

# PATENT EXAMINATION BOARD

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

### Supplementary - Paper 2

November 2023

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:

As you know, I am passionate about health and fitness and go to great lengths to stay in shape, which means visiting the gym on a regular basis. Lately, due to my busy schedule, I don't always find the time to visit the gym during the week and as a result, my progress has slowed down. I came to the realisation that I would benefit from being able to perform a few quick conditioning exercises at home on days where visiting the gym wouldn't be possible.

Home gym equipment, such as dumbbells, bars, weights, benches, and the like are quite expensive. Furthermore, I rent a studio apartment without a garage and therefore don't really have space to store all of this equipment.

One of my friends recently installed a basic pull-up bar on a wall in his garage. This pull-up bar (shown below) comprises a frame having mounting portions which are bolted to the wall, two members which extend horizontally away from the mounting portions and a bar extending between ends of the two members. Brace members extend diagonally between the mounting portions and members for additional support.



My friend uses this installation on a daily basis and is able to target a variety of muscle groups using the installation to perform different exercises. He also has arm straps which can be used to support his upper arms whilst performing core exercises.

I considered installing a similar pull-up bar in my apartment but abandoned the idea in the face of a number of obstacles. In addition to the spatial constraints of my apartment, my landlord doesn't allow me to install permanent fixtures on the walls of the apartment. Furthermore, I find the installation unsightly and believe it will detract from the aesthetic appeal of my

apartment. I have therefore developed a new pull-up bar which, I believe, solves all of these issues and which I will therefore be able to use in my apartment.

I attach a set of figures showing my new pull-up bar.

From the figures, you will note that my pull-up bar may be installed temporarily on a door frame (shown in broken lines) when in use. More particularly, the pull-up bar can be used with conventional steel door frames that protrude slightly from a wall in which it is installed.

The pull-up bar comprises a main tubular cross member (1) which is wider than an opening of the door, such that opposite ends (2 and 3) thereof catch on vertical jambs of the door frame on a first side of the door frame. I added rubber sleeves on these opposite ends in order to protect the doorframe against potential damage. The pull-up bar also has a horizontally extending catch member (4) located on an opposite side of the pull-up bar, and which in use engages an edge of a protruding edge of a horizontal head jamb (the upper part of the door frame). The catch member (4) has a wall-facing surface (5) which abuts the wall and a lower edge (6) which catches on a protruding edge (7) of the door frame.

The main tubular cross member (1) and the catch member (4) are fixed together by means of two tubular angle members (8), which are generally L-shaped.

The pull-up bar is installed by 'hanging' the catch member (4) from the horizontal head jamb of the door frame, and then pivoting the tubular cross member (1) about the engaged catch member until the opposite ends (2 and 3) abut the vertical jambs of the door frame. The tubular cross member (1) and the catch member (4) exert opposing forces on opposite sides of the door frame/wall, effectively locking the pull-up bar in place.

