

PARALYSIS AND PROFITS

By STEWART GRISCOM

Condensed from an article in *The Nation*, March 1, 1933

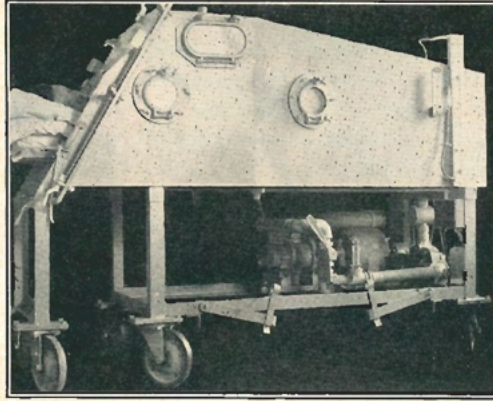
... IN 1929 Philip Drinker, associate professor of industrial hygiene and member of the faculty of the Harvard Engineering School, was engaged in research on pneumatic life-saving machines in the laboratory of the Harvard School of Public Health . . . He produced a practical respirator apparatus and announced the fact in May, 1929.

It was a crude device. Noisy vacuum-cleaner blowers were used to exhaust the air; it included no hand pump to be used in case the electric current failed; it was geared to permit only a few respiration rates; and it was fitted with intricate fastenings which interfered with the rapid introduction of patients in emergencies. In spite of these deficiencies the machine was a real asset to live-saving technique and was welcomed by the medical profession. Philip Drinker and Louis Agassiz Shaw, who had collaborated with him on the invention, at once applied for a patent, which was finally granted in December, 1931, two years after the date of application. From this time on, Shaw has been out of the picture.

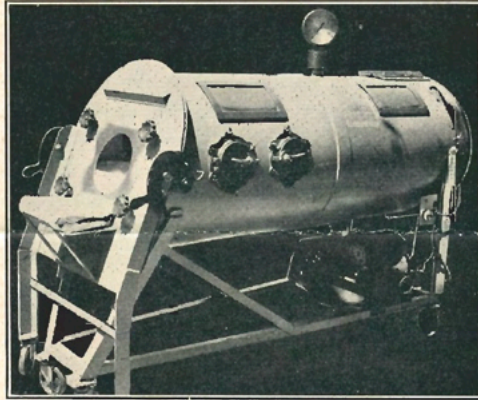
During this two-year interim, in the spring of 1931, a new figure entered the picture. It was John Haven Emerson, humanist and inventor, with a gift for mechanics approaching genius and delighting in the development of delicate and accurate scientific apparatus . . . It was in the spring of 1931 that Emerson first saw the Drinker respirator in operation at the Children's Hospital in Boston. Some members of the staff pointed out certain weaknesses in the machine and suggested that he figure out remedies. He said he would think about the problem, and a little later he talked to Drinker about the possibility of substituting a new type of blower. Drinker was not interested. Until that time Emerson had no thought of building a respirator. He now began to play with the notion of a machine which should embody all his projected improvements. Emerson says that the idea appealed to him as a challenge in applied mechanics and that he had no suspicion Drinker might object. Those who know him accept this statement. The device was designed to save life, and this, in his mind, precluded commercial jealousy. That Drinker's machine was not yet patented and that it seemed doubtful if it ever would be, was irrelevant. He probably would have proceeded with the improvements in any case.

The Emerson respirator was completed in July, 1931. It was far superior to the Drinker product. Instead of a blower it employed a silent leather diaphragm. It was adjustable to any respiration rate. The cost was \$1,000, instead of \$2,300 or \$2,000, the price of the other apparatus . . . It was put in use to save the life of a desperately paralyzed boy, Emerson and Garrison standing by to demonstrate the machine in operation.

This dramatic success marked the beginning of Drinker's open hostility. He was bitter at what he evidently felt was an invasion of the respirator market and spoke of legal protection against infringements. His objurgations were echoed by one Collins, of Warren E. Collins, Inc., manufacturers of medical apparatus, who by this time



The old model Drinker apparatus



The Emerson Respirator

had acquired the exclusive rights to manufacture Drinker's machine . . .

When Emerson declined to weaken and continued manufacturing in spite of threats and remonstrances, officials of Harvard University intervened. Whether they did this deliberately, with knowledge of the facts, is not known . . . In any event, after some preliminary correspondence, Emerson and his father called on Dr. David L. Edsall, the dean of the Medical School, and placed all the facts before him as Emerson knew them. Deprecating the controversy, Dr. Edsall asked Emerson as a favor to the university to withhold all commercial advertising about his machine for a period of two weeks . . .

To this proposal Emerson agreed. Some two weeks later the Dean wrote him a noncommittal letter stating that the corporation was still discussing the problem. After another three weeks, Edsall sent another communication similar to the first but without suggesting release from the obligation to refrain from advertising. Exactly nine days later Warren E. Collins, Inc., announced the completion of a new model respirator selling at \$1,500. The design was a great improvement over the earlier Drinker apparatus. This was less surprising when it developed that every mechanical change, without exception, which the Collins concern thought worthy of fea-

turing in their new advertising material had appeared first in Emerson's machine . . . Edsall released Emerson from his promise not to advertise but begged him to keep the story from the public. Emerson countered by asking whether the university proposed to exert its influence in creating a monopoly of life-saving devices for the financial benefit of favored individuals. If this was the policy, he said, he would ignore the patent and fight . . . Four months later the Collins corporation entered suit for infringement . . .

The value of Emerson's machine is unquestioned . . . It has been officially accepted by the Council on Physical Therapy of the American Medical Association . . . As for price, the Emerson device has always sold for at least \$500 less than the Drinker apparatus.

Although the Collins attorneys announced that "unlike many patent suits in which the maintenance of royalties is a chief point at issue, it is stated that the present suit is being prosecuted solely in the interests of public safety," they have recently sought a settlement under which Emerson would pay a 10% royalty on the sale price of each machine and agree to a price-fixing arrangement. It is hard to see how the interest of the public would be served by such an agreement.

Another practical consideration . . . is the opinion of various authorities on poliomyelitis that both Collins and Emerson should continue to manufacture. In the event of a serious epidemic of infantile paralysis, they say, it would be impossible for either concern to produce all the apparatus which might be required. Healthy competition, furthermore, usually stimulates the development of improvements.

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In reprinting these parts of Mr. Griscom's interesting article, we wish to append the opinions of a few Warm Springs patients who have themselves been respirator cases.

Wilson Shippee, of Vermont, favors the Drinker. Except for the noise of the old Drinker, he considers both Drinkers superior to the Emerson, partly because of facility in putting on and taking off the neck-collar.

Frances McGaan, of Illinois, prefers the Drinker machine, but says this may be due to a sentimental attachment growing out of a long acquaintance.

John Peters, of Massachusetts, is strongly in favor of the Emerson. He has been in both, and says that the movement of patients in and out is easier, the mechanism is better, and the fact that the Emerson has an auxiliary pump in case of current failure makes it a far better machine.

In closing, the Editor, who has been subjected only to the efforts of boys trying Seifer Artificial Respiration, would like to call attention to the remark of Mr. Griscom's that in case of another epidemic, neither manufacturer alone could be able to supply the demand for respirators, and that healthy competition would stimulate the manufacturers to improve their machines and lower the costs.