



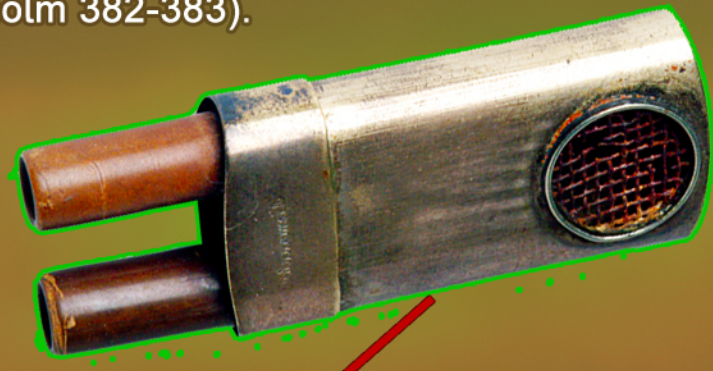
## Ambulances & Field Medics

A crude version of the ambulance was in place before the civil war, but they were unorganized--and saying they lacked efficiency would be the understatement of the century. With the help of Jonathan Letterman, Asst Adj Gen Seth Williams decreed sixteen regulations that the ambulance corps were required to adhere (Williams).

"Ambulance Wagons on the Battle Field." (Brady)

Because it became necessary for ambulances of the time to have medics on hand, Jonathan Letterman standardized what we would consider today as the

On the proper use of chloroform, Confederate Dr. Jon J Chisolm wrote of his expectations in the south's Surgery Manual. "Ingenious inhalors are more or less complicated, and are on that account more or less inefficient. The great perfection of the above-mentioned apparatus is its simplicity. Finding that much chloroform is wasted by evaporation from the handkerchief, I have for some years used a common funnel as my inhalor, which protects the hands of the person administering the chloroform, and prevents the loss from general evaporation" (Chisolm 382-383).



"Chisolm Chloroform Inhaler" (Bynum)

## Anesthesia & Amputations

"First Lines of the Practice of Surgery" (Cooper)

**PRACTICE OF SURGERY. 399**

After the operation the stump should rest upon a pillow of very moderate thickness; for bending the thigh-bone too much causes a retraction of the flexor muscles.

If possible the dressings should never be removed before the third day; but, in general, it is quite soon enough to change them on the fourth.

At the end of five or six days the surgeon may begin to try, in a very gentle manner, whether any of the ligatures are loose. However, he should not use the smallest force, nor persist if the trial should create pain. One would hardly try whether the ligature on the great artery is loose before the eighth or ninth day.

