**PATENT EXAMINATION BOARD**

**DRAFTING OF PATENT SPECIFICATIONS – GROUP 2(e)**

**Paper 2**

**OCTOBER 2024**

Examiner: L Cilliers
Moderator: J Whittaker

Time: 6 hours

Total marks: 100

This paper consists of 8 pages (including this cover page)

Instructions:

- Attached is an instruction from your client detailing an invention. You are required to draft a full patent specification for your client's invention. The full patent specification must include: (1) a background to the invention, (2) a brief description of the drawings, (3) a detailed description of the invention, (4) a set of patent claims, and (5) an abstract. **No summary of the invention (consistories) is required.**

- Marks will be allocated as follows:
  - 60% of the marks will be allocated to the claims.
  - 40% of the marks will be allocated to the rest of the specification.

  In order to obtain a pass for this paper, candidates must obtain not less than 40% for each of these two sections.

- Please write legibly.

Your client writes:

A hand whisk is a common kitchen tool used for mixing ingredients in cooking. Hand whisks are designed to beat or whip ingredients like eggs, cream, or batters. A hand whisk typically takes the form of an elongated implement with a plurality of wire loops at one end. The wire loops in a whisk help incorporate air into the mixture, creating a lighter texture, and are commonly used for making whipped cream, meringues, or light batters. They can also break up lumps for smoother mixing. This is an example of a common hand whisk.

While hand whisks are handy for various tasks, they have notable limitations. Whipping or beating by hand can be tiring and time-consuming, especially for tasks that require significant air incorporation, like meringues or whipped cream. Achieving a consistent texture can also be challenging, as the manual effort needed may result in uneven mixtures. Additionally, prolonged use or large-scale tasks can lead to fatigue, making the process less enjoyable.

The other day, I got tired of whipping cream with a whisk, so at one point, I tried rotating the handle of the whisk between the palms of my hands, similar to how one would make a fire by twisting one stick on top of another. It worked reasonably well, save for the blisters forming on the palms of my hand the next day. I knew there was room for improvement, but the idea of keeping it simple yet efficient escaped me. A week later, while sharpening a pencil on an old rotating pencil sharpener (below), inspiration struck!


After some further thought and contemplation, I had my revolutionary (no pun intended) idea: a whisk, or rather two, that can be rotated using a handle! I did some research and found an improvement over a conventional whisk. I included a sketch below as Figure 1, but essentially it entails a whisk or beater that is rotatable inside a sleeve (which the user holds onto during use) and a handle extending from the upper end of the whisk. Someone clearly shared my frustration, but I thought this device might not be efficient because one would struggle to rotate the whisk at a high enough speed to achieve the desired results.

My device is shown in the drawings below, and in particular Figures 2 to 5. I am not going to describe everything in detail - I am sure you will be able to figure it all out when looking at my sketches - but I will highlight a few aspects.

The rotating beater includes a frame that holds everything together. The frame has various parts, some of which include:

- a lower loop that extends from an operatively lower end of the frame and which protrudes beyond the beaters, thus allowing the user to rest the bottom of the lower loop on the base of a mixing bowl while still permitting the beaters to rotate; and
- a stationary grip handle that extends from another end of the frame. I prefer the handle to be skewed, as shown in the drawings, but it could also be vertical (and located on the side of the device) or horizontal (and located on top of the device), and may even be adjustable if a suitable pivot and locking mechanism is provided.

The rotating beater includes at least one beater, but it makes much more sense to have two beaters that can mesh nicely so that they are not spaced too far apart, thus doubling the beating efficiency while remaining manageable and compact. I intend for the two beaters to

be removable from the frame to facilitate easier cleaning, although this is not necessarily critical.

The rotating beater also includes a rotating handle that can be turned to induce rotation of the beaters. For this invention to work, the beaters must rotate more than once for every rotation of the handle. I found that an annular gear and pinion arrangement, as shown in the sketches, works particularly well, but there can be other configurations which would meet the requirements of the device. I have also added a rotating sleeve on the portion of the handle that will be engaged by the user to make it easier to rotate.

