H. B. WALKER.

RELEASE JOINT FOR WELL CASINGS.

APPLICATION FILED FEB. 10, 1917.

1,243,364. Patented Oct. 16, 1917.

FIG. 1

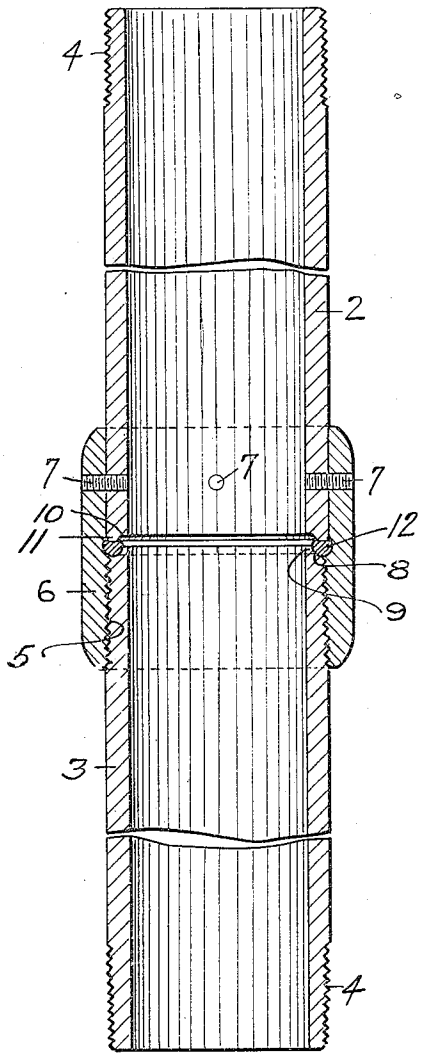
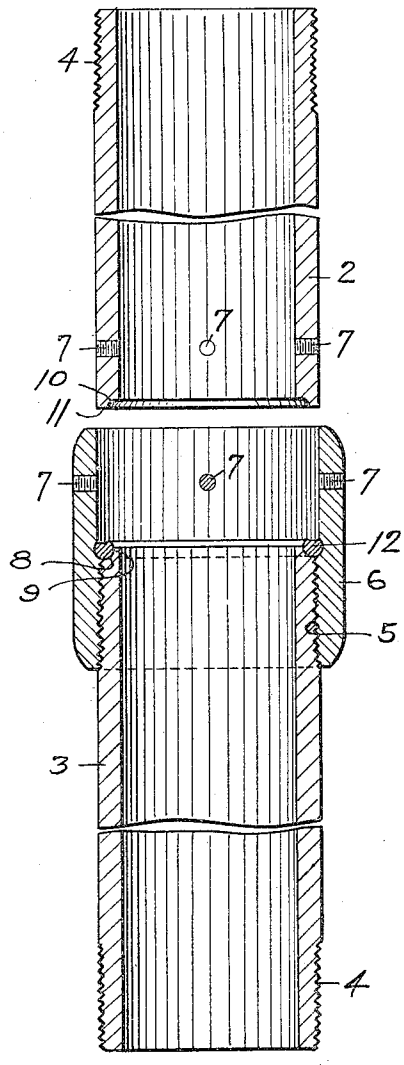


FIG. 2



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RELEASE-JOINT FOR WELL-CASINGS.

1,243,364. Specification of Letters Patent. Patented Oct. 16, 1917.

Application filed February 10, 1917. Serial No. 147,860.

To all whom it may concern:

Be it known that I, HENRY B. WALKER, a citizen of the United States, and resident of Lancaster, in the county of Fairfield and State of Ohio, have invented a new and useful Improvement in Release-Joints for Well-Casings; and I do hereby declare the following to be a full, clear, and exact description thereof.

My invention relates to a release joint for well casings.

When an oil or like well becomes abandoned, through failure to produce or for any other reason, it is desirable to remove the casings or pipes from the wells for use in other wells, and sometimes happens that the lower end of the casing becomes fast in the well due to the caving of the rock, or for other reasons, and release joints have been provided to enable the upper sections to be separated from the casing that has become fast in the well.

The object of my invention is to provide a simple form of release joint of this character, and the invention comprises the novel features hereinafter set forth and claimed.

In the accompanying drawing Figure 1 is a vertical section of my improved release joint; and Fig. 2 is a like view showing the separation of the parts, or the joint in released position.

Referring to the drawing, the numeral 2 designates the upper section of the release joint, and 3 the lower section. These sections are threaded, as at 4 for connection with the upper and the lower sections of the well casings.

The lower section 3 is threaded as at 5 at its upper end; engaging said threaded portion is the sleeve 6 which is screwed thereon. The lower end of the upper section 2 fits down within said sleeve and pins 7 of copper or other metal of sufficient strength and size, connect the upper end of the sleeve 6 with the lower end of the section 2. These pins have sufficient strength to securely connect the section 2 and the casing connected therewith to the sleeve 6, but when it is desired to separate the upper section with the casing connected thereto from the sleeve 6, this separation may be effected by the shearing of the pins 7 when the lower section of casing becomes fast in the hole and resists upward movement.

The upper edge of the lower section 3 is cut away as at 8 to form the annular rim 9 and the lower end of the upper section is cut away as at 10 to form the rim 11. A gasket 12 of block tin, lead or other suitable material is interposed between the ends of the sections 2 and 3 and forms a joint between the two sections impervious either to water or gas.

The rim 11 on the outer edge of the upper section and the rim 9 on the inner end of the lower section form a suitable seat for the gasket, and the gasket is thereby compressed snugly in said seat.

When my improved release joint is in use, the release joint connected to the casings is lowered into the well, and in case it is desired to remove the casing for any reason, and it is found that the lower casing is stuck fast in the hole, by jarring or pulling upward on the upper casing, the pins 7 will be sheared, and will permit the upper sections of the casing to be withdrawn, leaving the lower section in the hole.

By my invention, I have provided a very simple form of release joint, which, when lowered into the well remains intact with a packing which renders it impervious to water and gas, and the pins 7 hold the upper section in fixed position until such time as the force exerted to lift the casing is sufficient to shear the pins 7, whereupon the separation takes place and the upper sections of casing can be readily withdrawn.

What I claim is:

1. A release joint for oil, gas or like wells, comprising tubular sections, a sleeve threaded to one of said sections, a frangible pin securing the other section to said sleeve, and a packing interposed between the ends of said sections.

2. A release joint for oil, gas or like wells, comprising an upper and a lower tubular section, a sleeve threaded to the lower section, a frangible pin connecting the upper

section with said sleeve, and packing material interposed between the ends of said sections.

3. A release joint for oil, gas or like wells, comprising an upper and a lower tubular section, a sleeve threaded to one of said sections, a frangible pin connecting the other section to said sleeve, the adjoining ends of said sections being cut away to form inner and outer annular rims and packing material interposed in the seats formed by said rim.

In testimony whereof, I the said HENRY B. WALKER, have hereunto set my hand.

HENRY B. WALKER.

Witnesses:
ROBT. D. TOTTEN,
JOHN F. WILL.

Copies of this patent may be obtained for five cents each, by addressing the "Commissioner of Patents, Washington, D. C."