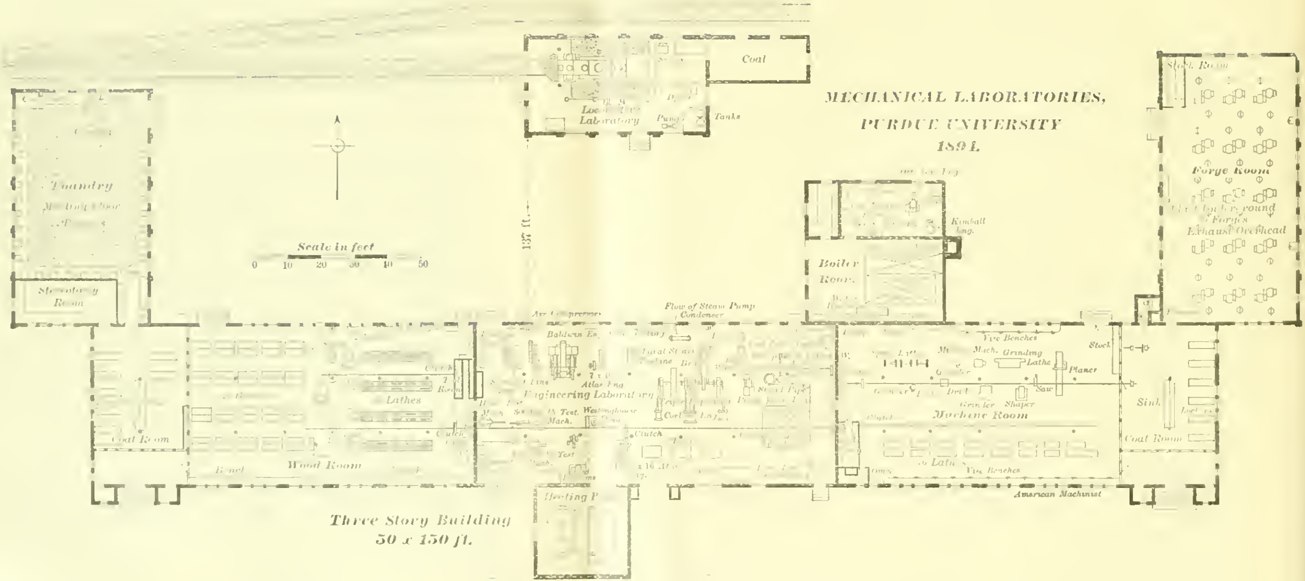

MECHANICAL LABORATORIES,
PURDUE UNIVERSITY
1894.
Coal
Tanks
Laboratory
Foundry
Scale in feet
0 10 20 30 40 50
137 ft.
Boiler
Kimball
Eng.
Forge Room
Exhaust Overhead
Stock Room
Flow of Steam Pump
Condenser
Engineering Laboratory
Atlas Eng
Lathes
Wood Room
Coal Room
Clutch
Vise Benches
Grinding
Lathe
Planer
Saw
Drill
Grinder
Shaper
Machine Room
Sink
Coal Room
Vise Benches
American Machinist
Three Story Building
50 x 150 ft.

Let us turn back to our clinical case. We have tried to show that as a result of the injury there was a loss of tone, and, we shall now try to show that its return to the muscles was due to the remedy that was applied.

It does not seem improbable that the application of massage caused the afferent impressions which acted upon the trophic centers of the cord; and this in turn sent out efferent impressions to the toneless muscles, and by that means they were restored to a condition so that they were able to respond to certain motory impulses.

Such an investigation of necessity has its limitations. The most essential facts needed will, of course, be in the dark as long as the patient is alive. An examination of the cord, in order to obtain the extent of the lesions, would make it more clear. Even had we the opportunity of examining sections of the injured portions, there might still be some doubt as to the revealing of all the facts in the case. We do not know to what extent the injured parts affect those which are apparently healthy.

Although the citation of this interesting case may not settle definitely the great problem whether there is skeletal tone, it will at least shed some light on the subject.

Does High Tension of Electric Current Destroy Life? By J. L. Campbell.

The Purdue Engineering Laboratory Since the Restoration. By Wm. F. M. Goss.

A little less than a year ago, Purdue University lost by fire, the larger part of its mechanical laboratory. The building was a fine one, only just completed, and was occupied by the Departments of Mechanical Engineering, Civil Engineering and Practical Mechanics; it had more than an acre of floor area, and was filled with an expensive equipment. The disaster was a trying one. Not only was the property loss apparently irrecoverable, but fear was felt that the uncertainty and delay in restoration would result in a loss of the prestige so honorably won by the University and a diversion of its student constituency in other directions. In this emergency the wisdom and courage of President Smart were quick to assert themselves. In a few weeks after the fire new machinery was running

in temporary quarters and the permanent building was in progress of construction. No work prescribed in the catalogue has been omitted from the course of any student.

The accompanying plan shows the laboratory as it now stands restored. The portion which was burned included the forge room, machine room and engineering laboratory; also, a three-story front containing offices, recitation rooms and drawing rooms. The outline of the old building has been preserved in the new, but the construction of the front has not yet been undertaken. All laboratory rooms have been entirely finished and equipped. A room has been added for experimental work with natural gas, and the locomotive testing plant has been provided for in a separate building. Not only has the capacity of the structure been increased, but the equipment also in every department has been improved. Time will not permit an enumeration, but the floor plan shows the location of apparatus now in place and in daily use.

It will be seen that while other lines of work have not been neglected, the equipment of the engineering laboratory is especially complete for work in steam engineering. The several engines shown are mounted as separate plants. This arrangement avoids any chance of interference among different groups of students who may be working with different engines at the same time. The Buckeye, Straight Line and Baldwin engines occupy the floor space, which before the fire was taken by the plant now in the annex. The Baldwin consists of a pair of $9\frac{1}{2}$ and 16x18 Vonclain Locomotive Engines fitted up for the purpose of experiment. These engines are supplied with steam from the laboratory boilers and are run under the load of a friction brake.

The locomotive testing plant in the annex laboratory has been much improved. The plant shows Purdue's locomotive, Schenectady, in place, but the arrangement of the plant is such that any locomotive may be received and tested.

The engineering laboratory contains thirty-six steam cylinders aggregating over 1,500 horse power.

Method of Determining Sewage Pollution of Rivers. By Chas. C. Brown, C. E.

[Abstract.]

In 1888 I began work for the State Board of Health of New York on the investigation of the purity of water supplies drawn from rivers, with a detailed inspection of the water-shed of the Croton River from which New York City derives its supply. This was almost entirely an inspection of the actual sources of pollution, though a study was made of the chemical side of the question. The