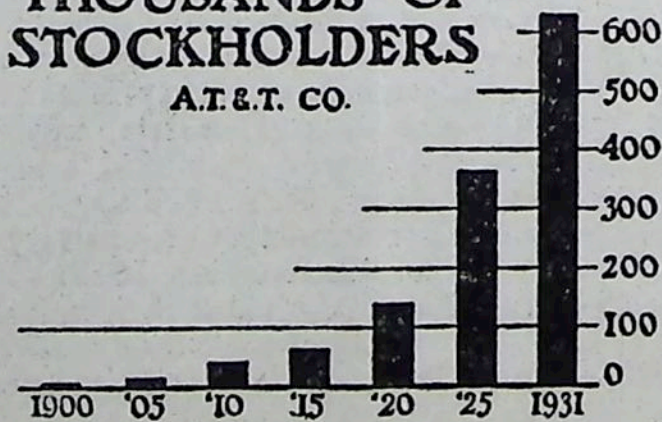
Of the 540 stockholders who participated in the first American Bell Telephone

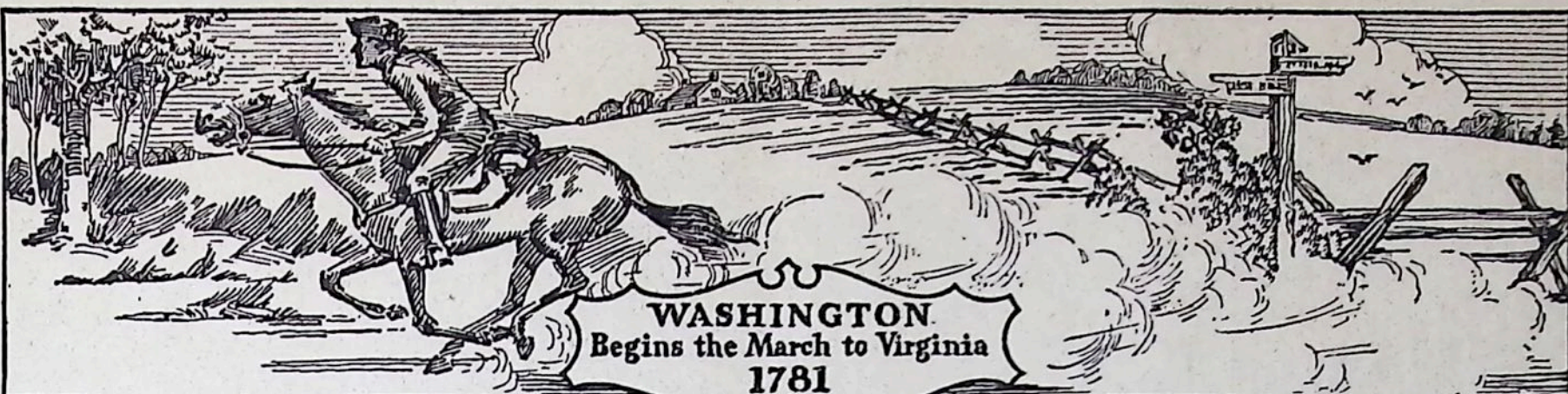
Company dividend, 450 resided in Massachusetts, the remaining ninety being scattered through a few states, chiefly in New England. Today when

the American Telephone and Telegraph Company pays its regular dividends—as it and its predecessor have done continuously for over fifty years—its checks go to more than 620,000 stockholders, residing in every state of the Union and in about seventy foreign countries and extraterritorial possessions of the United States.

THOUSANDS OF STOCKHOLDERS

A.T.&T. CO.







8th mo

August

1932

On August 19, 1781, Washington's army, north of New York, broke camp and began its famous march to Virginia. Learning that a French fleet was sailing for the Chesapeake, Washington had suddenly decided to join Lafayette at Yorktown and attack Cornwallis. In his plans, communication played an important part. Swift riders sped back and forth between the northern and southern continental armies. Feinting an attack on New York through New Jersey, Washington kept even his own troops in ignorance of their destination. British reconnoitering parties and couriers were prevented from carrying to New York any information of Washington's movements until he was beyond reach. Then Cornwallis was doomed and the outcome of the Revolution was virtually decided.

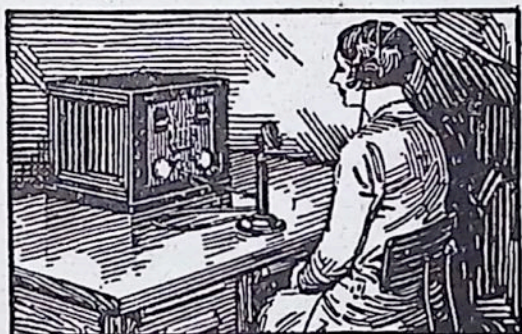
MOON'S PHASES

Eastern Time D.H.M.	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.	
2 4 42 A.M.		 Ω
9 2 40 A.M.		
16 2 42 A.M.		 π8
24 2 21 A.M.		
31 2 55 P.M.		

AUGUST hath 31 days

"Nothing is more useful to man than to speak clearly."—Phaedrus


CORRECT TIME BY TELEPHONE



In many areas the Associated Companies of the Bell System maintain bureaus to which are routed all calls requesting the correct time. Recently there has been developed a device, known as the time announcement turret, which greatly simplifies the handling of such calls.

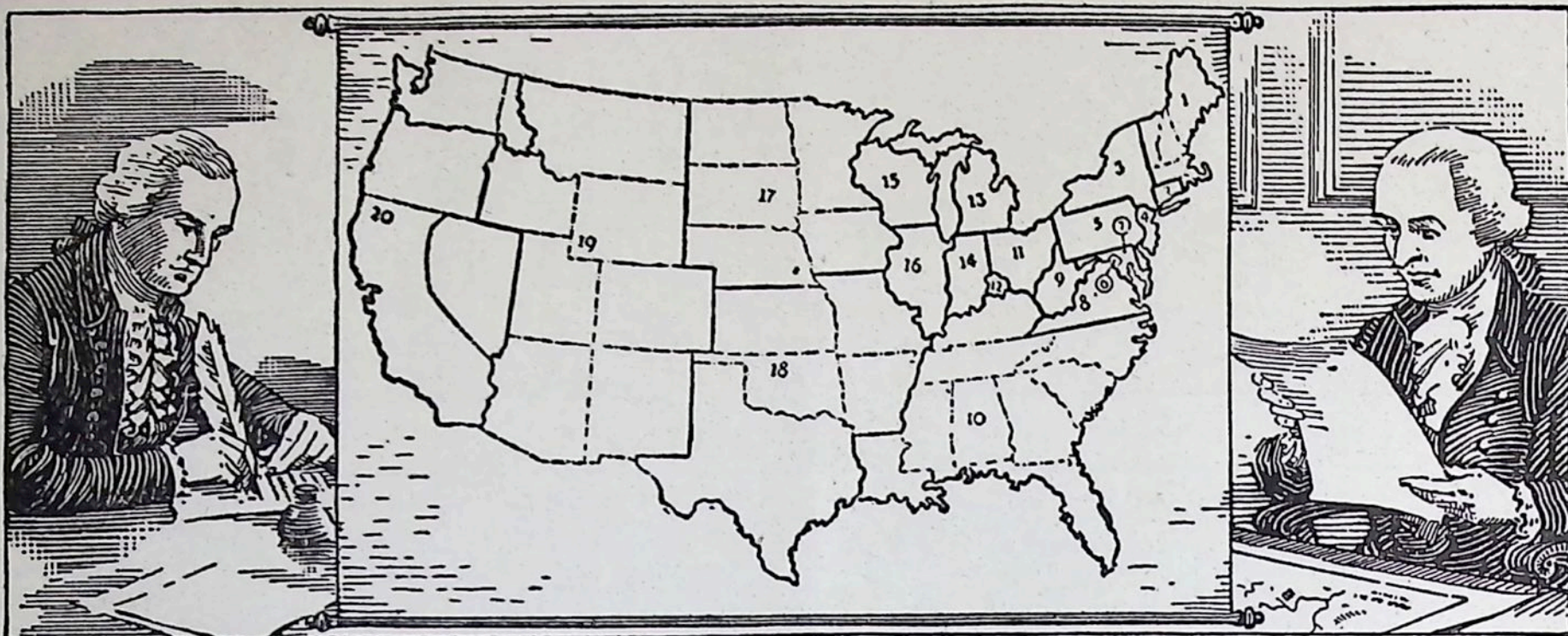
The apparatus, contained in a box-like case, rests on a desk before which sits a special operator. On the face of the turret are mounted two registers which indicate the time, in quarter-minute stages, together with various electric lights and keys. A number of subscribers may be connected with the turret and may listen to the operator simultaneously. When one or more subscribers are so connected, a white light appears and at regular intervals before each quarter minute change, a green light appears. Notified by this combination of green and white lights, the operator announces the time. For example, "When you hear the signal the time will be 10:45 $\frac{1}{4}$." This is followed by a short tone indicating the time as announced.