To protect the user from injury due to the moving gears, I designed a clip-on cover that will shield the gears but is also removable to allow for cleaning inside the rotating beater. The clip-on cover is shown in full in Figures 2 and 4, partially cut away in Figure 3 to show part of the insides of the device. In Figure 5 the clip-on cover is completely removed.

Please draft a patent specification to protect my invention.

**DRAWINGS:**

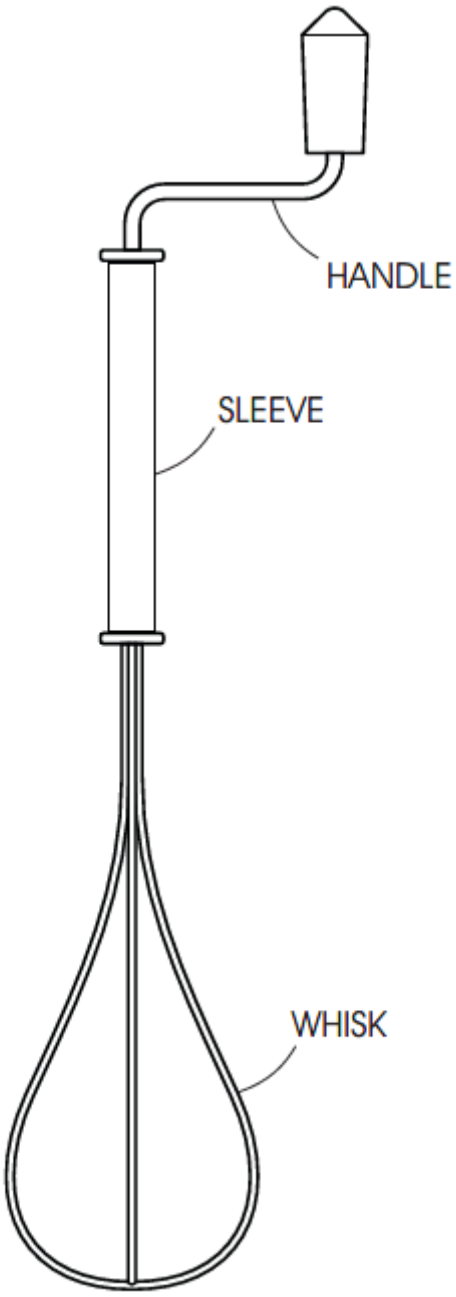


Fig. 1
(PRIOR ART)

