

Children's orthopaedic ward, Agnew Memorial Pavilion, University Hospital, special equipment / by De Forest Willard.

Contributors

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CHILDREN'S ORTHOPÆDIC WARD,

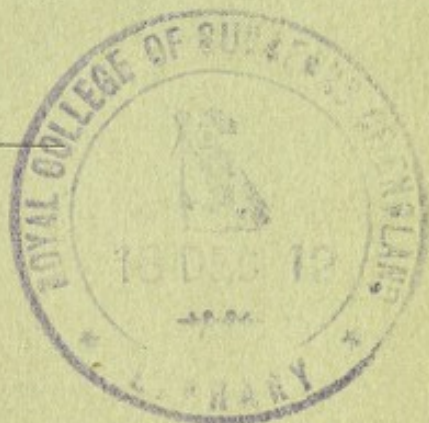
AGNEW MEMORIAL PAVILION, UNIVERSITY HOSPITAL,

SPECIAL EQUIPMENT.

BY

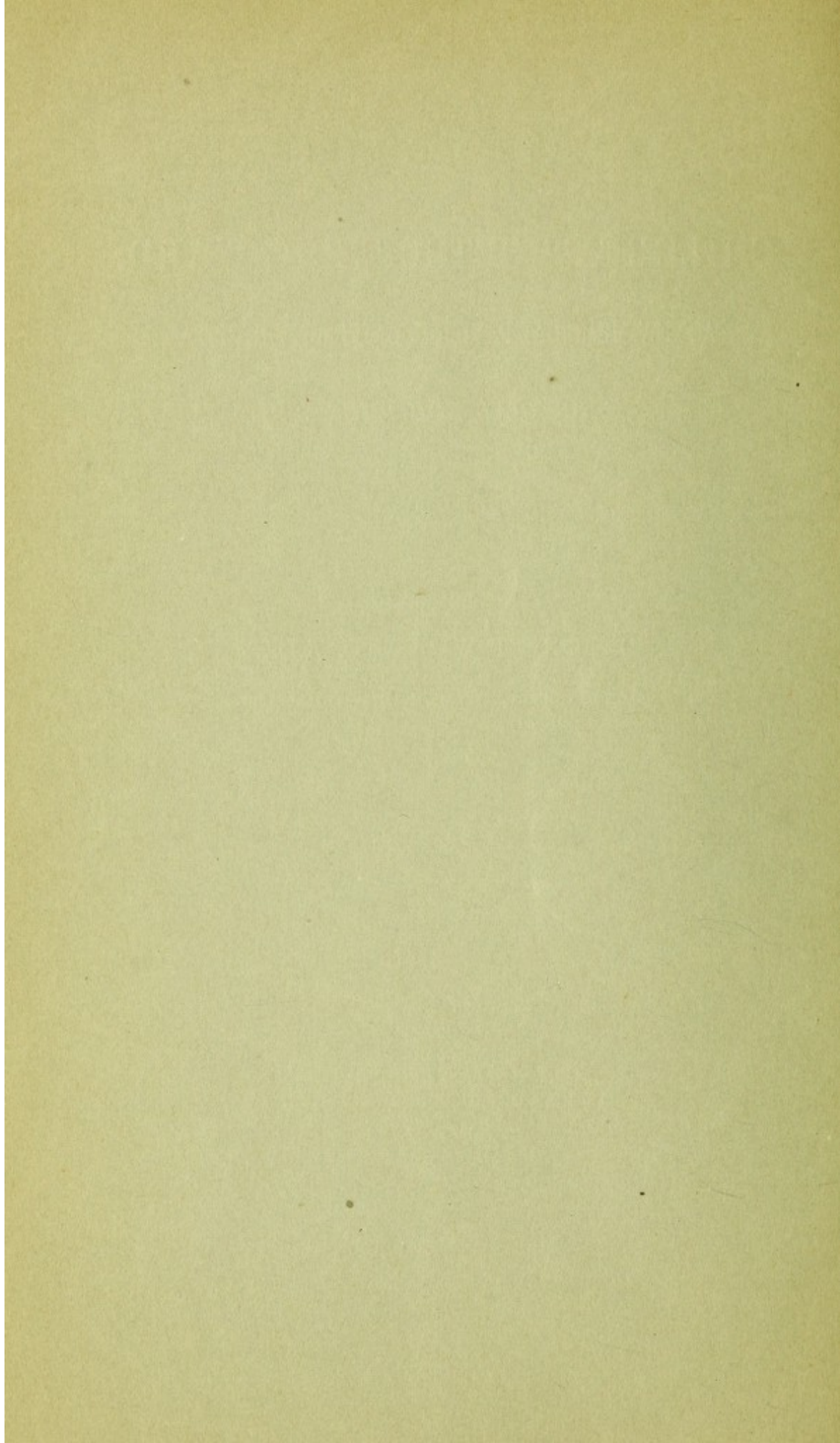
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FROM THE TRANSACTIONS OF THE
AMERICAN ORTHOPEDIC ASSOCIATION.