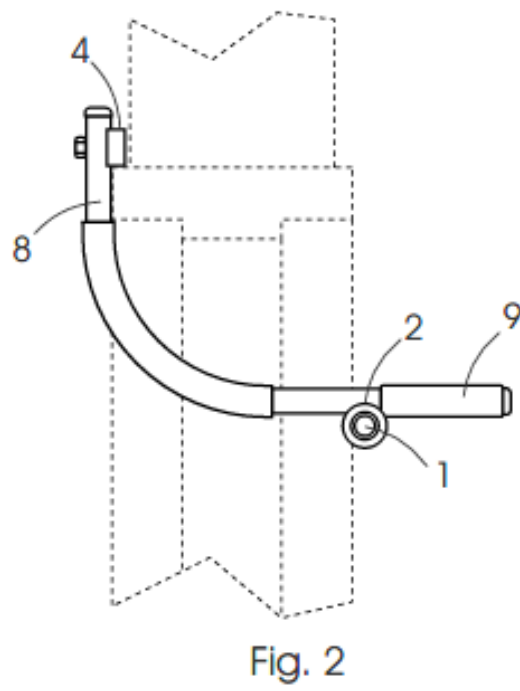
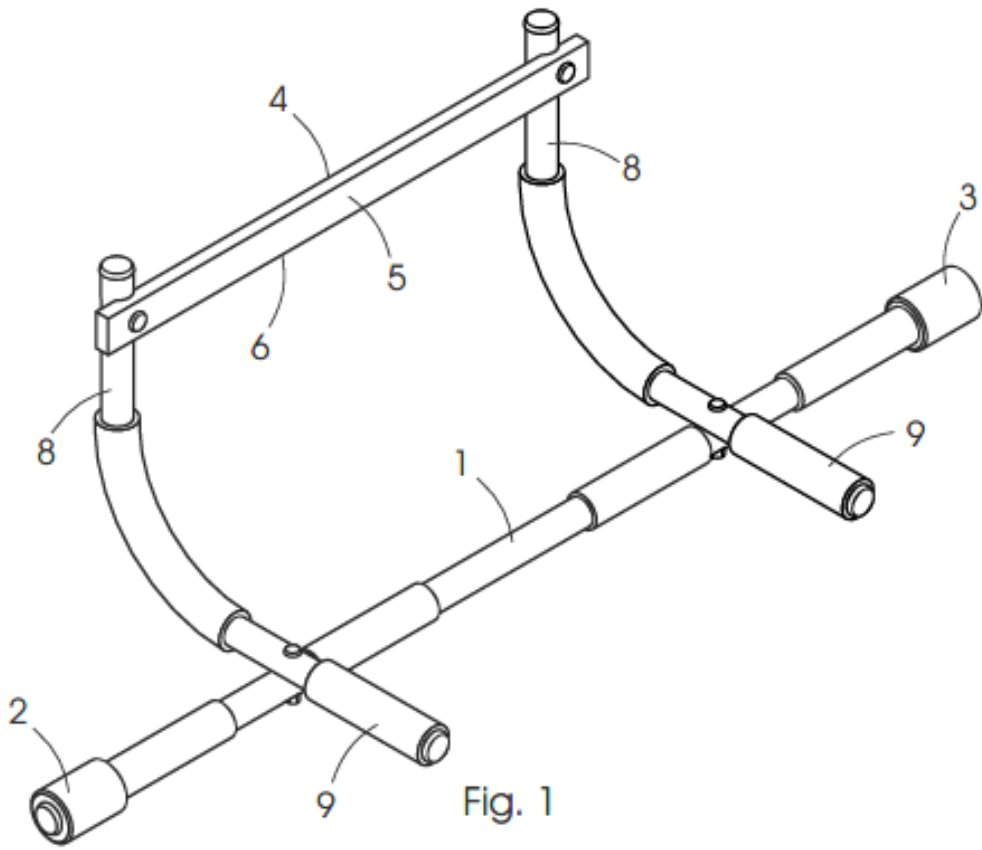
The lower edge (6) of the catch member (4) catching on the protruding edge (7) of the door frame furthermore prevents the pull-up bar from sliding down the door frame. All the components of my pull-up bar are bolted together, and the pull-up bar may therefore be disassembled after use, if needed.

In use, a person typically hangs from the main tubular member (1) when performing a pull-up. Provision is made for a narrow grip between the two tubular angle members (8) or a wide grip outside of the two tubular angle members (8). Furthermore, the two tubular angle members (8) have extensions (9) which project beyond the main tubular cross member (1) to provide a third gripping option. These extensions are useful, but not necessarily essential.

What is great about my pull-up bar is the fact that it requires no permanent fixtures and can be used with almost any standard door frame. Furthermore, my pull-up bar can be stored away when not in use, due to its constituent parts being bolted together.

I have an upcoming discussion with a manufacturer of home gym equipment with whom I wish to collaborate to take my pull-up bar to market. Please draft a patent specification to protect my invention.

