Jan. 15, 1929. 1,699,295

J. M. KELLER

AUXILIARY CENTERING CHUCK

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Fig. 2.

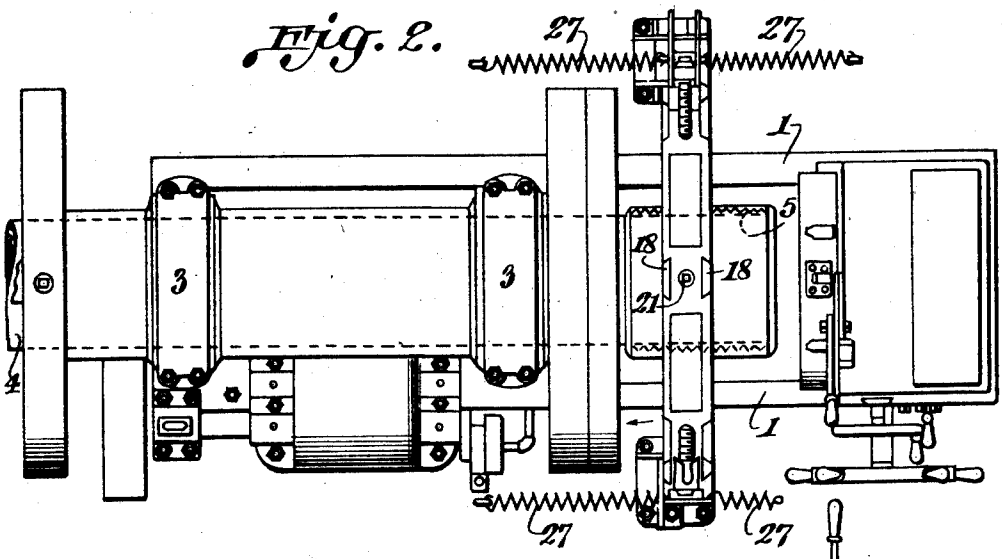
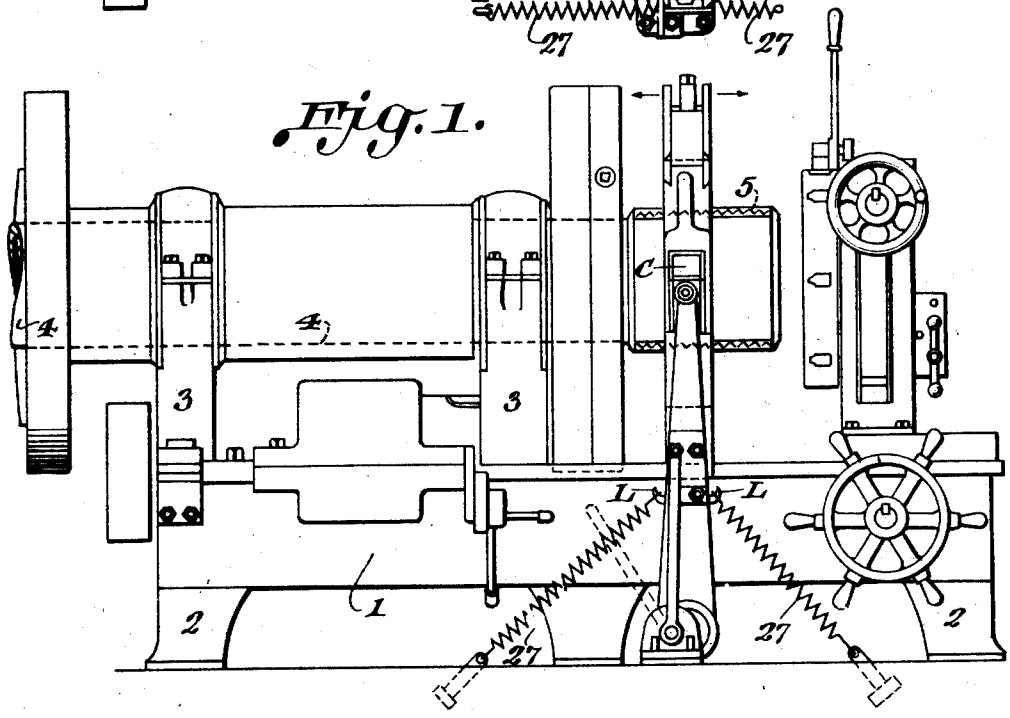


Fig. 1.



