CREOSOTE A SPECIFIC FOR ERYSIPELAS.

'TIME was when the advocate of a specific was laughed at by the scientific world, but since it is known that so many forms of disease are the direct result of some kind of germ life, it is no longer a misnomer to call a medicine which will certainly and always destroy the germ which produces so many forms of disease a specific.

In the light of this definition, founded upon the experience of forty years' successful practice in treating this form of disease with creosote, the writer is prepared to indorse the heading of this article. Having used all the different remedies ordinarily prescribed, they have long since been laid aside, and this one used in all forms of the disease exclusively, and with uniform success.

In 1863 it was the writer's fortune to spend several weeks in a military hospital in Memphis as a volunteer surgeon, under the direction of Dr. Lord. In conversation with him, the use of this article was mentioned, which appeared new to him, and a case was put under treatment with it, with such prompt favorable results as to elicit his hearty commendation, and, at his suggestion, Surgeon-General Hammond was informed of it.

All injuries, of whatever kind, have been treated with dressings of this remedy, and where this has been done from the first to last, in no instance has there been an attack of erysipelas.

The usual manner of application was in solution of six to twenty drops to the ounce of water, keeping the parts covered with cloths constantly wet with it. In ulcers or wounds it may be used in the form of a poultice, by stirring ground elm into the solution, the strength to be regulated according to the virulence of the attack. Ordinarily, ten drops to the ounce is strong enough for the cutaneous form of the disease and in dressings for wounds or recent injuries. If the inflammation threatens to spread rapidly, it should be increased to twenty or more drops to the ounce of water.

The antiseptic properties of this remedy render it of additional value, as it will certainly destroy the tendency to unhealthy suppuration, and thus prevent septicæmia.

In the treatment of hundreds of cases of erysipelas but one fatal case has occurred, and that one in an old and depraved system. In the less violent attacks no other remedy was used, but where constitutional treatment was indicated, the usual appropriate tonics were prescribed.

There is no question in my mind but that creosote is as much a specific in erysipelas as quinine is in intermittent fever, and may be used with as much confidence.—*St. Louis Med. Jour.*

A NEW APPARATUS FOR THE STUDY OF CARDIAC DRUGS.

By WILLIAM GILMAN THOMPSON, M.D., New York.

THE apparatus was devised by Mr. R. D. Gray (the inventor of the ingenious "vest camera" and other photographic improvements) and by myself. I described what was required and suggested various modifications and improvements, but the mechanical details were worked out exclusively by him. To test the rapidity of the camera, we photographed a "horse-timer" clock, with a dial marking quarter seconds, and succeeded in taking five distinct photographs in half a second with one lens, which has never before been accomplished excepting by Professor Marey,* at the College de France, who has taken successive views of flying birds, falling balls, etc., with one lens at a very rapid rate. His camera was unknown to me until after mine was constructed, so that as a success in photography alone the work is interesting.

The camera consists of a circular brass box, 5½ inches in diameter and 1¼ inches deep, containing a circular vulcanite shutter with two apertures, behind which is placed a circular dry plate. Both plate and shutter are revolved in opposite directions to each other by a simple arrangement of four cogged wheels moved by a single crank. The box is perforated at one side by a circular opening, 1¾ inches in diameter, from the margin of which projects at a right angle a long brass tube (Fig. 1), which carries the lens. In Fig. 2 the lid of the box has been removed, and the bottom of the box, with the wheels, springs, and partially closed shutter, is presented. The lid is double—that is, it is a flat box in itself. It contains nothing but the dry plate, supported at its center upon a small brass disk, against which disk it is firmly pressed by a pivot attached to a spring fastened in the lid. The aperture in one side of this double lid, which corresponds with that seen in the floor of the box, may be closed by a slide, so that the lid containing the plate can be removed like an ordinary plate holder and carried to a dark room, where it is opened and the plate is changed. When the lid is replaced this slide is removed, and as the shutter is made to revolve, the light falls upon whatever portion of the dry plate happens to be opposite the opening.

