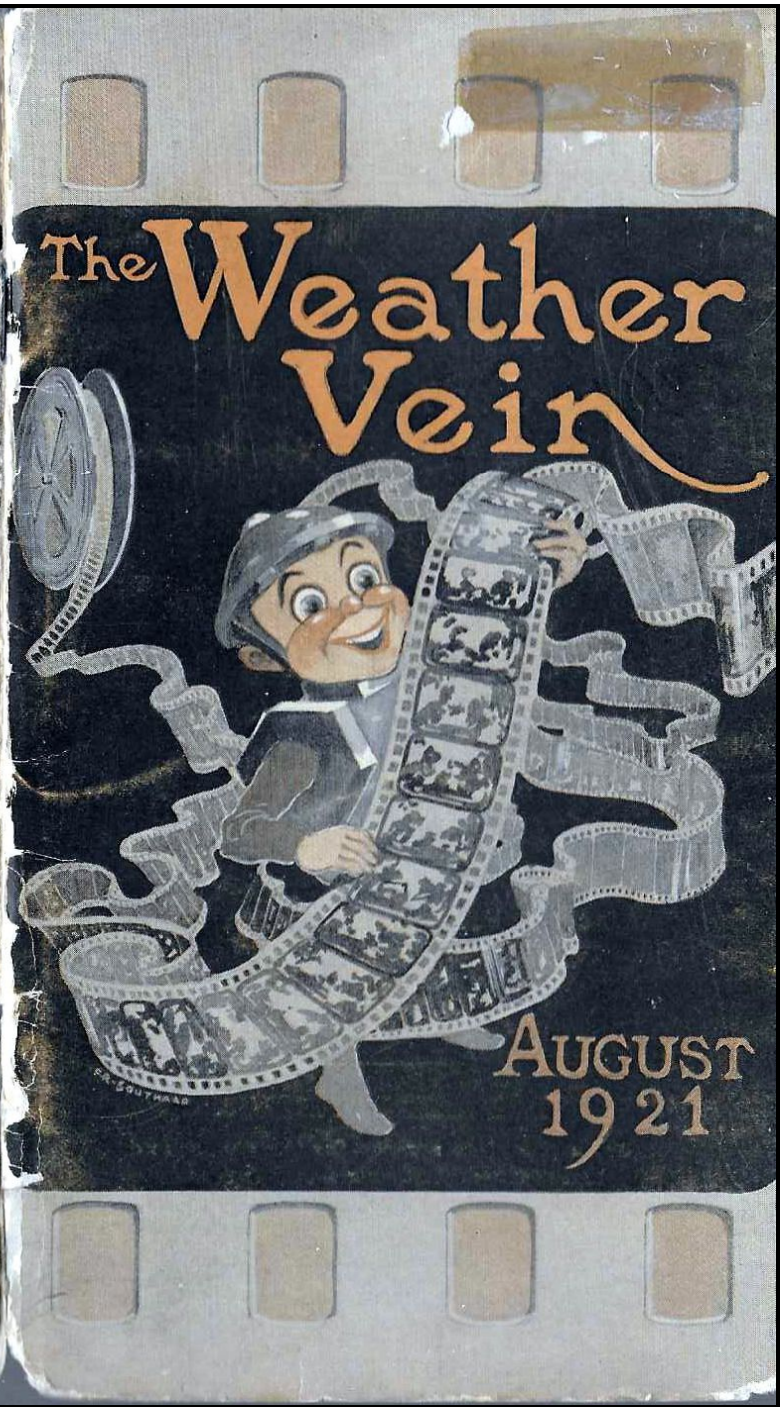


AIR CONDITIONING AMERICAN MOVIE THEATRES 1917-1932

*Carrier Engineering
Corporation*

The Weather Vein

MOTION PICTURE NUMBER 1921



The Business of the
Carrier Engineering Corporation
involves the application of the
scientific principles of
AIR CONDITIONING
to the Practical Requirements of
INDUSTRY



Humidification Dehumidification
Evaporative Cooling
Air Cooling by Refrigeration
Heating and Ventilation
and
DRYING

At Low Temperatures and Low Humidities

At Medium Temperatures and High or Low Humidities

At High Temperatures, from 200° to 1000° F.

