

**FACTS**

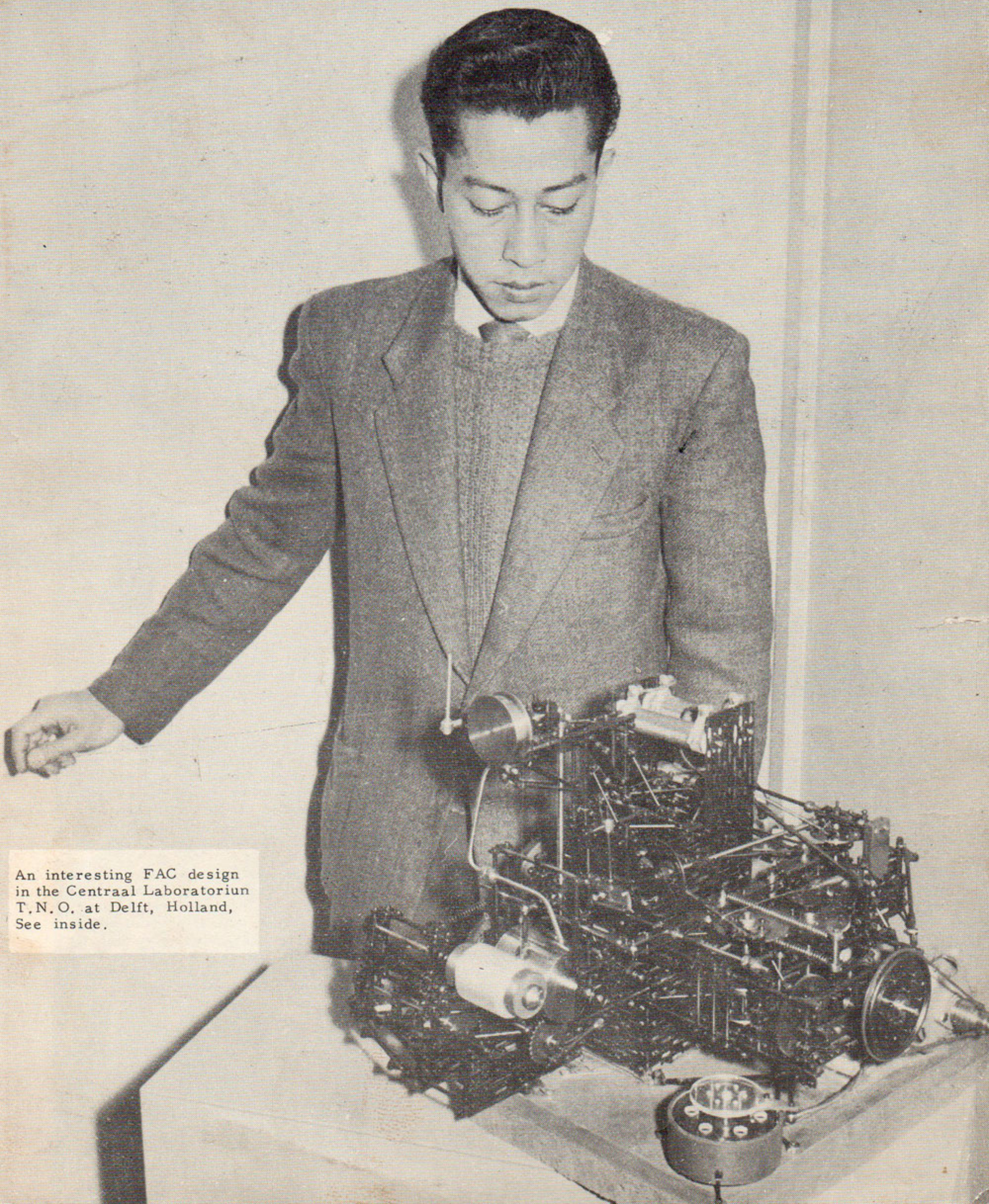
**about**

**FAC**

No. **3**

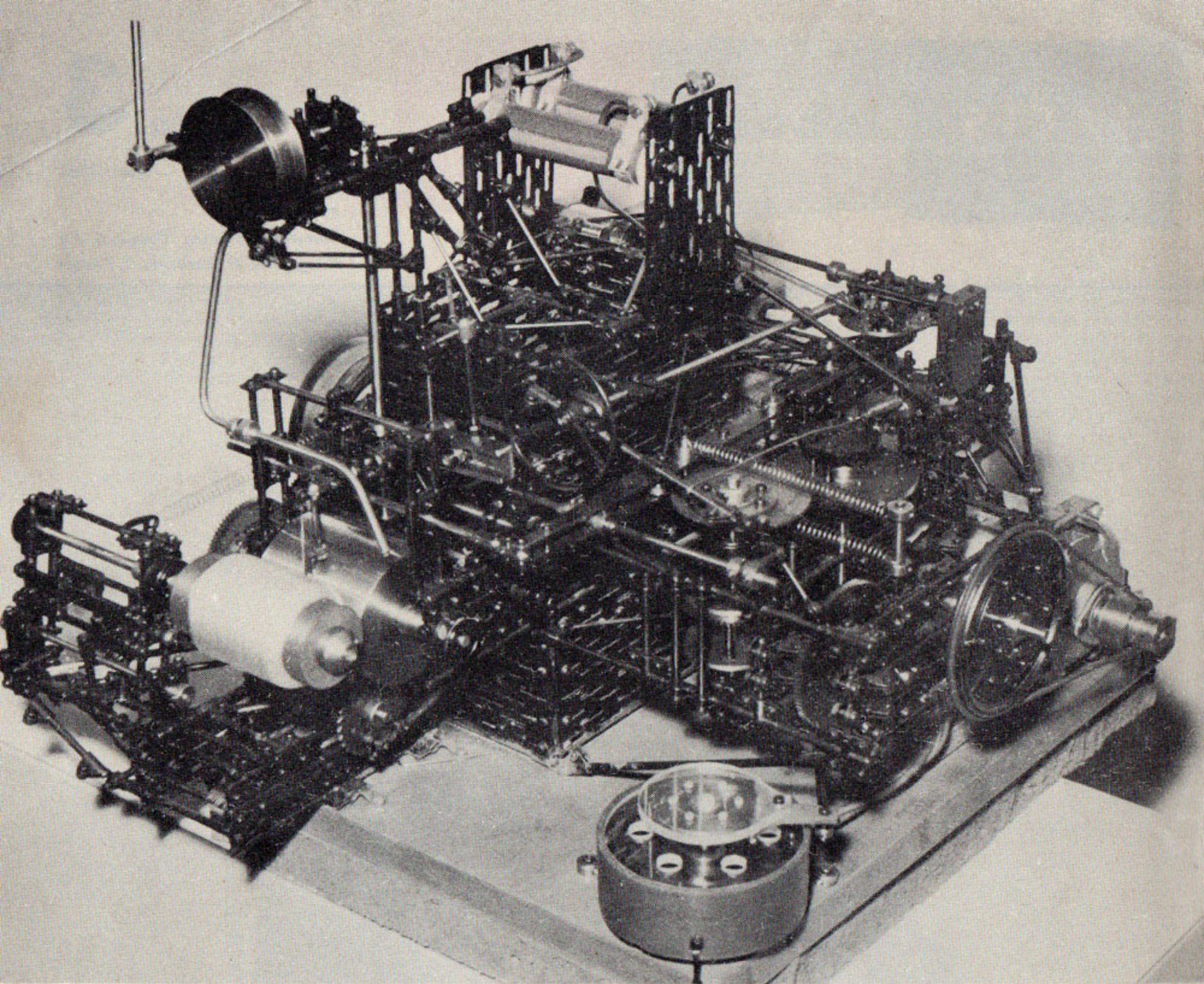
April 1960

Published by  
Transitoria Trading Company AB,  
Kungsgatan 29, Stockholm C, Sweden



An interesting FAC design  
in the Centraal Laboratorium  
T.N.O. at Delft, Holland,  
See inside.





## FAC AT WORK

An experimental apparatus for winding nylon in a special manner, built by Centraal Laboratorium T.N.O., Delft, Holland.

In the Netherlands, FAC is used in practically all branches of industry, and only within the T.N.O. at Delft no less than 20 cases of FAC X-2, the largest industrial kit, are in constant use. By courtesy of the Centraal Laboratorium T.N.O., we are in a position to show our readers an example of the versatility of the FAC system.

The machine is a typical FAC design, having developed by way of tests with a variety of solutions. The designer has "thought" direct in the FAC material. The machine shows clear evidence of these

trials which preceded the final solution, i.e. it is not a "clean" design but one telling the story of its creation.

The machine can, of course, be "cleaned up" in a second version, and be given a more simple and concentrated form, which would be esthetically more appealing. This is by no means necessary, however, and lies outside the problem as such. The machine works. The desired organisation of a certain mechanical problem has been found.

It is the opinion of the designer that the use of FAC has brought about vast savings of time and expenditure. If built in the conventional manner, i.e. by way of the drafting office and workshop, the machine would have cost somewhere around 55.000 guilders. When built in FAC, the cost did not amount to more than 5.000 guilders, of which only about 500 guilders were for FAC parts.



