A NEW IDENTIFICATION SYSTEM IN THE UNITED STATES ARMY.

BY H. L. MORGAN.

The new identification system in use at present in the army of the United States absolutely prevents any fraud being perpetrated by a soldier upon the government, in the way of desertion and re-enlistment, or in any way which depends upon lack of recognition for its success. The system comprises, first, an accurate personal description; second, a set of finger prints of the most elaborate character; and third, a double photograph of the face and head, from both front and side positions.

The obtaining of all this record, of the thousands of soldiers scattered over the country and its possessions, and in any of one hundred and fifty-eight military posts, is, as may be imagined, a matter of some difficulty. The finger prints did not cause so much trouble, inasmuch as the apparatus is simple, can be used by anyone with a moderate degree of intelligence, and produces results of one sort or another on the instant.

The photographs, however, probably the most important part of the record, were a problem. To send a corps of photographers traveling over the globe to obtain these photographs would not only cause an enormous expense at the start, but would not provide for photographs of further enlistments. The enlistment of a photographer at every post was also open to objections of expense and expediency. So it was determined to provide a photographer at every post, out of hand. As it was not possible to be certain of educating enough men in a short time up to the standard required of an intelligent photographer, photography was simplified to the point where failure is almost impossible, and common sense is sufficient to run the apparatus.

The requirements of the photographs are that they shall be two in number, a front and a side face, that both negatives be on one piece of film, for accuracy and lack of possibility of loss, that they be sharp and clear, that they be uniform, and that they be like one another as to size, shape, and appearance. The War Department, after long and exhaustive investigations and experiments, carried on by Major Edgar Russel of the Signal Office, ordered from a prominent firm of camera manufacturers a quantity of cameras of peculiar design. The lenses have but one diaphragm. The relation of the lens to the plate is fixed—no focusing is possible. The cameras are double, like a stereoscopic camera, but have only the one lens, which, however, is on a laterally sliding lens board, so that it may be placed in front of either camera.

The camera, in use, is fastened to the floor in a fixed position pointing toward a background. In front of the background, in a chair also fixed to the floor, the subject is required to sit. His face, when leaning back in the chair, is fifty-four inches from the lens. This is the arbitrary distance required to bring into focus on the plate an image one-seventh the size of the original. At one side and slightly in front is a white cloth reflector. At the other side is a flash light of peculiar and interesting construction, to be described in a moment. An instant's thought will show that, if the plates and resulting prints are to be uniform, the light must be uniform. Consequently, daylight with its uncertainties is prohibited. The use of the flash light, also, allows the proper exposure to be determined in the home experimental studio, a certain amount of flash powder, in a certain style of instrument, giving a certain amount of illumination on a subject a certain distance from the flash and from the camera. The flash light is a square pyramidal box, open at the end, and covered there with light cheesecloth. The flash cartridge is provided with a thin paper end. This is so placed in the light chamber that the pressing of a button below causes a stream of sparks from two terminals to spring across the paper end. The sparks are from dry batteries and a coil which is part of the outfit. These sparks burn through the paper and ignite the powder which causes the flash. The smoke of the flash is retained in the box. The pictures are made upon films, in a film pack. One picture having been taken of the full face of the subject, he wearing around his neck a slate on which is inscribed his name and organization, he is required to turn his profile to the camera. The lens is shifted over the other section of the camera, and another flash made, which produces two pictures of the same man on the same strip of film. The film pack slip is then drawn out, a new flash cartridge inserted, and the apparatus is ready for the next man.

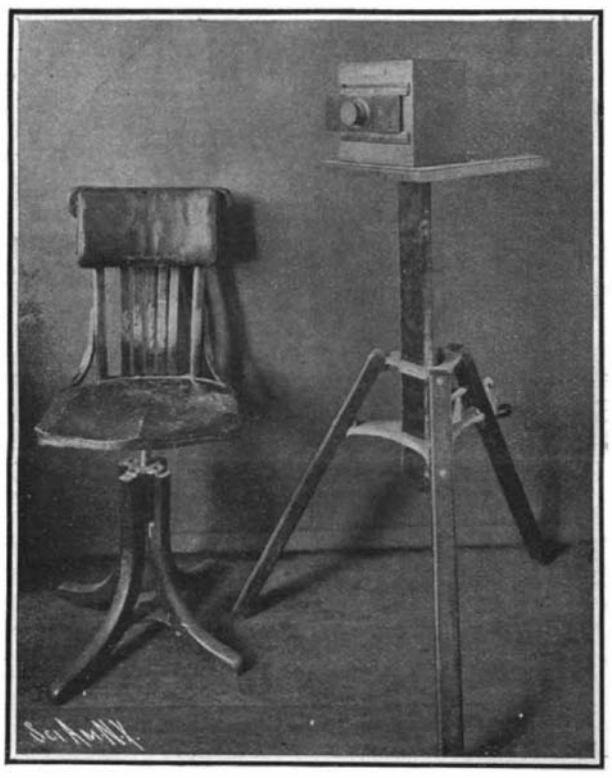
It will be seen that so far no photographic knowledge is required. A full book of instructions is furnished, and the medical officer of the post in whose charge this work is put, has but to follow directions as to the proper setting up and operation of the apparatus, to insure that the camera will work. He is not required to exercise any judgment as to the focus or the length of exposure; nor has he to judge where the sitter and camera should be placed to obtain the best relation of light. He has nothing to do but follow instructions as to the setting up of the apparatus and to press the button, change the film by drawing out a sheet of paper from the film pack, and shift the lens. Everything else has been done for him.