More than 350,000 men and women are employed in the telephone business in the United States.

- 1—M.—Enumeration under first Federal Census began, 1790. Colorado admitted to the Union, 1876.
- 2—Tu.—Alexander Graham Bell, inventor of the Telephone, died, 1922.
- 3—W.—First express office in Omaha, Neb., established, 1857.
- 4—Th.—Cornwallis retired with his army to Yorktown, Va., 1781.
- 5—Fr.—Desk type of telephone used in 1886.
- 6—Sa.—Father Gibault induced Vincennes to declare its allegiance to the United States, 1778.
- 7—Su.—American army under Scott left Pueblo, on march on Mexico City, 1847.
- 8—M.—James Bowdoin, Revolutionary patriot, born, 1726.
- 9—Tu.—Overland stage route opened between San Antonio, Tex. and San Diego, Cal., 1857.
- 10—W.—Missouri admitted to the Union, 1821. Herbert Clark Hoover, 31st President, born, 1874.
- 11—Th.— Last splice completed on New York-Chicago long distance telephone cable, 1925.
- 12—Fr.—King Philip died near Mount Hope, R. I. and the war which bears his name came to a close, 1676.
- 13—Sa.—Battle of Fort Erie began, 1814.
- 14—Su.—Washington commissioned Colonel and Commander-in-Chief of Virginia forces to protect frontier against Indians and French, 1755.
- 15—M.—First telephone exchange in Michigan opened at Detroit, 1878. First telephone exchange in New Jersey opened at Camden, 1879.
- 16—Tu.—Battle of Bennington, Vt., 1777.
- 17—W.—Outbreak of the Sioux War, 1862.
- 18—Th.—Santa Fe occupied by Gen. Kearney, 1846.
- 19—Fr.—U.S.S. Constitution captured the British frigate Guerriere, 1812.
- 20—Sa.—Benjamin Harrison, 23rd President, born, 1833.
- 21—Su.—First telephone exchange in Texas opened in Galveston, 1879.
- 22—M.—American force under Sullivan and Clinton set out from Tioga Point on expedition against Indians of Six Nations, 1779.
- 23—Tu.—Civil government organized in District of Arkansas, 1808.
- 24—W.—Fort Snelling, first military outpost in the Northwest, established, 1819.
- 25—Th.—British burned Washington, D. C., 1814. Overland mail service from Santa Fe to the East inaugurated, 1846.
- 26—Fr.—First telephone exchange in South Carolina opened at Charleston, 1879.
- 27—Sa.—Americans defeated in Battle of Long Island, 1776.
- 28—Su.—About 30,000 Bell telephones are connected or disconnected, on the average, each working day.
- 29—M.—Battle of Quaker Hill, R. I., 1778. Battle of Chemung (now Elmira, N. Y.) 1779.
- 30—Tu.—Washington saved Americans by his masterly retreat from Long Island, 1776. Second Battle of Bull Run, 1862.
- 31—W.—Delaware granted to William Penn by Duke of York, 1682.

*Ye Telephone
Will Save Thee
Many Steps in
Ye August Sun*





“Which Will Pervade the Whole Union”

ON August 1, 1786, Washington wrote to John Jay:

“I do not conceive we can exist long as a nation without having lodged somewhere a power, which will pervade the whole Union in as energetic a manner as the authority of the State governments extends over the several States.”

Out of such far-seeing conceptions of the imperative need for a strong federal government came, a little more than a year later, the United States Constitution. While providing an all-pervading federal authority, this remarkable document preserved to a large degree the independence of action of the individual states.

Similar in scope and purpose—and arising out of necessities equally imperative—was the conception of those who, more than half a century ago, laid the foundations of the Bell System, a group of operating telephone companies which have been allied for nation-wide service.

The relations of these Associated Companies with each other and with their parent company closely resemble those of the states of the Union with each other and with the federal government. Each Associated Company furnishes local service and interconnects communities within its own territory. For the purpose of providing service to the nation as a whole, all of these operating companies have been linked into a federation “which will pervade the Union.”

The American Telephone and Telegraph Company interconnects the territorial operating companies by means of its long distance lines; affords a centralized advisory service; maintains for the system an extensive research, investigating and experimental organization, including the Bell Telephone Laboratories; controls the Western Electric Company, manufacturer for the system, and furnishes the Associated Companies with engineering assistance and operating advice, as well as with assistance in legal, accounting and financial matters.

THE TERRITORIES OF THE ASSOCIATED COMPANIES

of the Bell System, as shown on the above map, are:

- | | |
|--|--|
| (1) New England Telephone and Telegraph Company | (12) The Cincinnati & Suburban Bell Telephone Company |
| (2) The Southern New England Telephone Company | (13) Michigan Bell Telephone Company |
| (3) New York Telephone Company | (14) Indiana Bell Telephone Company |
| (4) New Jersey Bell Telephone Company | (15) Wisconsin Telephone Company |
| (5) The Bell Telephone Company of Pennsylvania | (16) Illinois Bell Telephone Company |
| The Diamond State Telephone Company | (17) Northwestern Bell Telephone Company |
| (6) The Chesapeake & Potomac Telephone Company | (18) Southwestern Bell Telephone Company |
| (7) The Chesapeake & Potomac Telephone Company of Baltimore City | (19) The Mountain States Telephone and Telegraph Company |
| (8) The Chesapeake & Potomac Telephone Company of Virginia | (20) The Pacific Telephone and Telegraph Company |
| (9) The Chesapeake & Potomac Telephone Company of West Virginia | Bell Telephone Company of Nevada |
| (10) Southern Bell Telephone and Telegraph Company | The Home Telephone and Telegraph Company of Spokane |
| (11) The Ohio Bell Telephone Company | Southern California Telephone Company |



9th mo

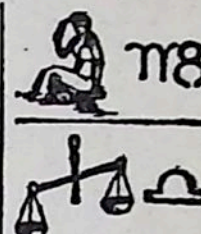
September

1932

On September 5, 1774, Washington attended the opening session of the First Continental Congress, at Philadelphia. Patrick Henry opened the deliberations of the body with an eloquent address in which he said: "British oppression has effaced the boundaries of the several colonies; the distinction between Virginians, Pennsylvanians and New Englanders is no more. I am not a Virginian, but an American!" In spite of these ringing words, one of the most serious problems of the American patriots was that of effecting close cooperation between the widely separated sections of the country. Mails were infrequent and undependable; distance and delay militated against a united democracy; inadequate facilities or intercommunication handicapped the struggle for independence.

MOON'S PHASES

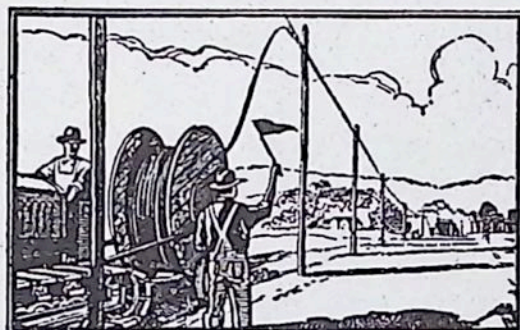
Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
7 7 49 A.M.	
14 4 6 P.M.	
22 7 47 P.M.	
30 12 30 A.M.	



SEPTEMBER hath 30 days

"We drank the pure delight of honest speech."—Meredith

PULLING IN AN AERIAL CABLE



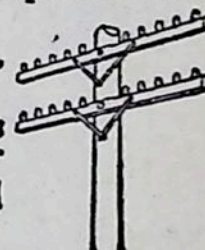
At the wave of a flag, a winch mounted on a big, blue-gray truck begins to whirl. Through rings hooked into a suspension strand supported on a long line of poles the lead-covered telephone cable crawls, foot by foot, until its reel is empty. Again the flag waves, the winch stops revolving—but only to begin again after it has been moved farther down the line where the process of "pulling-in" will be repeated.

Day after day, month after month, the work of extending the Bell System's network of aerial cables is going on—has been going on for some years. This type of construction is practically immune from damage by sleet storms and other hazards to which open wires are subject. The use of fine-gauge wire in cables has conserved copper and thus has been an important factor in reducing the cost of telephone construction.

