This invention relates to slips and a method of actuating same, the slips being operated to control the movement of the casing, tubing, rods, and the like in the well. It is desirable that these slips be released and engaged quickly to prevent accidents, and to facilitate the speed of the work. My slips are operated by the driller or another operator, who is stationed immediately adjacent to the well, and actuates the slips by means of a handle or the like.

An object of my invention is to provide slips of the character stated, which are released or engaged with a very short vertical movement.

Another feature of my invention resides in the fact that it may be assembled around the casing, tubing, or the like, without having to pass the head and slips over the top of the pipe or tubing, which latter action is cumbersome and slow.

Another feature of my invention is the positioning of the operating spider inside of the collar, which makes the slips operate easier and over a small distance.

Other objects, advantages, and features of invention may appear in the accompanying drawings, the subjoined detailed descriptions, and the appended claims.

The head is preferably held in position on the casing by means of chains 11—12, or the like, which chains are looped around nipples 13—14, extending from the casing, the other end of the chain being secured in eyes 15—16, formed in the head 3.

A plurality of slips 17, (here shown as 3) are positioned within the head 3, and are adapted to engage the pipe 10, and hold the same against downward movement. It is to be understood that the slips are provided with teeth or serrations to engage the pipe as is usual in this type of construction.

A split spider 18, is connected to each of the slips 17, by chain links 19, or the like, and the spider has outwardly extending fingers 20, which extend through slots 21, in a ring 22, rising from the head 3, a foot treadle 23 is formed with arcuate arms which extend under the fingers 20, and are adapted to lift the spider 18, when the foot treadle is depressed. The treadle may be pivoted at any desirable point, and I here show a lug 25, extending from the head 3, on which the treadle is pivoted. The spider 18, is positioned inside of the ring 22, thus providing a more direct and shorter coupling between the spider and the slips, which makes for easier action and more effective control.

As shown in Fig. 1, as the slips 17, are lifted they are also moved outwardly a sufficient distance to entirely clear the pipe, tubing or the like. The slips 17, are each provided with a seat 26, approximately midway between the top and bottom thereof, and the lower edges 3 of the slips are tapered as at 27, the purpose of which will be further described.

A ring seat 28, is formed in the head 3, upon which the seat 26, is adapted to rest, both seats 26, and 27, being tapered so as to force the slips inwardly against the tubing.

From the ring seat 28, a wall 29, rises to an offset 30', from which offset the wall 30, rises. The purpose of this is to accommodate the upper section of the slip when said slips are in elevated position.

As shown in Fig. 1, when the slips are elevated, the tapered seat 26, rests on the edge of the offset 30', and the tapered surface 27, rests on the seat 28, thus when the pressure on the foot treadle is released the slip will readily move inwardly into operative position. The wall 29, is approximately the same height as the distance between the seat 26, and the
tapered surface 27, which distance is relatively short, and about the same height as the slots 21 in the wall 22, which means that a short movement of the spider 18, will move the slips upwardly and outwardly into operative position.

Having described my invention, I claim:

1. An oil well slip comprising a split head adapted to be assembled about a casing, a split spider positioned within the head, a plurality of slips in the head and adapted to engage a pipe and the like, and links connecting the spider and slips, a treadle and means connecting said treadle and spider whereby the spider is elevated to actuate the slips.

2. An oil well slip comprising a split head adapted to be assembled about a casing, a split spider, a ring rising from the head within which the spider is positioned, fingers on the spider, said rings having slots therein through which the fingers extend, slips in said head, links connecting the spider and slips, and a treadle connected to said spider.

3. An oil well slip comprising a split head adapted to be assembled about a casing, a split spider positioned within the head, a plurality of slips in the head and adapted to engage a pipe and the like, and links connecting the spider and slips, a treadle and means connecting said treadle and spider whereby the spider is elevated to actuate the slips, a tapered ring seat in the head, a tapered seat on each of the slips adapted to rest on the tapered ring seat, the lower edge of the slip being beveled to rest on the ring seat when the slips are in elevated position.

5. An oil well slip comprising a split head adapted to be assembled about a casing, a split spider, a ring rising from the head within which the spider is positioned, fingers on the spider, said ring having slots therein, through which the fingers extend, slips in said head, links connecting the spider and slips, and a foot treadle connected to said spider, nipples extending from the casing, eyes formed on the head, and chains adapted to extend from the eyes and around the nipples, whereby the head is held in position.

6. An oil well slip comprising a split head, adapted to be assembled about a casing, a ring rising from the head, a split spider mounted within the ring, fingers extending from the spider, said ring having slots therein, through which the fingers extend, a treadle connected to said fingers, whereby the spider is elevated, slips mounted in the head, and means connecting the spider and slips, an inclined ring seat in the head, and an inclined seat on each of the slips adapted to rest on the inclined ring seat, a wall rising above the ring seat in the head, said wall being about the same height as the distance from the inclined seat to the bottom of the slip.

7. An oil well slip comprising a split head, adapted to be assembled about a casing, a ring rising from the head, a split spider mounted within the ring, fingers extending from the spider, said ring having slots therein, through which the fingers extend, a treadle connected to said fingers, whereby the spider is elevated, slips mounted in the head, and means connecting the spiral and slips, an inclined ring seat in the head, and an inclined seat on each of the slips adapted to rest on the inclined ring seat, a wall rising above the ring seat in the head, said wall being about the same height as the distance from the inclined seat to the bottom of the slip.

8. An oil well slip comprising a split head, adapted to be assembled about a casing, a tapered lower edge on the slip adapted to rest on the ring seat in the elevated position of the slips, and means to secure said head to the casing.

In testimony whereof, I affix my signature.

KARL P. NEILSEN.