**AMPUTATION BELOW THE KNEE.**

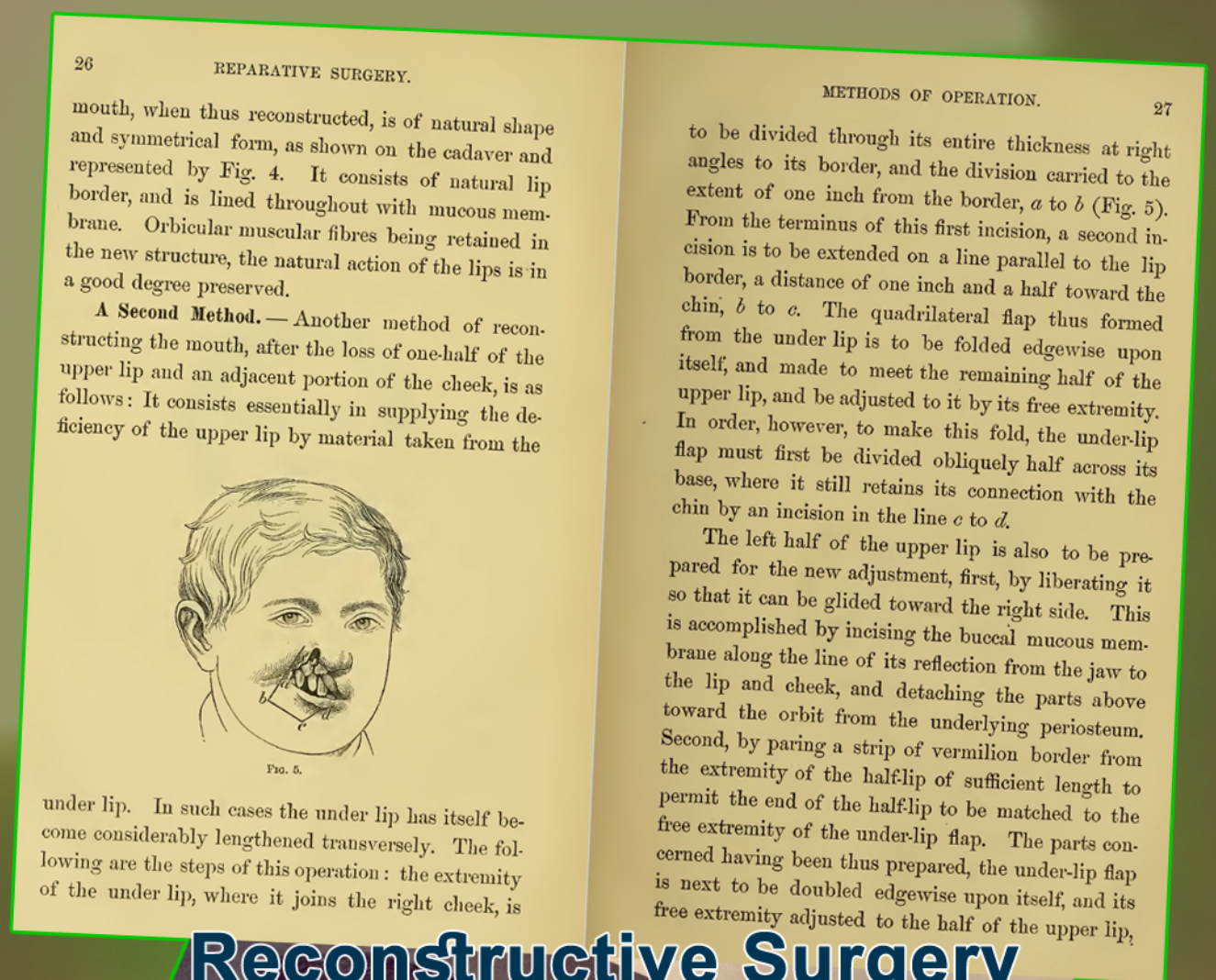
In the thigh we amputate as low as the nature of the case will allow us. In the leg the common practice is always to make the incision through the integuments sufficiently low to enable the operator to saw the bones about four inches below the lower part of the patella. This is necessary, in order not to deprive the stump of that power of motion which arises from the flexor tendons of the leg continuing undivided.

The tourniquet should be applied to the femoral artery two thirds of the way down the thigh, just before the vessel perforates the tendon of the triceps muscle. This is a much more convenient situation than the ham. The leg being properly held, the integuments should next be drawn upward by an assistant, while the surgeon, with one quick stroke of the knife, must divide the skin completely round the limb. Some recommend the operator to stand on the inside of the leg, in order to be able to saw both bones at once. No reflections could ever make me perceive that any real advantage ought strictly to be imputed to this plan. I know that many think it diminishes the chance of the fibula being splintered, as this bone is completely divided rather before the tibia. But splintering the bones arises from the assistant who holds the leg depressing the limb too much; it would be difficult to explain why the two bones should not be splintered, when a certain thickness of them has been sawn through, if the leg were too forcibly depressed.

Having made a circular division of the integuments, the next object is to preserve skin enough to cover the front of the tibia and part of the stump, corresponding to the situation of the *tibialis anticus*, *extensor digitorum*, and other muscles between the tibia and fibula, including those covering the latter bone. Throughout this extent there are no bulky muscles which can



"A Civil War Surgeon's Tools"



