

Making your own apple grinder

by

Claude Jolicoeur

Making your own apple grinder

A good grinder is important to increase the yield and speed the pressing of apples into juice.

This presentation will give tips and show the procedure to build an efficient grinder.

- Historic background
 - Rotating drum grinders
 - Centrifugal mills
- Design objectives
- Details of fabrication
- Conclusion

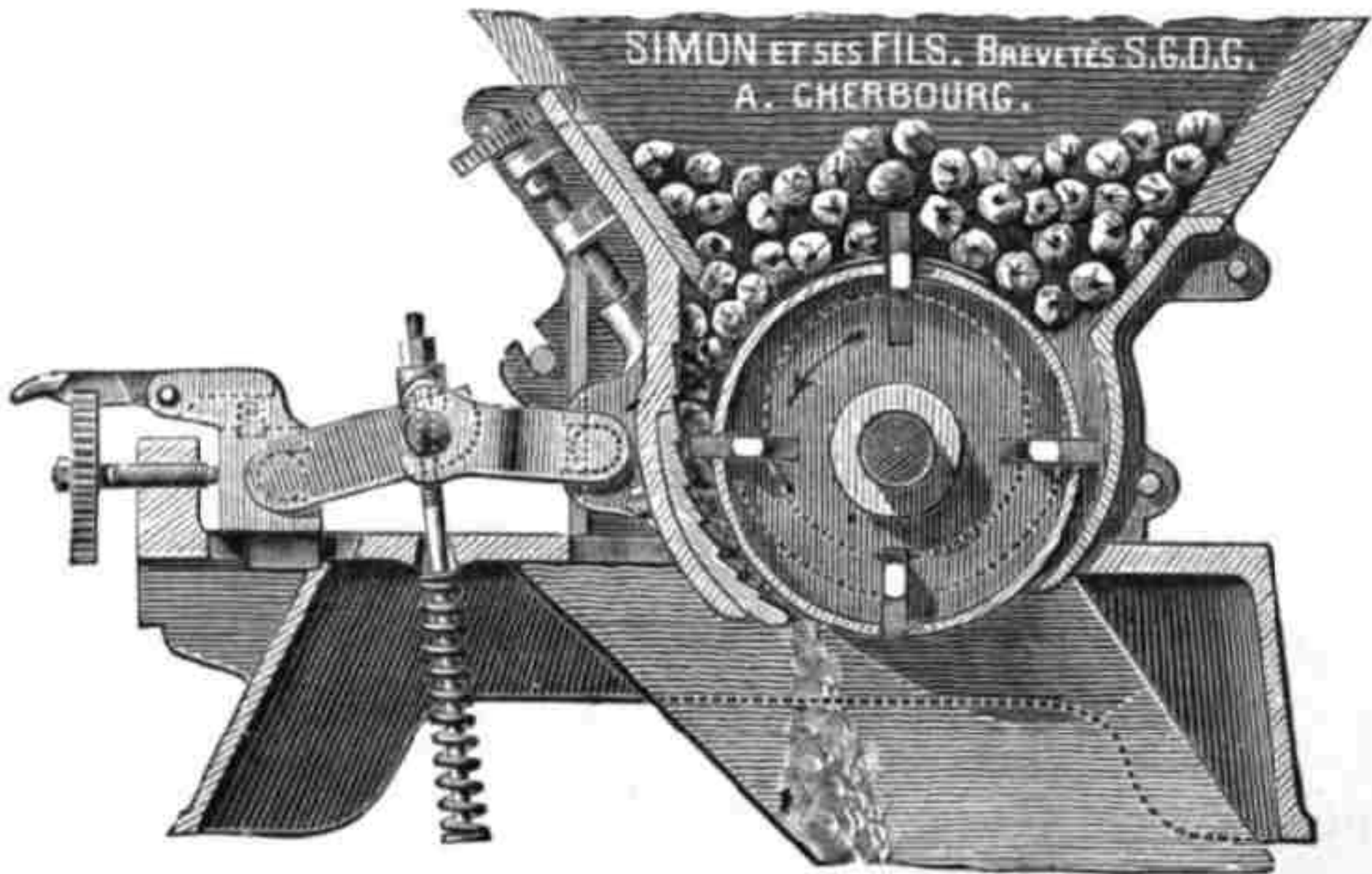
Historical background



Rotating drum grinders

- Most common DIY design.
- The drum / wheel is equipped with teeth and rotates against a plate or stator with a small gap.
- Works by ripping / cutting small pieces of the apples.





Broyeur Simon. Coupe de mécanisme.







Pictured
with
optional
stand

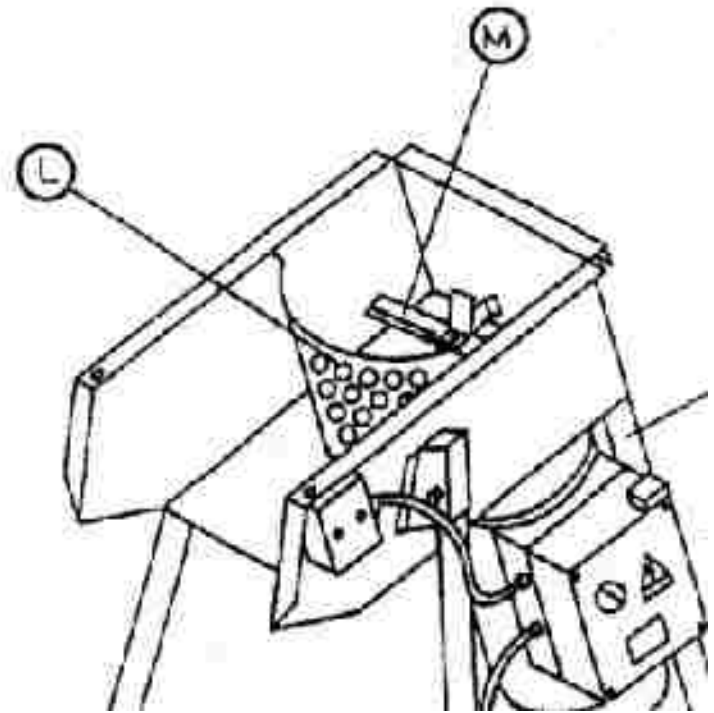






Centrifugal mills

- Common modern commercial design.
- High speed rotating blade and/or hammer smash / cut the apples.
- Holes in a grid control size of pomace.