Inventor,
Joseph M. Keller.

by Victor J. Evans,
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Fig. 6.

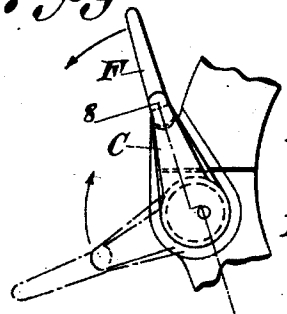


Fig. 8.

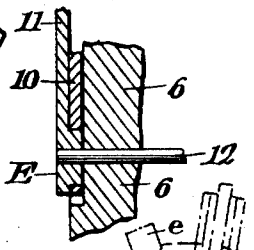


Fig. 7.

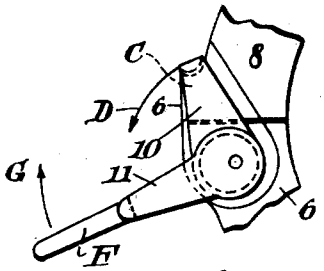


Fig. 4.

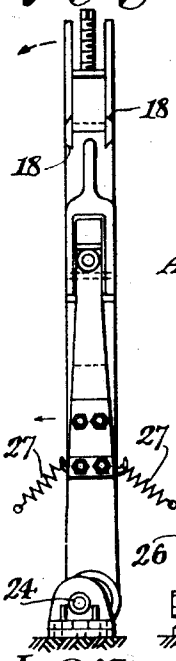


Fig. 3.

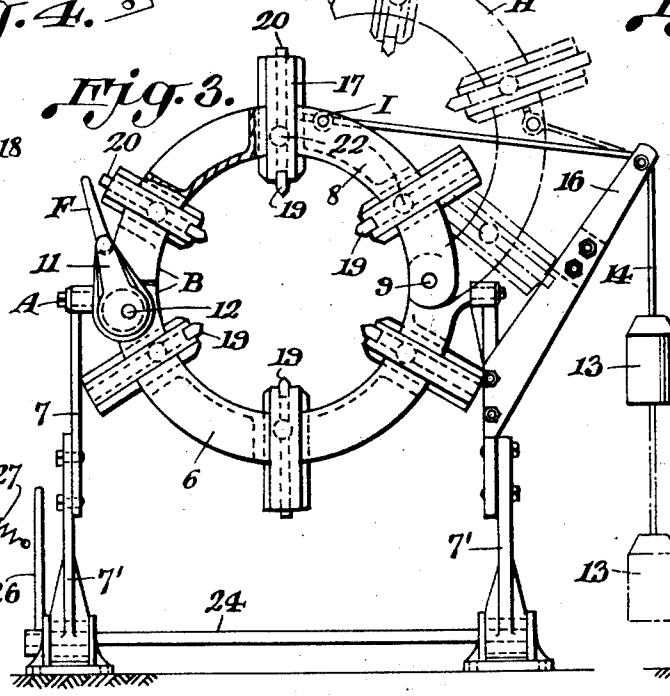


Fig. 5.

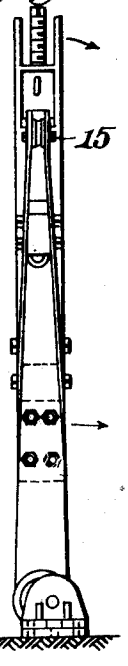


Fig. 9.

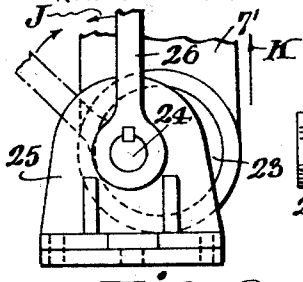
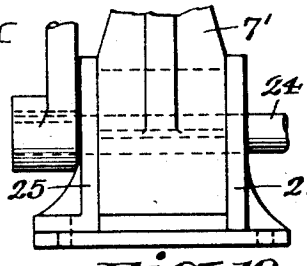


Fig. 10.