1898.



CHILDREN'S ORTHOPÆDIC WARD, AGNEW MEMORIAL PAVILION, UNIVERSITY HOSPITAL, SPECIAL EQUIPMENT.

BY DE FOREST WILLARD, M.D.,
PHILADELPHIA.

A DESCRIPTION of a few of the special items of equipment of this ward may be of interest to the Association.

BUILDING. First, the building is erected so as to secure the benefit of the east, south, and west sun. The windows are large (double in winter for protection), and the ward being but thirty feet wide, the sun streams across it all day. Decided benefit is thus secured against "hospitalism" in patients confined to bed.

The ward has tiled sides and open fireplaces.

VENTILATION. Ventilation and excellent circulation of air are secured by open gratings beneath each bed, connected with a hot-air shaft which by forcible suction constantly carries off the heavy and deleterious gases.

SUN-PORCH AND PLAYROOM. The sun-porch is an important feature. It is at the southern extremity of the building, and opens directly from the ward by a wide door without a sill. The beds are supplied with three-inch rubber-tired wheels and are easily rolled out upon this porch. It is enclosed with glass and heated in winter, open in summer, and looks out upon green grass, trees, and pleasant surroundings. The bed-ridden patients look upon this retreat as their greatest privilege. It is occupied for three hundred and sixty-five days in the year either by bed patients or as a playroom for convalescents. (Fig. 1.)

TROLLEY SUSPENSION. Extending the entire length of the ceiling of the main ward is a trolley track from which is suspended an adjustable leather corset travelling on overhead wheels. In this a child with feet just touching the floor can be placed and

educated in the use of its leg muscles as he traverses the whole length of the room, without the danger or fear of falling. This trolley can be used by a patient either with or without an attendant. (Fig. 4.)

DRESSINGS. Each case requiring surgical dressing, removal of plaster cast, or anything that is likely to cause pain, is removed upon a wheeled litter to a separate room. A closed door intervenes between this room and the ward, and thus is avoided the disturbing element of listening to sounds of pain or fright, which so often cause serious and distressing results in a ward filled with children. In this room are provided all surgical appliances for thorough, aseptic, cleanly dressings, and all mechanical and electrical accessories. Patients requiring frequent dressings are kept upon bed frames, or trays, so as to be easily lifted and transported. During the dressing the tray rests upon enamelled iron trestles (Fig. 3). A large pan placed underneath permits free irrigation through the break in the canvas cover opposite the wound.

A clean pitcher upon a movable stand, with siphon irrigation attachment, is more cleanly and convenient than the ordinary irrigation jar.

RECOVERY-ROOM. In the recovery-room are placed all patients after operation, where they remain as long as absolute quiet is essential. No patient is allowed to be etherized in the ward, nor to return to the ward before recovering from an anæsthetic.