MIXER



MINIMIXER







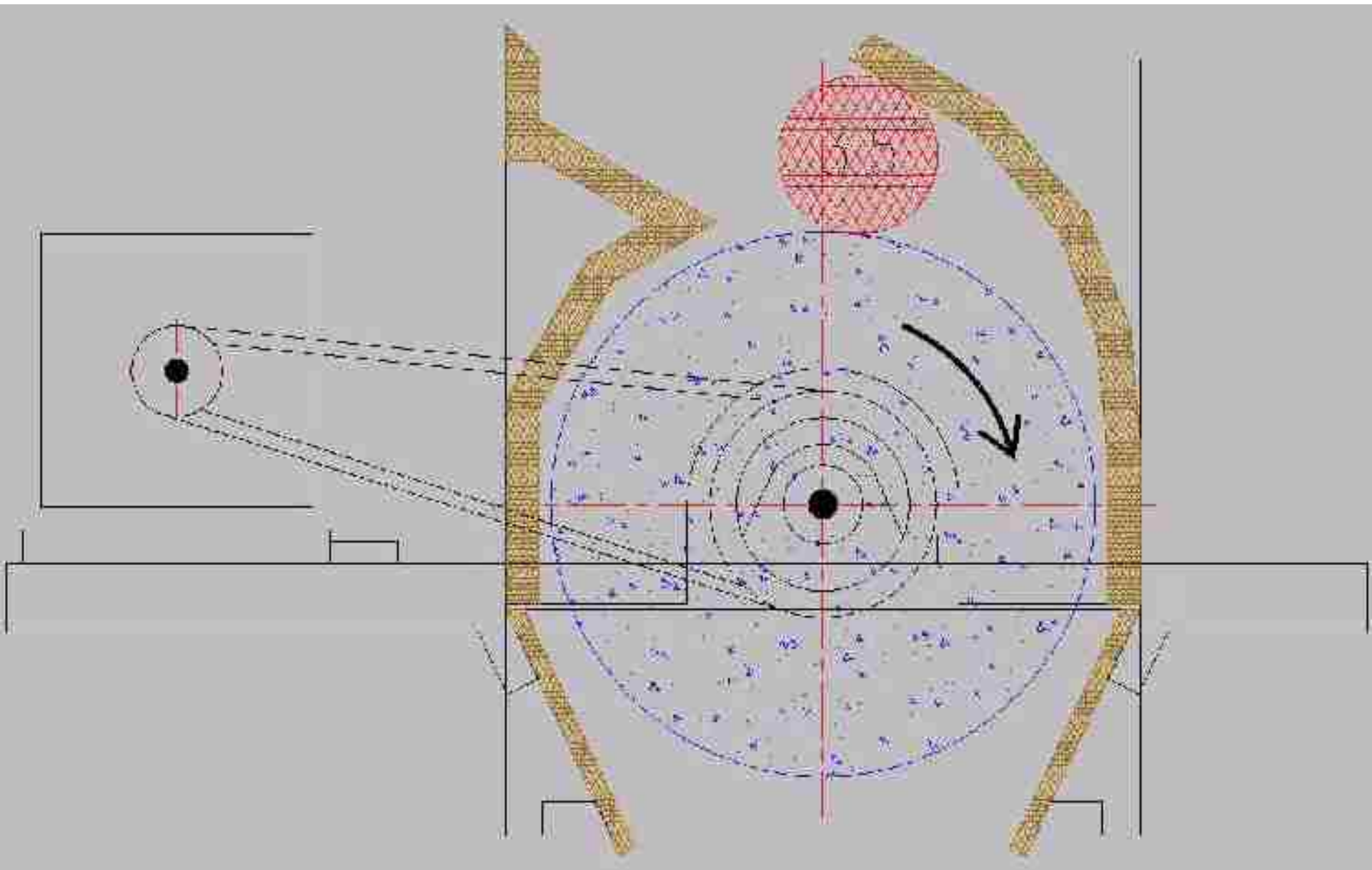
Other methods

- Freezer
- Food processor with grater disk
- Wood beam and bucket (as pestle and mortar)

Design objectives

- It should effectively grind apples.... Fast
- One person serving the grinder
- Easy to clean
- Modularity

Video of what we do not want....



Details of fabrication

- Mechanical supplies
- Rotor, dry laminated wood
- Teeth, SS pipe collar
- Frame, housings, legs
- Finish - varnish, has to cure weeks















Demonstration video of grinder in action

Conclusion

For a grinder that works...

- Work on the geometry of rotor / stator - large diameter, convergent geometry.
- Rotor may be dry laminated wood or HDPE plastic if you have a supplier.
- Teeth, aggressive, 1/8 high, SS, pipe collar works well, screws not ideal.
- No iron or non-SS steel in contact with juice.
- Plan in advance - varnish has to cure weeks.



Claude Jolicoeur

<http://cjoliprsf.awardspace.biz/>

Pictures : <http://picasaweb.google.com/cjoliprsf>