

ITALY'S FAMOUS ALPINE TROOPS ON THE MARCH IN THE SNOW.

CHINA'S FINAL BLOW TO OPIUM

"THE CURSE OF CENTURIES will soon vanish from China," says the Peking Gazette, which tells us that after March 31 the opium traffic must cease absolutely. Up to the present time opium could be imported into China from India under a treaty with Great Britain signed in 1911, and this traffic was the monopoly of the Shanghai Opium Combine. The Clark University Journal of Race Development discusses the question at some length, and says:

"Anticipating the end of the opium connection with Great Britain, the Chinese Government recently communicated with the British Minister in Peking, requesting that a British envoy be deputed to China to head an investigation into the opiumsuppression campaign in China. At the same time circulars were sent to all the provinces preparing them for the impending complete extirpation of the traffic as follows: (1) All the opium plantations in the land were ordered to be swept away during a period of three months from September to November, 1916; (2) the trading in opium had to be entirely stopt between December, 1916, and March, 1917; (3) smoking of opium is to cease in a period of three months from March to June, 1917."

It would seem that these provisions are received with popular favor, for *The Journal* proceeds:

"Bonfires have been frequent since these orders went into effect, the Chihli Opium Prohibition Bureau, at Kalgan, making perhaps one of the most spectacular affairs. A large quantity of opium was gathered together with all the opium-smoking instruments the officials could lay their hands on, invitations were issued, and a delegate from the National Opium Prohibition Union was requested to come as a witness. The acting president, Mr. An Ming, responded, and the ceremony proceeded in due and thorough order, lasting from eight in the morning to one in the afternoon, with the civil governor of Chihli, the military governor of Kalgan, the police authorities, and citizens from all neighboring sections an enthusiastic audience. This is typical of scenes being enacted in many parts of China."

Big Business, however, did not surrender without a final struggle, and we read:

"The Shanghai Opium Combine is the only legal surviving distributor of opium, having secured a license to carry on its

traffic until March 31, 1917, in the provinces of Kwangtung, Kiangsu, and Kiangsi. To their bribe of \$16,000,000 for the privilege of an extension, to their threat of withholding their extra duty of \$1,750 per case, the Chinese Government has lent a deaf ear. The opium traffic must go, and as quickly as possible. The threat of the Combine to stop the payment of the additional duty, even if it is carried out—which is unlikely—would only mean a loss to the Government of something like \$5,000,000. According to trustworthy information, the Combine can sell between October, 1916, and the 31st of March, 1917, three thousand cases at a valuation of \$5,000 per case, which would give the Government a revenue of \$5,000,000, a small sacrifice where the physical and moral welfare of the country are at stake. And President Li and his Cabinet have lost no time in declaring that there shall be no compromise."

CHINA WAKING UP—The upheaval of the Monarchy has meant more than a political change in China, says the Peking correspondent of the Shanghai North China Daily News; he describes it, indeed, as being also an entire revolution of the mental attitude of the Celestial, and he writes:

"The President's visit to Paotingfu yesterday is suggestive of the process of development slowly but surely taking place in China. A thousand students graduated at the Military Academy in the old capital of Chihli, and the President went one hundred miles by train to attend the graduating exercises, leaving at 9 A.M. and returning at 4 P.M. Therein are contained three facts, remarkable because they are indicative of a state of things inconceivable in China a generation ago.

"The least significant fact is that it is possible to journey a hundred miles from Peking into the interior, to do solid business at one's destination, and to return to the capital, all within a few hours.

"Next comes the fact that one thousand young Chinese of the better classes have just completed a military education of a modern character, fitting them for commissioned rank.

"Thirdly, the Ruler of the State calmly walks in and out of his palace, drives along streets in his motor, brushes through crowds at railway stations, makes a popular address to a crowd of lads, and all the time is doing what everybody thinks natural and proper.

"Truly, the times are changing. This trip of the President is indicative of nothing less than a revolution of thought in the mind of China, a revolution of which the possibilities are equally endless and encouraging."

