

## Inventions New and Interesting

*A Department Devoted to Pioneer Work in the Arts*

### Surgical Machinery Up to Date

IT is almost a commonplace to remark that the war has reduced surgery to a precise mechanical art. Nevertheless, as the various devices for converting the hospital into a machine shop pass in review, the layman will hardly be able to retain completely the garb of sophistication, or to restrain altogether some expression of surprise.

One of the latest exhibits of this sort of thing is the arm splint which we illustrate herewith. It is obvious enough that this splint gives the necessary degree of rigidity; but here it merely duplicates existing devices, instead of surpassing them. Its advantages consist in the fact that it can be used on either arm indifferently, and can be adjusted to any desired position of the arm and of the wearer.

The new splint has been ordered in quantities for use in our base hospitals, here and abroad, and it is violating no dictate of military secrecy to state that the American Red Cross is responsible for its design and adoption. The advantages of having one splint applicable to all cases of arm wounds are so obvious that we need not dilate upon them here. It is just the same game of standardized trucks and standardized airplane engines all over again, on a smaller scale.

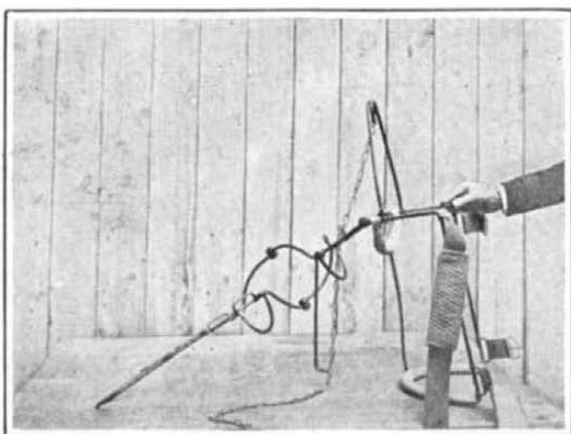
### Weighing the Temperature for Blind Folk

By Jacques Boyer

THE victims of blindness, whose number the war has unfortunately so increased, excite more and more the interest of a sympathetic world, which strives to ameliorate their lot by providing them with a variety of useful appliances. In the course of the past few years, various workers have adapted to the use of the blind certain machines, tools, and even games; the Braille slate and the Braille typewriter furnish instances selected at random. Today comes a resident of Nimes, M. Fleury Brunet, with a curious thermometer that he has invented to make it possible for persons deprived of their sight to read the temperature quite as well as anybody else.

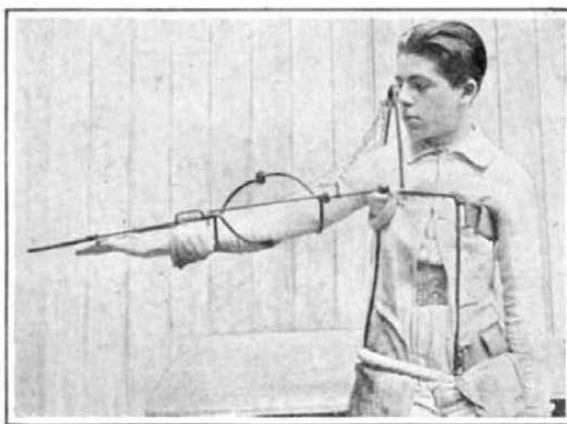
The device is a calorimetric balance, with which one actually weighs the temperature, if we may be permitted this expression. It is a combination of a balance beam with a mercurial thermometer, using the motion of the mercury column to displace the center of gravity of the tube and permit the blind man to read, from its position, the degrees of temperature marked on an index scale.

The inventor has worked out his conception in a fashion at once elegant and sound. The scale is carried on two steel



The standardized adjustable arm splint

bars, along which it can be slid for a short distance backward and forward. It is graduated in Braille characters, the lower temperatures being above and the upper ones below. The principal member is a rather heavy bar of aluminum, supported, on a knife-edge bearing, at a point near one end. On its long arm it carries an ordinary mercurial ther-



How the new splint goes on the patient

for whatever temperature is to lie in the middle of the instrument's range—which ordinarily runs from zero to 40° Centigrade. The column of mercury then plays the role of running weight; and by its varying position it controls the position of the balance—when the temperature rises and the mercury moves outward along the beam, the pointed

one of the holes of the scale, and penetrates a little way on the other side. It is then locked in position, and the blind man can find it and read the corresponding Braille character without any danger of displacing it and altering the accuracy of his reading. Having found the temperature, the blind man moves the scale back to normal position, and the pointer is again free to oscillate under the influence of temperature changes.

Inability to read the temperature, while not the worst of the blind man's disabilities, is far from being the least annoying; and this clever means of removing it will be appreciated.

