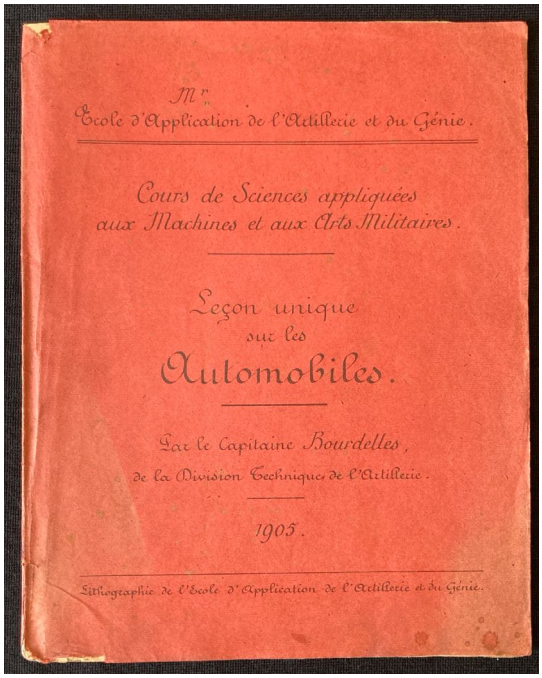
Gerald W. Cloud
Rare Books • Manuscripts • Archives
410 Hauser Blvd, #10J, Los Angeles, CA 90036

An early (1905) technical instruction manual
Applied Science Course on Machines and the Military Arts: lessons on the automobile



[Bourdelles, Captain]. *Cours de Sciences Appliquees aux Machines et aux Arts Militaires. Leçon unique sur les automobiles.*

[Fontainebleau], Lithographie de l'École d'application de l'artillerie et du génie, 1905.

(23.5 x 18.5 cm). [4], 1-37 [38, blank] pp., illustrated with figures, and the text produced via autographié, a lithographic process. In the publisher's original red wrappers, some rubbing and a few tiny splits to a few page edges, but well preserved. No copies located in OCLC or CCFr.

An extremely rare technical manual for the instruction and use of military students at a well-established French military Polytechnic school, the École d'Application de l'Artillerie et du Genie. The manual instructs on the workings of the automobile and the internal combustion engine at an early stage of its development.

$ 1,500

Written by a French artillery Captain, this detailed teaching manual aimed at engineers and technicians covers in a systematic and cohesive manner the following (from the table of contents): the engine, distributor, exhaust, intake valves, regulator / timing, cooling, spark, carburetors, transmission—differential, gears, clutch—, chassis, steering, brakes, and lubrication. The language of the manual is precise and lucid, and would have served both for instruction to engineering students but also to auto-didactic learning as well. In the early days of the automobile the lack of convenient service stations meant that motorists would have been obliged to rely on themselves to troubleshoot any difficulties that came up when out on the road. Access to such a manual would have appealed to both drivers and students of mechanical engineering.

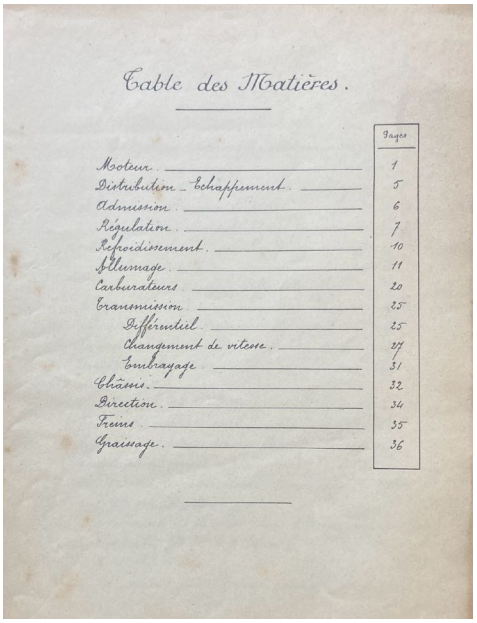
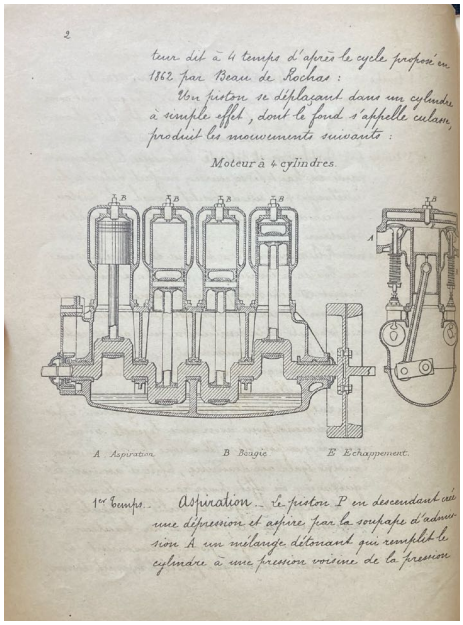