When it comes to development and printing, he has to use a little more photographic knowledge, but here too everything has been done that can be done. The developers come in sealed packages, contents to a certain amount of water at a certain temperature, films to be left in solution so many minutes. Fixing bath, package to a certain amount of water, fixing to take place in a certain time. Washing and drying the same. Here, of course, the operators can go wrong more easily, but even so, it is photography wonderfully simplified. If there were a tank for developing pack films, as there is for roll films, the entire operation would be automatic, but that is something yet to be invented. The observer is inclined to wonder why roll films were not adopted, but the explanation lies in the greater complication of using them, and the liability of their slipping in inexperienced hands and being thus ruined. Also, from a film pack of one dozen exposures any one or more may be removed and developed, leaving the rest, while with roll film the whole must be exposed before development. Printing is done upon a gaslight paper, also with sealed packages of chemicals, and the operator or his assistants are required to make and forward with the negative one good print. If this were not required, poor negatives might be, unknowingly, sent in, which would cause endless confusion and correspondence.

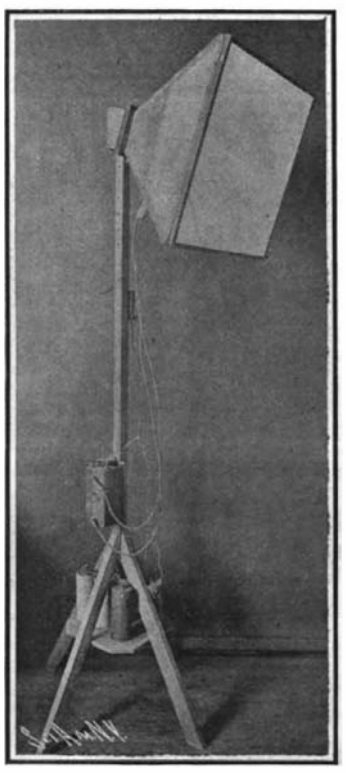
The finger-print part of the records is very simple. It requires ink, a plate and a roller, paper forms, and a holder for the forms. The subject is required to have clean and dry hands, and to surrender them to the operator, making no move on his own part. The operator inks the fingers and rolls them, once, from side to side, one at a time, in the proper blanks, producing a rolling impression of the ball of the fingers and also of the sides of the fingers. This is done with each hand. Then an impression is taken of each hand as a whole, the balls of the fingers leaving their prints simply from pressure. Finally, after signing the record, the soldier makes a last, pressure signature, of his right index finger, which serves as part of the system of indexing in which these records are kept.

On the back of this form are two charts of a man's body, back and front, and on these charts are marked any distinguishing marks, scars, moles, tattooing, etc., which comes under the general heading of personal description.

The negative, the print, and the folded document of impressions are forwarded to the Military Secretary at Washington and filed. They provide an absolutely accurate record of when, where, why, and how, of every soldier, and will be immensely valuable in case of war, for identification, in case of pension claims, in the future, as well as a preventive of crime. They will be as valuable to the soldier as to Uncle Sam, affording him the chance to prove absolutely and conclusively his connection with the army at any time, for any purpose which may need such proof.



Posing Chair and Camera, Showing Shifting Lens and Stand.



Flash Lamp Which Retains Its Own Smoke After Flash.

Apparatus in Use, Showing Relative Positions of Screen, Flash Light, and Camera.

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The Shackleton Antarctic Expedition.

To continue the exploratory work of the "Discovery" expedition in the Antarctic a party has been organized by Lieut. Shackleton, who was a member of Capt. Scott's crew. Lieut. Shackleton has secured for this purpose the "Endurance." Her hull is of English oak and she is now being refitted for the two years that are to be spent in Antarctic waters.

The expedition leaves England shortly, and will make its headquarters on King Edward VII. Land, a virgin field for exploration, Capt. Scott and his men having obtained only a glimpse of it. The exploring party of twelve men will be divided into groups of three each, one being composed of the strongest physically, who will attempt to reach the South Pole, while the others will explore King Edward VII. Land. A high-power automobile is being taken to haul the sledges laden with supplies over the ice. Manchurian ponies also form part of the equipment, to be used when motoring becomes impracticable.

The expedition will occupy two years, the "Endurance" returning to New Zealand after the first winter for supplies.

The excavations at Pæstum have brought to light a roadway 25 feet wide, flanked by sidewalks. The pavement of large stone blocks shows deep ruts worn by the wheels of heavy chariots. A beautiful Doric temple to Neptune has been uncovered for a distance of 120 feet.