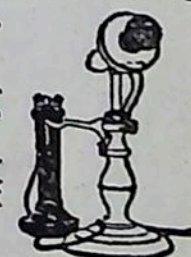
The more than 20,000,000 miles of Bell System wire in aerial cables therefore play an important part in assuring the dependability and cheapness of America's nation-wide telephone service.

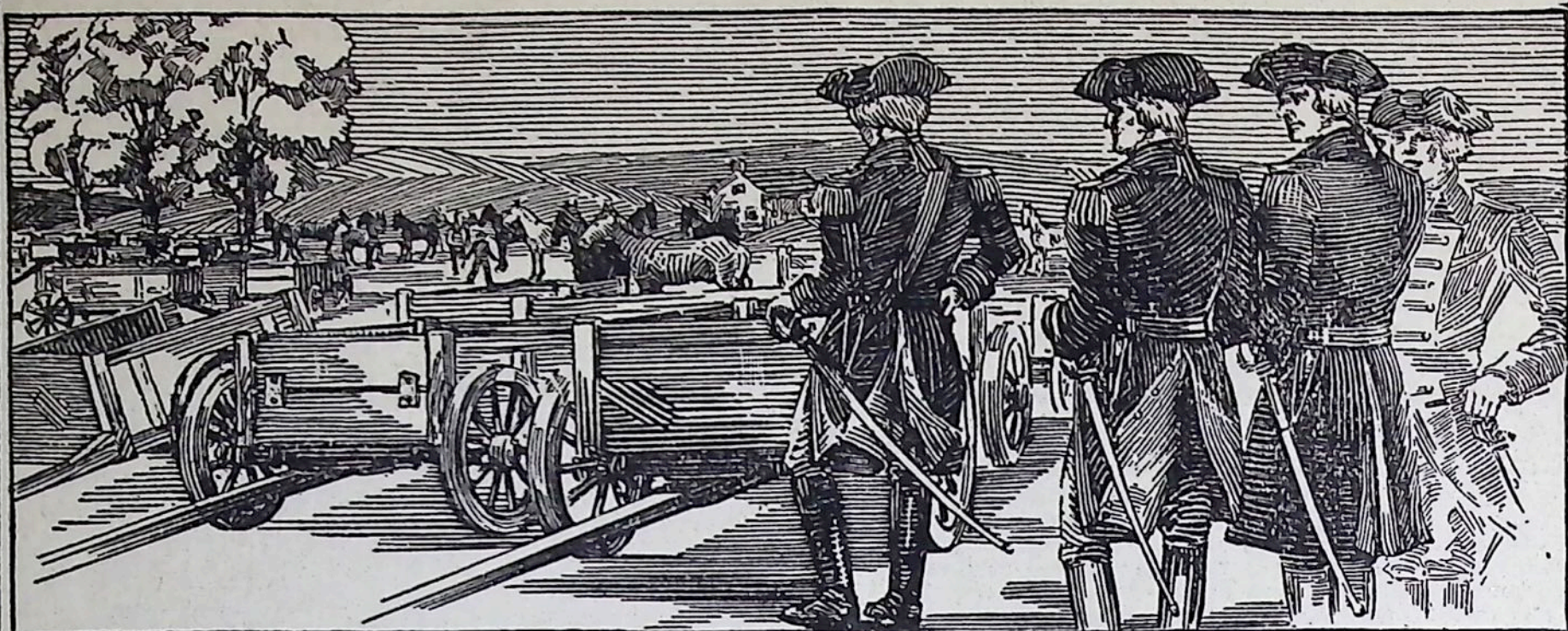
More than 235,000 American Telephone and Telegraph Company stockholders own five shares or less each.

- 1—Th.—First telephone exchange in Ohio opened at Cincinnati, 1878.
- 2—Fr.—First telephone exchange in Maine opened at Portland, 1879.
- 3—Sa.—Militia of several states called out to quell uprising in Western Pennsylvania known as the "Whiskey Rebellion," 1794.
- 4—Su.—Treaty of Peace ending Revolutionary War signed at Paris, 1783.
- 5—Su.—Hendrick Hudson anchored at Sandy Hook, N. J., 1609. New Amsterdam became an English possession, 1664.
- 6—M.—LABOR DAY. Colorado's first railroad survey completed from Black Hawk to Golden, 1865.
- 7—Tu.—The Pilgrims sailed from Plymouth on the Mayflower, 1620. Marquis de Lafayette born, 1757.
- 8—W.—Bell System new construction and replacements required over 600,000 poles during 1931.
- 9—Th.—Spaniards under Pedro Menendez de Aviles landed at present site of St. Augustine, Fla., 1565.
- 10—Fr.—California admitted to the Union, 1850.
- 11—Sa.—Commodore Perry won the Battle of Lake Erie—"We have met the enemy and they are ours."—1813.
- 12—Su.—Battle of Brandywine, 1777. First telephone exchange in Kansas opened at Topeka, 1879.
- 13—M.—Battle of Chapultepec, Mex., 1847.
- 14—Tu.—Spanish reconquest of Santa Fe, N. M., 1692.
- 15—W.—Washington joined Lafayette at Williamsburg, Va., 1781. Battle of South Mountain, Md., 1862.
- 16—Th.—William Howard Taft, 27th President, born, 1857.
- 17—Fr.—Battle of Harlem Heights, 1776.
- 18—Sa.—U. S. Constitution presented to delegates for signature, 1787. Washington's farewell address to his countrymen, 1796.
- 19—Su.—Cornerstone of Federal Capitol laid by Washington, 1793. First regular coach from San Francisco reached Denver, 1862.
- 20—M.—First Battle of Bemis Heights, N. Y., 1777. Terre Haute, Ind. laid out, 1816. Battle of Winchester, Va., 1864.
- 21—Tu.—Delaware adopted a state constitution, 1776. First telephone exchange in North Carolina opened at Raleigh, 1879.
- 22—W.—Washington conferred with Rochambeau and Admiral de Terney at Hartford, Conn., 1780. Battle of Monterey, Mex., began, 1846.
- 23—Th.—Desk type of telephone used by Bell System subscribers in 1895.
- 24—Fr.—AUTUMN BEGINS. John Paul Jones, commanding *Bonhomme Richard*, defeated *Serapis* off Flamborough Head, Eng., 1779.
- 25—Sa.—United States Supreme Court established, 1789.
- 26—Su.—First telephone exchange in Georgia opened at Atlanta, 1881.
- 27—M.—Ethan Allen captured by British, Montreal, Can., 1775.
- 28—Tu.—Pacific Ocean discovered by Vasco Nunez de Balboa, 1513.
- 29—W.—Gen. Gage arrived in Boston with troops from England, 1768.
- 30—Th.—Siege of Yorktown, Va., by Americans and French began, 1781.
- 31—Fr.—Twenty-seventh Division, A.E.F., broke Hindenburg Line, 1918.
- 32—Sa.—Telephone service between United States and Mexico opened to the public, 1927.



Students May
Keep in Touch
With Home by
Long Distance





The Service of Supply

HISTORY has made it clear that the initiative and courage of one great American—George Washington—saved the ill-fated Braddock expedition against Fort Duquesne from being doubly disastrous. That Braddock was able even to undertake this spectacular though unsuccessful thrust at the French on the Ohio was due to the assistance he received from another great American—Benjamin Franklin.

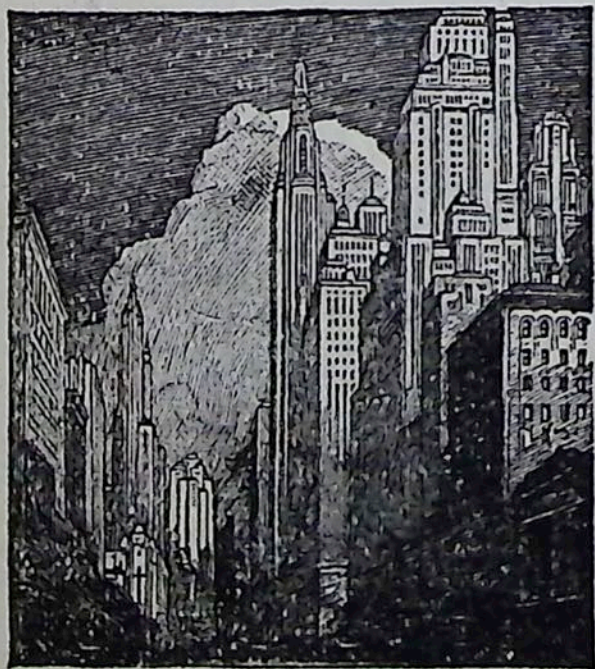
Writing to one of his military associates from Fort Cumberland, on June 5, 1755, Braddock said:

"I therefore, before I left Frederick, desired Mr. Franklin, postmaster of Pennsylvania, and a man of great influence in that Province, to contract for 150 Waggon and a Number of Horses, which he has executed with great punctuality and integrity . . . his Waggon and Horses have all joined me, and are indeed my whole Dependence."