Inventor,
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Patented Jan. 15, 1929. 1,699,295

UNITED STATES PATENT OFFICE.

JOSEPH M. KELLER, OF KAW, OKLAHOMA.

AUXILIARY CENTERING CHUCK.

Application filed April 12, 1926. Serial No. 101,411.

My invention relates to means for applying and removing couplings and the like to and from pipes and the like and its general object is to provide a device of this character that cooperates with a metal working lathe.

The primary object of my invention is to provide a simple and effective means for holding a coupling commonly used for connecting pipe lines, from rotating when removal or application thereof from and to a pipe is required.

A further object of my invention is to provide an auxiliary chuck that is easily centered and can be expeditiously associated with the coupling.

A still further object of my invention is to provide adjustable means for attaching the chuck to the coupling.

Another object of my invention is to provide a counter-balancing means for assisting in opening the jaws of the chuck.

These and other objects will hereinafter be more fully explained.

Referring to the drawings:

Figure 1 is a side elevation of a lathe adapted for threading pipes, and illustrates the application of the device forming the subject matter of the present invention thereto.

Figure 2 is a top plan view thereof.

Figure 3 is a side view of my device per se.

Figure 4 is a view taken at right angles to Figure 3 and illustrates one edge of the device.

Figure 5 is a similar view of the opposite edge.

Figure 6 is an enlarged detail view of the locking means for the jaws.

Figure 7 is a similar view showing the position of the lever for the locking means when the jaws are in locked position.

Figure 8 is a fragmentary sectional view taken approximately on line 8—8 of Figure 6, looking in the direction of the arrows.

Figure 9 is a side elevation of the eccentric carrying means for the standards.

Figure 10 is a view taken at right angles to Figure 9.

In Figures 1 and 2 is shown a lathe bed 1 supported by legs 2. Vertically positioned on the bed are bearings 3 carrying a supporting means for a pipe 4, and means for rotating said pipe in said supporting means. The pipe is shown as being provided with a coupling 5 which is threaded on one end.

In many cases the coupling has become rusted to the pipe and is difficult to remove therefrom, and also to place the couplings thereon, should the threads on the coupling and the pipe be rusted or mutilated. In such cases it is impossible to use ordinary standard pipe tongs that are manually operated, therefore I have provided an auxiliary centering chuck comprising a jaw 6 pivotally carried on standards 7 as at A. A jaw 8 has one end pivotally secured to one end of the jaw 6 as at 9 and the free ends of these jaws cooperate and are designed for registration as at B. The jaw 8 is provided with an outwardly extending lip C which is adapted for receiving a yoke 10 for a purpose hereinafter described. Rockably mounted on the jaw 6 is the yoke 10 which is operated through the medium of a pivotally connected yoke 11 and is adapted to rock in the direction indicated by the arrow D; the said yoke 10 having an aperture in each end thereof to receive the bosses E on the ends of the arms of said yoke 11; the said yoke 11 having a handle F centrally positioned thereon for operating the same. The yokes are pivoted to the jaw 6 by pins 12 eccentrically mounted in the bosses and when the yoke 11 is rocked upwardly as indicated by arrow G, the yoke 10 will release its tension on the lip C, then by rocking yoke 10 outwardly as indicated by arrow D, the jaw 8 will swing upwardly and rearwardly as indicated by dotted lines H in Fig. 3.

As a convenient means for raising the upper jaw I have provided a counter weight 13 suspended by a cable 14 which is attached to said jaw 13 as shown at I and travels on a sheave 15 which is rotatably mounted between the ends of arms 16; said arms being rigidly attached to one of the standards as shown. On jaws 6 and 8 are radially positioned substantially U-shaped frames 17 having their arms slidably engaging in dove-

tailed slots formed in the jaws as shown at 18 in Fig. 2. Positioned on the inner face of the frames are toothed members 19 which are mounted for slidable movement therein and are removable for the purpose of being sharpened or replaced should the teeth become broken. The members 19 are adapted to cut into the metal of the coupling for holding it rigid while the pipe is being rotated. The said frames are adjusted radially by means of screws 20 slidably mounted through bores formed in the jaws and the screws are threaded through a cylindrical member 22 transversely positioned through the jaws.