## Reconstructive Surgery



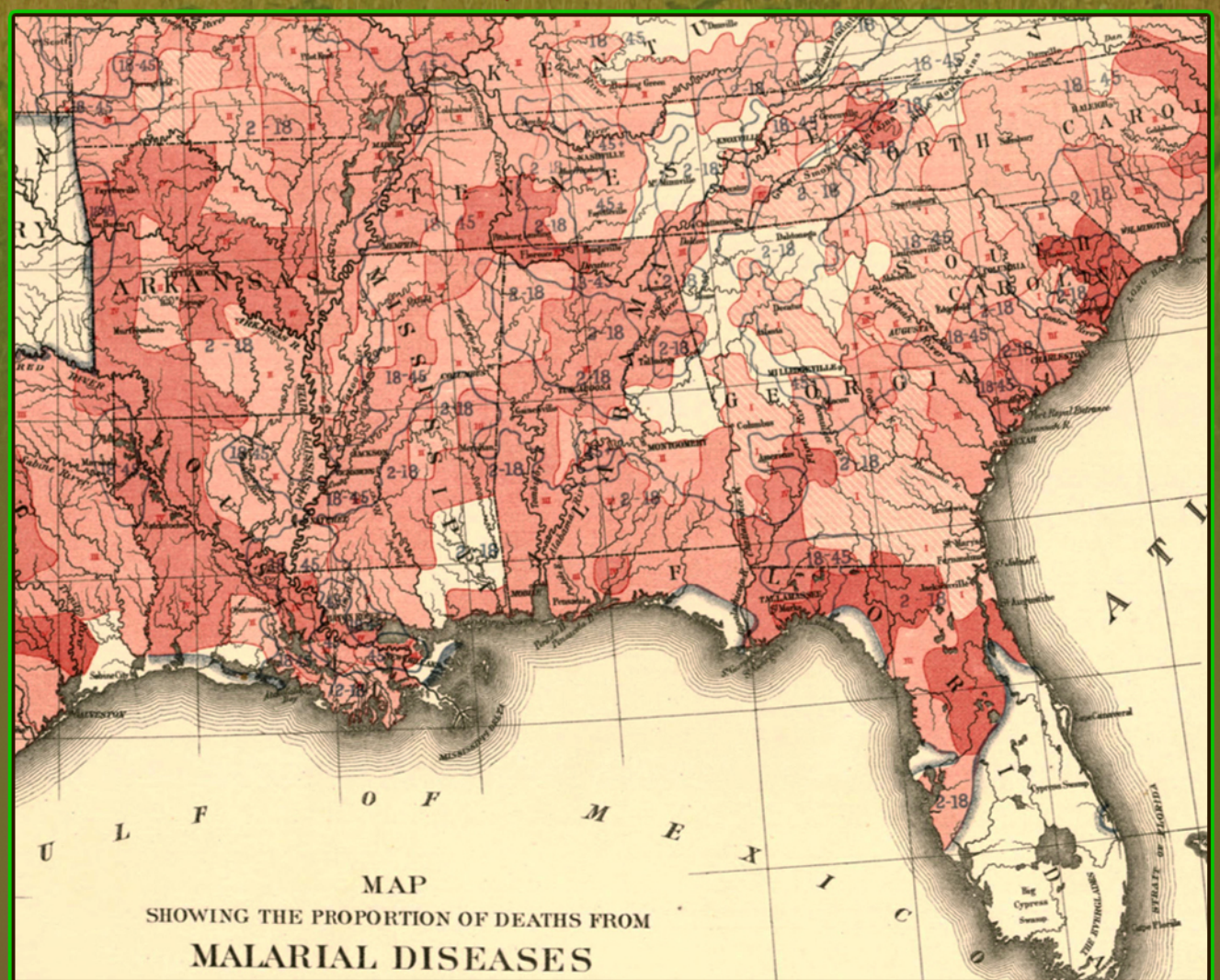
"Mending Broken Faces of War" (Grabowski)



"American Civil War Quinine Tin" (Phisick)

Quinine was extracted by Pierre Pelletier and Joseph Caventou in 1820 from the cinchona bark as one of the few fever suppressants for malaria (Achan).

## Quinine & Malaria



Map courtesy Library of Congress (Census Office)

By May of 1862, because of malaria and diarrhea, half of Union General Sherman's soldiers were bed-ridden and unable to fight (Hicks).

# Civil War MEDICAL ADVANCEMENTS

Douglas McCue

HIST110

30 Mar. 2021

*IEP 2 – Civil War Medical Advancements*

The Confederacy being defeated in the American Civil War came from more than the sum of Generals, luck, and strategies—it was also a major medical war with both sides making significant advancements on and off the battlefield. Like Samuel Cooper, who standardized, improved precision, and decreased mortality rates by increased amputation efficiency. John Chisolm dreamed up more effective anesthetizing methods to curb accidents, overdoses, and wastefulness of period anesthetics. Off the battlefield, Gurdon Buck singlehandedly started the field of facial reconstructive (or plastic) surgery. Finally, analysis suggests that the man who did the most to lead the Union to victory was the Potomac Army's medical director, Dr. Jonathan Letterman. He cleaned up the Union's horrid sanitation issues, established an ambulance system, standardized the field medic's role, created field hospitals, and had time to improve the soldier's meals (Letterman).

This project began very curiously researching quinine during the Civil War. As research goes, it quickly enveloped the achievements and men portrayed in the infographic. While quinine was not pioneered or bettered during this time, its usefulness in keeping fevers at bay from malaria proved it to be a beneficial medicine to have at quantity—especially in the south with such quantities of *gallinippers*—or mosquitoes—that were like rainstorms upon the camps. It would take one score for scientists to realize mosquitoes are the carriers of malaria and yellow fever (Hicks).

The class themes found were ‘war and medicine,’ ‘public health,’ and ‘technology-medicine-health.’ The first theme is likely obvious given the topic. The second theme is probably fairly obvious, but I posit that the comparison here merely intensifies just how unsanitary and unorganized things were. The final theme mirrors the topic and theme I decided upon—in this presentation of how technology increased with medicine because of health.

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