Franklin's assistance to Braddock was one of the earliest American examples of what is known in military terms as the Service of Supply—a service as important in peace as in war. In the provision of America's nation-wide telephone service, an important function is performed by the Western Electric Company, which not only manufactures a major part of all equipment used by the Bell System, but acts for it in the capacity of purchasing agent.

Standardized manufacturing and the purchasing of supplies by this central agency are vital factors in furnishing economical and efficient telephone service.

CORNERSTONES OF COMMERCE



LOCAL and long distance telephone service has been an important factor in the laying of a firm foundation for modern America's commercial structure. Upon its direct and personal communication depend many millions of the human contacts which must be made every day if the nation's business is to be done. Nowhere so widely as in America has the telephone been accepted as one of the essential tools of trade. Nowhere else is business transacted more swiftly, more surely, or at lower cost. Nowhere else have been laid more securely the cornerstones of close co-operation and mutual understanding upon which sound business must be built.



10th mo

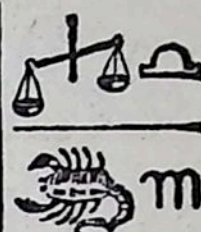
October

1932

On October 19, 1781, Cornwallis surrendered at Yorktown, Va., and American independence became assured. Washington at once dispatched Lieut. Col. Tench Tilghman, his aide-de-camp, to Philadelphia with a report of the victory, addressed to Thomas McKean, President of the Continental Congress. With the true spirit of the message-bearer, Tilghman spared neither himself nor his steed. He reached Philadelphia in the dead of night, October 23. Almost arrested because of his importunate knocking at McKean's door, he finally convinced the night watchmen of the nature and importance of his mission. Soon through the streets echoed their cry: "Cornwallis is taken!" From colony to colony other riders relayed the news that Americans had won their long fight for freedom.

MOON'S PHASES

Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
6 3 5 P.M.	
14 8 18 A.M.	
22 12 14 P.M.	
29 9 56 A.M.	



OCTOBER hath 31 days

"The living voice moves men."—Pliny the Younger

SPEEDS UP CALLS ACROSS ATLANTIC



Many transatlantic telephone calls involve names in languages with which the operators are not familiar. In order to establish connections for such calls as rapidly and accurately as possible, use is frequently made of the teletypewriter. By this means any character typed at one end of a circuit appears, practically at the same instant, at the other end, in type-written form.

Through the use of the teletypewriter for exchange of information between American and European transoceanic telephone operators, names of persons or places in unfamiliar languages may be spelled out quickly and correctly, thus speeding up the service.

When the long-wave radio channel is not being used for telephone transmission, the teletypewriter apparatus, which is set up on a table behind the switchboard operators, may be "plugged in" on this circuit as its use is desired.

Neither the apparatus nor the channel is available for the transmission of teletypewriter messages on a commercial basis.

On an average, 985 telephone conversations take place in the United States every second.

- 1—Sa.—*New York-Chicago telephone cable opened, 1925.*
- 2—Su.—*State House, Indianapolis, completed, 1888.*
- 3—M.—*West Virginia State University, Morgantown, established, 1863.*
- 4—Tu.—*Battle of Germantown, Pa., 1777. Rutherford B. Hayes, 19th President, born, 1822.*
- 5—W.—*First telegraph line reached Nebraska, 1860. Chester A. Arthur, 21st President, born, 1830.*
- 6—Th.—*Forts Clinton and Montgomery, on west bank of Hudson, captured by British under Gen. Clinton, 1777.*
- 7—Fr.—*Americans stormed King's Mountain, S. C., 1780.*
- 8—Sa.—*Modern telephone desk set.*
- 9—Su.—*First reciprocal telephone conversation over a real line, Boston to Cambridgeport, Mass., two miles, 1876.*
- 10—M.—*Benjamin West, artist, born, 1738. Minneapolis, Minn., settled and made county seat, 1852.*
- 11—Tu.—*Americans under Benedict Arnold defeated by British in naval battle on Lake Champlain, 1776.*
- 12—W.—*COLUMBUS DAY. Columbus sighted land which he named San Salvador, 1492.*
- 13—Th.—*Cornerstone of the White House laid, 1792.*
- 14—Fr.—*William Penn, founder of Pennsylvania, born, 1644.*
- 15—Sa.—*Regular Quarterly Dividend date, American Telephone and Telegraph Company.*
- 16—Su.—*Pottawattamie Indians ceded to the State of Indiana right-of-way for Michigan Road, 1826. John Brown's Raid, Harper's Ferry, Va., 1859.*
- 17—M.—*Burgoyne's surrender at Saratoga, 1777.*
- 18—Tu.—*North Carolina adopted a state constitution, 1776.*
- 19—W.—*British forces under Cornwallis surrendered to Americans and French at Yorktown, Va., 1781.*
- 20—Th.—*Minerva Society, first women's club in America, organized at New Harmony, Ind., 1859.*
- 21—Fr.—*Juan de Onate authorized to colonize New Mexico, 1595.*
- 22—Sa.—*Fort Wayne, Ind., one of strongholds built by troops under Gen. Anthony Wayne in campaign against Indians, completed, 1794.*
- 23—Su.—*Thomas Pinckney, patriot and statesman, born, 1750.*
- 24—M.—*Gold nugget worth \$417 found at Unknown Gulch, Col., 1860.*
- 25—Tu.—*William Penn granted a charter to Philadelphia, 1701. British evacuated Newport, R. I., 1779.*
- 26—W.—*Erie Canal completed and dedicated, 1825.*
- 27—Th.—*William Penn arrived at Newcastle, Pa., 1682. Theodore Roosevelt, 26th President, born, 1858.*
- 28—Fr.—*Battle of White Plains, N. Y., 1776. First election held in Territory of Montana, 1864.*
- 29—Sa.—*More than 66 per cent of Bell System wire mileage is in underground cable.*
- 30—Su.—*John Adams, 2nd President, born, 1735.*
- 31—M.—*All Hallow-e'en. Nevada admitted to the Union, 1864.*



Time to Call
Up and Reserve
Tickets for ye
Football Game





In Great Waters

THE restoration of the *Constitution*—the gallant frigate “Old Ironsides”—recalls the last important engagement of this stalwart fighting ship. The battle, fought needlessly because its participants had not learned of the proclamation of peace, strikingly illustrates the stark solitude and isolation which, before the advent of modern methods of communication, surrounded all who found it their duty, in peace or in war, to “go down to the sea in ships” and “do business in great waters.”

Captain Charles Stewart, commanding the *Constitution*, put out from Boston toward the end of December, 1814. While he was at sea, or perhaps a few days before he sailed, the Treaty of Ghent was signed and the War of 1812 came to a close. Ignorant of this fact, Stewart proceeded

across the Atlantic to the Bay of Biscay, cruised along the coast of Portugal and there, on February 20, 1815, still unaware that hostilities between the United States and Great Britain had ended nearly two months before, encountered and captured the British ships *Cyane* and *Levant*.

Today such an ill-timed encounter would be impossible. Electrical communication has been so widely extended that open stretches of ocean no longer afford a barrier to the transmission of man's messages. Even the spoken word has triumphed over wind and wave. Not a few ocean liners are equipped with ship-to-shore radio telephone apparatus by means of which their passengers may converse with their homes or places of business at will. Science has swept away the isolation of the sea.

SUBTERRANEAN SPEECH HIGHWAYS

MORE than fifty years ago it became apparent that, in the larger cities, some means of putting telephone wires underground must be developed. So rapid had been the growth of demand for telephone service that open-wire lines cluttered house-tops and wires formed spider webs of copper above city streets.

Various experiments finally resulted in a cable

in which each wire was insulated by a wrapping of dry paper, the core thus formed being protected by



a lead sheath. In 1891 a dry-core cable containing fifty pairs of wires became standard for the Bell System. The number of wires in a cable was gradually increased, this evolution producing, among others, one type, now in common use, which contains 1800 pairs of wires.