THE PIPING DIVISION

offers a complete service for the design and
installation of Power and Process
Piping of all Kinds

We Invite Correspondence

The Weather Vein



for August, 1921

Copyright 1921, by Carrier Engineering Corporation



Please note that the address of our New Plant is 750
Frelinghuysen Avenue, Newark, N. J., to which all mail
should be addressed. The New York Sales Engineering
Offices will remain at 39 Cortlandt Street.



Motion Picture Number

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SEPTEMBER WILL BE THE
CERAMICS NUMBER

The Weather Vein



Published monthly by the

Carrier Engineering Corporation

Offices and Laboratories

750 Frelinghuysen Avenue, Newark, N. J.

New York Offices, 39 Cortlandt Street

176 Federal Street
Boston

Land Title Bldg.
Philadelphia

Prudential Bldg.
Buffalo

Transportation Bldg.
Chicago

VOL. 1. AUGUST, 1921 No. 8

WEATHER being a subject of general and absorbing interest, this little book is dedicated to the dissemination of knowledge concerning weather—and the fact that weather can be manufactured.



There's a way to make
"Every day a good day"

Each issue of the Weather Vein
is a guide-post on the way

Are you a regular subscriber?

The subscription price is your request.

To make sure that the book reaches you individually
please write your name and title plainly

The Weather Vein →

THE ULTRA-EXPRESSIVE RAY

THE history of human progress—the record of the development of civilization—is epitomized in the story of man's efforts to express and communicate his thoughts and emotions.

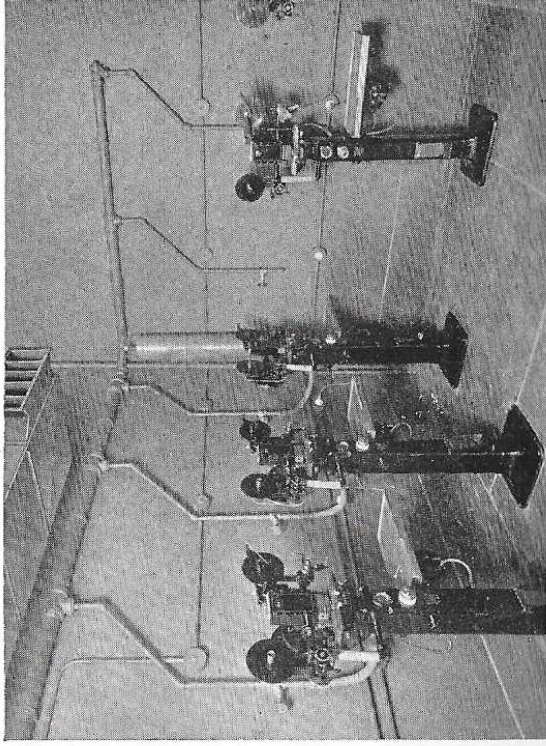
The earliest men had no manner of thought or emotional expression save the posture of their bodies and the aspect of their features, these being largely instinctive.

As primitive man developed, his first communicative effort was probably the mimic sign, even as one may observe it in modern pantomime. This, also, was largely instinctive, but it involved a definite factor of reasoning, which undoubtedly led to the first attempts at picture-writing, from which, ultimately, the alphabet, as we know it, emerged by a process of slow evolution.

The early development of language was mothered by the stark necessity of personal communication. Speech, in the beginning, was probably mostly an imitative reproduction of the sounds heard, or echoic, as the scientists say,—as witness the many words which have survived in our own language—such as *ring*, *buzz*, *hush*, *click*. Modern philologists assert that echoism, or this imitative repetition of the sounds heard, has had but a slight influence upon the development of language, although it is conceded that this influence was probably greatest in the earliest stages of speech.

Early speech was principally utilitarian—a means of conveying the utterly essential con-

→ *"Every day a good day"* →



The Perforating Department of a Modern Film Laboratory. Manufactured Weather makes the Process of Perforating entirely independent of outdoor Weather. The Machines shown are Bell & Howell Perforators which operate at a speed of 66 Feet of Film per Minute. The Punchings are collected and the Silver recovered.