**FIGURES:**



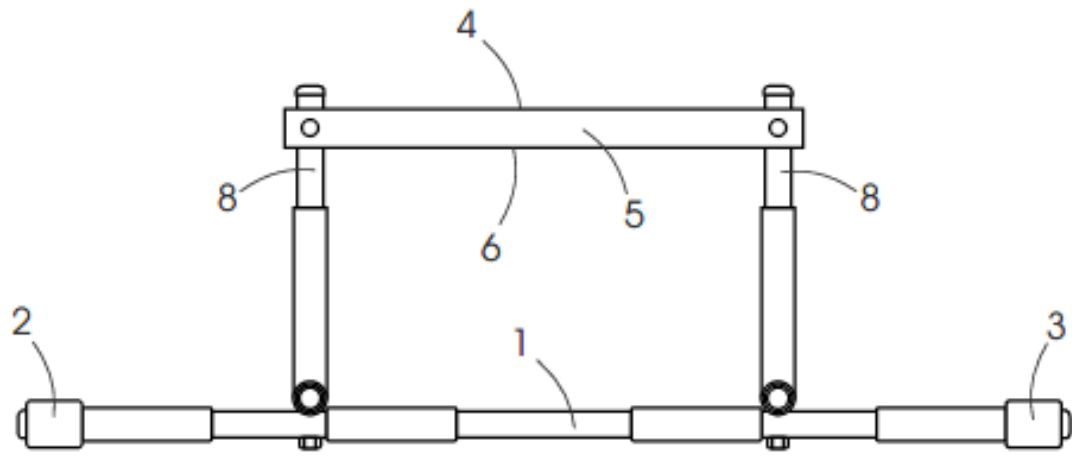


Fig. 3

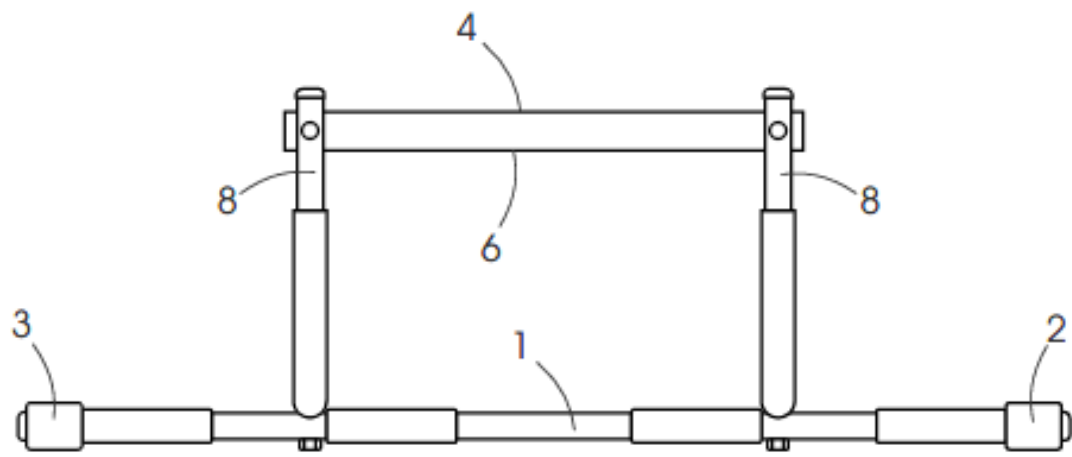


Fig. 4