11th mo

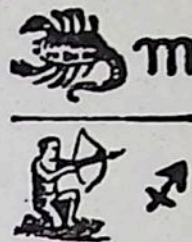
November

1932

On November 26, 1789, the first American national Thanksgiving Day was celebrated. President Washington's proclamation calling for its observance was dated October 3, but did not reach some sections of the country until weeks later. The communication facilities of that period form a striking contrast with those of the present. Now the President may read his Thanksgiving Day proclamation, or make an address on any important subject, and nation-wide telephone networks, connecting scores of radio broadcasting stations, will carry his voice instantly to millions of listeners. Well may Americans recall that among the blessings for which Washington called upon his countrymen to give thanks was "the means we have of acquiring and diffusing useful knowledge."

MOON'S PHASES

Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
5 150 A.M.	
13 228 A.M.	
21 258 A.M.	
27 743 P.M.	



NOVEMBER hath 30 days

"As the life is, so is the speech."—Greek Proverb

DIRECTORIES BY THE TRUCKLOAD



Taken together, the telephone directories issued by the Associated Companies of the Bell System come close to breaking all printing records for volume, speed of production and accuracy. Every year there are distributed among the subscribers of the system more than 1900 different directories, with a total issue of more than 36,000,000 copies. As a rule, two issues of each directory are published every year.

Preparing the directory material, checking and rechecking for errors, getting the books off the press on time and making prompt distribution to subscribers are important phases of providing telephone service that keeps pace with America's growing demands.

Years of study have been given to size and character of type, arrangement of printed matter, quality and weight of paper, methods of binding and other problems involved in making the telephone directory easy to read and to handle—an important contribution to the comfort and convenience of the telephone user.

The Bell System now has in service more than 300,000 public telephones.

- 1—Tu.—All Saints Day. Stamp Act in effect, 1765. First telephone exchange in Arkansas opened at Little Rock, 1879.
- 2—W.—James K. Polk, 11th President, born, 1795. Warren G. Harding, 29th President, born, 1865. North and South Dakota admitted to the Union, 1889.
- 3—Th.—University of Vermont, Burlington, chartered, 1791.
- 4—Fr.—First General Assembly in Indiana met at Corydon, 1816.
- 5—Sa.—Washington began trip to Philadelphia—his last extensive journey from Mount Vernon, 1798.
- 6—Su.—The modern hand telephone instrument.
- 7—M.—U. S. troops under Harrison defeated Indians at Tippecanoe, Ind., 1811.
- 8—Tu.—ELECTION DAY. (Except in certain states). Montana admitted to the Union, 1889.
- 9—W.—State constitution of Oregon ratified, 1857.
- 10—Th.—Antonio de Espejo started for New Mexico, 1582.
- 11—Fr.—Washington (state) admitted to the Union, 1889.
- 12—Sa.—Americans under Montgomery entered Montreal, Can., 1775.
- 13—Su.—First meeting of Board of Trustees, University of Pennsylvania, 1749.
- 14—M.—First type set in Nebraska used in printing *The Palladium*, a weekly newspaper published at Bellevue, 1854. First telephone exchange in Pennsylvania opened at Philadelphia, 1878.
- 15—Tu.—Lewis and Clark reached the Pacific, 1805. First telephone exchange in Alabama opened at Mobile, 1879.
- 16—W.—Oklahoma admitted to the Union, 1907.
- 17—Th.—U. S. Congress met in Washington, D. C. for first time, 1800.
- 18—Fr.—Susan B. Anthony and several other women who cast ballots at national election (Nov. 5) arrested for illegal voting, 1872.
- 19—Sa.—James A. Garfield, 20th President, born, 1831.
- 20—Su.—First issue of *Arkansas Gazette*, first newspaper published in Arkansas, 1819.
- 21—M.—(Nov. 11 O. S.) Pilgrims reached Cape Cod and executed the famous "Mayflower Compact," 1620. North Carolina (12th state) ratified U. S. Constitution, 1789.
- 22—Tu.—The Associated Companies of the Bell System operate more than 6,600 central offices.
- 23—W.—Franklin Pierce, 14th President, born, 1804.
- 24—Th.—THANKSGIVING DAY. Zachary Taylor, 12th President, born, 1784.
- 25—Fr.—British evacuated New York, 1783.
- 26—Sa.—First "long distance" telephone conversation, Boston to Salem, Mass., 1876.
- 27—Su.—First Sunday in Advent. Battle of the Washita, Indian Territory, 1868.
- 28—M.—Magellan entered the Pacific, 1520.
- 29—Tu.—Savannah, Ga., captured by British, 1778.
- 30—W.—Preliminary treaty ending Revolutionary War signed, Paris, 1782.



Telephone Calls to Absent Loved Ones Give Them Added Cause for Giving Thanks



Friends at a Distance

IN order to prove that man could live self-sufficiently, Henry David Thoreau, naturalist, lecturer and essayist of the middle of the nineteenth century, built with his own hands a hut on the shores of Walden Pond, near Concord, Mass., and there lived for two years the life of a recluse. Cultivating beans and potatoes for food, he shut himself off as completely as he could from human contacts and made beasts, birds and fishes his only intimates.

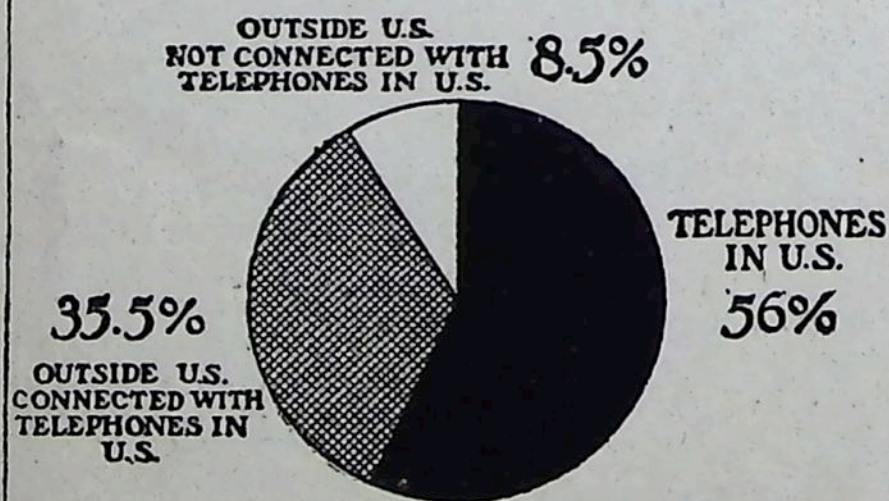
Yet this same hermit-philosopher wrote:

"Nothing makes the earth seem so spacious as to have friends at a distance."

Deep down beneath that which makes men sometimes seek solitude is an instinct which, at other times, makes them yearn for the touch of a friendly hand or the sound of a familiar voice. At such times the world seems very wide because friends are far away.

The earth today is far less spacious than it was when the hermit of Walden wrote these words. Far-flung facilities for communication carry the voice of loved ones or acquaintances from coast to coast, from continent to continent, and to and from ships far out at sea. Science has made time and distance no longer the masters of speech, but its servants. No matter how far distant friends may be, they are never farther out of voice-reach than the nearest telephone.

THE WORLD'S TELEPHONES



THE telephones in the United States which may be linked for nation-wide communication by the lines of the Bell System or its Connecting Companies now number about 20,000,000, or about 56 per cent of all the telephones in the world. These telephones may be interconnected, by wire or radio, with approximately 12,800,000 additional telephones in foreign countries. Every Bell-owned or Bell-connecting telephone is thus within voice-reach of 32,800,000 other telephones, or more than 91 per cent of all the telephones in the world.



12th mo

December

1932

On December 14, 1799, George Washington died at Mount Vernon, Va. The United States was then a narrow strip of territory fringing the Atlantic seaboard, yet many days were required to carry the news of his death even to its larger cities. Not until December 25, for example, did the papers of Boston record the event. A much longer time was required to reach the remoter sections. News of similar importance would be flashed, today, from coast to coast, reaching America's millions of people in less time than it took a courier, a century ago, to ride from one town to the next. As the nation has grown, communication facilities have grown to meet its increasing needs.

MOON'S PHASES

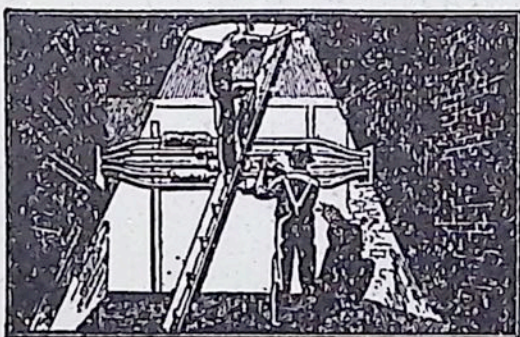
Eastern Time	For Central Time, deduct 1 hr.; Mountain Time, 2 hrs.; Pacific Time, 3 hrs.
D.H.M.	
4 44 5 P.M.	
12 9 21 P.M.	
20 3 22 P.M.	
27 6 22 A.M.	