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ceptions of a rude existence. As language developed, it became more flexible, more adaptable to subtlety and delicate shadings of thought. The languages of today are exquisite instruments by means of which the most profound deductions of the philosopher, the exact determinations of the scientist, or the most refined and sensitive inspirations of the poet, find a ready and adequate expression.

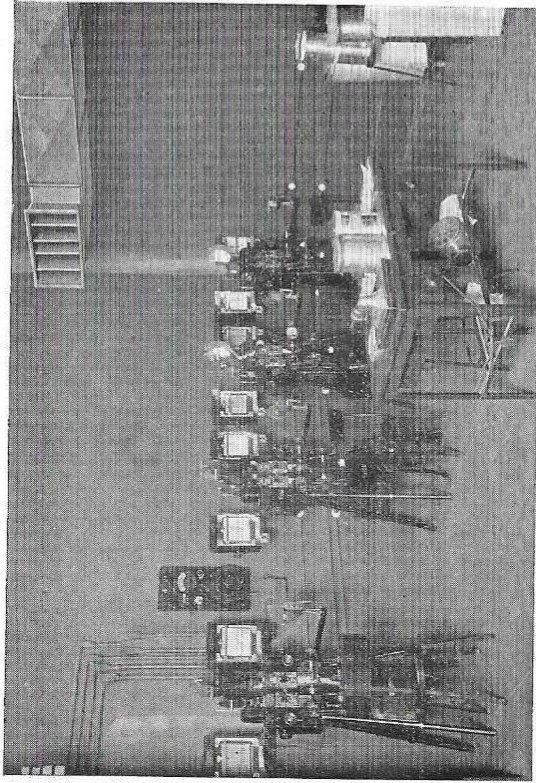
Yet, even today, language is incomplete without the picture. To the philosopher the picture affords a visual interpretation of concepts which are difficult to convey through the medium of words alone; to the scientist the picture, as a graph, perhaps, summarizes the facts set down in many words, so that the brain, through the direct perception of the eye, can quickly grasp the significance of related facts; to the poet the picture is a means of crystallizing the salient beauty of his impressions; while to the artist of form and color, the picture is the sole instrumentality for the expression of his art.

Man's first efforts to record and convey his thoughts involved the use of pictures representing the object itself, or the concrete expression of the idea.

Picture writing grew out of man's pressing need for a means of (a) recalling at a given time something which must be done, (b) communicating with others not present or easily accessible, and (c) recording or establishing permanently his rights to property.

The first of these aims was achieved by the device of tying knots in a thong, each knot

→ *"Every day a good day"* →



A Modern Printing Department. These marvelous Machines are entirely automatic, Printing from 38 to 48 Feet of Film per Minute. In the Duplex Machines shown in the Picture the Film moves intermittently, as in Projection, while in the Bell & Howell Machine the Film moves continuously.

The Weather Vein →

representing a thing to be recalled, or each knot marking the passage of a period of time—usually a day and a night.

For the purpose of communication or identification, however, another method suggested itself—that of picturing the object or idea.

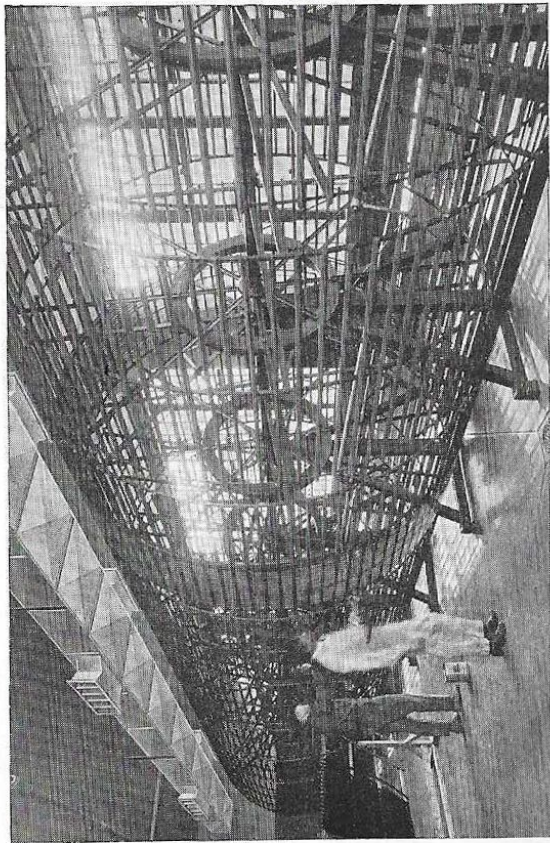
Out of such picture-writing grew the three great Old World systems of writing.