THE MUSCULAR DEVELOPMENT-ROOM AND GYMNASIUM. The muscular development-room is in charge of a competent physical trainer and masseuse who supervises active and passive muscular movements, Swedish exercises, massage, etc. For lateral curvature cases, in addition to the active and passive movements of Roth and others, special gymnastics are provided for special cases—dumb-bells, clubs, double trapeze, unequal rings, quarter circles, chest weights, Swedish bars, etc. (Fig. 3). For adults forcible correction is practised by Weigel's and Beeley's powerful machines. Couches are provided for rest.

For paralytics there is a trolley with corset suspension similar to the one described in the ward, which runs the entire length of the room (Fig. 4). The younger and paralytic children ride a stationary bicycle—their feet being strapped to the pedals—run by an

electric motor. For this class also a swing moved by the arm-power of the patients is a pleasant and helpful device.

No case is treated without a written prescription giving the exact movements to be employed, the length of time treatment is to be continued, etc., and each case is individually supervised either by the surgeon or attendant.

When there are too many patients for hand massage, mechanical massage is employed by machines, an electric motor furnishing the power. Hand and foot movements are used for stiffened joints following fractures or other injury.

Large cylindrical ovens are furnished also for the treatment by superheated dry air in cases of ankylosis of joints, rheumatism, flat-foot, etc.

ISOLATION-ROOM. To the isolation-room is removed every case of even suspected contagious disease. By early sequestration an outbreak is often checked; if a false alarm has arisen, a day or two settles the question. This room is tiled, and can be easily washed and fumigated; it also has a separate water-supply, so that the nurse need not communicate with other portions of the hospital. Early separation is the essential element in the avoidance of an epidemic.

PRIVATE OPERATING-ROOM AND AMPHITHEATRE. The private operating-room and public amphitheatre are furnished with white marble floors in large blocks, in order best to disclose dirt and avoid cracks. These can be flushed by hose. The floor corners are rounded and the sides of the rooms tiled. Pedal cocks are supplied for the washstands. The rooms are furnished with white enamelled iron and glass.

An electrically heated mattress lies upon the operating-table, supplying a warm and comfortable bed throughout the operation and greatly lessening the shock of prolonged operations or of those which are accompanied by great loss of blood.

STERILIZATION. Sterilized hot and cold water are supplied from the tanks to the private operating-rooms, the public amphitheatre, surgical dressing-room, and dispensary. Instruments, dressings, etc., are sterilized each day.

DISPENSARY. A patient requiring examination or dressing of the feet is placed upon an elevated platform or a high stool,

thus greatly relieving the vertebral column of the surgeon. This platform is provided with a graduated appliance for measuring inequality of limbs, also with a sloping mirror for inspecting the soles of flat-feet.

MACHINE SHOP. A machine shop for the manufacture of apparatus, including all the steel, leather, and shoe work, is run in connection with the department.

LABORATORY. A laboratory thoroughly equipped for microscopical, chemical, and bacteriological work is also provided.

PHOTOGRAPH AND X-RAY ROOM. A practical room for photography is another important adjunct, and an X-ray outfit is close at hand.

APPARATUS-ROOM. One room is also devoted to the display and storage of various illustrative apparatus, both ancient and modern.

TEACHER. A lady for six hours each day teaches such as are able to learn reading, writing, and arithmetic, sewing, and self-control. She beguiles weary restlessness by stories, teaches quiet games, writes letters for the children, and visits dispensary and ward patients at their homes in the city. Many careless or indigent cases need to be watched over after leaving the hospital.