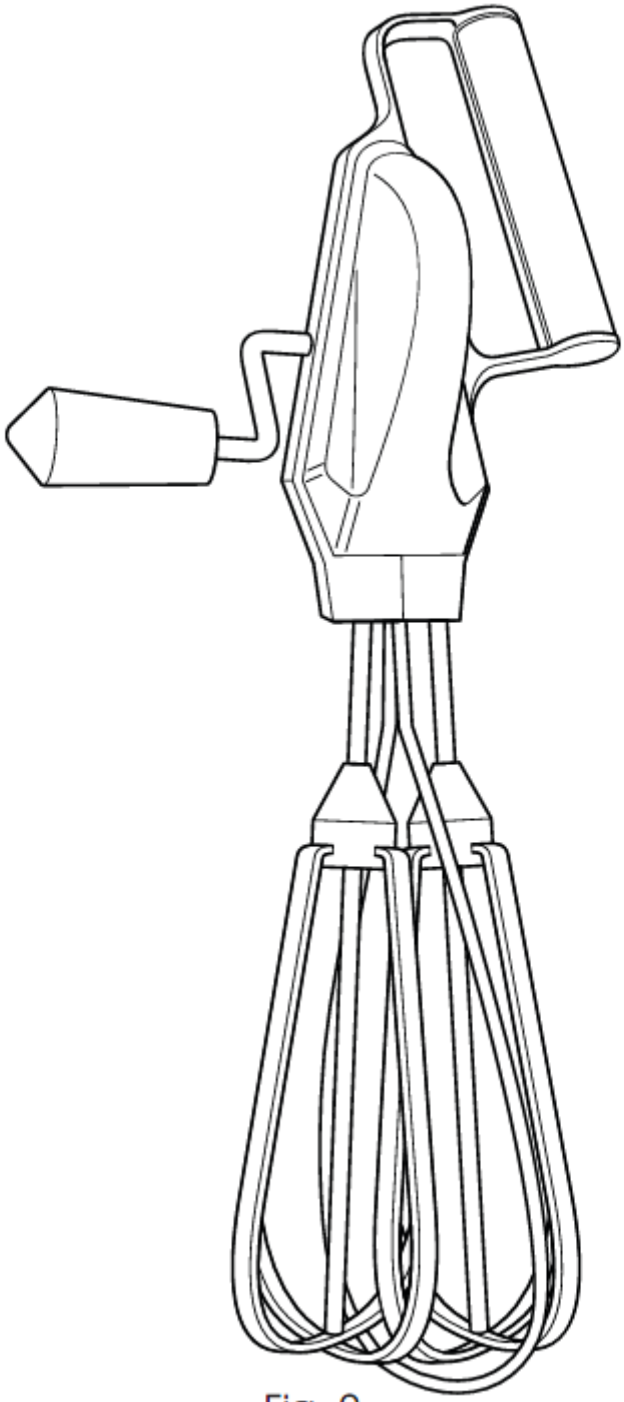

Fig. 2

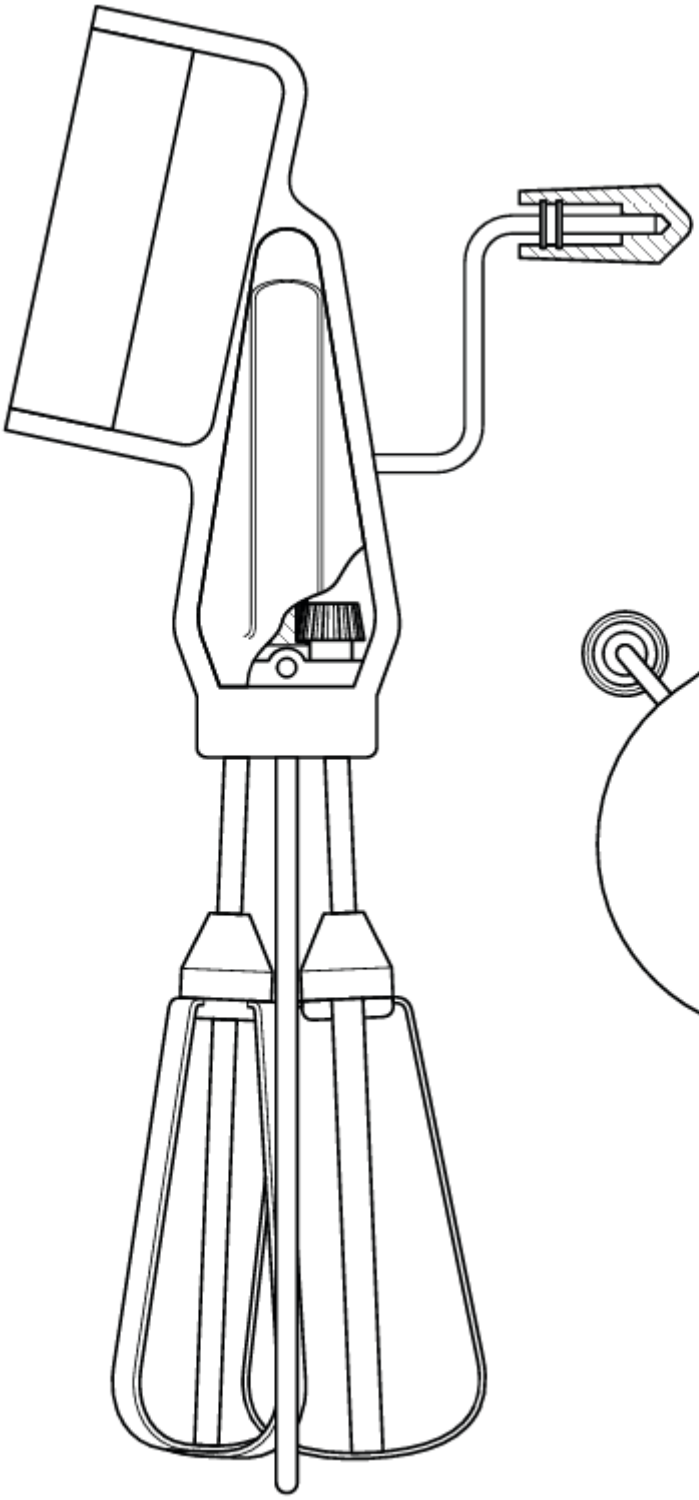

Fig. 3

