

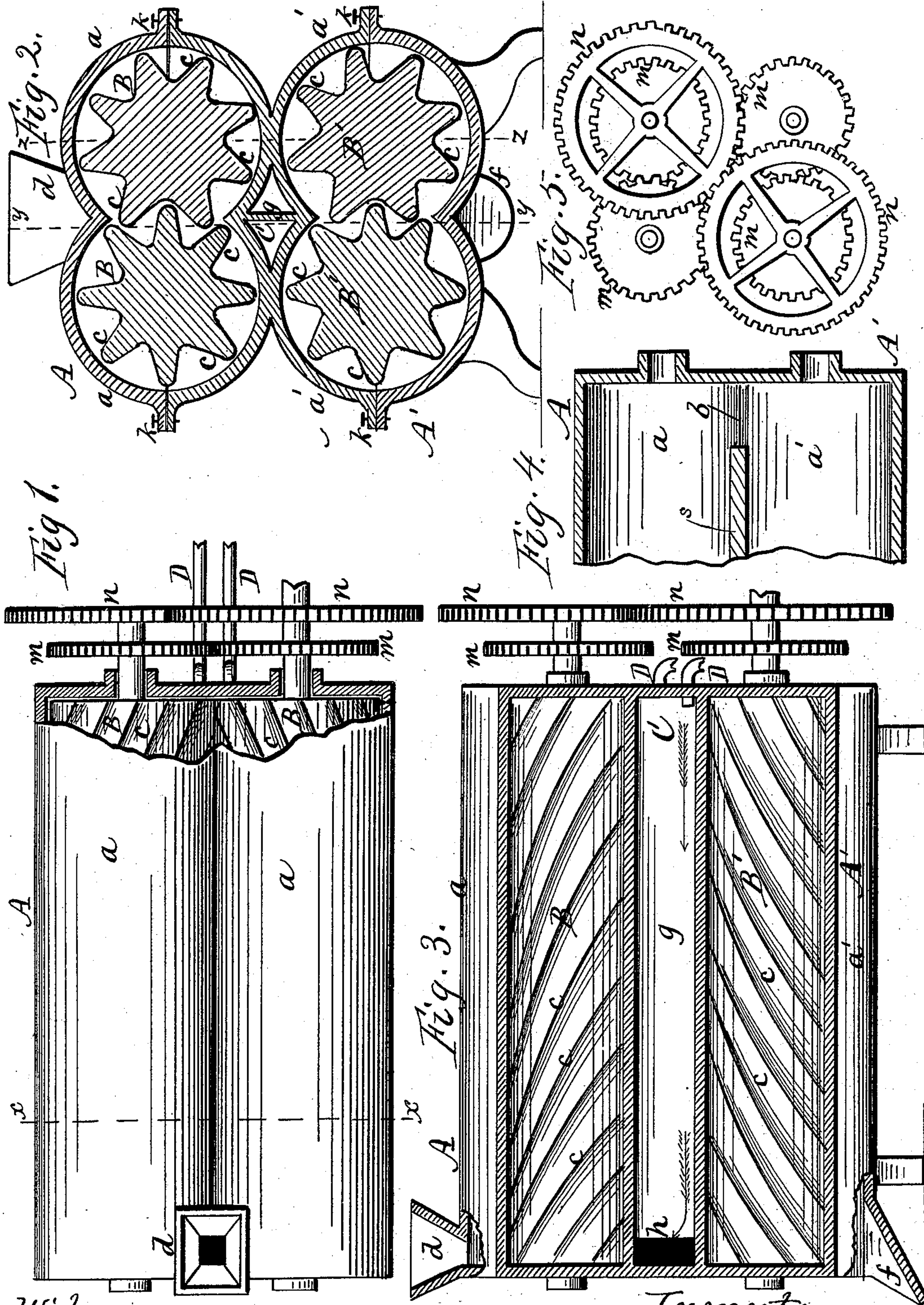
(No Model.)

J. WERNER.

MACHINE FOR BEATING AND MIXING SIRUP.

No. 506,384.

Patented Oct. 10, 1893.



Witnesses.

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MACHINE FOR BEATING AND MIXING SIRUP.

