THE popularity of moving pictures, which have swept like a tidal wave over the country, from Maine to California and from the Great Lakes to the Gulf, has demonstrated the enormous money-making possibilities of the actorless theatre. Here is an infant industry with twenty-five million American dollars invested in it, boasting a Trust and Independents, a dozen trade papers, and thousands of theatres—as gaudy and glittering as tiles, plaster, gilding, marble, mirrors and wonderful trick electric signs can make them—built especially for its favorites, to say nothing of scores of formerly unprofitable theatres and vaudeville houses now occupied by the ubiquitous projecting machine. And the secret of the meteoric success of this form of entertainment is found in the irresistible attraction for the average person of something that moves. Lamentable as it may seem, an automatic figure whose eyes and mouth open and shut with idiotic regularity will attract far greater attention than the most marvelous mechanism evolved by the human brain if the latter is motionless.

Have you ever been “behind the scenes” of a moving picture theatre? No? Perhaps you never even realized that there was any “behind the scenes,”
and perhaps you do not know that the highest priced professionals are employed in the performance of these hitherto silent comedies and tragedies. The meaning of that word "hitherto" will appear later.

At one time the public was satisfied with just ordinary pictures of interesting events at home and abroad, but nowadays "the play's the thing," and the enterprising moving picture concern

![AN ENTIRE OPERA COMPANY IN A SINGLE BOX.](image)

must needs employ authors and actors, artists to paint the scenery and settings, and all the paraphernalia of a well equipped theatre. And strenuous things are often asked of the moving picture actor or actress, both in the studio and out of doors.

Last winter the writer was a passenger on one of the New Jersey ferry boats. When in midstream a shabbily dressed young woman suddenly darted to the rail and leaped into the icy water. There was a big commotion for some minutes until the poor creature was fished out in an apparently dying condition by a man in a rowboat. But she was only doing a stunt for a moving picture melodrama, and while the passengers were working themselves up to a fine state of excitement a quiet looking young man on the upper deck was calmly taking pictures of the thrilling scene. A month or so later I saw the whole incident enacted on the screen of a Sixth Avenue Nickelodeon.

The studios of these concerns are hidden away in obscure parts of New York. One of them is in the Bronx, another in the wilds of Brooklyn, and another on Eleventh Avenue. It is to this latter delectable neighborhood, known to the impolite as "Hell's Kitchen," that we will wend our way, for here is the home of the very latest development of motion photography, an invention that is destined to revolutionize the entire industry.

Our destination is near the corner of Forty-Third Street on Eleventh Avenue, a large building bearing the word "Cameraphone" in gilt letters. Here we meet an old friend who is the manager of the new enterprise, and a veritable encyclopaedia of moving picture knowledge. He knows the business from A to Z. We have arrived just in time, for a new reel is about to be exhibited for the benefit of some out of town managers. We take our seats in the tiny theatre and the show commences. First the names of the members of the cast are projected on the screen—for these are no ordinary moving pictures, performed in pantomime by nameless actors.

The opening scene is St. John's Church, Richmond, Virginia, in 1775, with the Virginia Convention of that year in session. George Washington, Thomas Jefferson, Richard Henry Lee, and a score of other notable historical personages are present. The picture reveals them sitting in the pews of the quaint old church. The immortal Patrick Henry steps forward—and right there comes the surprise of your life. You expect the usual silent if eloquent gestures of the moving picture actor, but Patrick Henry opens his mouth and with impassioned mein delivers in a resonant voice his classic oration "Give Me Liberty or Give Me Death" to pews filled with a band of patriots of deathless fame. As his clear, ringing tones come through the sheet directly back of the moving lips the effect is absolutely human.

The thing awes you with its spook-
iness, and then the tremendous significance of this most important step in the history of motion photography gradually forces itself upon you. You realize that here is an ideal means of preserving the actual personalities of the world’s great men and women, an invention that will enable our grandchildren to command the presence of the Roosevelts and Bryans, the Tetrazzinis and Carusos of our own times, and make them talk and sing at will. Compared with the finest efforts of the silent film makers, the new pictures are like living flesh and blood, a talking, breathing personality, compared to a statue.

The historical incident is quickly followed by an up-to-date vaudeville act, and the performance runs right through the usual programme of a first class theatre—the only difference being that the living bodies of the performers are absent. Their disembodied spirits entertain you just as well.

You are, of course, all eagerness to find out how it is done. In the art of motion photography, after exquisite artistic skill has made more and more daring achievements possible, the limit has been reached, so far as the pictures themselves are concerned. Various inventors have perceived the possibilities of combining the phonograph principle with the motion picture, and their inventions have from time to time been dealt with in this magazine. The photophone is one of them; but while it combines in one machine the voices and the picture, there is no actual connection between the two.

It has remained for a young Oregonian, James A. Whitman, after two years of difficult experimental work, to produce the projected image and the sound record in perfect unison—in absolute synchrony. In New York City in a building comprising 50,000 square feet of floor area on six floors, are provided the finest facilities in the world for motion photography and for making the special sound records. Here scenes from plays and operas, song
numbers, dances and speeches, in fact entertainments ranging from modern farce to classic tragedy, are being produced and prepared. A quarter of a million dollars a year is set aside for productions. All the subjects are American, made by American artists, except of course some of the grand opera numbers.

Each week from seventy-five to one hundred actors and actresses are employed. The material is first carefully laid out, and the performers who are to make the voice records study their lines; for the "records" must be made separately from the pictures. If an opera is being produced all the principals and members of the chorus must be vocally drilled. After the orchestra rehearsals are completed we see the assemblage singing the opera into the recording phonograph. From the wax "master record" so produced a copper mold is made electrically, and the wax is molded therein into hundreds of duplicates.