The standards 7 are composed of two parts, the lower parts being indicated by the reference numeral 7′ and terminating in bearings trunnioned on rollers 23; the said rollers being rotated by a shaft 24 which is eccentrically positioned therein as shown in Fig. 9, and the ends thereof are rotatably mounted in bearings 25 which are rigidly attached to the floor. On the outwardly extending end of the shaft is a lever 26 rigidly attached thereto, and by rocking said lever the chuck is raised or lowered. When rocked in the direction as indicated by arrow J the standard will travel in the direction indicated by arrow K; this rocking movement is necessary when the lathe is removing the coupling for the reason that the travel of the coupling horizontally will carry with it the chuck rocking the standards out of their vertical positions, and in order that the chuck may travel horizontally with the coupling the eccentric must be turned simultaneously with the travel thereof for supplying the deficiency of the standard's length as the coupling is removed. It will also be understood that the eccentric feature is employed when a vertical movement is required to center the chuck on the coupling.

As a means for vertically supporting the standards I have provided springs 27 which have one of their ends attached to the floor and their opposite ends secured to the standards as at L; the said springs will normally retain the chuck in an upright position and allow the standards to rock while the chuck is being carried horizontally by the threaded action of the coupling.

From the above description and disclosure of the drawings, it will be obvious that I have provided a novel device for removing and applying couplings, joints and the like from and to pipes and the like, in an easy and expeditious manner with very little effort and in the operation of the device, when it is desired to remove the coupling from the pipe as shown, the pipe is mounted in the bearings 3 and the jaws are secured in applied position with the teeth in biting engagement with the coupling, the lathe is then put into operation for rotating the pipe and the coupling will be removed as will be apparent.

Such modifications may be employed as lie within the scope of the appended claims.

Having thus described my invention, what I claim as new and desire to secure by Letters Patent is:

1. In an auxiliary centering chuck, a device adapted to work in conjunction with a lathe for applying and removing pipe couplings, comprising a pair of arcuate shape jaws pivotally connected together at one end, a plurality of frames radially positioned on said jaws, toothed members carried by said frames, screw means for adjusting the frames, a clamping means for securing said jaws in closed position, a pair of standards pivotally engaging one of said jaws, floor bearings for said standards, eccentrically mounted rollers for said standards and being trunnioned in said bearings, means to rotate said rollers to allow for the horizontal travel of the jaws, a counter-balancing means for one of said jaws, and means to support the counterbalancing means from the standard adjacent the pivot for said jaws.

2. In an auxiliary centering chuck, a pair of arcuate shaped jaws pivotally connected together at one end and being provided with a plurality of dove-tailed slots radially disposed on both sides thereof, U-shaped frames slidably mounted in said slots, a pipe fitting gripping tooth for each frame and being removably position in the inner end thereof, screw means carried by said jaws for adjusting said frames radially thereof, a pair of standards including pivoted parts and being pivotally secured to the lower jaw, eccentric bearings for the lower ends of the standards, means to rotate said bearings, a yoke eccentrically pivoted to the lower jaw adjacent its free end, a yoke carried by the yoke first mentioned, a lip extending from the other jaw and being adapted to receive the last mentioned yoke for securing the jaws in operative position, arms secured to one of said standards, a sheave wheel journaled between the outer ends of said arms, a cable trained about the sheave wheel and attached to the upper jaw, and a weight secured to said cable and operating as a counter-balance for the upper jaw.

3. A device of the character described comprising a pair of arcuate shape jaws pivotally connected together at one end, a pair of standards pivotally supporting said jaws, eccentrically mounted roller bearings for said standards, a bearing for each roller bearing and being rigidly secured to a floor, springs obliquely extending from the sides of each of said standards for normally supporting the standards in a vertical position, frames slidably mounted on the jaws and being adjustable radially with respect thereto, a tooth secured to and inwardly extend-

ing from each frame, screws carried by said jaws for adjusting the frames, an eccentric yoke pivotally connected to one jaw, a second yoke trunnioned on the first mentioned yoke and being actuated thereby, an outwardly extending lip on the other jaw for receiving the last mentioned yoke to hold the jaws in closed position, a counter-balancing means supported by one of said standards and being adapted to move the last mentioned jaw to open position and retain the same accordingly.

JOSEPH M. KELLER.