By reference to Fig. 2, it will be seen that when the large wheel which projects outside of the box is revolved by a crank, it turns the small ratchet wheel, which bears an eccentric pawl. (The crank has been removed in Fig. 2; it is seen in Fig. 1.) The central wheel has only six cogs. The pawl is pressed into one of these cogs by a spring. It pushes the central wheel around one-sixth of its circumference, when it returns to be pressed into the next cog. While the pawl returns, it necessarily leaves the central wheel at rest, and whatever momentum this wheel carries is checked by a simple stop pressed by a spring upon the opposite side. The central wheel carries a square axle, which projects through a small hole in the center of the double lid and fits into the brass disk before alluded to, causing the disk to revolve with the axle. The disk is covered by rubber cloth; and as the dry plate is pressed firmly against the rubber surface by the spring in the lid, the plate adheres to the rubber and revolves with the disk. Thus every complete revolution of the central wheel in the floor of the box carries with it the dry plate, stops it, and moves it on again six times. The velocity of revolution of the plate is only limited by the rapidity with which one can turn the crank.

The shutter is revolved in the opposite direction by

a wheel whose cogs are seen fitting into those of the little wheel carrying the eccentric pawl.

The two apertures in the shutter are so placed that at the instant of exposure of the plate it is momentarily at rest, while the plate when moving is covered by the shutters. This arrangement prevents vibration of the plate and blurring of the image. The camera is

FIG. 1.—THE CAMERA MOUNTED.

mounted by two lateral axles with screw clamps upon two iron stands, such as are in common use in chemical laboratories. A brass rod attached to the tube steadies it, and allows it to be screwed fast at any angle corresponding to the angle at which the heart is placed. It is thus easy to put a manometer tube in the femoral artery of an animal, bend it up alongside of the exposed heart, and simultaneously photograph the cardiac contraction and the degree of rise of the fluid in the manometer (?). The tube is arranged like the draw tube of a microscope. It is made long, so as to admit of taking

FIG. 2.—INTERIOR OF THE CAMERA.

small hearts at life-size. The stand carries a support for the frog or other animal to be experimented upon, and a bottle of physiological salt solution kept warm by a spirit lamp beneath.

The whole apparatus is readily packed in a small space. I have already taken a number of photographs of various hearts and intestines with it, and the contraction of the heart of the frog produced by *Strophanthus hispidus*, the new cardiac stimulant, is seen in Fig. 3, taken by this new instrument. The apparatus

FIG. 3.—PHOTOGRAPHS OF THE HEART IN MOTION.

1, Normal diastole; 2, auricular systole; 3, ventricular systole. 1, 2, 3 were taken in a half second; 4, 5, 6, same as 1, 2, 3, after injection of toxic dose of *Strophanthus hispidus*. 4, 5, 6 were taken in a half second. The pulse rate was 74.

has the great advantage that six photographs of a single cardiac pulsation, or of any muscular contraction, may be easily taken in less than one second, or, by simply turning the crank slower, they may be taken at any desired rate to keep pace with the rhythm of the heart. The second hand of a watch may be placed in the field of view and simultaneously photographed with the heart, so that there can be no question about the series of photographs all belonging to one pulsation.

I have already called attention* to the ease with which these photographs are enlarged for lecture room demonstration, either on paper or in a stereopticon, and the ease with which they may be reproduced in print to illustrate the action of drugs.

A CATALOGUE containing brief notices of many important scientific papers heretofore published in the SUPPLEMENT, may be had gratis at this office.

* *Medical Record*, loc. cit.; Recent Advances in Methods of Studying the Heart, *Medical Press*, Buffalo, March 1, 1886, p. 234; Instantaneous Photographs of the Heart, Johns Hopkins University Circulars, March, 1886, p. 60.

