SEPTEMBER 1995

Attitudes toward mandatory drug testing (University of Michigan, Ann Arbor, MI): "This descriptive-correlational study examined civilian student pilots' attitudes toward urinalysis (UA) drug testing and the pilots' opinions regarding effectiveness, adequacy, and fairness of the method as a deterrent for substance abuse among pilots… A Likert-scaled questionnaire was completed by the student pilots who were enrolled in mandatory and nonmandatory UA drug tested class sections within a large civilian aviation flight program… Pilots felt mandatory UA testing was less anxiety-producing ($t = 2.25$, $p < 0.05$) than the students in nonmandatory tested flight classes. The pilots in nonmandatory tested sections felt more strongly ($t = 2.55$, $p < 0.01$) that drug use existed among pilots on the flight schedule than mandatorily tested pilots… Based on the results, mandatory UA drug testing appeared to decrease substance abuse among pilots on the flight schedule."[4]

SEPTEMBER 1970

Fowl play restraining chickens aloft (University of California, Davis, CA): "A restraint method was developed and described for the domestic fowl which was apparently not physiologically stressful nor did it produce immobilization [**Fig. 1**]. The degree of restraint however, was considered sufficient as an animal orientation aid for space (weightless) experimentation. These birds appeared to tolerate this form of chronic restraint for several months without significant changes in their hematology or several other determined physiological parameters [as found in previous studies of restraint systems]."[1]

SEPTEMBER 1945

Physical fitness and flying (School of Aviation Medicine, Pensacola, FL): "The necessity for achieving and maintaining a high level of physical fitness for the successful performance of hard work or strenuous sports is known to many persons by experience and has been proven by actual measurement. However, flying does not involve strenuous physical exertion. The ability to learn to fly an airplane rests more on certain psychological attributes of the individual than it does on the ability to perform hard muscular work. Consequently, the relationship between physical fitness and success in learning to fly is part of the broader problem of the relationship between physical fitness on the one hand and various psychological factors such as judgment, ability to learn and to think quickly, motivation, morale, courage and mental stability on the other. Physical educators declare that such a relationship exists to an important degree but offer little or nothing in the way of scientific evidence as proof…

"It must be pointed out that there may be remote benefits associated with the athletic program in flight training. Since it is desirable for naval aviators in combat theatres to be in a good state of physical fitness – for survival in emergency, if for no other reason."[3]

Oxygen delivery device (Columbia University, New York City): "The device described below [**Fig. 2**] will deliver any one of two predetermined rates of oxygen flow with either of two oxygen concentrations by turning the handle of a petcock. The regulator may be attached to any constant pressure manifold. In a relatively simple adjustment a concentration of 100 per cent oxygen may be obtained at the same time as a flow of 12 liters per minute of oxygen, or a concentration of 50 per cent oxygen with a flow of 4.5 liters per minute with another adjustment which operates an air injector similar to that employed in the Meter mask."[2]

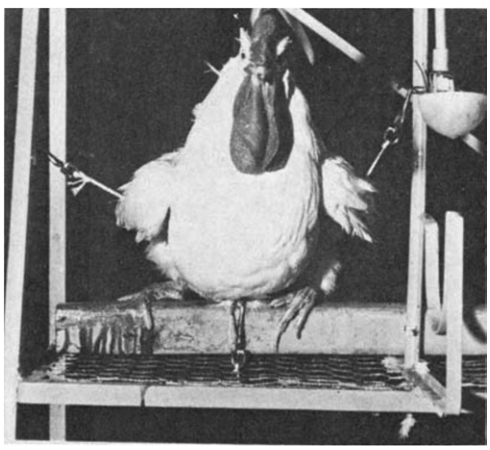

Fig 1. Detailed view of restrained chicken in orientation frame.

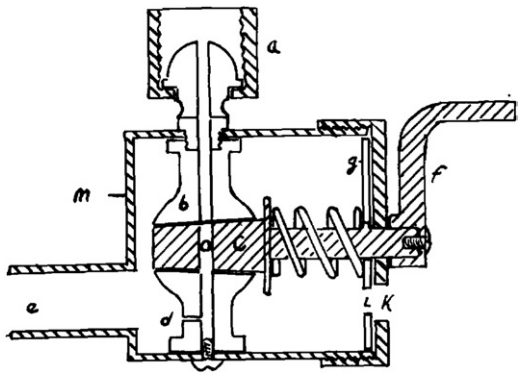

Fig. 2. Oxygen mixing and flow regulator.

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