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United Nations Industrial Development Organization

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DEVELOPMENT OF [illegible] SINCE 1964 AND THE OUTLOOK FOR DEVELOPING COUNTRIES 1/

[illegible]

[illegible]

I. The rubber [illegible] 1968
   1. The [illegible] natural and synthetic - how far the two [illegible]
   2. The [illegible] - the appearance on the market of [illegible] - the possibility of their [illegible] and the [illegible] - the cost and availability of the [illegible]
   3. The [illegible] of natural and synthetic rubbers - the [illegible]

II. Development [illegible] between 1964 and 1968 - world production - industrialized [illegible] - developing countries - rate of increase - how this is [illegible] in the two groups of countries

III. Development [illegible] between 1964 and 1968 - fulfilment of requirements [illegible] - rate of increase of consumption - creation [illegible] - setting up of

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production units of synthetic rubbers and development of plantations of natural rubber

IV. Development of uses of rubber in developing countries during the period 1964 - 1980 - trends - ratio of tyre uses to total uses - development of automobile uses and industrial uses - part played by synthetic rubbers

V. The possibilities of setting up a synthetic rubber industry in developing countries

1. The need for a petrochemical industry of substantial size (production of butadiene)
2. Economies of steam-cracking - economies of stereoregular polymerization and the polymerization in emulsion form
3. Possibilities of exporting synthetic rubber to developing countries taking advantage of geographical position or of production economies (raw materials)
4. Example of a minimum size of production, hence the market needed and the quantity of petrochemical raw material that must be produced.

V - POSSIBLE [illegible]

[illegible]

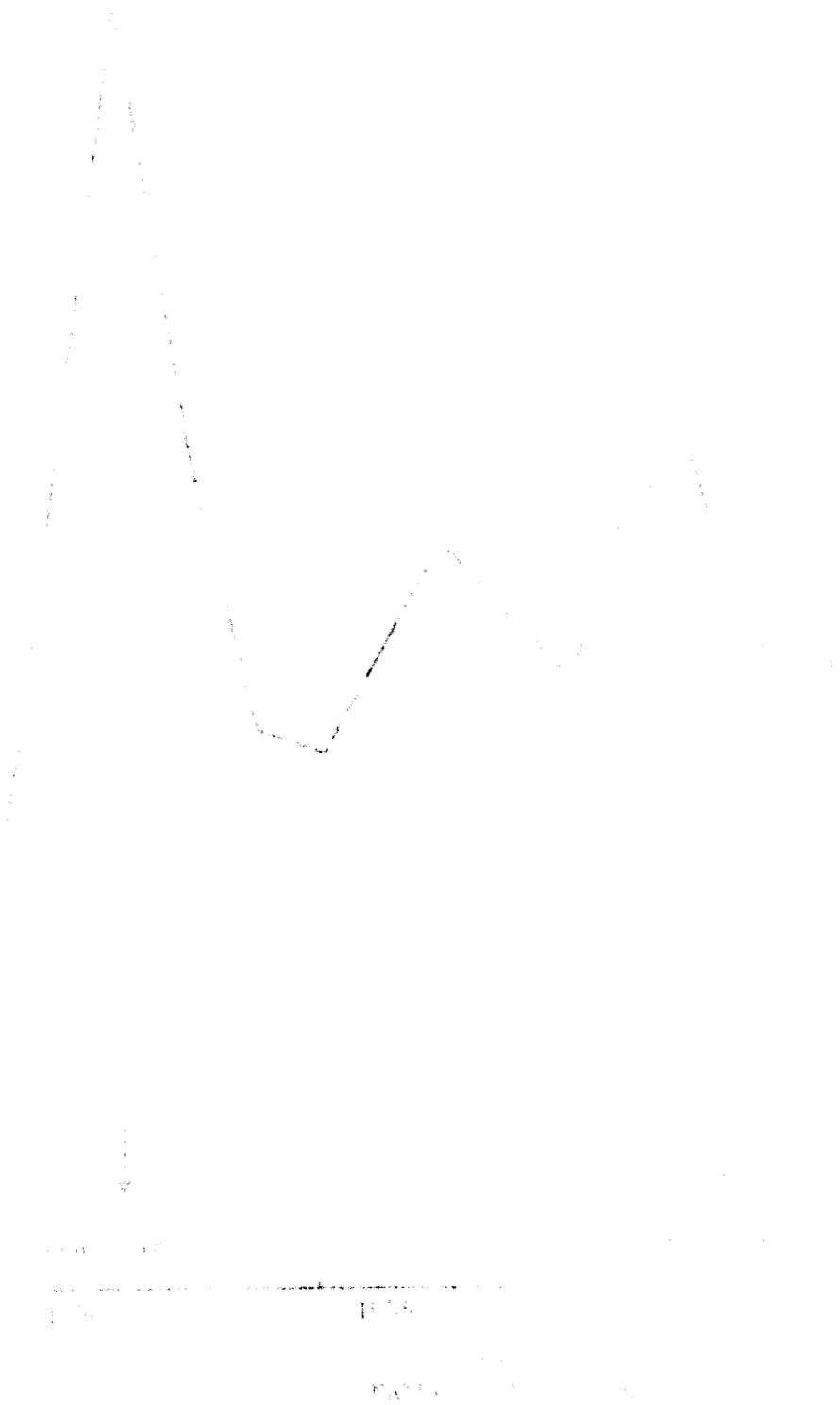
1. [illegible]