The experience gained with this machine shows that one or more revisions are practically indispensable for machines of a more complicated nature, involving several movements which combine into one work operation. The designers like to stress that the use of FAC constitutes the quickest and least expensive method to achieve this goal.

The saving in time is more difficult to estimate, although this factor often decides the use of FAC. An idea may be formed by noting that planning and building can be carried out hand in hand, affording the advantage that every part or subassembly of the machine can be tested as the building work goes along. There is no waiting for parts to be made, as every part is available at zero notice.

Manuscript approved by  
Dipl. Ing. G. Moolhuizen, T.N.O., Delft.

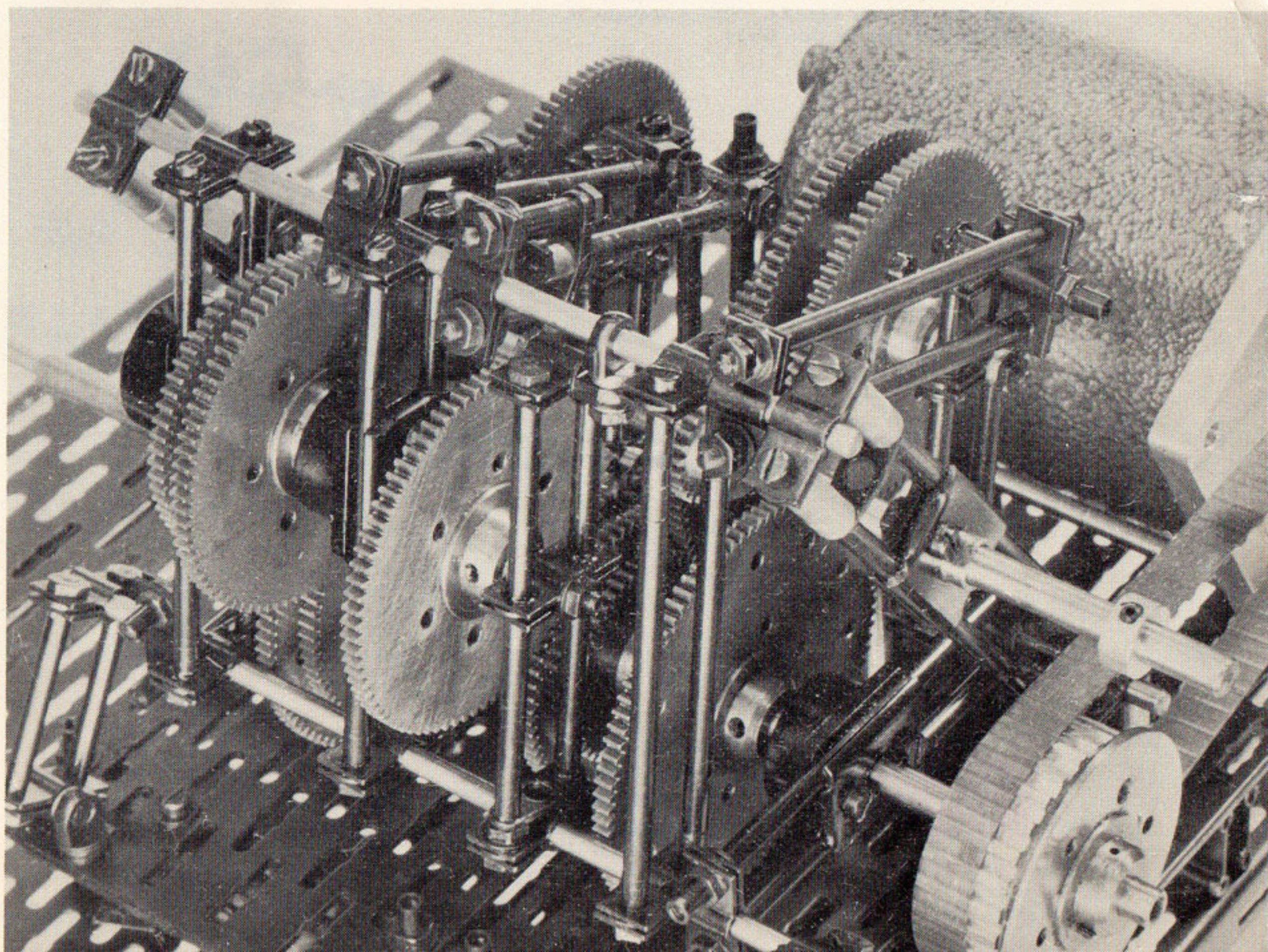
### Supporting Structure for Gear Transmission

We like to devote some space to a type of structure which lends itself particularly well to the building of gear transmissions with several speeds.