DECEMBER hath 31 days

"They give charm to their gifts by words."—Pliny

50,000,000 MILES OF BURIED WIRE



Within a few years after the first sentence of speech was transmitted electrically, the development of the telephone in the larger towns and cities had become so extensive that the existence of tall poles, each carrying scores of overhead lines, was a serious problem.

In 1881, a definite step in the direction of putting the telephone wires underground was taken when a conversation was held successfully over a cable about a quarter of a mile in length. From this beginning dates the development of the Bell System's vast amount of underground cable.

Running through conduits or ducts buried deep beneath the city streets, unseen by the public they serve, are more than 50,000,000 miles of fine copper wire in cable. Manholes like that here shown afford convenient access to the conduits when repairs are required or when increasing demands for service necessitate the installation of additional cables.

Underground cable has helped to make possible the high development of the telephone in modern American cities.

The Bell System's average investment in plant is more than \$250 for each Bell telephone.

- 1—Th.—First telephone exchange in District of Columbia opened at Washington, 1878.
- 2—Fr.—Presidential message propounded the Monroe Doctrine, 1823.
- 3—Sa.—Illinois admitted to the Union, 1818.
- 4—Su.—Washington's farewell to his officers, Fraunce's Tavern, New York City, 1783.
- 5—M.—Martin Van Buren, 8th President, born, 1782. Washington elected President for second term by unanimous electoral vote, 1792.
- 6—Tu.—Abraham Lincoln entered Congress, 1847.
- 7—W.—Delaware (1st state) ratified the U. S. Constitution, 1787.
- 8—Th.—Boundary line fixed between Indiana and Michigan, 1834.
- 9—Fr.—Battle of Great Bridge—"Virginia's Bunker Hill," 1775.
- 10—Sa.—Mississippi admitted to the Union, 1817.
- 11—Su.—Indiana admitted to the Union, 1816.
- 12—M.—Pennsylvania (2nd state) ratified U. S. Constitution, 1787. John Jay, diplomat and first Chief Justice of U. S. Supreme Court, born, 1745.
- 13—Tu.—Bell System long distance service reaches over 91 per cent of the world's telephones.
- 14—W.—Alabama admitted to the Union, 1819.
- 15—Th.—Battle of Nashville, Tenn., began, 1864.
- 16—Fr.—"Boston Tea Party," 1773.
- 17—Sa.—First successful flight of man-carrying airplane made by Orville and Wilbur Wright, Kitty Hawk, N. C., 1903.
- 18—Su.—New Jersey (3rd state) ratified U. S. Constitution, 1787.
- 19—M.—Washington's army went into winter quarters at Valley Forge, Pa., 1777.
- 20—Tu.—The symbol of a nation-wide, universal telephone service.
- 21—W.—WINTER BEGINS. Landing of the Pilgrims at Plymouth, Mass., 1620.
- 22—Th.—Southern Transcontinental Telephone Line, between Chicago and Los Angeles, opened, 1923.
- 23—Fr.—Washington surrendered his commission to Congress at Annapolis, Md., 1783.
- 24—Sa.—Treaty of Peace between United States and Great Britain, ending War of 1812, signed at Ghent, Belgium, 1814.
- 25—Su.—Christmas Day. Washington crossed the Delaware, 1776.
- 26—M.—Battle of Trenton, N. J., 1776.
- 27—Tu.—Nicholas J. Roosevelt, inventor, born, 1767.
- 28—W.—Iowa admitted to the Union, 1846. Woodrow Wilson, 28th President, born, 1856.
- 29—Th.—Andrew Johnson, 17th President, born, 1808. Texas admitted to the Union, 1845.
- 30—Fr.—Gadsden Purchase treaty signed, 1853.
- 31—Sa.—Americans under Montgomery and Arnold failed in attempt to capture Quebec, Can., 1775.



Ye Voice, Borne
by Telephone, is
ye Best of All
Yuletide Gifts



THE BRITISH ISLES. CANADA. BERMUDA AND AUSTRALIA. The phrase is "Number, please?"

CUBA. Dark-haired señoritas at the switchboard answer: "Numero?"—that is "Number?"

MEXICO. The operator says: "Que numero?" ("What number?") She may add "por favor."

HOLLAND. The subscriber hears "Welk nummer?" This is Dutch for "Which number?"



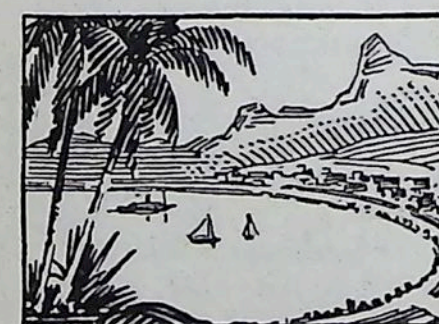
ARGENTINA. The voice at the central office greets one with "Numero?" ("Number?")



URUGUAY. In answering calls, operators use the word "Numero?" which is Spanish for "Number?"



CHILE. The standard phrase used in local exchanges is "Que numero?" ("What number?")



BRAZIL. The operator says in Portuguese: "Que numero, faz favor?" ("What number, please?")



FRANCE. The rules require the operators to answer: "J'écoute" ("I am listening.")



SPAIN. Operators at manual exchanges answer calls with the word "Numero?" ("Number?")



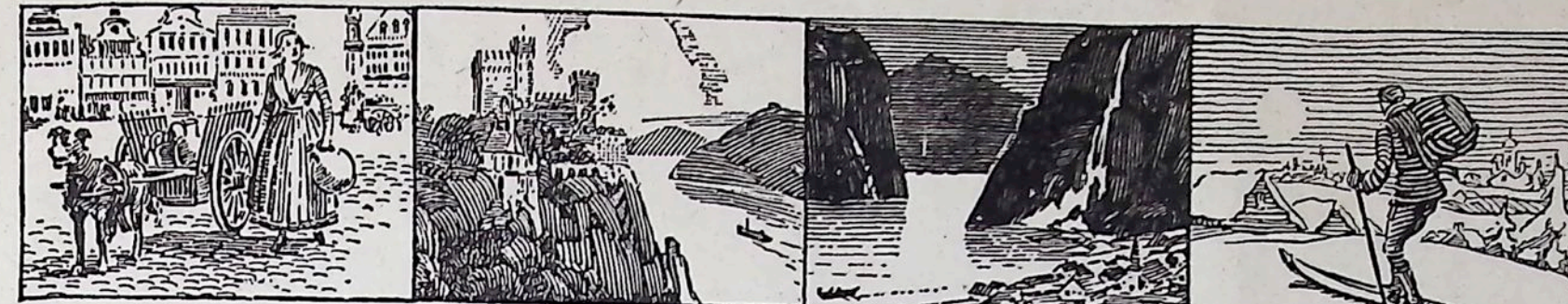
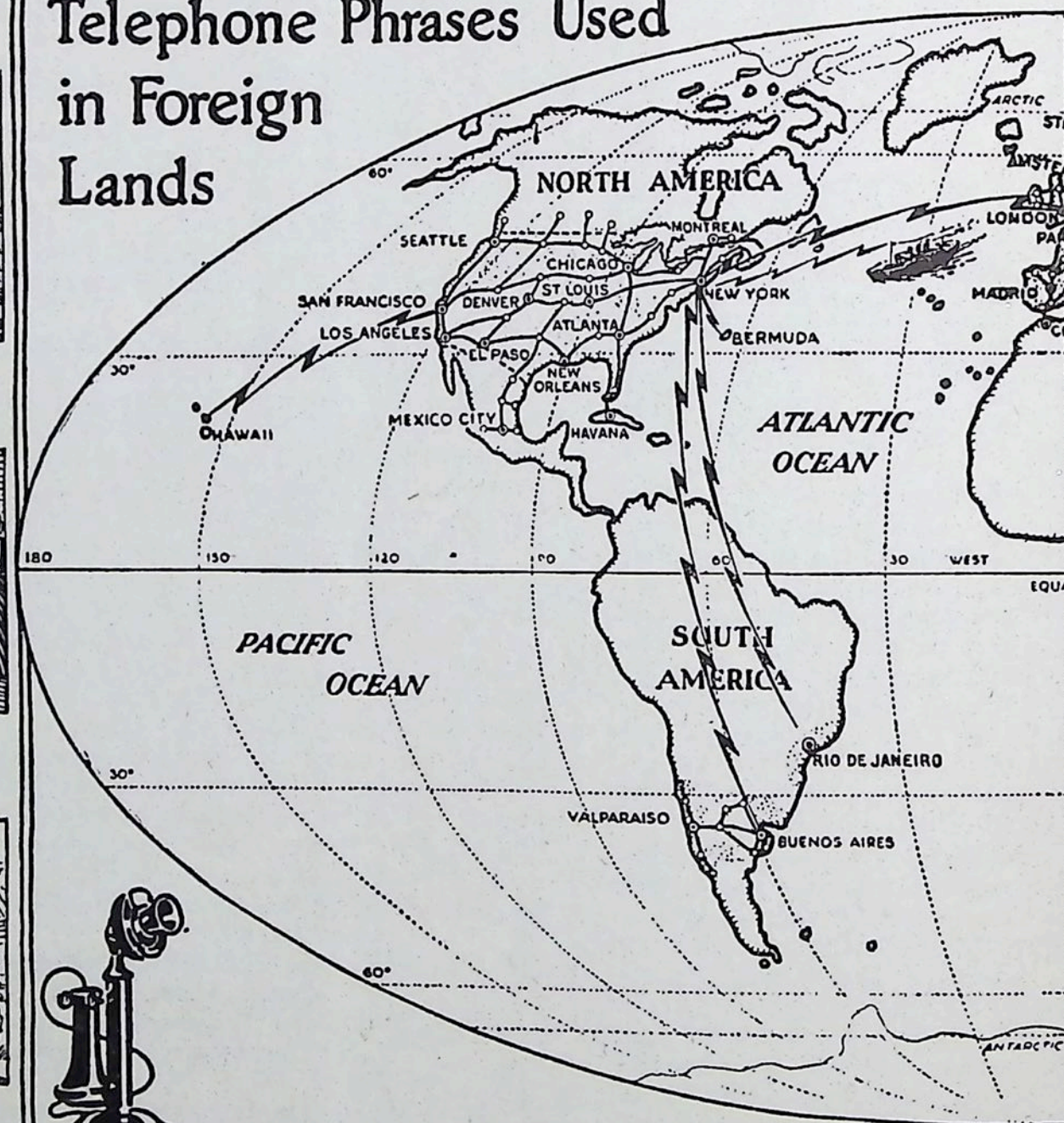
ITALY. Operator gives her own number, then adds "per servirla" ("At your service.")