2. [illegible]

2.1. [illegible]

2.2. [illegible]

[illegible]



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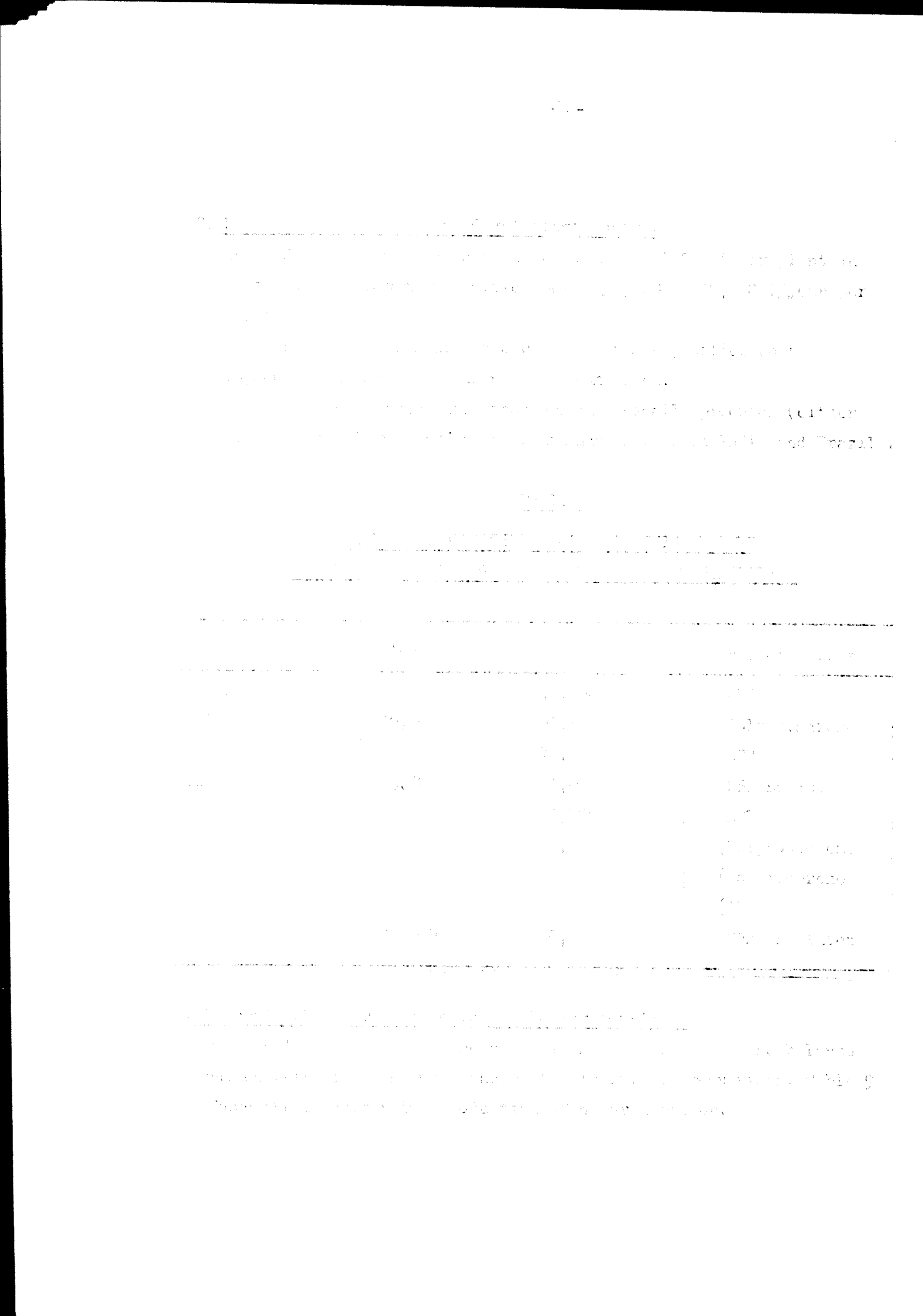