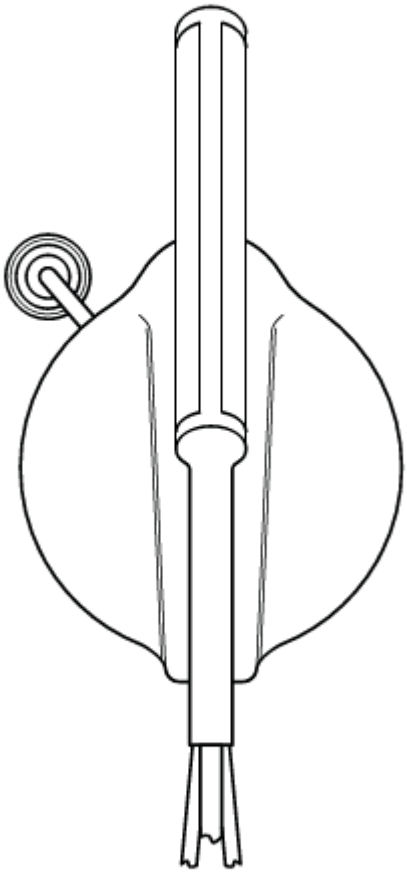

Fig. 4

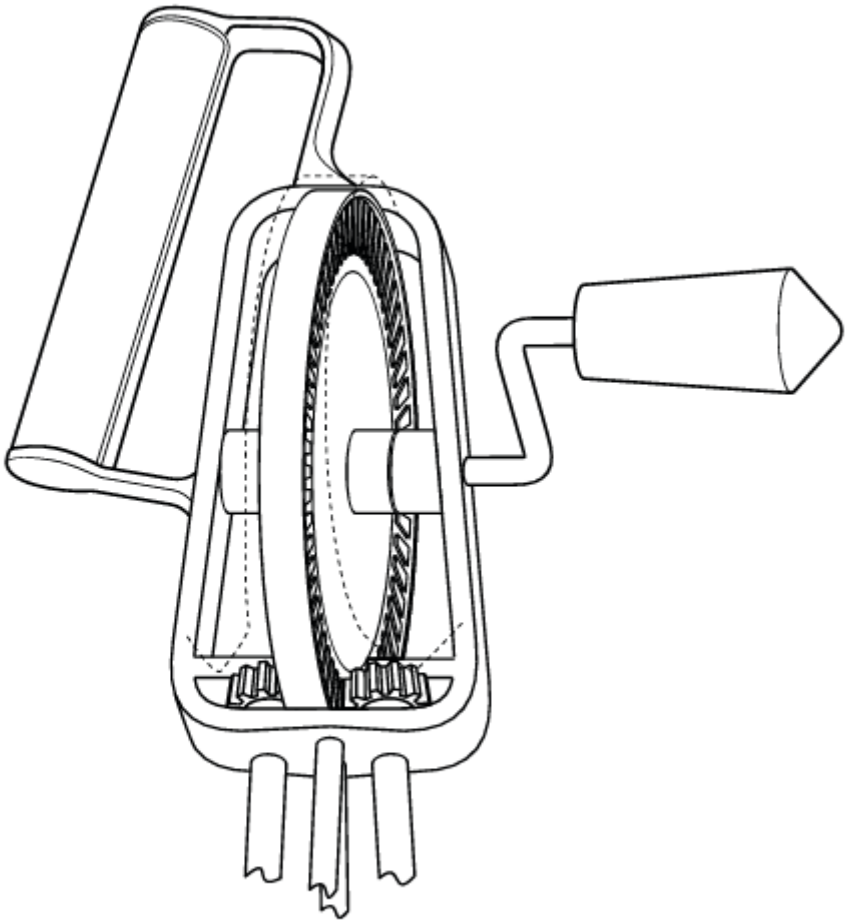

Fig. 5