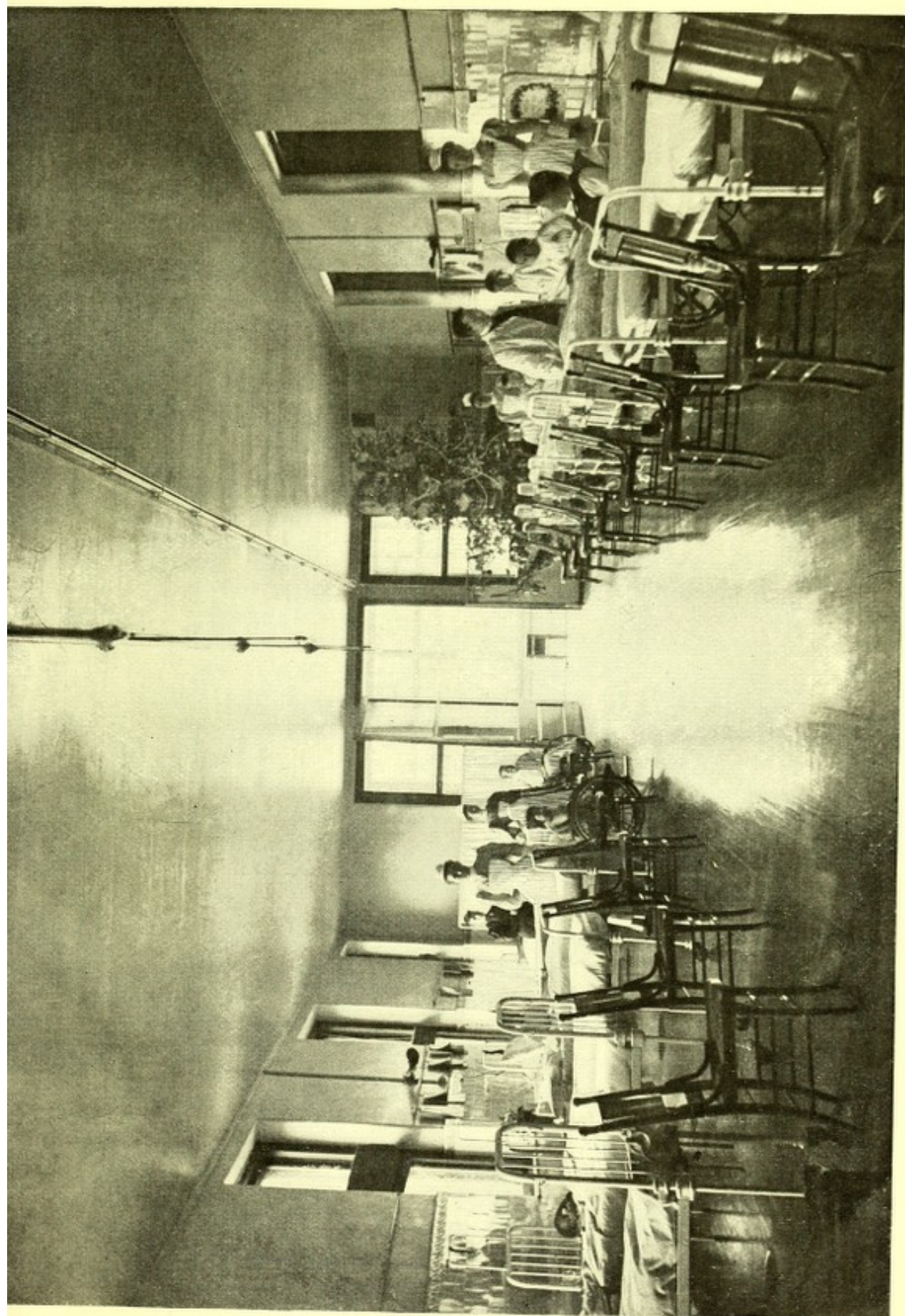
Finally, sunlight, fresh air, cleanliness, an abundance of nutritious food, and cheerful surroundings, are insisted upon as essentials.

FIG. 1.—Main ward, with sun-porch at south end. Suspension-trolley in ceiling.