HUNGARY. Operators answer calls by saying "Kospont", meaning "Central Office."

How They Say

Telephone Phrases Used in Foreign Lands



BELGIUM. Operators say, in French, "J'écoute" or, in Flemish, "Ik luister" ("I listen.")

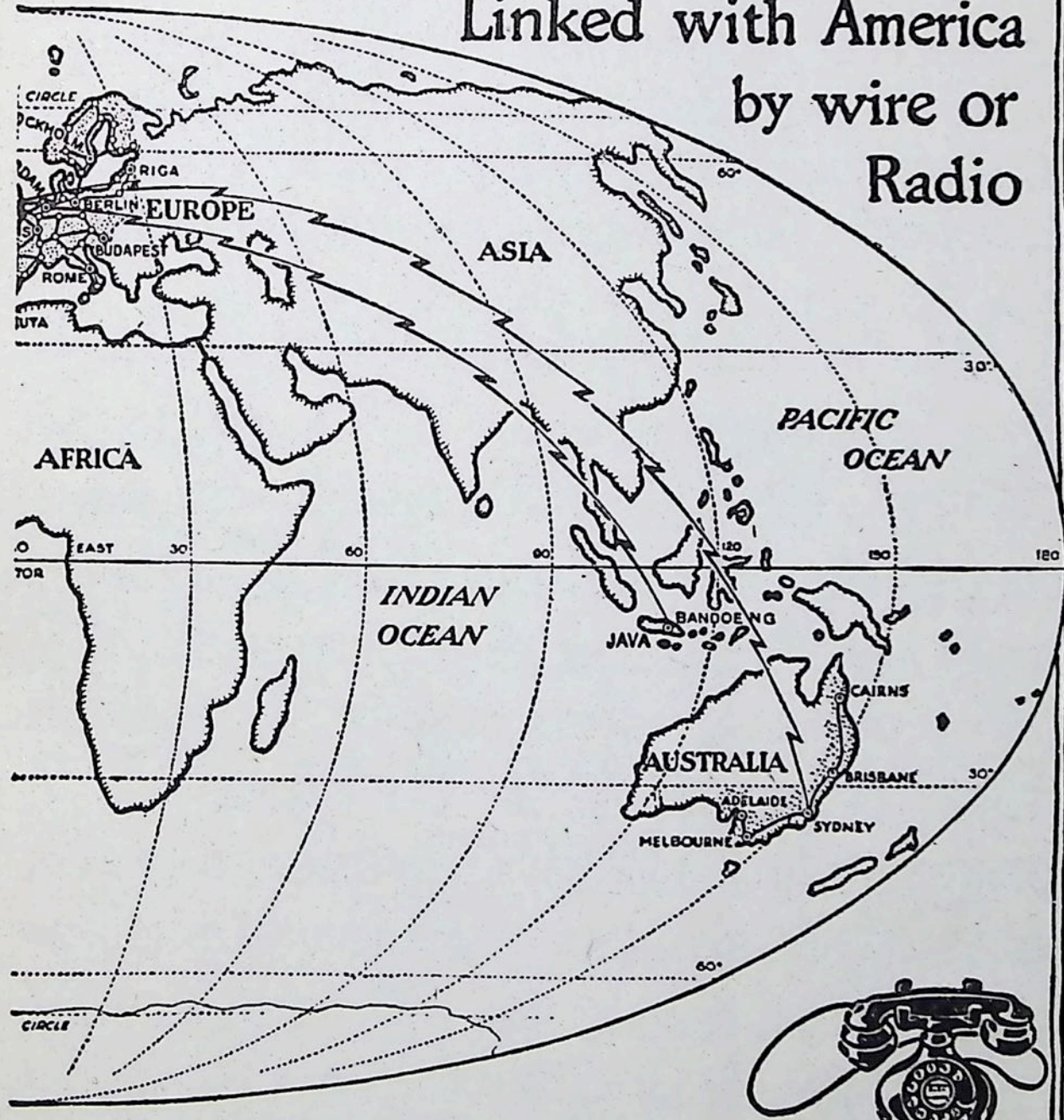
GERMANY. Operators say "Hier Amt" ("This is the exchange") or give the exchange name.

NORWAY. When a local office is called, the standard reply is "Centralen," that is, "Exchange."

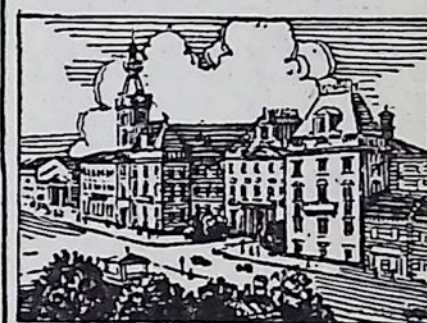
SWEDEN. The general rule is for the operator to announce name of her central office.

"Number Please"

Linked with America by wire or Radio



DENMARK. Operators answer calls by repeating the name of their own central office.



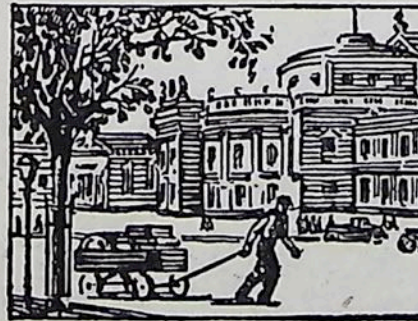
POLAND. Operator gives her number. This may be followed by "Proszę," meaning "Please."



LATVIA. The subscriber hears the operator say "Centrale," which means "Central Office."



LITHUANIA. The equivalent of "Central Office" is used here also. The word is "Centrals."



AUSTRIA. "Bitte, die nummer?" ("Number, please?") or the word "Nummer?" is employed.



CZECHO-SLOVAKIA. Operators usually reply with the word "Prosim," meaning "Please."



