Mar. 3, 1925. 1,528,694

R. D. RILEY

PIPE AND ROD BENDING MACHINE

Filed Dec. 31, 1921 2 Sheets-Sheet 1

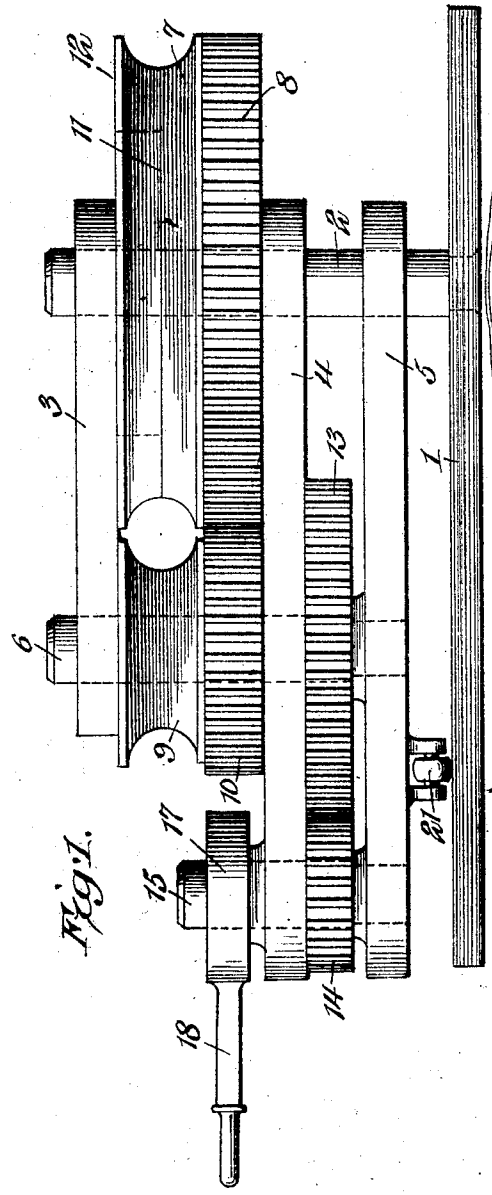


Fig. 1.

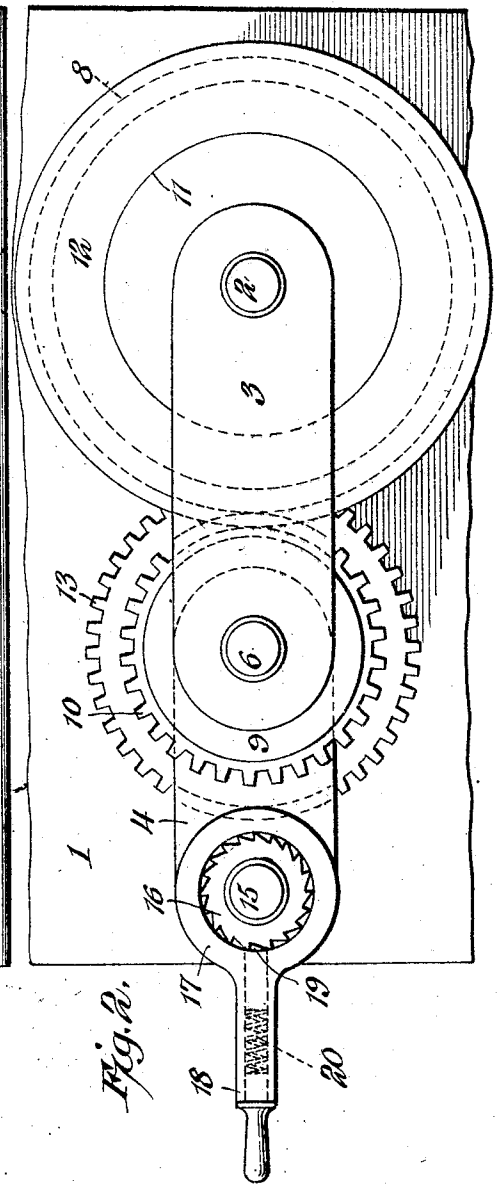


Fig. 2.