The Cuneiform Script was invented by the Sumerians of Babylonia in a period so remote that it is beyond speculation. The Cuneiform was adopted by the Semitic Babylonians and greatly improved. They used it from 4500 B.C. to the first century B.C., and left an immense literature which modern philologists are slowly developing by elaborate study. From the Semitic Babylonians the Cuneiform script passed to the Assyrians, who simplified and further improved it, using it throughout the entire period of their national existence, from 1500 B.C. to 607 B.C. The Cuneiform of the Babylonians was slowly developed into the simpler script of the Persians.

Preceding even the Cuneiform, the Egyptian system of writing, perhaps the oldest of all known scripts, had its origin in the picture. The Chinese system, the third of the Old World scripts, was also pictographic, and in common with the Egyptian script, was greatly refined and improved by its long use, until, finally, the pictures of Egyptian and Chinese scripts were converted into a syllabary from which began the development of an alphabet.

The Egyptian system persisted until the Ptolemaic period, when the simpler and more

→ *Every day a good day* →



A Modern Film Dry Room, showing the large rotating Drums upon which the Film is Wound for Drying. If the Air within the Dry Room is properly Conditioned the Drying can be accomplished in Twenty minutes. Allowing Five Minutes for Mounting and Five Minutes for Removing the Film the entire Drying Process requires but Thirty Minutes.

The Weather Vein →

effective Greek alphabet began to supercede it.

Thus the picture was man's first conception of a means for the conveyance of his ideas, and today, through the modern motion picture, the most subtle and delicate of man's emotions and ideas can be quickly conveyed to the minds of others. Impressions so conveyed through the eye are extraordinarily permanent, the mental impression of vision being more fully developed and sensitive than the impression of hearing or reading.

This is easily understood when one considers that vision is a direct photographic impression upon the brain, while hearing requires a translation of the sound-meaning—a noise, music, words—and reading necessitates the interpretation of a complicated system of symbols which represent words, the words themselves representing an arbitrary expression of ideas.

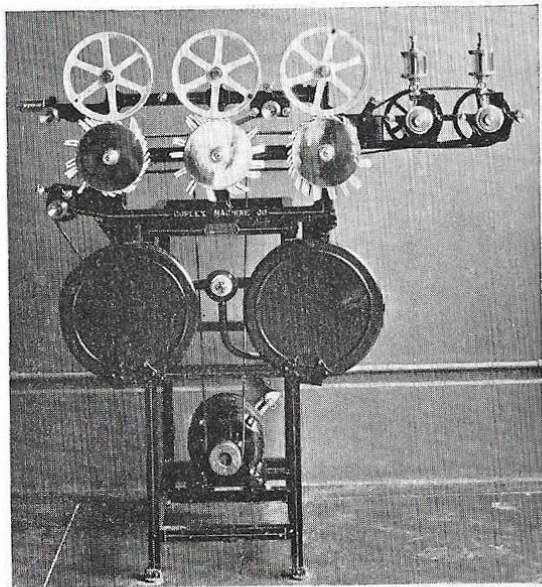
Charles Ray has created a motion picture without titles, indicating that the motion picture is an expression-art sufficient unto itself and independent of words or sounds.

To our mind, the modern motion picture is the most powerful of all forms of expression, combining, as it does, the idea, the setting or atmosphere, the personal characterization, and the actual representation of the objects involved.

The motion picture is now principally employed as an entertainment, but the industry is in its infancy—a lusty infancy, to be sure—and the industrial and educational possibilities of

→ *"Every day a good day"* →

The Weather Vein →



A Film Polishing Machine.

the motion picture are rapidly being perceived and developed.