Table des Matières.


teur dit à 4 temps d'après le cycle proposé en 1862 par Beau de Rochas :

Un piston se déplaçant dans un cylindre à simple effet, dont le fond s'appelle culasse, produit les mouvements suivants :

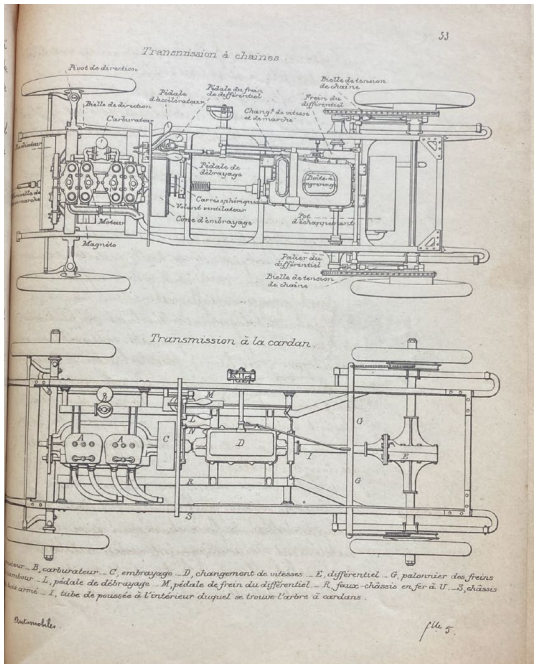
Moteur à 4 cylindres.

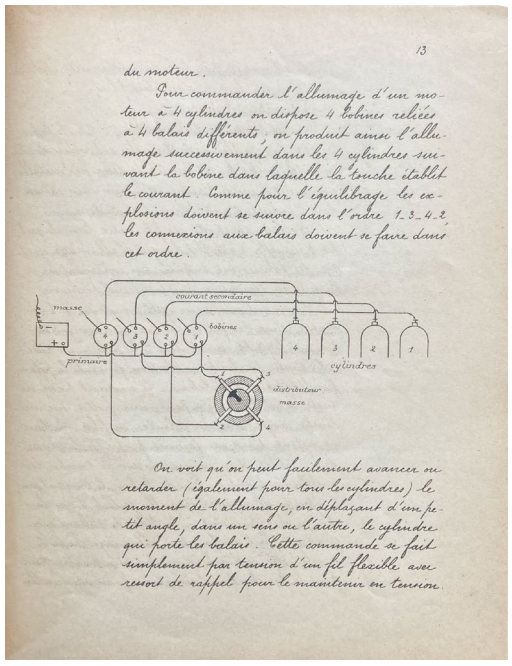
A Aspiration. B Bougie. E Echappement.

1er temps. Aspiration. Le piston P en descendant crée une dépression et aspire par la soupape d'admission A un mélange détonant qui remplit le cylindre à une pression voisine de la pression

The manual includes not only explicit explanation and function of the various elements listed in the table of contents (shown above left), but also employs precise schematic drawings that diagram the function of the essential parts of the early automobile.

Below: the diagrams for the chassis and the electronic distribution circuit including the battery, sparkplugs, and distributor. The written explanations are technical enough to serve as an operation manual without becoming so complex as to require advanced engineering knowledge.





A valuable witness to the debut of the automobile and mechanical transportation less than ten years prior to the start of World War I, notably produced for instruction in a military school.

The manual also provides insight to the debut of personal automobile ownership and the development of the auto-mechanic's manual. We note that the manual was printed via lithography by the same school that offered the course, the l'École d'application de l'artillerie et du genie, a military school. Rare examples of manuals produced under the same imprint and dedicated to other topics (metallurgy and explosives) survive but according to OCLC only in one or two copies. These manuals, cheaply produced, must have been well-handled by students and thus their survival is exceedingly uncommon. A nice copy, complete with the original wrappers.