



2400 telephone wires in a cable little larger than a man's wrist

Science keeps down costs

When the Bell System installed its first successful telephone cable, fifty wires was the largest number that could be operated in a single cable without "cross-talk" and other interference. Today it would require 48 cables of the original type to accommodate the number of wires often operated in one cable.

Without this improvement in cable, the construction of new underground and aerial lines would have cost the Bell System upwards of a hundred million dollars more than has actually been spent. In addition, the cost of maintenance would have been greater by eighteen million dollars a year. These economies in the Bell System mean a saving in telephone rates to each individual subscriber.

In all branches of telephone

practice science has similarly contributed to economy. Even in such a comparatively small item as switchboard cords, improvements have reduced the cost of renewal by four million dollars a year.

Every new telephone added to the Bell System increases the usefulness of all telephones, but this multiplication tends likewise to increase the complications and the expense of service. The scientists of the Bell System, to offset this tendency, are constantly called upon to develop new devices which simplify complications and keep down costs.

By virtue of a united system the benefits of these improvements are shared by all subscribers—and the nation is provided with the best and cheapest telephone service in the world.



"BELL SYSTEM"
AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES

One Policy, One System, Universal Service, and all directed toward Better Service

Photographs and Cartoons

THE OUTLOOK can always use good amateur photographs of interesting scenes or events. We pay \$3 for each one accepted, if suitable for a half page or smaller; \$5 if selected for full-page reproduction. We especially want snap-

shots made by the person submitting the photographs. Cartoons are also desired; if accepted we pay \$1 each. Postage should be inclosed for return of photographs if not available for our use; cartoons are not returned.

The Outlook Company, 381 Fourth Ave., New York

CONTRIBUTORS' GALLERY

ROLLIN LYNDE HARTT, who interviewed Mr. Thomas at our request, studied theology in this country and in Paris, has been on the staffs of Boston "Transcript," the Chicago Tribune, and the "Literary Digest," written books and articles, and has been a frequent contributor to The Outlook.

NEWTON FUESSE is on the staff of The Outlook.

REGINALD WRIGHT KAUFFMAN and **RUTH WRIGHT KAUFFMAN** are husband and wife, and together they send these verses on a common subject. They are journalists (there is no word common gender for newspaper man—less we say newspaper people), novelists and poets. They were both war correspondents in Europe. They are natives of neighboring States—Mr. Kauffman of Pennsylvania, Mrs. Kauffman of New York.

ARCHIBALD RUTLEDGE, as the reader of his sympathetic and discerning article on the Negro in this issue will note, is the son of a Confederate veteran. He is a native of South Carolina; he studied at Porter Academy, in the old city of Charleston of that State. He received his bachelor's and master's degrees from Union College. As readers of The Outlook know, he has contributed articles to The Outlook on his experiences and observations as a hunter and lover of nature. He has written books, among them "Old Plantation Days," "Tom I on the Old Plantation," "Plantation Game Trails."

FRANK A. WAUGH, whose contributions to The Outlook on scenic subjects have been a deft mingling of instruction, exhortation, and entertainment, is professor of Horticulture and Landscape Gardening at the Massachusetts Agricultural College.

HENRY L. SWEINHART is an experienced newspaper correspondent in Washington. He sends us his correspondence on the coal situation, and particularly on the policy of the newly appointed Coal Distributor, at our request.

ELBERT F. BALDWIN, for many years a member of the editorial staff of The Outlook, is now representing The Outlook abroad, where his wide and accurate acquaintance with foreign affairs is put to the best possible service of The Outlook's readers.

LOYD R. MORRIS is an editor, translator, and critic, of New York City.