

CLAIMS:

1. A valve repair device clasp for repairing a native valve of a patient, the valve repair device clasp comprising:
 - a fixed arm that is attachable to a paddle of a valve repair device;
 - a moveable arm;
 - a hinge portion connecting the moveable arm to the fixed arm; and
 - an indicator arm coupled to the moveable arm;wherein the moveable arm is moveable relative to the fixed arm to form an opening between the moveable arm and the fixed arm; ~~and~~
wherein the fixed arm, the moveable arm, and the hinge portion are integrally formed; and
~~an indicator arm coupled to one of the fixed arm and the moveable arm;~~
wherein the indicator arm is ~~moveable configured to move~~ through ~~one of the fixed arm and an opening of~~ the moveable arm when the leaflet of the native valve is inserted into the opening between the fixed arm and the moveable arm to indicate whether a leaflet of the native valve is inserted into the opening between the fixed arm and the movable arm to at least a minimum insertion depth.
- ~~2. The valve repair device clasp of claim 1, wherein the indicator arm is coupled to the moveable arm.~~
- ~~3. The valve repair device clasp of any of claims 1-2 wherein the indicator arm is configured to move through the moveable arm when the leaflet of the native valve is inserted into the opening between the fixed arm and the movable arm to at least the minimum insertion depth.~~
- ~~4.2.~~ The valve repair device clasp of any of claims ~~1-3~~1 wherein the indicator arm has a shaped portion.
- ~~5.3.~~ The valve repair device clasp of claim ~~4-2~~4-2 wherein the indicator arm is configured such that the shaped portion is inside outer boundaries of the clasp when the indicator arm is in a resting configuration and no leaflet has reached the minimum insertion depth.

- ~~6.4.~~ The valve repair device clasp of any of claims ~~4-52-3~~ wherein the indicator arm is configured such that the shaped portion is pressed through an opening in the moveable arm when the leaflet of the native valve is inserted into the opening between the fixed arm and the movable arm to at least the minimum insertion depth.
- ~~7.5.~~ The valve repair device clasp of any one of claims ~~4-62-4~~ wherein the shaped portion is round, coiled, semi-circular, ovoid, or polygonal.
- ~~8.6.~~ The valve repair device clasp of any one of claims ~~4-72-5~~ wherein the moveable arm and the shaped portion are configured to be positioned on an atrial side of the leaflet of the native valve.
- ~~9.7.~~ A valve repair device for repairing a native valve of a patient, the valve repair device comprising:
a paddle;
a clasp comprising:
a moveable clasp arm;
a fixed clasp arm coupled to the paddle; and
a hinge portion connecting the moveable clasp arm to the fixed clasp arm;
wherein the fixed clasp arm, the moveable clasp arm, and the hinge portion are integrally formed;
wherein the paddle and the moveable clasp arm are moveable to form an opening between the moveable clasp arm and the paddle; and
an indicator arm coupled to the valve repair device;
wherein the indicator arm is moveable through an opening of one or more of the paddle and the moveable clasp arm when the leaflet of the native valve is inserted into the opening between the paddle and the movable arm ~~to indicate whether a leaflet of the native valve is inserted into the opening between the paddle and the moveable clasp arm~~ to at least a minimum insertion depth.

~~10.8.~~ The valve repair device of claim ~~97~~, wherein the indicator arm is coupled to the moveable clasp arm.

~~11.~~ ~~The valve repair device of any of claims 9-10 wherein the indicator arm is configured to move through the moveable arm when the leaflet of the native valve is inserted into the opening between the fixed arm and the movable arm to at least the minimum insertion depth.~~

~~12.9.~~ The valve repair device of any of claims ~~9-117-8~~ wherein the indicator arm has a shaped portion.

~~13.10.~~ The valve repair device of claim ~~12-9~~ wherein the indicator arm is configured such that the shaped portion is between the moveable clasp arm and the paddle when the indicator arm is in a resting configuration and no leaflet has reached the minimum insertion depth.

~~14.11.~~ The valve repair device of any of claims ~~12-139-10~~ wherein the indicator arm is configured such that the shaped portion is pressed through an opening in the moveable arm when the leaflet of the native valve is inserted into the opening between the fixed arm and the movable arm to at least the minimum insertion depth.

~~15.12.~~ The valve repair device of any one of claims ~~12-149-11~~ wherein the shaped portion is round, coiled, semi-circular, ovoid, or polygonal.

~~16.13.~~ The valve repair device of any one of claims ~~12-159-12~~ wherein the moveable arm and the shaped portion are configured to be positioned on an atrial side of the leaflet of the native valve.

~~17.14.~~ A valve repair system comprising:
a delivery catheter;
a valve repair device coupled to the delivery catheter, the valve repair device comprising:
a paddle;

a clasp comprising:

a moveable clasp arm;

a fixed clasp arm coupled to the paddle; and

a hinge portion connecting the moveable clasp arm to the fixed clasp arm;

wherein the fixed clasp arm, the moveable clasp arm and the hinge portion are integrally formed;

wherein the paddle and the moveable clasp arm are moveable to form an opening between the moveable clasp arm and the paddle; and

an indicator arm coupled to the valve repair device;

wherein the indicator arm is moveable through ~~one or more of the paddle and an opening of~~ the moveable clasp arm when the leaflet of the native valve is inserted into the opening between the paddle and the movable arm ~~to indicate whether a leaflet of the native valve is inserted into the opening between the paddle and the moveable clasp arm~~ to at least a pre-set insertion depth.

~~18.15.~~ The valve repair system of claim ~~17~~14, wherein the indicator arm is coupled to the moveable clasp arm.

~~19. — The valve repair system of any of claims 17–18 wherein the indicator arm is configured to move through the moveable arm when the leaflet of the native valve is inserted into the opening between the fixed arm and the movable arm to at least the pre-set insertion depth.~~

~~20.16.~~ The valve repair system of any of claims ~~17–19~~14–15 wherein the indicator arm has a shaped portion.

~~21.17.~~ The valve repair system of claim ~~20~~16 wherein the indicator arm is configured such that the shaped portion is between the moveable clasp arm and the paddle when the indicator arm is in a resting configuration and no leaflet has reached the pre-set insertion depth.

~~22.18.~~ The valve repair system of any of claims ~~20–21~~16–17 wherein the indicator arm is configured such that the shaped portion is pressed through an opening in the

moveable arm when the leaflet of the native valve is inserted into the opening between the fixed arm and the movable arm to at least the pre-set insertion depth.

~~23.19.~~ The valve repair system of any one of claims ~~20-22~~16-18 wherein the shaped portion is round, coiled, semi-circular, ovoid, or polygonal.

~~24.20.~~ The valve repair system of any one of claims ~~20-23~~16-19 wherein the moveable arm and the shaped portion are configured to be positioned on an atrial side of the leaflet of the native valve.