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PANTOGRAPH AS AN EXAMPLE OF THE USE OF GEOMETRIC TRANSFORMATIONS IN CONSTRUCTING OF OLD DRAWING INSTRUMENTS

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A revolution in designer drawing workshop has taken place just recently before our eyes. Computer technology almost entirely has supplanted the freehand method of design drafting. Professional, sophisticated drawing instruments and tools for manual plotting, as well as basic drawing aids, have gradually fallen into oblivion and become relics of a bygone era - the objects of collectors' interest. Professor Henry Limon, former employee of the Department of Descriptive Geometry, Faculty of Architecture, had collected old geometric tools during his life. A part of his collection, transferred to Gdansk University of Technology, will serve the education and the memory of past inventions, that have improved processes of designing and design plotting.



Fig. 1 Collection of prof. H. Limon: Pantograph, company Adrien Cavard, Paris
- phot. K. Krzempek

The article describes the pantograph, considered to be the ancestor of today's photocopier. This instrument draws the copies, enlarges or reduces any figure. The author presents its genesis, the scope of application in the past, explains the structure and geometrical transformations used during

its action. Based on a specific example, the work illustrates practical application of geometry in the past inventions for designing.



Fig. 2 Collection of prof. H. Limon: Nickel plated pantograph, company Cav. Piero, Brevetto Fumagalli - phot. K. Krzempek

References:

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