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TABLE OF CONTENTS.

	PAGE
I. BOTANY.—A Century Plant in Bloom.—Interesting account of the recent blossoming of an <i>Agave Americana</i> at Auburn, N. Y.	8965
Alpine Flowers in the Pyrenees.—1 illustration.	8965
II. CHEMISTRY.—Probable Isolation of Fluorine.—Decomposition of hydrofluoric acid by an electric current.—By M. H. MOISSAN.—Production of a new body, possibly fluorine, or perfluoride of hydrogen.	8963
The Determination of Nitric Acid by the Absorption of Nitric Oxide in a Standard Solution of Potassium Permanganate.—By H. N. MORSE and A. F. LIXX.—Full description of a new and important volumetric determination.—1 illustration.	8964
Water of Crystallization.—By W. W. J. NICOL, M.A., D.Sc.—Discussion of the state of water of crystallization in a salt in solution.	8964
III. ENGINEERING.—Combustion, Fire Boxes, and Steam Boilers.—By JOHN A. COLEMAN.—Address before the June Convention of the Master Mechanics' Association.	8953
Compound Hydraulic Presses.—Different forms of presses designed for pressing bales for shipment.—Very fully illustrated by 8 figures.	8951
Examination Papers in General Construction.—Eighty-six questions in engineering propounded by the civil service examiners of New York City.	8956
IV. MEDICINE AND PHYSIOLOGY.—A New Apparatus for the Study of Cardiac Drugs.—By WILLIAM GILMAN THOMPSON, M.D.—Instantaneous application of instantaneous photography to the study of heart movements.—Apparatus and views produced.—3 illustrations.	8966
Creosote a Specific for Erysipelas.—A new cure for this complaint.	8966
V. METALLURGY.—Primitive Iron Manufacture.—Iron furnace and blowing apparatus in use in Bengal.—2 illustrations.	8962
VI. MINING ENGINEERING.—The Catastrophe at Chancelado.—Application of photography to investigating mine disasters.—4 illustrations.	8957
VII. MISCELLANEOUS.—Celebration of the 500th Anniversary of the University of Heidelberg, August, 1886.	8957
Useful Bags and How to Make Them.—Interesting paper on the trunk makers' art.—4 illustrations.	8960
VIII. NAVAL ENGINEERING.—Atlantic Steamers.—By W. JOHN.—Exhaustive comparison of representative Atlantic liners and war ships.—3 illustrations.	8954
Jet Propellers.—Hydraulic propulsion of vessels.—Mathematical examination of this subject.	8951
IX. ORDNANCE.—The New Army Gun.—Description of the 8-inch steel gun as manufactured at the West Point, N. Y., Foundry.—1 illustration.	8952
X. PHYSICS.—A New Thermo Regulator.—1 illustration.	8959
Cohesion and Cohesion Figures.—By WILLIAM ACKROYD, F.I.C.—Laws of vortex rings examined, and relation of solubility to cohesion.	8963
Pipette for taking the Density of Liquids.—Apparatus and calculations for use.—1 illustration.	8959
XI. TECHNOLOGY.—Impurities in Photographic Chemicals, and Tests for Same.—Table referred to in a paper read before the Birmingham Photographic Society by G. M. Jones, M.P.S.	8957
Molasses, how made.	8961
Work on Plantations Graphically Described.—Optical errors and human mistakes.—By ERNST GUNDLACH.—On the examination of optical glasses.—A paper read before the Buffalo meeting of the A.A.A.S.	8963
Soap.—By HENRY LEFFMANN, Ph.D.	8962
Somzee's New Gas Burners.—Interesting description of regenerative burners.—3 figures.	8958
The Diamond Gas Burner.—Of value as a supplement to the above named article, describing an incandescent burner.—1 illustration.	8959
Wood Oil.—A new industry worked on the large scale in Sweden.	8962

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* La Methode Graphique (Supplement), Paris, 1885.