The gears are arranged on "quadrants" which form the units of which the structure is composed. The construction of the quadrants is very simple. The only coupling element is the Strap Coupler F1-01 which encloses the horizontal, supporting Rods. The quadrants can be easily detached at one end and folded out to rearrange the gears. It is worth noting that all screwed connections are accessible from without, thus facilitating revisions. An important point is not to forget placing a washer between the Couplers F1-01 to take up the play otherwise filled out by plates. Without these washers, the couplers will be deformed when the nuts are tightened.

Fig. 1. Five-speed transmission, with ratios 1:1, 3:2, 3:5, 5:4 and 6:5, using gear pairs P1-80/P1-80, P1-96/P1-64, P1-48/P1-80, PL-64/P1-80 and P1-96/P1-80.

The transmission drives a pump used with an experimental equipment to test artificial heart valves in the Thorax Clinic, Karolinska Sjukhuset, Stockholm.





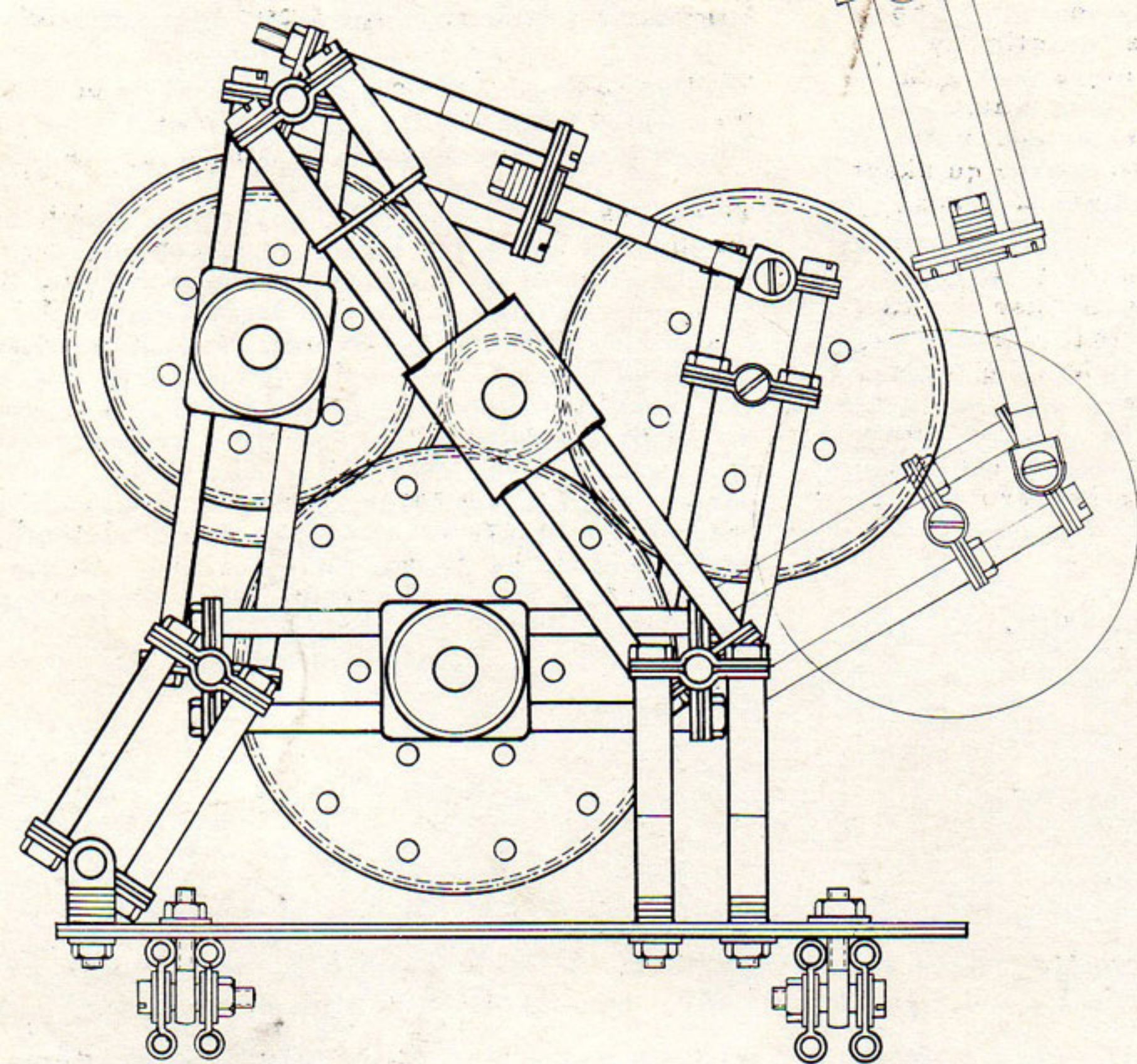


Fig. 2. Side view of transmission, Fig. 1. The gear P1-24 in the centre can be moved axially to engage the various speeds. One quadrant is shown folded out, in thin lines.