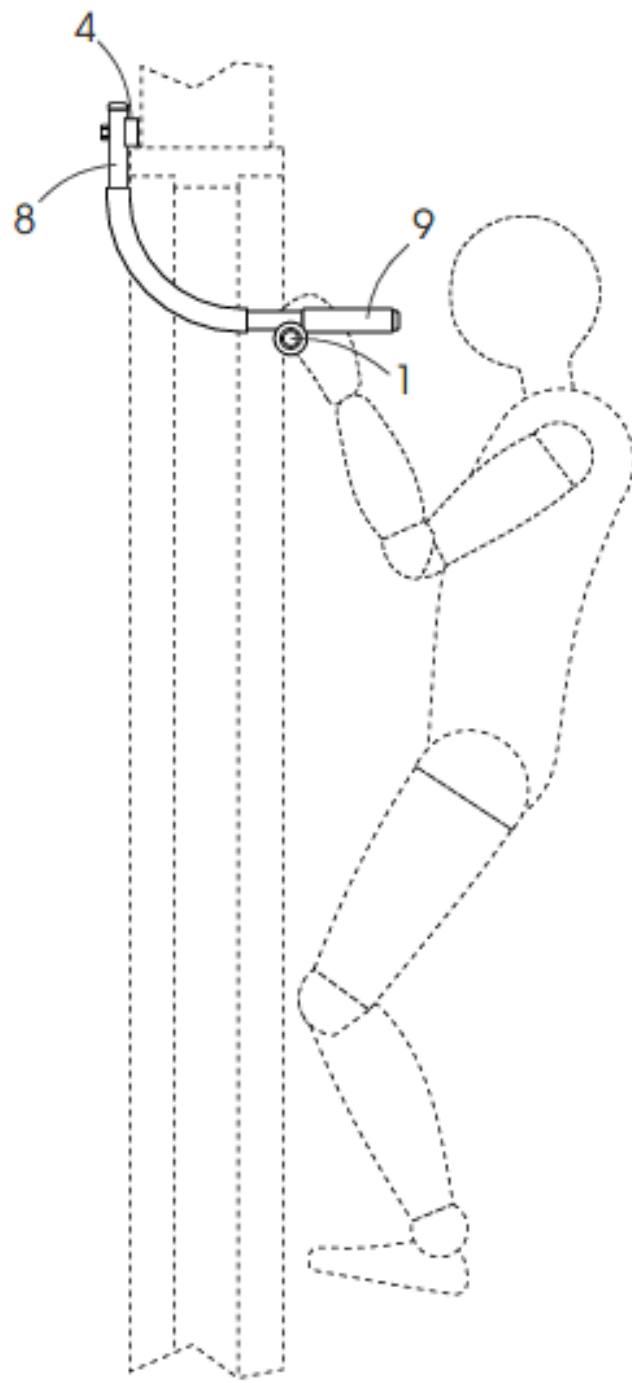


Fig. 5

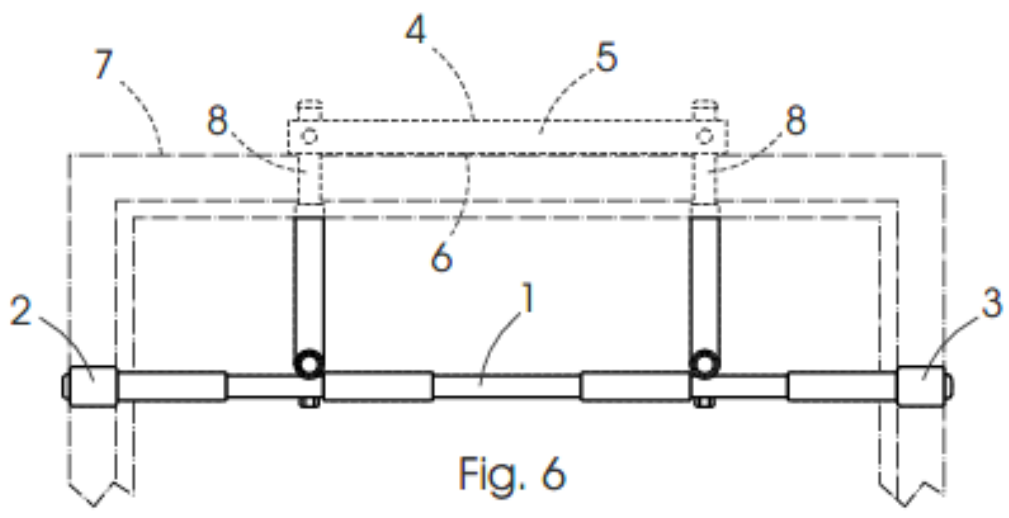


Fig. 6

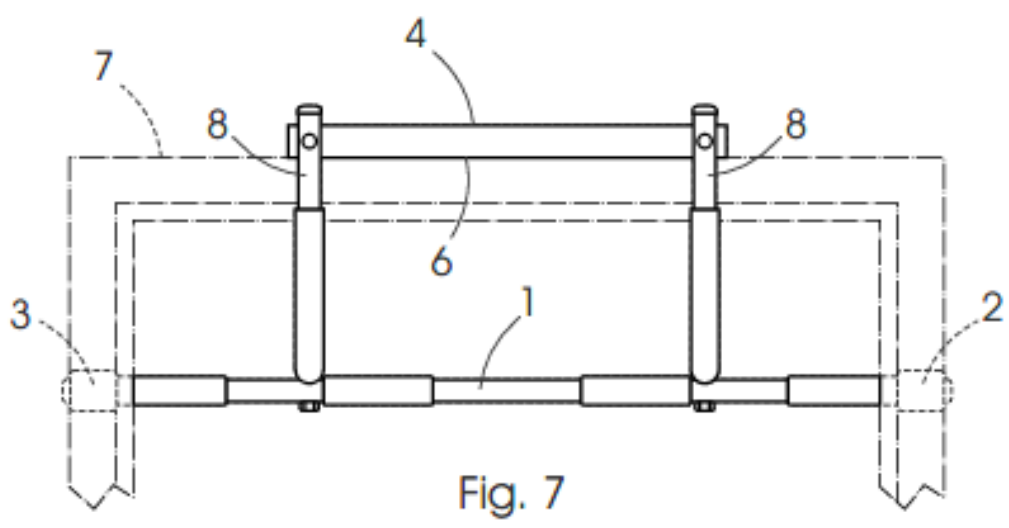


Fig. 7