As an instance of the tremendous educational possibilities, we have, ourselves, been impressed by the character of certain films conceived originally for their *entertainment* value. For instance, we left the showing of the imported "Deception" with a clearer and more permanently fixed perception of Henry VIII, Anne Boleyn, and the separation of the Church of England, than written history (read, we recall, because we had to) had ever imparted.

→ *"Every day a good day"* →

The Weather Vein →

We once saw a film depicting the manufacturing processes involved in the production of an automobile tire. That film held the fascinated attention of everyone in the audience, men, women and children. It fixed in their minds the geographic sources of rubber and the conditions surrounding its crude production away over on the other side of the world, rendering clear, even to the children, the essential machinery and processes necessary to the manufacture of a useful finished product from the sap of a tree.

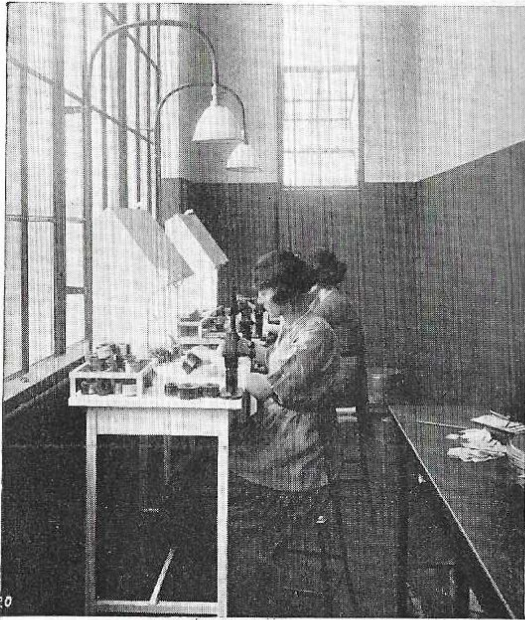
Imagine *writing* such a story without using pictures. Imagine the time required to *read* what the pictures *showed* in a few minutes.

Greater, as we see it, than most people imagine, is the marvelous interpretive power of the motion picture. When we sat, spell-bound, through John Barrymore's screened interpretation of *Dr. Jekyll and Mr. Hyde*, we were deeply impressed with the interpretive function of the motion picture as related to the literature of all times.

One reads, remember, only with one's own ability to perceive, unaided by the cooperation of other minds. Thus, in reading, one often comprehends but a sorry fraction of the real significance which the author intended to convey. We know certain people, for instance, who regard Stevenson's masterful conception of man's dual personality simply as a rather fantastic and highly improbable experiment in chemistry. But the same persons could not fail to grasp the significance of the story from the screened version. Barrymore's characteri-

→ *"Every day a good day"* →

The Weather Vein



Part of the Assembling Department, Long Island City Laboratories of the Famous Players-Lasky Corporation.

zation is too perfect, the selection of sequential incidents is too careful, the creation of the atmosphere is too powerful, to permit a misconception.

There are very definite reasons for the motion picture's notable interpretive function. Instead of a perception based upon one's own ability alone, and subject to that limitation.

“Every day a good day”

The Weather Vein

as in reading, the motion picture is created by the combined efforts of a carefully selected organization, each unit trained to contribute its part with the utmost effect. The scenario is prepared by an expert who *forces* those incidents most pertinent to the conception of the theme. The casting director selects the characters with trained perception. The settings are designed and executed by experts, creating an atmosphere beyond the power of description in words. The director unifies the efforts of the entire organization, and the finished film presents the collective interpretive ability of a company of experts.

Ere long the motion picture will assume a powerful role in our educational system—will become a factor of tremendous industrial importance, and we believe that its purely entertaining function will be developed beyond our present conception.

It behooves us, therefore, to study and perfect the factors involved in the physical production of motion pictures.

Our own interest, naturally, centers in the application of Manufactured Weather.

To begin with, the film base itself is delicately sensitive to atmospheric moisture. If the humidity of the air surrounding the celluloid solution in process of manufacture is too high, the finished film base will be opaque and cloudy—if the humidity is too low, the film will crack or the surface will show scratches and dust will be deposited. Both of these difficulties have been effectively overcome by scientific air conditioning, which has eliminated the

“Every day a good day”

The Weather Vein →

vexatious problems arising from atmospheric effects.

In the Studio and in the Laboratory, Manufactured Weather has established itself as an invaluable ally.

