

Figure 3. Another dream: "Electricity direct from coal" (Jacques, 1896). This carbon-air battery delivered 16 amperes at 90 volts and was said to have been in operation for 6 months when the picture was taken. The electrolyte was molten potassium hydroxide (costly) which was changed to potassium carbonate (cheap) as the battery operated. This alone makes the battery uneconomic. In addition, its efficiency—erroneously placed at "82 per cent of the theoretical"—was grossly overestimated, and the inventor did not come to grips with the difficulties that would have arisen from impurities (ash, sulfur) had he used coal.

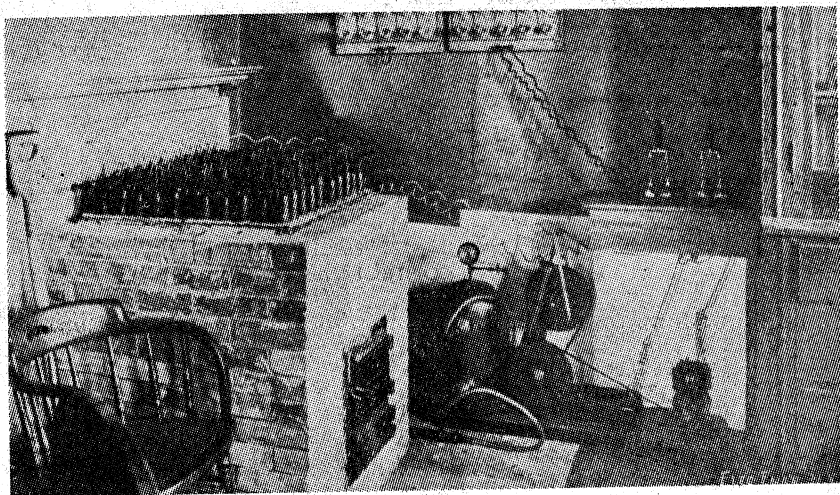


FIGURE 3