Robert D. Riley INVENTOR,
BY
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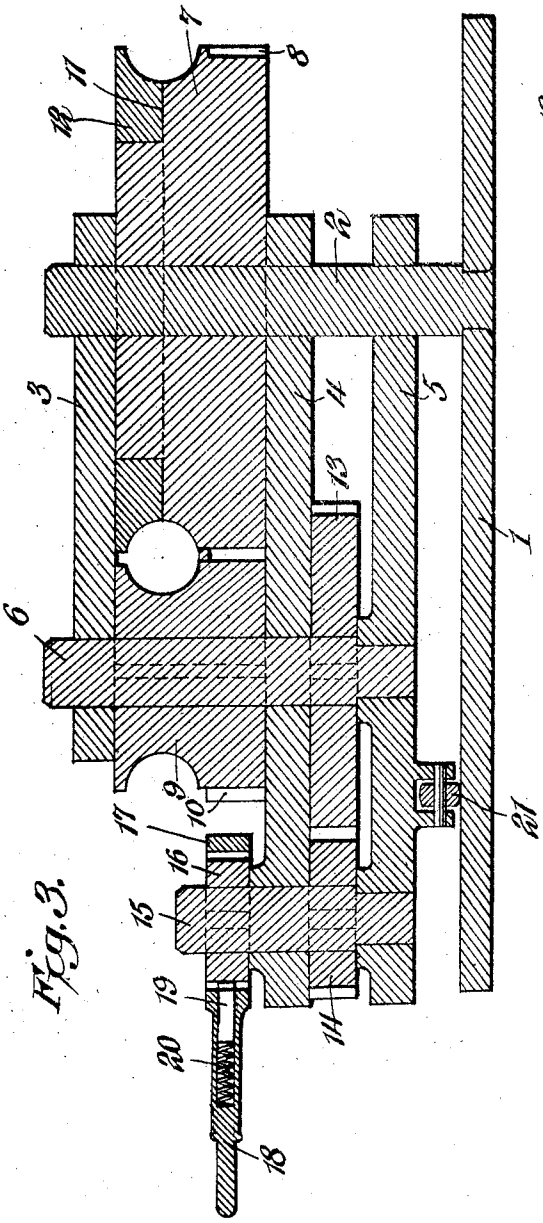


Fig. 3.

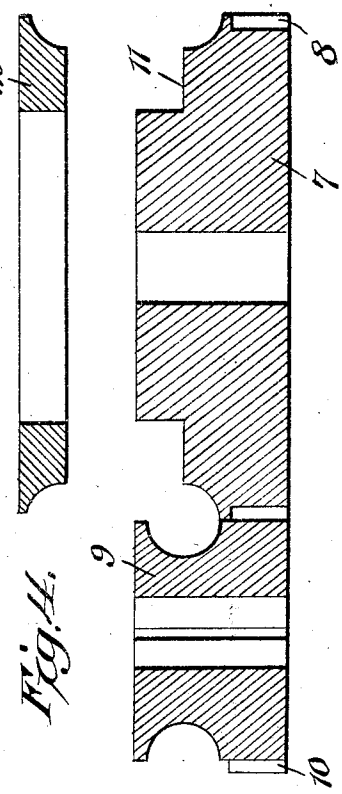


Fig. 4.

INVENTOR,
Robert D. Riley
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ATTORNEYS.

Patented Mar. 3, 1925. 1,528,694

UNITED STATES PATENT OFFICE.

ROBERT D. RILEY, OF NEW ORLEANS, LOUISIANA, ASSIGNOR OF THIRTY-FIVE ONE-HUNDREDTHS TO LOUIS F. ZEIGLER, OF NEW ORLEANS, LOUISIANA.

PIPE AND ROD BENDING MACHINE.

Application filed December 31, 1921. Serial No. 526,357.

To all whom it may concern:

Be it known that I, ROBERT D. RILEY, a citizen of the United States, residing at New Orleans, in the parish of Orleans and State of Louisiana, have invented new and useful Improvements in Pipe and Rod Bending Machines, of which the following is a specification.

My present invention pertains to pipe bending machines and the like, and it contemplates the provision of means whereby pipe or like material may be easily and expeditiously bent and this with but a slight amount of effort on the part of the operator.

The invention further contemplates the provision in a bending machine of means whereby the material operated upon may be quickly and readily inserted in the machine, and the work or finished product easily removed.

The invention further contemplates the provision of a machine for the purpose set forth that is simple in construction, inexpensive to produce, and well able to withstand the rough usages to which machines of similar character are ordinarily subjected.