Imagine the dust and heat in an unconditioned studio. During the summer, in a close-up, how often have you seen the perspiration oozing from the grease paint on the cheeks or brow of the star? Manufactured Weather in the Studio provides cool, clean and invigorating air, preventing such things as this. Have you noticed in certain "long shots," where the picture includes a vast scene of great depth, that the picture is not clear—that it appears to be hazy? That is due to dust or fog in the air of the studio. Air Conditioning equipment easily obviates these difficulties.

So that the film can be moved through the camera and the projecting machine with mechanical precision, tiny holes are punched in the edges of the film, and these holes engage the mechanism of both the camera and the projector. These holes are punched in the perforating department of the Laboratory, and film is supplied to the camera men as required.

Then, when the film has been shot, or exposed, it is returned to the Laboratory for developing and printing. Sample prints are returned to the director, who selects the portions desired, cuts the film to the final running length and makes notations for the insertion of titles. The prints are then returned to the Laboratory, where the Negative Cutting Department arranges the negative in accordance

→ *Every day a good day* →

The Weather Vein →

with the approved prints from the Director, divides the negative into parts, and lays out such toning and tinting as may be required.

The negative is then ready for the Printing Department, where contact prints are made with the aid of automatic machines, each picture being exposed in succession, the time or intensity of the exposure being automatically regulated by the printing machine, in accordance with the predetermined quality of the negative.

From the Printing Department the positive film goes to the Developing Department, and thence to the Washing Department, where the chemicals used in developing are removed by repeated washings in clear water.

The tinting or toning—a red tone for a fire scene, blue for night scenes, as examples—is the next step, after which the film must again be thoroughly washed.

Then to the Dry Room, where the film is mounted on large drums and revolved until all the water has been evaporated.

From the Dry Room the positive film goes to the Assembly Room, where it is cut and joined in reels of standard length, usually 1,000 feet.

The film, on standard reels, is now passed through the Polishing Machine, which removes water marks and any excess chemical deposits which were not removed in the washing process.

The final step in the Laboratory is the screen examination in the Inspection Department. Here the finished film is projected on

→ *Every day a good day* →



Interior of the Long Island City Studio of the Famous Players-Lasky Corporation. Note the great number of Lights and the vast amount of material used for the Settings and Properties.

The Weather Vein →

a screen and carefully inspected by an expert, who corrects every imperfection.

The finished positive film then goes to the Shipping Department for shipment to the Exchange, through which it is to be distributed.

In each of the Departments of the Laboratory Manufactured Weather is a profitable investment. It is true that not in every Department can its profit be readily measured in dollars and cents.

In the Printing and Developing Departments the role of manufactured weather is principally human, because the manufacturing process *can* be carried on in spite of adverse atmospheric conditions, except that there is danger from high heat and high humidity during the summer, which causes the emulsion to soften and may result in an impaired surface. The danger to employees working in a close, dark room is very great, not only from the heat and humidity, but from the contamination of the air by evaporation of the film solvents, principally ether and alcohol. Manufactured Weather in the Printing and Developing Departments has been considered a wise investment by some of America's leading producers, because it eliminates every disadvantage.

In the Perforating Department, Manufactured Weather plays two important roles, according to the season. In winter it prevents the generation of static electricity in the rapidly moving perforating machine, thereby avoiding the injuries to the film caused by

→ *"Every day a good day"* →

The Weather Vein →

static, and it keeps the film in the properly moistened condition which insures perfect perforations without cracking or tearing the edges. In summer Manufactured Weather prevents the softening of the emulsion and protects the film from dust or dirt deposits. Also, it preserves the health of the employees and increases their capacity.

In the Dry Room, Manufactured Weather finds its greatest usefulness. Properly applied, Manufactured Weather will reduce the *time* of drying by fully one-half, and will establish an exact drying schedule, entirely independent of outdoor weather conditions. Besides doubling the capacity of the Dry Room, Manufactured Weather insures film free from dust and dirt, and eliminates the danger of softening the emulsion, due to high temperatures during the summer.

We will be glad to discuss these things with anyone who is interested, either by mail or personally.



Greater love than this hath no man—than that he opens up his last bottle of hooch for his friends.