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SCIENCE - AND - INVENTION

MOVIES FOR EVERYBODY

T MUST BE ONLY a question of time when the amateur photographer will be able to use a moving-picture camera as easily, and almost as cheaply, as he now uses his kodak. The time, in fact, has already arrived, if we are to believe Mr. Ernest A. Dench, who writes on "Movies as a Hobby," in *The Popular Science Monthly* (New York, February). Those who have hesitated to take up motion-pictures on the ground of expense are assured by Mr. Dench that the private field is no longer monopolized by the wealthy. Those who fear that the motion-picture camera is too complicated are informed that it is not. It differs from the still camera only in its machinery for controlling the shutter. When a crank is turned the lens opens and closes. At each turn of the crank eight frames, each of which is one inch wide and three-fourths of an inch in height, are exposed. He goes on:

"As the standard speed is sixteen frames a second, you must not turn the crank more than twice each second. With watch in hand you should be able to adjust this speed. This, at the same time, enables you to gage how much film you have consumed. Twenty feet is regarded as sufficient for the average scene.

"It is more than mere handle-turning, believe me! Unless you attend to this detail steadily from start to finish, there will be a decided jerkiness about the results. The knack of obtaining an evenly balanced scene is to watch the view-finder while turning the crank.

"Do not let people move about too quickly unless you have a reason for permitting them to do so, as a quick walk becomes a run on the film. Their movements will, in all probability, be blurred. The professional cinematographer never allows people to travel more than sixteen inches to the second.

"You will, if you are wise, confine yourself to outdoor work, for interiors are only for the advanced worker. It is only when the daylight is exceptionally good that the special lighting equipment can be avoided.

"Now we come to the question of developing. Do I advise sending the negative out or doing the necessary work yourself? All that I can say is that it is up to you. A complete filmdeveloping outfit would lessen your pocketbook by about fifteen dollars. "If you have not the time or feel you would rather gain experience before attempting this delicate work, then you can send the negative out to be developed. The charge will probably be one cent a foot. You will, of course, need at least one positive printed from the same. The charge for this service usually is five cents a foot, which includes the raw film. Any explanatory matter you want inserted costs eight cents a foot. A conservative estimate for a twenty-foot scene with explanatory subtitles is about \$1.30.

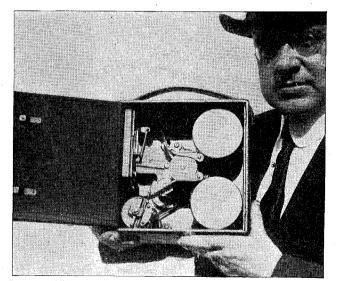
"After you are completely through with the negative, you can reproduce some still prints from the same. One of the animated newspapers has occasion to run stills of the principal incidents depicted for publication in their house organ. Extracts from positive copies come out very indistinctly, so still prints are run off from the particular scenes in the negative.

are run off from the particular scenes in the negative. "The next step lies in viewing your completed efforts. Naturally, it is not enough to cast your eyes over the strip of celluloid. You want to see it in motion and magnified to a life-like size. You will need, of course, a projecting machine. There are several miniature machines, at prices ranging from \$50 to \$150, adaptable for the purpose.

adaptable for the purpose. "The pictures are projected at the rate of sixteen to the second. Handle the film carefully when putting it on the projector and do not relax the pains taken until you unspool the reels. 'Always' is the best motto. This precaution will insure the film being kept in perfect condition. Mend all breaks as they occur, and this applies also when the film leaves the sprockets."

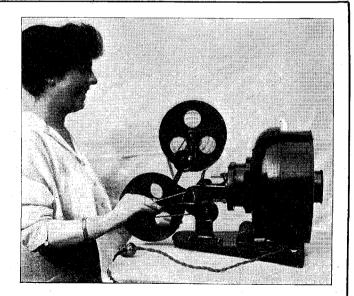
It is possible, of course, that when the movie becomes a household toy its apparatus may be modified in some way. Here, for instance, is a projecting machine that differs from the common kind as a reflectoscope does from an ordinary lantern. The light is reflected from its film instead of passing through it, says Mr. E. A. Dime, who describes it in *The Scientific American* (New York, January 27):

"In place of a transparent film through which the powerful beams of a sputtering arc lamp pass, there is a paper ribbon upon which the light rays from thirteen 21 candle-power, circularly arranged incandescent lamps impinge, and from which they are reflected. So intense is the illumination upon each single picture of the paper strip, when it is in position, that it



By courtesy of "The Scientific American," New York. A motor-driven motion-picture camera, which needs no tripod, can

be operated by pushing a button, and can use paper films.



A projector which uses the paper films. Prints are taken from a regulation film, and the pictures are reflected upon the screen.

MOTION-PICTURE APPARATUS FOR HOME USE.