

# Bifunctional Coronary stent

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## Introduction

This is the first of its kind coronary stent design which combines both balloon and self-expandable platforms into one.

This invention is a breakthrough concept to amalgamate the two discrete technologies into one, in such a way, to utilize both at their best.

This invention finds solution to unresolved technical hurdles around treatment of complex and higher risk bifurcation and ostial coronary artery disease, enabling better treatment with lower risk and potentially better long-term outcome.

## Background

Due to lack of a dedicated optimal stent design, bifurcation and ostial treatment still remains a major issue for interventional cardiologists.

**The Problem:** Conventional ostial stenting either misses the ostium OR protrudes too much out posing risk.

Self expandable stents were difficult to deliver and might migrate during deployment

Balloon expandable platforms protrudes without flaring at the ostium, posing risk of overhang. This has detrimental effects on the patient's outcome especially if they were to come back for re-intervention.

**Demerits of Current two stent technologies:**

Sub-optimal coverage of the ostium and carina

Undesired carinal shift with poor hemodynamics of the Neo-carina

Complex procedures with many steps

Rewiring may be very difficult and sometimes impossible

## Value

Less unwanted metal, optimal coverage of disease all around the ostium & carina and Less unbalanced shifting of carina; to ensure better hemodynamics. Better apposition of metal in the Main Branch (MB)

Maintaining the original architecture and radial strength of the stent with no distortion, damage or foreshortening.

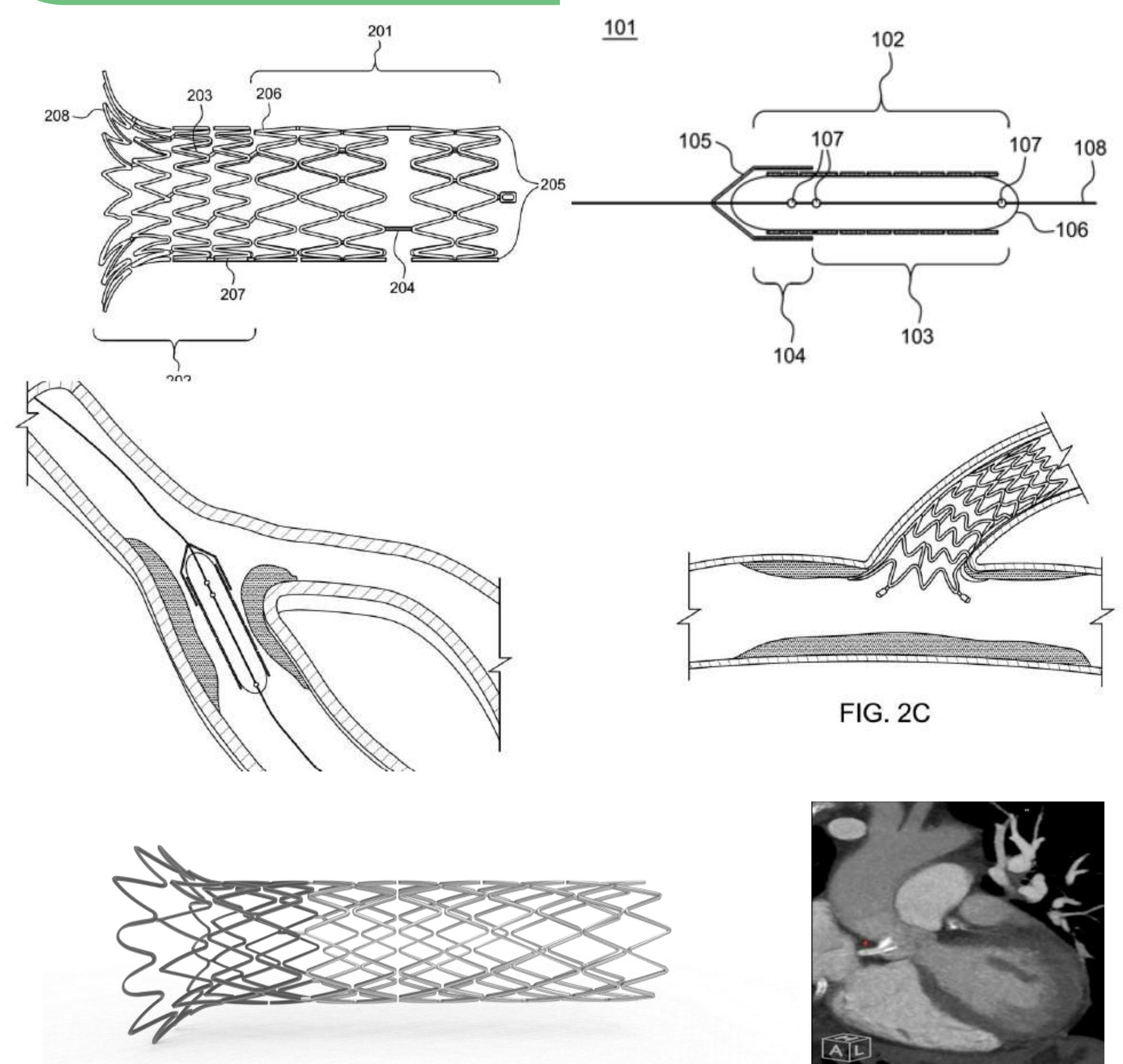
Less steps and to make rewiring easy.

Bifunctional stent flares at the ostium leaving no residual disease.

It's unique features, takes care of the deliverability issues associated with self-expandable platforms.

It is very easy to deliver and deploy with precision and accuracy.

## Technical Details



## Deployment

### Description:

Self expandable stent (SES) and balloon expandable stent (BES) are combined into one stent, both parts mounted on balloon. Self-expandable part is compressed by the splittable sheath.

### Stent Deployment:

Markers at the ostium ensures optimal position.

Balloon inflation splits the splittable covering sheath over the self expandable part leading to its release and deployment at the ostium.

### Unique benefits

- 1- Optimal Ostial Coverage
- 2- No overhang or missing the ostium
- 3- Easy Re-entry
- 4- Treatment for sole ostial large branch vessel disease
- 5- Confidence and comfort for the operator
- 6- Less procedural time, less complications, better patient outcome and care.

## Contact

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