Some chorus girls make one wish that there was another S. P. C. A.—a Society for the Prevention of Cruelty to the Aged.




If all of us were immortal, we'd have no great men.

→ *"Every day a good day"* →

The Weather Vein →

"Every day a good day" In the Theatre

 T would seem that, of all conceivable places, the Motion Picture Theatre should find Manufactured Weather not only a highly profitable investment, but absolutely prerequisite to success.

We've often been asked, while sweltering in a movie theatre during the summer, why the theatres were not equipped with Carrier Apparatus. Our questioner usually puffs and mops his brow despairingly as he looks accusingly at us. Our answer is always the same.

"My dear fellow (young lady)," we say smoothly, "you, yourself, are the answer to your question. The fact that you are here is the reason why the theatre owner does not have to manufacture his weather and make you comfortable. If you'd stay away during the summer and show him you won't stand for the conditions you find in his theatres, he'd quickly meet your protest by installing Carrier Equipment."

That always ends the argument.

But not for long, we think. When competition is keener—when an increased number of theatres reduces the proportion of possible patronage, the theatre owners' eyes will be opened. He will realize that a cool, invigorating condition in summer, and a warm, moist, healthful condition in winter, with copious ventilation at all times, will make his theatre a Mecca for the discriminating movie

→ *"Every day a good day"* →

The Weather Vein →

fan. We think that he could quite readily increase his admission charge to more than balance the slight cost of Manufactured Weather.

This is just a suggestion, so that we can say "we told you so" when the time comes. As it surely will.



Formula for Making Success

Dissolve one problem in equal weight of thought, filter through experience, and crystallize by admixture of sufficient action.

Repeat as often as necessary.



Your real Business Man is not in business to make money primarily. Business is Romance and Adventure to him. Therefore he usually does well the things for which he is in business—and nearly always does make money.



The tragedy of life is a woman more beautiful in a man's fancy than she is in herself.



The real artist, nowadays, is one who can paint the town red with *water-colors*.



A rolling stone isn't on the level.

→ *"Every day a good day"* →

The Weather Vein →

A MAN'S PRAYER

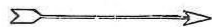
FEACH me that 60 minutes make an hour, 16 ounces one pound, and 100 cents one dollar. Help me so to live that I can lie down at night with a clear conscience, without a gun under my pillow and unhaunted by the faces of those to whom I have brought pain. Grant that I may earn my meal ticket on the square, and that in earning it I may do unto others as I would have them do unto me. Deafen me to the jingle of tainted money and to the rustle of unholy skirts. Blind me to the faults of the other fellow, but reveal to me my own. Guide me so that each night when I look across the dinner table at my wife who has been a blessing to me, I will have nothing to conceal. Keep me young enough to laugh with little children, and sympathetic enough to be considerate of old age. And when comes the day of darkened shades and the smell of flowers, the tread of soft footsteps and the crunching of wheels in the yard—make the ceremony short and the epitaph simple—“HERE LIES A MAN.”—*Produce Journal*.



Oh! To have my past all ahead of me.



Gaiety brings laughter to the lips of the happy and tears to the eyes of the sad.



Marry in haste and repent at Reno.

→ *“Every day a good day”* →

The Weather Vein →

ADVENTURES OF

The Mechanical Weather Man

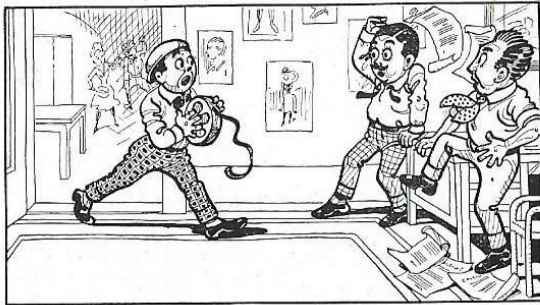
THE FILM MYSTERY



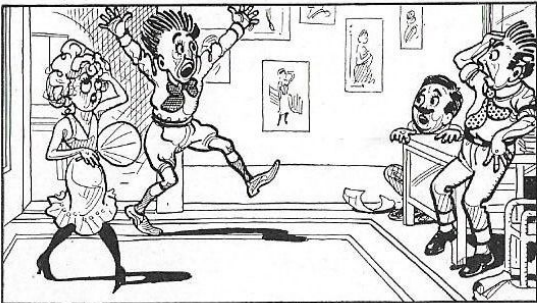
Film-em Brothers, movie-makers, register dismay. A dozen cancelled contracts is the total for the day.