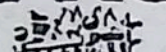




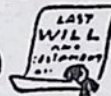

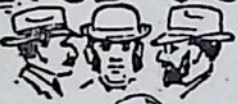



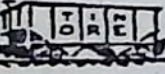









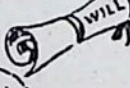














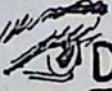




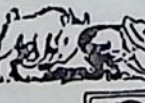











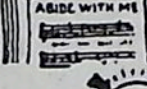








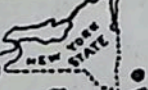


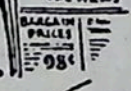







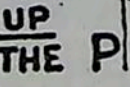
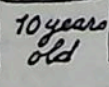







SWITZERLAND. Equivalents of "Number, please?" in French, German and Italian are used.

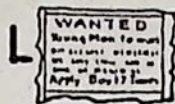


JAVA. Operators use the same words as in Holland, or answer "Kantor" which means "Office."

A black and white woodcut-style illustration of a woman sitting at a desk, writing in a book. She is wearing a long, light-colored dress with a dark belt. The desk is cluttered with several books and papers. In the background, there is a window with vertical blinds and a shelf with more books.

A LEAF FROM WASHINGTON'S BOOK

WITH FUL S, THROUGH  THIS Y, AMERI  
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 Y OF  . HIS  S AS  IER, ST  8ES,  LIVE
 4 EVER  AGE. HIS RE  AS A  WELCOME  4  URIES  
 C.  .   OFT HAVE  ETS SUNG OF  W  HE
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 OF PAR  WEEMS.   T  AS IT  THIS UTH IS HON-
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 BOLD  S OF A  ,  LET US  HIS 
 LOOK & C JUST W  IT IS HE WR  TES. Th  EE  ENCES THE



INDICES ; —

Rules of Civility & Decent Behaviour In Company and Conversation

Let your Conversation be without Malice or Envy, for 'tis a Sign
of a Tractable and Commendable Nature?

Speak not injurious Words neither in Jest nor Earnest

Be not froward but friendly and Courteous; the first to Salute,
hear and answer & be not Pensive when it's a time to converse.

Think before you speak pronounce not imperfectly nor bring out
your Words too hastily but orderly & distinctly
Speak not evil of the absent for it is unjust

THEE MIMS, AS U C, CH THE ER T OF UING
S -- A MOST IM LES; 1 T WAS L E D B
THE ART OF CON ATION T WAS I E D B
THOUGH ONLY NEIGH S, F 2 F, COULD T CON
-- BOTH & SP SET LIM TATIONS ON THE S THROUGH
COULD REACH THE VO OF . OUR S IS M /ORT NOW THAN
T IT WAS, IV WE'VE L E D HOW 2 GIVE II THE ON WORD; S
VO B OTHER IS HEARD DIST L & ; HIS S HAS FLOWN
AFR, NE BY

The Telephone

LET US RE T WE THEE S T MAKE 4
NDEAV WAYS 2 O EVERYTHING T WE SAY. I NG,
LET US TR II C T WE R E D B THEE M IMS -- EVERY
ONE NED Y A B Washington.

OUR RE IS F E D, GOOD FR, ONCE M WE SAY

The End.

If you wish a translation of the Rebus, together with
additional information about the telephone, write -

Information Department

AMERICAN TELEPHONE AND TELEGRAPH COMPANY
195 Broadway, New York City



The Bell System's Fundamental Policy

THE business of the Bell System is to furnish telephone service to the nation. This organization consists of the American Telephone and Telegraph Company and its Associated Companies, whose common stocks are largely owned by the American company. The American Telephone and Telegraph Company now has more than 620,000 stockholders. The employees of the Bell System, including those of the Western Electric Company, number more than 350,000.

These facts have a most important bearing on the policy of the management in carrying out its four-fold obligation to the telephone using public, to the telephone art, to its investors and to its employees.

These responsibilities, and the Bell System's policy in meeting them, may be summarized as follows:

1. *The fact that the responsibility for such a large part of the entire telephone service of the country rests solely upon the American Telephone and Telegraph Company and its Associated Companies imposes on the management an unusual obligation to the public to see that the service shall at all times be adequate, dependable and satisfactory to the user.*
2. *The fact that so large a share of the responsibility for meeting the telephone needs of today rests upon the Bell System implies that it must also be responsible for meeting the needs of the future. It has a peculiar obligation to carry on the research and experimentation necessary for the further development of the telephone art.*
3. *The fact that the ownership of Bell System securities is so widespread and diffused imposes an unusual obligation on the management to see that the savings of these hundreds of thousands of people are secure and remain so.*
4. *The policy which recognizes these obligations to the telephone-using public of today and of the future and to its investors recognizes equally the Bell System's responsibilities to its employees. It is and has been the policy and aim of the management to pay salaries and wages in all respects adequate and just and to make sure that individual merit is discovered and recognized.*

Obviously the only sound policy that will meet these obligations is to continue to furnish the best telephone service at the lowest cost consistent with financial safety.

Earnings must be sufficient to assure the best possible telephone service at all times, the further development of the art and the continued financial integrity of the business. Earnings that are less than adequate must result in telephone service, in the present and in the future, that is something less than the best possible. Earnings in excess of these requirements must either be spent for enlargement and improvement of the service furnished or the rates charged for the service must be reduced.

This is the four-fold basis of the fundamental policy and purpose of the Bell System—the most telephone service and the best, at the least cost to the public, consistent with these obligations.

1503



1932

From An Ancient Almanac

THE illustration shown is taken from Pynson's "Kalender of Shepherdes," published in 1503. The central circle encloses two figures, a woman with a nosegay of flowers, representing warm weather, and a man sitting by an outdoor fire, representing cold weather.

The occupational illustrations begin at the lower left portion of the second circle with the picture of a man slaughtering a boar, for January. Proceeding around the circle, in a clock-wise direction, the other months are: February, a man sitting at a table with a tankard before him; March, a woman warming her hands and feet by a fire; April, a pruner; May, a lover and lass a-Maying; June, a plowman; July, a mower; August, a reaper; September, a man with a mattock; October, a man driving a horse; November, a vintager; and December, a shepherd. The outermost circle contains the signs of the zodiac, each sign being divided between two months.

ECLIPSES, 1932

In the year 1932 there will be four eclipses, two of the Sun and two of the Moon.

1. An annular eclipse of the Sun on March 7, visible as a partial eclipse in the East Indies and Australia. The annular path passes over the ocean south of Australia.

2. A partial eclipse of the Moon on March 22, visible in Asia, Australia and North America.

3. A total eclipse of the Sun on August 31, visible as a partial eclipse in North America, the extreme northern part of South America, and the extreme northeastern part of Asia. The path of totality crosses the northeastern section of North America.

4. A partial eclipse of the Moon on September 14, visible in Europe, Africa, Asia, and Australia. The ending also visible in the northeastern part of North America and in South America.

CHRONOLOGICAL ERAS

The year 1931 of the Christian era comprises the latter part of the 156th and the beginning of the 157th year of the Independence of the United States of America.

Of the peoples using the Christian era some employ the Gregorian calendar and some the Julian. The Gregorian calendar is used in the United States and many other countries. January 1, 1932, in the Gregorian calendar corresponds to December 19, 1931, in the Julian calendar.

The year 5693 of the Jewish era begins at sunset on September 30, 1932, Gregorian calendar.

The year 2592 of the Japanese era, being the seventh year of the period Showa, begins on January 1, 1932, Gregorian calendar.

The year 1351 of the Mohammedan era, or the era of the Hegira, begins at sunset on May 6, 1932, Gregorian calendar.

SIGNS OF THE ZODIAC

Under the Julian Calendar, as originally used, the year began with March and the signs of the Zodiac, with their symbols, are usually named in order beginning with the sign for that month, as follows:

SPRING SIGNS		SUMMER SIGNS		AUTUMN SIGNS		WINTER SIGNS	
1. ♈ Aries,	Ram	4. ♋ Cancer,	Crab	7. ♎ Libra,	Balance	10. ♐ Capricornus,	Goat
2. ♉ Taurus,	Bull	5. ♌ Leo,	Lion	8. ♏ Scorpio,	Scorpion	11. ♑ Aquarius,	Water Bearer
3. ♊ Gemini,	Twins	6. ♍ Virgo,	Virgin	9. ♐ Sagittarius,	Bowman	12. ♒ Pisces,	Fishes



IN THE FIFTY-SIXTH YEAR OF THE
TELEPHONE THE BELL SYSTEM
LOOKS FORWARD TO CONTINUED
PROGRESS IN THE DEVELOPMENT
OF THE ART OF THE TRANSMIS-
SION OF THE SPOKEN WORD