When finished a set of records giving all the sounds for the opera or other act is given to the stage manager, who in one of the three spacious rehearsal halls drills the performers to the accompanying sound of the phonograph rendering the voices and music. Meantime in another part of the building the scenic artists are painting the scenery and the carpenters and property men are busy at work. Then the whole company assembles on the stage, which in this case is the photographic studio. Here in the glare of nearly one hundred thousand candle power light, from Cooper Hewitt mercury vapor tubes and powerful arc lights to tiny bulbs, the scene is re-enacted in absolute unison with the phonograph, while the whirring motion camera takes the negative.

Then the film goes to its baths in the developing rooms, where big drums on which it is wound revolve in tanks. Then if the negative is perfect it goes to the printing room. It is possible to print as high as three or four hundred positives from one negative before any appreciable sign of wear appears in the negative. Then with their appropriate titles photographed from large lettering the films are put on reels or spools and fitted into the cameraphone. Its special power of
synchronizing with the phonograph records, which are now on the phonographs behind the screen, enables the skillful operator to give the audience the mystifying illusion of a perfectly reproduced human performance.

Enough duplicates of the film are made to supply a rental service covering the entire United States, and the reels are shipped together with the appropriate records for that week’s programme. The programme of the week; big lobby photographs of the performers who will appear so mysteriously at the will of the operator, and a supply of special printing, including twelve-sheet, three-sheet and half-sheet posters, the latter differing each week according to the bill of that week. The charge for the entire outfit for the week is $150.

In addition to its vast possibilities as a means of entertainment, the camera-

PHOTOGRAphIC STUDIO SHOWING A RUSTIC SCENE SET.

When a manager contracts for the cameraphone service he receives a wooden box about three feet long by two feet wide. In that box is an entire stage performance for one week’s entertainment, which is equivalent to an entire theatrical company, scenery, baggage, costumes, orchestra—everything in fact that he could get by hiring a costly New York production except the actual living bodies of the performers. He is also provided with advance press notices for phone has obvious educational value in teaching any lesson requiring visual graphic demonstration. For instance, the concern has one film entitled “A Lesson in Physical Culture.” A well-known athlete steps to the foreground of the picture and delivers a straightforward talk to the audience, telling them in simple language how to develop muscles like his. By suitting the action to the word he shows clearly just what movements and exercises should be practiced to
properly develop the four hundred slumbering muscles in the human frame.

The same form of instruction can of course be used by the best authorities in every field of human knowledge and activity. A famous traveler will transport us to foreign climes, and although he is absent in the flesh, his own voice and figure will point out the objects of interest in the moving panorama. The presidential or gubernatorial candidate of the future will actually speak and appear simultaneously in scores of cities on the same night; the eminent divine will preach to hundreds of thousands anywhere from New York to San Francisco, his charm of manner and personality making powerful appeal to his widely scattered congregations.

Among the theatres used for cameraphone entertainments are the Grand Opera House, New York; the Tabor Grand Opera House, Denver; the Holliday Street Theatre, Baltimore; the Auditorium, Chicago; the Colonial Theatre, Richmond; Bijou Theatre, Atlanta; National, Rochester; Lyric, Dayton; Lyric, Mobile; Academy, Norfolk, and scores of others. In Denver nearly twelve thousand persons attended the cameraphone performances in one day. The charge of admission to the best seats for these entertainments is only ten cents. Subsidiary companies are being formed to exploit the invention in South America and Europe.

The ingenious device called the photophone, which also combines the moving picture machine with the talking machine, so that the words and music of a theatrical or other performance can be heard while the movements of the players are reproduced before the eyes, was invented recently by Mr. L. P. Valiquet.

By the aid of this contrivance anybody owning a talking machine can attach a compact little projecting lantern to it, and exhibit moving pictures on a screen to the accompaniment of a lecture or music, the pictures being projected through the horn or megaphone which is attached
TO EXTERMINATE THE PRAIRIE DOG

By M. BEVERLEY BUCHANAN

In the State of Texas alone, prairie dogs eat annually enough grass to support 1,562,500 cows. Utterly useless, the little animal is a pest so dreaded that the Forestry Service has undertaken his extermination. Poison is killing him, wherever he now flourishes, and another resource of the farmer is safeguarded.

Would think that the prairie dog, the shy and amusing little rodent that we like to watch before the door of his burrow at the "Zoo," would ever become the subject of government intervention or endanger the success of stockraising? Yet such is the fact. Out on the national forests which Uncle Sam is guarding for the use of the public, expert hunters have gone after the prairie dogs with zeal, ingenuity and poison, and have exterminated them in great numbers because some of the choicest bottom lands have had the grazing ruined for stock by the industrious burrowing of the "dogs."

Attempts made last year at poisoning prairie dogs on the national forests on an extensive scale were highly successful and plans are now being made to carry on the work much more widely next year. Stockmen who had suffered heavily from the prairie dog pest were solicitous to have the work taken up, and gladly offered to co-operate with the service in furnishing men and horses to distribute the poison. Formerly the area of available land in proportion to the population was so great that little attention was paid to such pests as prairie dogs and gophers. But in recent years the development of improved methods of farming, including irrigation and artesian water supply, has led ranchmen to push farther and farther westward over the semi-arid plains, until agriculture and stockraising have invaded most of the prairie dog's domain, the land holdings have decreased in size and increased in value, and the depredations of the pests are more keenly felt. To ascertain what success could be had