“Look here!” A wrathful Lab man's voice makes Film-em Brothers quake—
“The piece of film I'm holding here is cloudy and opaque!”



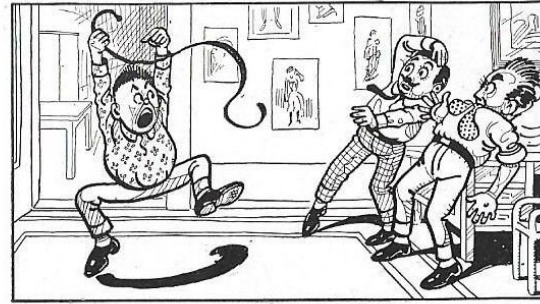
"And look at this!" The camera-man exudes an irate yell—
 "The film I gotta use is scratched and full of dust as well!"



"And how in blazes can we work"—a crazed director cries,
 "In ninety-six degrees of heat, with dust clouds in our eyes?"



"What's more, developing's a crime in weather like today!
 The coating softens on the film, gets smudged, and 'pulls away.'"



"Zounds!" In bursts Sam, the dry-room man, and starts to rave and cuss—
 "Conditioned Films, across the way, dry twice as fast as us!"



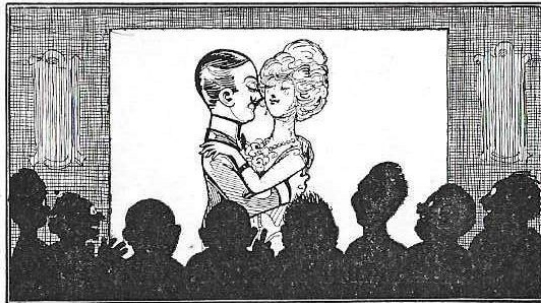
Then just as all seems inky gloom, there comes a ray of cheer,
 (It's Mech—the grinning little scamp!) "What ho, my friends, I'm here!"



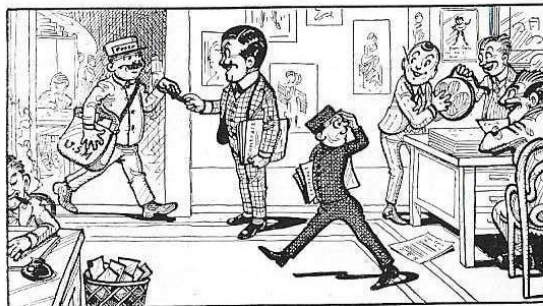
"Zing! Zip! No more close-ups today of trouble and despair—
 We'll try instead a second reel called "Clean Conditioned Air!"



Then like a flash through all the plant there runs
the joyful news,
That Mech, the weather wonder-man, has killed the
movie blues!



And since that day when Film-em's films are shown
upon the screen,
The movie fans declare the show the best they've
ever seen.



So Film-em Brothers smile with glee—as well the
brothers may—
When contracts by the carload flood their office
every day.

In a Lighter *vein*

Fair or Fowl

THE floorwalker approached the very
much perturbed looking young man
just inside the entrance of the depart-
ment store.

"You look as though you wished some sort
of information, sir. Can I be of service?"

"I don't know," said the perspiring young
man. I was told to go in here and purchase
either a camisole or a casserole, and for the
life of me I can't remember which."

"Well," said the floorwalker patiently, "if
you'll tell me what kind of a chicken you
propose to put in it, perhaps I can help you."



Pointed

One of our friends remarks that the latest
styles in women's dresses remind him of a
barbed wire fence, which adequately protects
the property without obstructing the view.



Last month a coal dealer wrote us as fol-
lows:

"Owing to the small demand for coal
recently, due to the mild winter, there is very
little mined, and an extreme shortage is anti-
cipated this coming winter. Prices will be
higher each month, beginning May 1st."

How do they do it?

"Every day a good day"