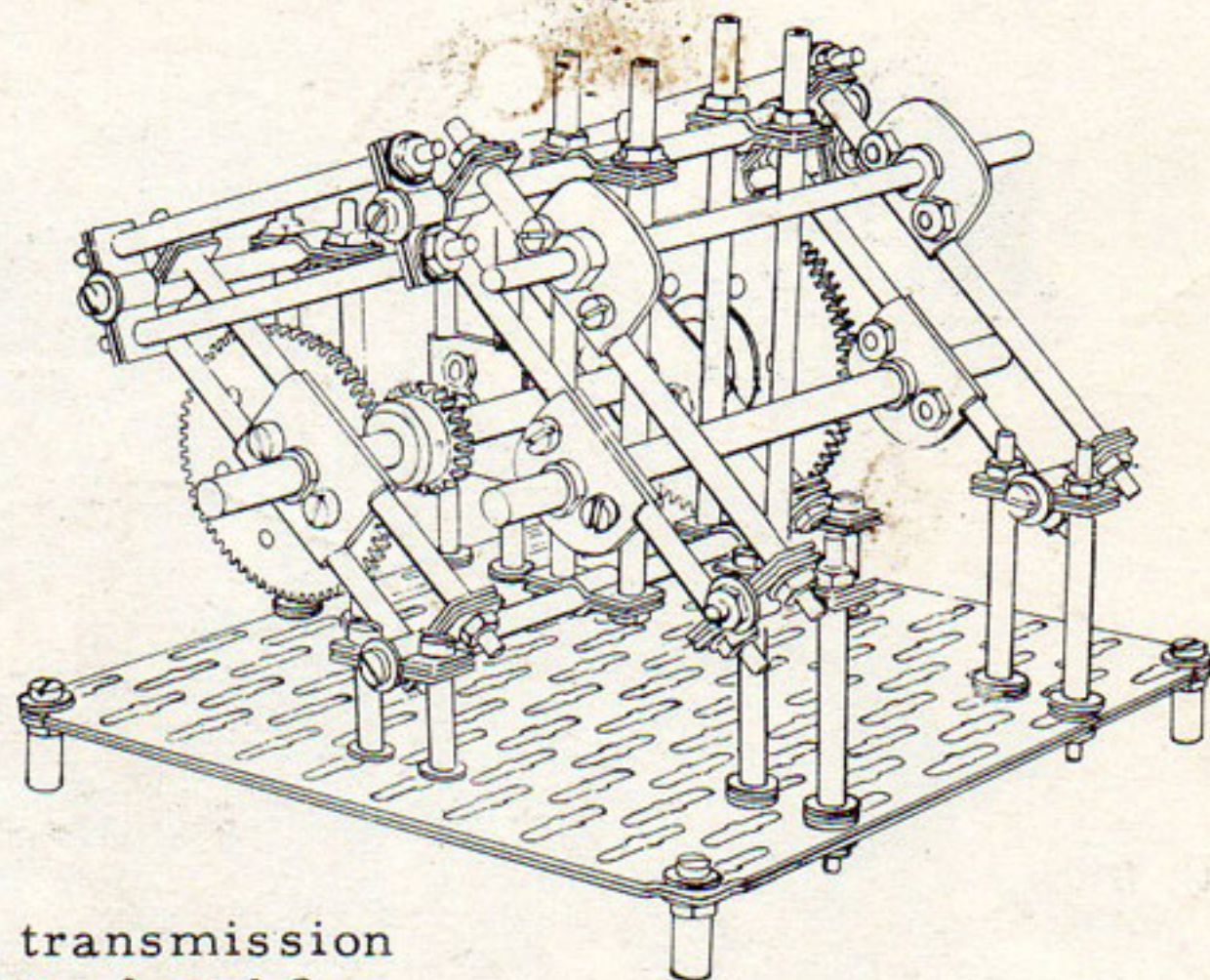


Fig. 3. Perspective view of a transmission similar to that in Figs. 1 and 2.



Made in Sweden  
 Export agents:  
 TRANSITORIA TRADING COMPANY AB  
 Kungsgatan 29 · Stockholm C · Sweden