

## Claims

### WHAT IS CLAIMED IS:

1. A valve repair device for repairing a native heart valve of a patient, the valve repair device comprising:

a pair of clasps, wherein each clasp is configured to attach to a native valve leaflet;

wherein ends of the pair of clasps are configured to move away from one another to a partially open position when the native valve leaflets open during a diastolic phase of a cardiac cycle; and

wherein ends of the pair of clasps are configured to move toward one another when the native valve leaflets close during a ventricular systole of the cardiac cycle.

2. The device of claim 1, wherein the ends of the clasps are angled away from one another when the clasps are in the partially open position.

3. The device of claim 1 or 2, further comprising a pair of paddles, wherein each clasp is fixed to one of the paddles.

4. The device of any of claims 1-3, wherein the paddles move toward and away from one another during the cardiac cycle to move the ends of the clasps toward and away from one another during the cardiac cycle.

5. The valve repair device of any of claims 1-4, further comprising a coaption element connected to the pair of clasps, wherein the movement of the clasps causes the native valve leaflets to coapt against the coaption element when the native valve closes and causes the native valve leaflets to separate from the coaption element when the native valve opens.

6. The valve repair device of any of claims 1-5 wherein the device further comprises a pair of biasing members, wherein the biasing members bias the clasps toward one another.

7. A valve repair device for repairing a native valve of a patient, the valve repair device comprising:

a pair of paddles; and

a pair of clasps, where each pair of clasps comprises an inner clasp member, an outer clasp member, and an end,

wherein the inner clasp member of each clasp is connected to one of the paddles;

wherein each clasp is configured to attach to a leaflet of the native valve;

wherein the paddles and attached clasps are moveable between a closed position and an open position, and

wherein the paddles are configured to be implanted on the native valve leaflets in a partially open position.

8. The device of claim 7, wherein the paddles are configured to remain in the partially open position when a force is applied to the clasps by the leaflets closing during systole.

9. The device of claim 7 or 8, wherein the paddles are configured to remain in the partially open position when a force is applied to the clasps by the leaflets opening during diastole.

10. The device of claim 7, wherein the paddles are configured to further open from the partially open position when a force is applied to the clasps by the leaflets opening during diastole.

11. The device of claim 7, wherein the paddles are configured to further open from the partially open position when a force is applied to the clasps by the leaflets opening during diastole and wherein the paddles are configured to return

to the partially open position when a force is applied to the clasps by the leaflets closing during systole.

12. The valve repair device of any of claims 7, 10, or 11 further comprising a coaption element connected to the pair of paddles, wherein the movement of the paddles and clasps causes the native valve leaflets to coapt against the coaption element when the native valve closes and causes the native valve leaflets to separate from the coaption element when the native valve opens.

13. The valve repair device of any of claims 7, or 10-12, wherein the device further comprises a pair of biasing members, wherein the biasing members bias the paddles toward one another.

14. A valve repair device for repairing a native heart valve of a patient, the valve repair device comprising:

a pair of flexible clasps, wherein each clasp is configured to attach to a native valve leaflet;

wherein the clasps are configured to flex such that ends of the pair of clasps move away from one another to a partially open position when the native valve leaflets open during a diastolic phase of a cardiac cycle; and

wherein the clasps are configured to flex such that ends of the pair of clasps move toward one another when the native valve leaflets close during a ventricular systole of the cardiac cycle.

15. The device of claim 14, wherein the ends of the clasps are angled away from one another when the clasps are in the partially open position.

16. The valve repair device of claim 14 or 15, further comprising a coaption element connected to the pair of clasps, wherein the movement of the clasps causes the native valve leaflets to coapt against the coaption element when the native valve closes and causes the native valve leaflets to separate from the coaption element when the native valve opens.

17. The valve repair device of any of claims 14-16 wherein the device further comprises a pair of biasing members, wherein the biasing members bias the clasps toward one another.