FIG. 2.—Dressing-tray laid on trestles. Irrigation through opening.

FIG. 3.—Special orthopædic gymnastic apparatus, stationary bicycle, etc.

FIG. 4.—Orthopædic gymnasium. Suspension-trolley for paralytics, etc.



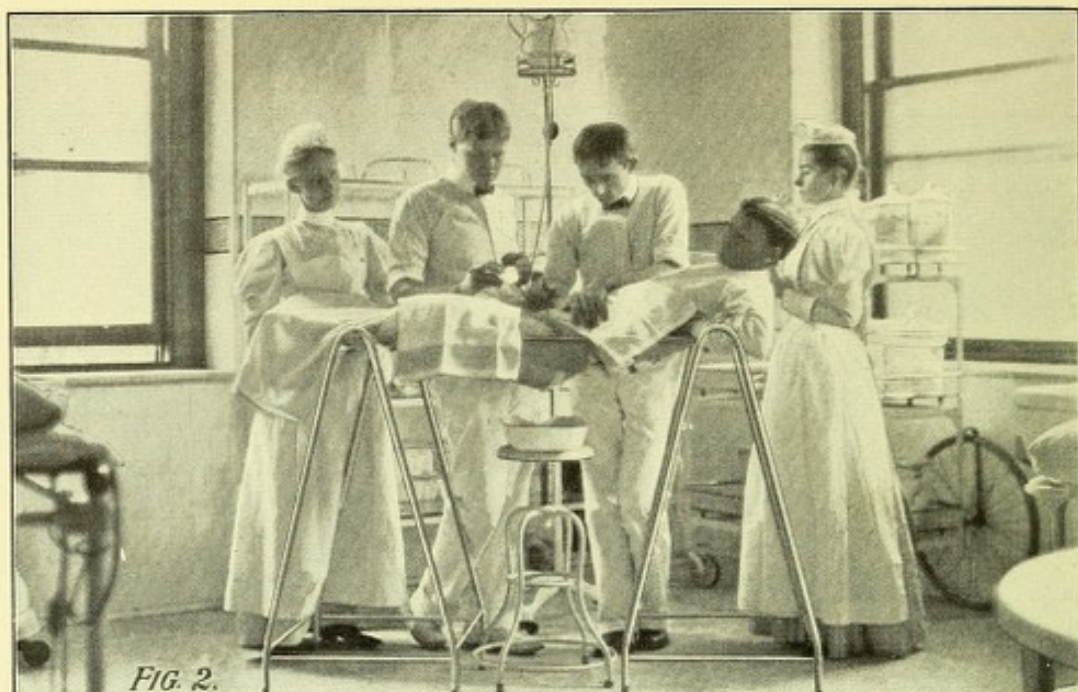


FIG. 2.