The invention in all of its details will be fully understood from the following description and claims, when the same are read in connection with the drawings, accompanying and forming part of this specification, in which:

Figure 1 is a side elevation of my novel bending machine.

Fig. 2 is a top plan view thereof.

Fig. 3 is a longitudinal sectional view of the machine.

Fig. 4 is a detailed sectional view of one of the sheaves and showing the removable portion thereof and the figure also shows the small sheave of the machine.

Similar numerals of reference designate corresponding parts in all of the views of the drawings:

My device comprises a bed-plate 1 and riveted to the plate is the main shaft 2 and secured to the upper end of the shaft is a cross-plate 3. The shaft 2 is journaled in the bar 3 and this bar is journaled to the intermediate plate or bar 4 as well as the lower cross-bar or plate 5.

Journaled in the plates 3, 4 and 5 is a shaft 6 and secured to the shaft 6 is a sheave 9 that is provided with the pinion 10. This pinion is preferably keyed on the shaft 6 and on the underside of the sheave 9.

By reference to Figure 1 in particular, it will be manifest that I provide on the shaft 2 the large sheave 7 and the said sheave is keyed or otherwise secured to the shaft 2, and mounted beneath the sheave 7 is the large toothed wheel 8 that is adapted to mesh with the pinion 10 of the shaft 6. The wheel 8 is fixed to shaft 2. The sheave 7 is provided on its upper end with a kerf or recess 11 into which seats the removable upper portion 12 that goes to make up the large sheave 7 and because of this provision, the finished work may be readily removed from the machine when occasion demands.

Mounted in one end of the cross-bars or plates 4 and 5 is a rotatable shaft 15 and at the upper end of the shaft 15 I provide thereon a collar 17 having the interior rack teeth 16. The collar 17 terminates in a handle or lever 18 and arranged in the handle 18 is a spring 20 for placing the pawl 19 under tension. The pawl 19 acts on the teeth of the shaft 15 and prevents retrograde rotation of the shaft when in inoperative positions and also permits of assisting in the stoppage of the shaft when occasion demands.

Secured by preference in a keyed manner on the shaft 15 is a toothed pinion 14, that meshes with the teeth of a large wheel 13 that is arranged on the shaft 6 below the lower cross plate 4 of the machine, and arranged on the underside of the plate 5 is a roller 21 that meets and bears on the bed plate 1 and relieves strain on the mechanism when the machinery is in operation. Wheel 13 is keyed on shaft 6.

In the practical operation of the machine the pipe is fed into the sheave 12, and the lever 18 is moved to operate the ratchet 16 that is keyed on the shaft 15, causing the pinion 14 to operate in wheel 13 that rolls the entire machine on the pulley 21 at the bottom of the machine. The entire machine moves around the shaft 2.

It will be gathered from the foregoing that the invention is simple and inexpensive to produce and comprises no delicate parts such as are liable to become inoperative after a short period of use.

I would distinctly have it understood that

I reserve to myself the right to make such changes or alterations in the relative arrangement of parts and construction thereof in the future practice of the invention, as fairly fall within the scope of the claims appended.

I would have it understood that the usual clamp or stop is mounted on the base for holding the end of the pipe.

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

1. In a machine for the purpose set forth, the combination of a base plate, a stationary shaft riveted in the base plate, a gear keyed to the shaft, a sheave keyed to the shaft, cross-plates rotatably secured to the shaft, a shaft arranged adjacent the first shaft and journaled in the cross-plates, a gear secured to the last-named shaft, a sheave secured to the last shaft and also a pinion secured to said shaft and adapted to mesh with the teeth of the gear of the first-named shaft, a third shaft secured to and journaled in several of the cross-plates, a ratchet lever adapted to control rotation of the third-named shaft, and a pinion secured to the third-named shaft and adapted to mesh with the teeth of the second-named gear.

2. In a machine for bending pipe and the like, the combination of a base plate, a stationary shaft riveted to the base plate, a sheave having a removable end keyed to the shaft; a shaft arranged adjacent the first-named shaft, and a third shaft arranged adjacent the first-named shafts, means for moving some of the shafts around the stationary shaft.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

ROBERT D. RILEY.

Witnesses:

WILLIAM GRUBER,

AUG. LEVERT.