[illegible] the two above paragraphs, can be pointed out the very low per [illegible] consumption level of the developing countries (1.2 kg in Brazil [illegible] India [illegible]). These have to be compared to the rather low [illegible] the developed countries.

[illegible] the consumption versus per capita income, [illegible] [illegible] during the 1957 - 1968 four year period. Such [illegible] [illegible] of magnitude, especially in countries [illegible] under very strict control of the Government. In many [illegible] countries [illegible] amount of rubber supplied to the consumption [illegible] [illegible] far from "saturation"). [illegible] production [illegible] substantially the consumption (e.g. India - Brazil).

[illegible] of the [illegible] in the world, India and Brazil.

[illegible] specific trends, the different uses follow [illegible] the [illegible] [illegible] in the order of importance.

India and Brazil have, in 1968, the [illegible] consumptions [illegible] comparable levels - 1.[illegible] 000 t in Brazil and 78.6 % for India - [illegible] consumption is [illegible] approximately 85,200 t (15.58 %) for Brazil and 13,[illegible] t (2.4[illegible] %) for India. It is to be noted that the world average [illegible] rubber consumption, [illegible] amounted to 32 % of the total rubber consumption.

In 1968, as for [illegible] all kinds rubber is concerned, Brazil and India [illegible] on the same level '16,98[illegible] for Brazil and 107,905 t for India) but Brazil would be [illegible] self-sufficient by [illegible] the world [illegible] other especially [illegible] Brazilian rubber consumption is split between [illegible],427 t of synthetic rubber and 87,953 t of natural rubber (i.e. [illegible].83 % of synthetics, to be compared to the world average 2 (6.6[illegible] %).

On the other hand, India [illegible] a [illegible] and [illegible] increasing [illegible] natural rubber production [illegible] the share of the synthetic rubber consumption [illegible] 21.[illegible] t out of 107,[illegible] t (i.e. 22.5 %). These tendencies [illegible] illustrated by the steadily reduction of natural rubber in Brazil (see II. [illegible] - which represented 7.5 % of the [illegible] in 1957 and [illegible] to 50 % in 1968 - and the rapidly growing Indian production which satisfies, in 1968, 83 % of the requirements versus 70 % in 1957.

The foreseable evolution:

- For the first group of c
  the structure of the ca
- For the second group, wit
  ratio will increase.