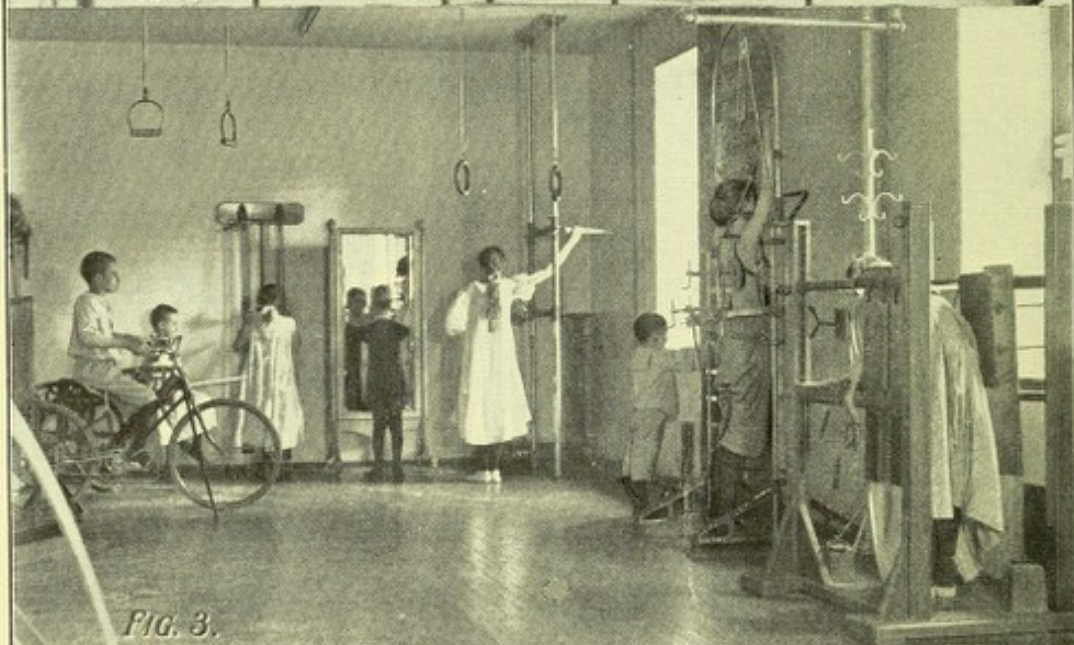


FIG. 3.

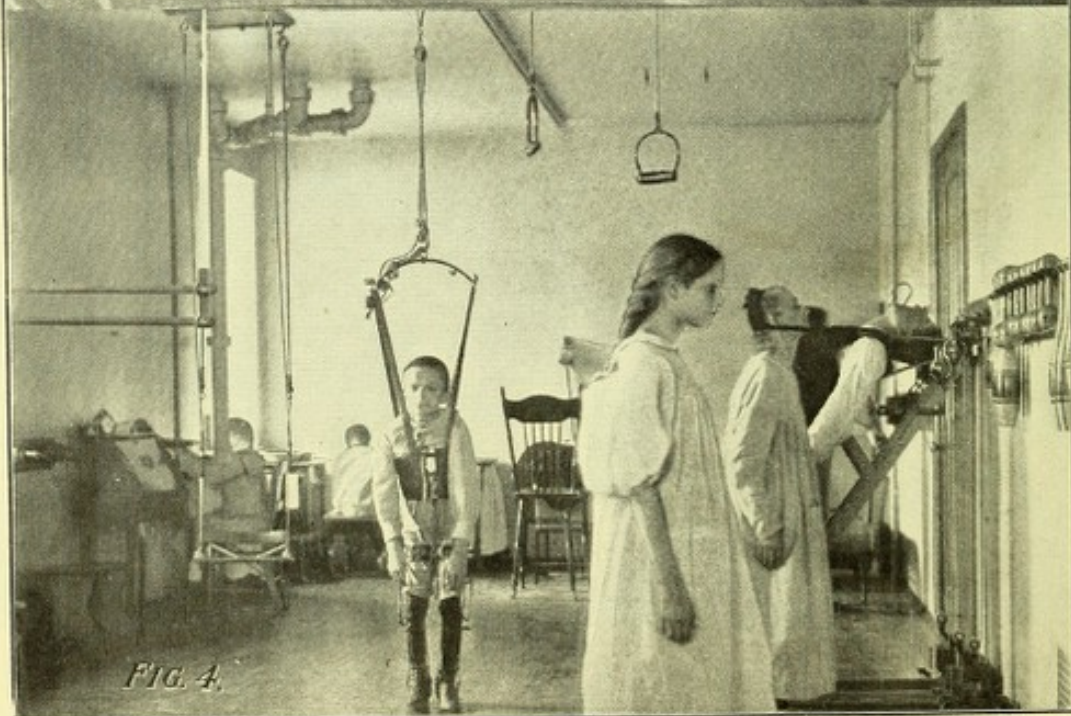


FIG. 4.

