

Moving Pictures That Really Talk

By GEORGE HOLMES

NOT so very long ago the world was startled with a new wonder, the *cinematograph* or *motion picture* as it is now known. Its rise has been phenomenal until now the "movie" business is one of the first in the

he happened to be holding his hand over the front lens in such a position as to cause a narrow slot to be formed between his fingers. By closing and opening this slot he struck upon the idea of the principle for a *shutter* which excludes the light while

tures of the regular size. From Edison he went to the Westinghouse Company, and from there to the Eidoloscope Company. Next he was associated with the Biograph Company, where he worked the giant cameras of the early pioneer days. In 1897 he went to England to show the Biograph Films.

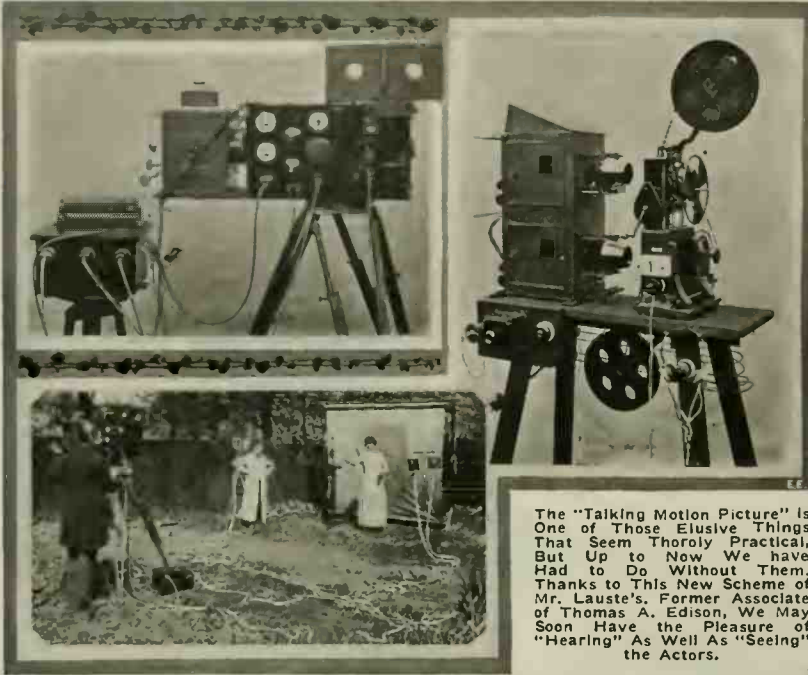
During his wide and varied career Mr. Lauste has met and become acquainted with many noted persons, among them being Mr. M. J. Marey, a Frenchman, who might have received the honor for the invention of the cinematograph, had he foreseen the possibilities of his "Photographic Gun" which he built in 1876. It was not primarily intended as a motion picture camera and therefore he cannot lay claim to the title of father of the Cinematograph, which might otherwise have been his.

In operation the "gun" was much the same as an ordinary gun, except that instead of shooting bullets when pulling the trigger, a number of instantaneous photographs are recorded at very short intervals. The Marey gun has been resurrected during the present war and is used extensively for taking military photos from aeroplanes.

Mr. Lauste's *talking picture system* is somewhat apart from the method which was tried several years ago and which no doubt many people recollect, in that in his system no phonograph and phonographic methods are employed either in taking the picture or in the reproduction. In this new method a selenium cell and telephone system are used to reproduce the sound directly from the photographic film. The film passes continuously in front of the selenium cell and no stylus or contact of any kind is necessary. The sound waves are reproduced with utmost clarity and fidelity and since these *sound lines* are directly on the same film as the photo images, a perfect synchronism is the result.

In the making of the "talking movie" it is not necessary for the players to talk into a horn as in the *phonographic* movies, for a number of sensitive microphones are distributed about the scene out of range of the camera or else suitably screened as in a flower vase, etc., to record the sounds, and the players not being reminded constantly by large horns or otherwise are better able to do full justice to their parts.

The sound waves are transferred from the microphones thru wires and a storage battery to a highly sensitive string galvanometer or oscillograph. The string or sensitive wire is suspended in the field of powerful electro-magnets and a very slight variation of the electrical impulses trans-



The "Talking Motion Picture" is One of Those Elusive Things That Seem Thoroughly Practical, But Up to Now We have Had to Do Without Them. Thanks to This New Scheme of Mr. Lauste's. Former Associate of Thomas A. Edison, We May Soon Have the Pleasure of "Hearing" As Well As "Seeing" the Actors.

land and the aggregate capital runs into the millions. In its present form it has done much to relieve humanity of its cares and worries, and for a nominal sum one may take his family to a theatre and pass a pleasant evening.

Nevertheless, inventors saw that there were more possibilities in the "films" than just a plain black and white picture; there were those who thought that in time the movie would eventually rival the spoken stage, and to this end countless men have been applying their time, money, everything to secure films that would be clear, sharp in Nature's own colors and last of all—with *speech* in perfect synchronism!

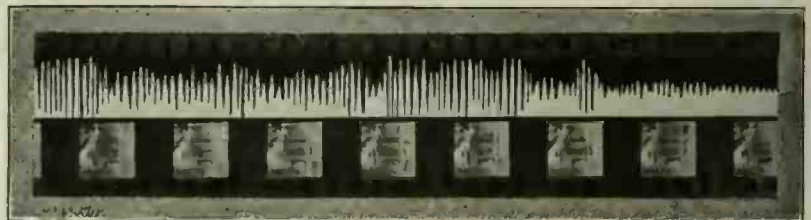
Color-photography has lately been realized by a prominent inventor, and now comes Mr. Eugene Lauste, a French inventor, who evidently can lay claim to having perfected a successful method of taking and reproducing "talking movies" that are well high perfect, both as to tone and synchronism.

Coming as this does from one who since childhood has dreamt of this great ideal, and made a persistent study of this great art, one may expect much. Mr. Lauste was born in Paris in 1857. At the tender age of ten when only a mere boy he conceived the idea of "motion pictures." Taking a strip of paper from the "Wheel of Life" or *Zetoscope*, he soaked it in oil to make it transparent and then pulled it thru a magic lantern in a series of jerks. Of course, this was very crude and at first no conceivable idea could be drawn from this procedure till one day, while adjusting the machine

another picture is drawn into place. So obsessed was he with the idea that from then on it might be said that he has made it his life work.

It might not be amiss to give a brief history of Mr. Lauste's work in that it will add weight to his claim of having invented a real "talking movie." From 1886 to 1892 he was associated with Mr. Thomas A. Edison, first at New York and later at the Menlo Park and Orange, N. J., laboratories.

While there in the year 1887, the Edison Kinetoscope first saw the light of day. It was not a projector nor did it have any form of escapement. The film ran continuously behind a peep hole and the pictures on it were viewed directly by means of a



Specimen Record of Voice (Top) and Motion Picture (Bottom) Photographed Simultaneously. The Voice Record is Made By a Strong Arc Light and Galvanometer. Reproduction of Speech is Caused By Light Acting On a Special Selenium Cell.

small magnifying eye-piece with a lamp arranged to shine between them. The film was of the present-day gage and with pic-

mitted from the microphones is sufficient to set the wire in motion. A beam of light
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(Continued from page 88)

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(Photos by Milwaukee School of Engineering.)

MOVING PICTURES THAT REALLY TALK.

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from a powerful arc lamp is projected thru the galvanometer and in a greatly magnified form throws the shadow of the moving wire on the steadily moving film behind a



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