These forecasts are based
percentage of light vehicles

LIGHT VEHICLE

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Western Europe
Developing Countries

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of the

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North Americ
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Developing cou
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2nd grou

V. - POSSIBILITIES OF CRE
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1. Economy of the produ

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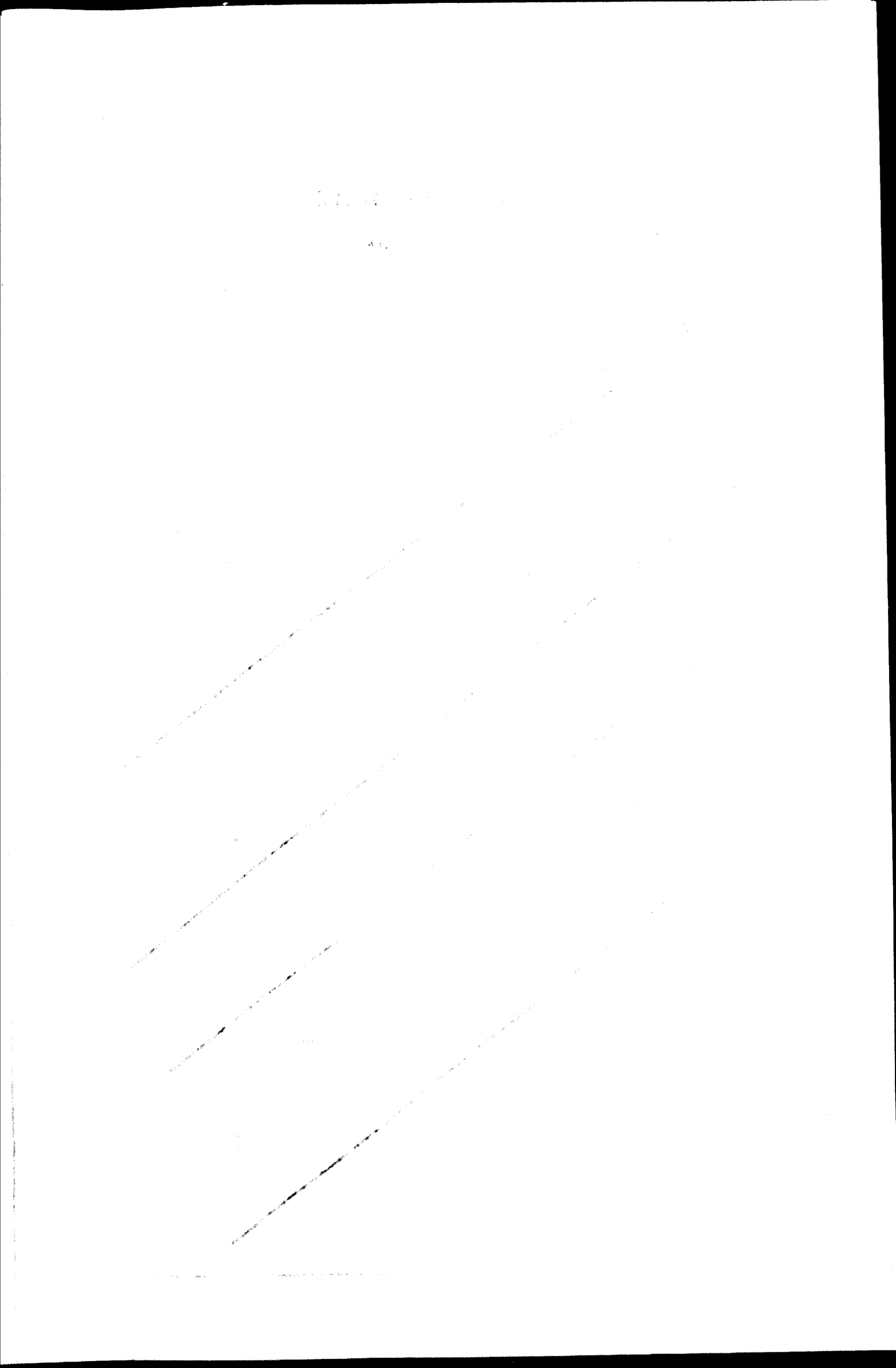