SPECIFICATION forming part of Letters Patent No. 506,384, dated October 10, 1893.

Application filed March 10, 1893. Serial No. 465,448. (No model.)

To all whom it may concern:

Be it known that I, JOHN WERNER, of Rochester, in the county of Monroe and State of New York, have invented a certain new and useful Improvement in Machines for Beating and Mixing Sirup; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the drawings accompanying this application.

My improvement relates to beating and mixing machines for confectioners' use, where the sirup is to be beaten up into a frothy or creamy mass for making "bon bons," chocolate drops and other similar confections. Ordinarily this work is done by a hand beater or spatula on an open table.

This machine relates to that class in which spirally-ribbed rollers are placed side by side in a casing and the sirup is run through from end to end between the rollers. It is found in practice that it is desirable to use means for regulating the temperature of the sirup as it passes through, either by the application of heat or cold; and it is also found that, as ordinarily constructed, such machines have not sufficient length to produce the desired mixing of the sirup before it is discharged.

To obviate these difficulties my invention consists of a casing composed of four cylinders, with two pairs of rollers, one pair above the other, and a cold water or steam passage between the cylinders, whereby the sirup is carried through the upper cylinders, then returned through the lower ones, and the temperature is regulated by the passage of a medium through the chamber between the cylinders, all as hereinafter described.

In the drawings—Figure 1 is a plan view of the machine with one end in horizontal section. Fig. 2 is a cross section of the same in line xx of Fig. 1. Fig. 3 is a central, longitudinal, vertical section in line yy of Fig. 2. Fig. 4 is a longitudinal vertical section in line zz of Fig. 2. Fig. 5 is an elevation of the gearing.

A A' indicates the casing, consisting of four horizontal cylinders $a a' a' a'$, arranged in pairs, one pair above the other with a division wall s between, and having at one end a passage b through the division wall, as shown in

Fig. 4, through which passage the sirup escapes from the upper into the lower compartments.

B B and B' B' are four spirally-ribbed rollers resting in the four cylinders above described. The spiral ribs $c c$ are so disposed that the sirup fed into the upper cylinders through the spout d at one end, is carried to the opposite end, there dropped through the passage b , then fed back through the lower cylinders to the end from which it started, and is finally discharged through a spout f . The edges of the ribs are rounded, and those of each pair of rollers are made to intermesh, as shown in the cross section Fig. 2.

C is a central chamber or passage between the pairs of cylinders, extending from end to end. This chamber is divided by a central partition g , and at one end is an opening h by which the two passages on opposite sides of the partition communicate.

D D are two pipes opening into the two passages at the end opposite to the opening h , one pipe serving to admit cold water or steam, the other to discharge it. By this means either cold water or steam may be made to circulate between the cylinders and thus regulate the temperature as desired. Ordinarily cold water is passed through for the purpose of cooling the sirup during its passage through the cylinders. By this arrangement the case can be constructed in sections of cast iron and secured by screws $k k$, so that the casing can be taken apart for cleaning or other purposes, and a cooling chamber is provided without the use of pipe coils. A double extent of the apparatus is secured without extending the horizontal length.

The rollers may be run by any suitable gearing. As shown in the drawings each pair of rollers has two spur gears $m m$ which engage together, and on the upper shaft of one pair and the lower shaft of the other pair are two other spur gears $n n$ which also engage together. By this means both pairs of rollers are made to revolve toward each other.

Having described my invention, what I claim as new, and desire to secure by Letters Patent, is—

In a sirup beating machine, the combination of the casing consisting of the four cyl-

inders *a a' a'* arranged in pairs one above the other, with the passage *b* at one end, and the central chamber *C* divided by the partition *g*, located between the cylinders, and having the opening *h*, the spouts *d* and *f* communicating with said casing, the pipes *D D* opening into the chamber *C* on opposite sides of its partition, and the four spirally ribbed rollers *B B B' B'* resting in the cylinders, as

shown and described and for the purpose to specified.

In witness whereof I have hereunto signed my name in the presence of two subscribing witnesses.

J. WERNER.

Witnesses:

R. F. OSGOOD,

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