### A Stretcher That Gives Up Its Load Painlessly

IN the strides made during the past decade by medical science and surgery, little attention has been paid to one of the minor, but none the less urgent, points in the handling of the injured—the means of getting them off the stretcher and into the bed. Every doctor will concede that the current style of handling patients in this transfer leads to irritation and shock which, in severe cases, may become a serious complication. But there has been no suggested means for avoiding these unpleasant consequences.

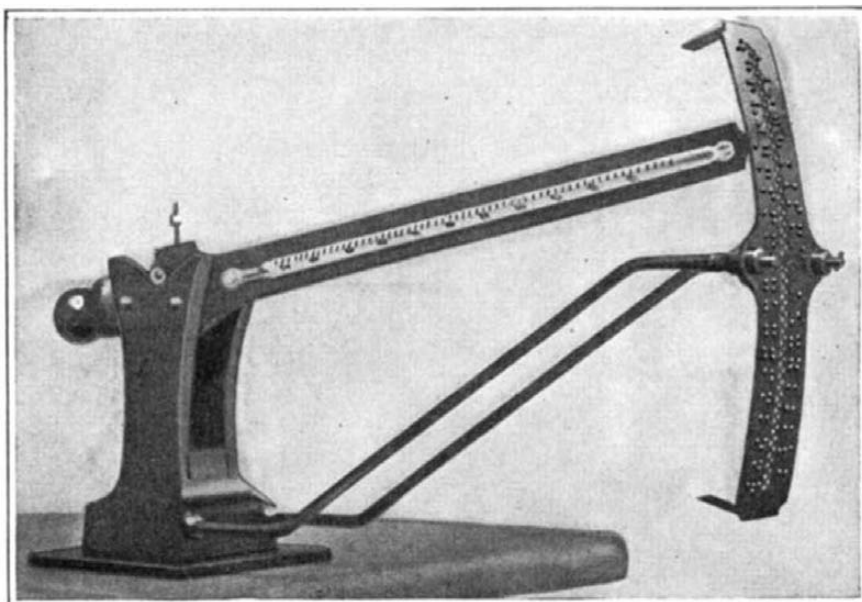
The stretcher shown on this page divides longitudinally in the middle. Each half of the canvas may then be slipped from under the patient, after he has been deposited, in the stretcher, on his bed or operating table; so the transfer takes place with no handling and no shock.

The center coupling of the new stretcher consists of two fine steel rods, three feet long—one running from each end of the stretcher through canvas loops that extend alternately from each side. These rods meet in the center loop, and are locked in place by a canvas strap that buttons over their outer ends in such fashion as absolutely to prevent their slipping out, while each rod checks the other in any tendency to slip inward. The folding handles reduce the minimum length of the stretcher to six feet, making delivery possible to the standard hospital bed, six feet two inches in length.

The iron spreading rods have a slot at the center of one which slips over a rivet at the center of the opposite rod, and, when rigidity is in order, is locked

by a pin penetrating both rods. This pin in turn is held in place by a small flat steel spring. On releasing this lock the spreading rods swing in under the canvas, and counter-sink into the wooden frame; whereupon the entire stretcher folds into a bundle, light and compact, six feet long and eight inches thick.

This stretcher was invented by M. V. Hubbard, an ambulance driver in the fire department of San Jose, California.

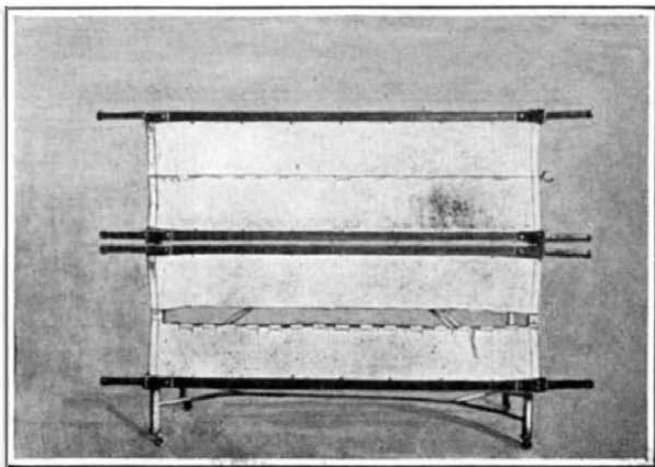


The thermometer that weighs the temperature so that the blind can read it

mometer, rigidly mounted; and this arm terminates in a point. The short arm ends in a heavy ball, and is provided in addition with two blocks, which may be slid back and forth and locked in position. This makes it possible so to calibrate the instrument that the aluminum beam takes a horizontal position

end of the latter falls, and in the opposite case it rises.

The point of the beam fails to touch the scale in the normal position of the latter. When a blind man wants to read the instrument, however, he pushes the scale in toward the base; and as he does so, the pointed beam passes through



The stretcher that divides down the middle to give up its load without handling



Shockless transfer from ambulance to bed, by means of the dividing stretcher