The blow out preventer may further including a fluid pressure actuated locking part which is provided in an aperture extending from the exterior of the housing to the interior of the housing, and which is movable from a retracted position in which the locking part does not extend into the interior of the housing to a locking position in which the locking part extends into the interior of the housing.

According to a second aspect of the invention we provide a blow out preventer stack comprising a plurality of blow out preventers in accordance with the first aspect of the invention, the blow out preventer being arranged such that the longitudinal axis of each lies on a single line.

In one embodiment of blow out preventer stack, the first part of the housing of a first blow out preventer is integrally formed with the second part of the housing of a second blow out preventer. In this case, the exterior of the housing is provided with a shoulder which joins the smaller diameter portion of the first part of the housing of the first blow out preventer with the second part of the housing of the second blow out preventer, the second part having a smaller external diameter than the first part.

In one embodiment of the invention, at least one of the fluid flow passages in the housing of the first blow out preventer is connected to a fluid flow passage in the housing of the second blow out preventer via a pipe at least a portion of which is external to the housing. In this case, the pipe may extend from a shoulder between the second part of the housing of the second blow out preventer and a smaller outer diameter portion of the first part of the housing of the first blow out preventer and a shoulder between the smaller outer diameter portion and a larger outer diameter portion of the first part of the housing of the first blow out preventer.

Herein disclosed, in a first implementation, is~~According to a third aspect of the invention we provide~~ a blow out preventer stack comprising three annular blow out preventers coaxially arranged around

the longitudinal axis of the blow out preventer stack. Each blow out preventer may comprise a housing having a first part and a second part, an annular packing element and an actuating part which is movable generally parallel to the longitudinal axis of the blow out preventer to push the packing element into engagement with the first part of the housing, compression of the packing element against the first part of the housing causing the diameter of the space enclosed by the packing element to decrease.

In this case, the internal diameter of the first part of the housing increases from a first port to a second port so that the interior face of the first part of the housing forms a cam surface with which the packing element engages when compressed by the actuating part.

At least one of the blow out preventers in the blow out preventer stack may have any of the features of the blow out preventer according to the first aspect of the invention.

Also disclosed is~~According to a fourth aspect of the invention we provide~~ a blow out preventer comprising a housing, and a fluid pressure actuated locking part which is provided in an aperture extending from the exterior of the housing to the interior of the housing, and which is movable from a retracted position in which the locking part does not extend into the interior of the housing to a locking position in which the locking part extends into the interior of the housing.

Two fluid pressure operated locking parts may be provided, the two fluid pressure operated locking parts being separated longitudinally relative to the housing.

The blow out preventer may also include any of the features of the blow out preventer according to the first aspect of the invention.

Further disclosed is~~According to a fifth aspect of the invention we provide~~ a blow out preventer assembly including the blow out preventer according to the first implementation,~~third aspect of the~~

~~invention~~ and a tubular component which is located in a central passage of the blow out preventer housing, the locking part when in its locking position, engaging with the tubular component to prevent or restrict translational movement of the tubular component along the central passage of the blow out preventer housing.

The blow out preventer may include first and second fluid pressure operated locking parts, the two fluid pressure operated locking parts being separated longitudinally relative to the housing, the first locking part when in its locking position, engaging with the tubular component to prevent or restrict translational movement of the tubular component in a first direction along the central passage of the blow out preventer housing, and the second locking part, when in its locking position, engaging with the tubular component to prevent or restrict translational movement of the tubular component in a second direction along the central passage of the blow out preventer housing.

An embodiment of the invention will now be described, by way of example only, with reference to the accompanying drawings, of which

FIGURE 1 is a longitudinal cross-section through a BOP stack including three BOPs in accordance with the invention,

FIGURE 2 is a longitudinal cross-section through the BOP stack shown in Figure 1 with a seal assembly positioned in the BOP stack,

FIGURE 3 is a perspective side view of the BOP stack illustrated in Figure 1,

FIGURE 4 is a detailed view of the portion of the cross-section through the BOP stack marked X in Figure 1,

FIGURE 5 is a detailed view of a cross-section through one of the lower locking dogs in the BOP stack illustrated in Figure 1,