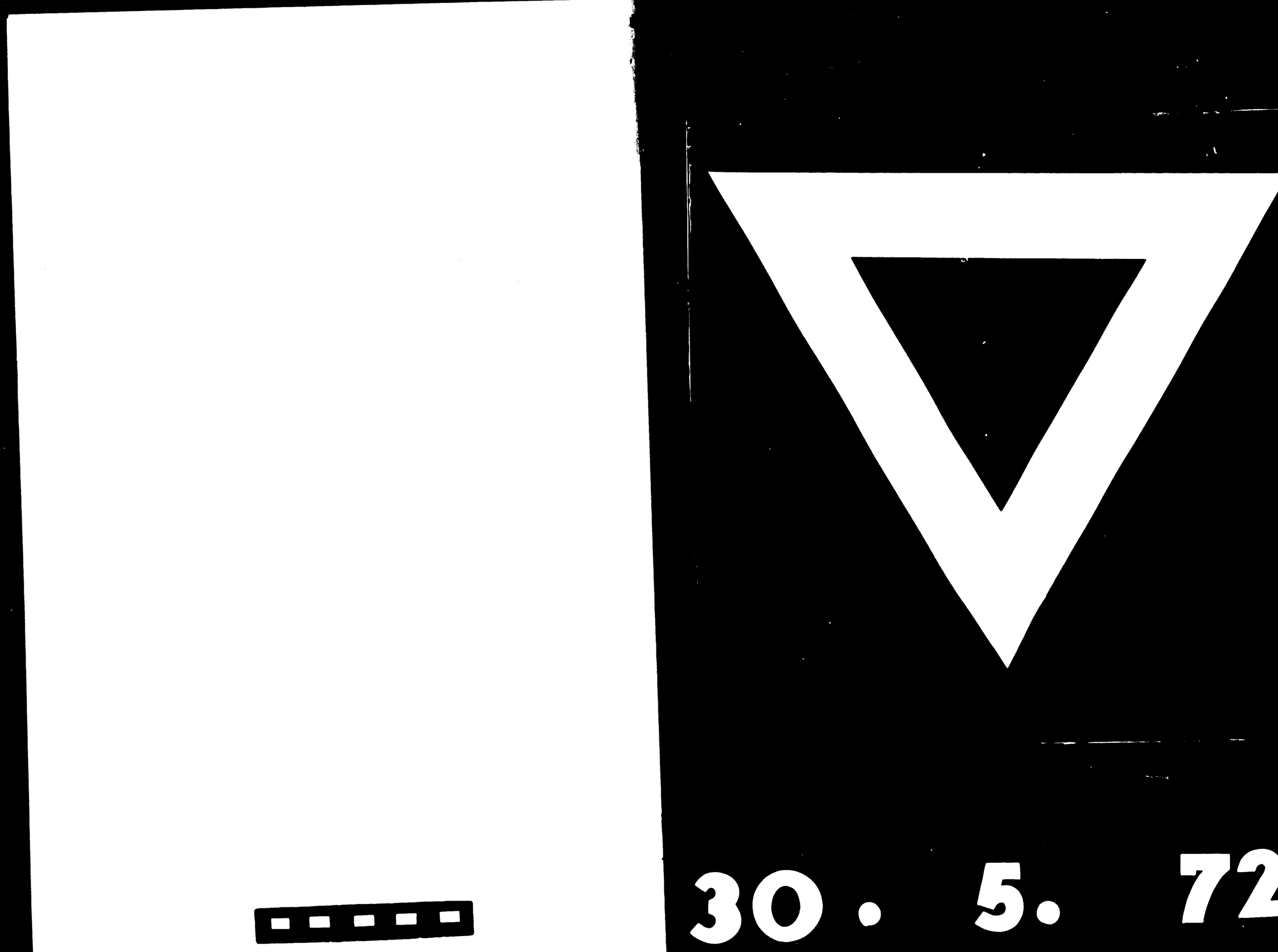
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