F. B. GIST.

SAFETY PIPE GRIP.

APPLICATION FILED FEB. 10, 1914.

1,190,146. Patented July 4, 1916.

Fig. 1.

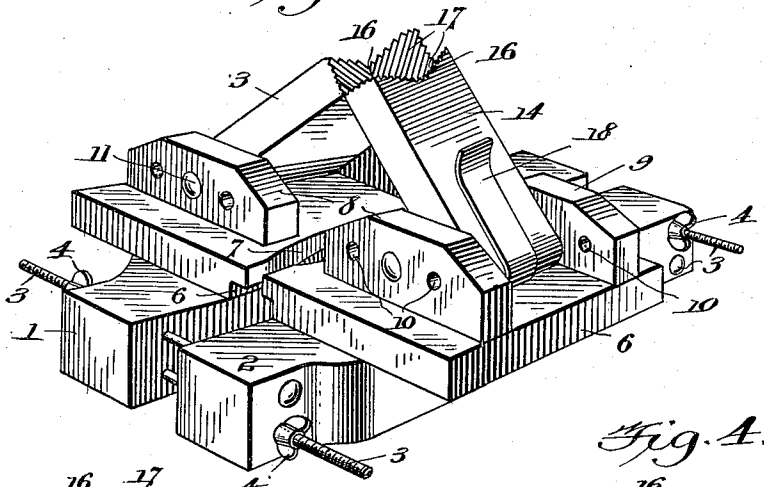


Fig. 3.

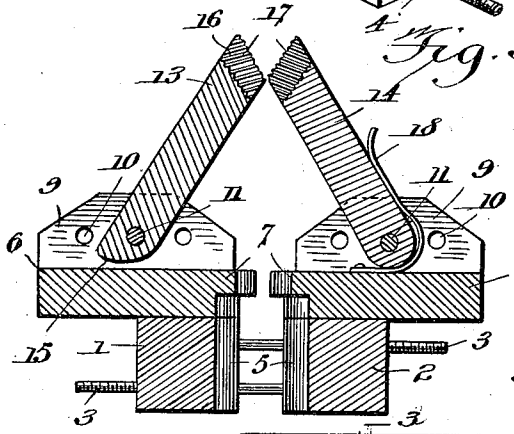


Fig. 4.

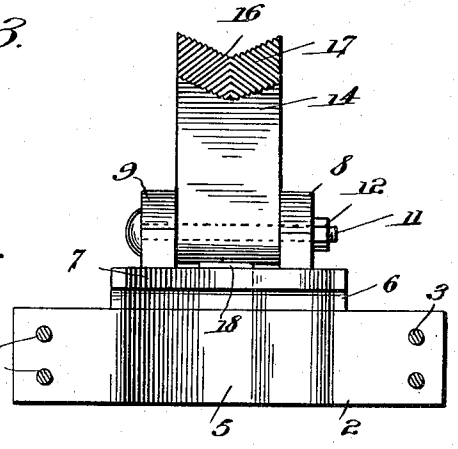
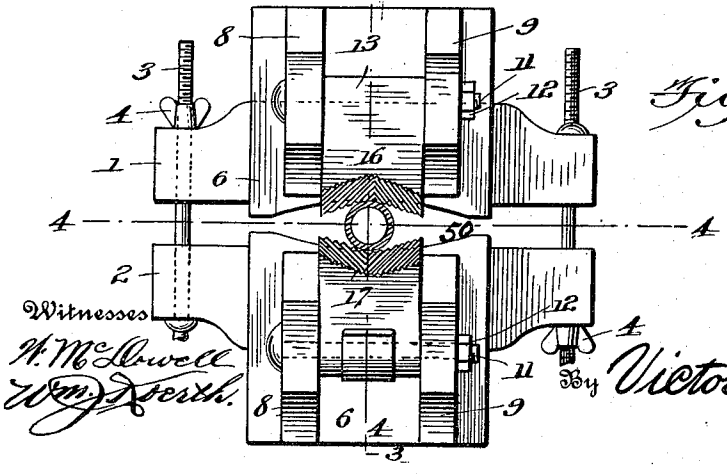


Fig. 2.



Witnesses

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UNITED STATES PATENT OFFICE.

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SAFETY PIPE-GRIP.

1,190,146. Specification of Letters Patent. Patented July 4, 1916.

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To all whom it may concern:

Be it known that I, FELTA B. GIST, a citizen of the United States, residing at Brownfield, in the county of Terry and State of Texas, have invented new and useful Improvements in Safety Pipe-Grips, of which the following is a specification.

The present invention relates to devices for gripping tubes or cylinders to hold the same against movement in one direction, and is more particularly devised for use in connection with well drilling or sinking operations, and the improvement resides in the construction, combination and operative arrangement of parts set forth in the following specification and falling within the scope of the appended claim.

In the drawing: Figure 1 is a perspective view of the improvement, Fig. 2 is a top plan view of the same, Fig. 3 is a sectional view approximately on the line 3—3 of Fig. 2, and Fig. 4 is a transverse section on the line 4—4 of Fig. 2.

In carrying out my invention I provide two base sections 1 and 2 respectively, both of a similar construction and both being provided, adjacent their outer edges, with registering openings arranged in pairs, one above the other. By adjusting the nut 4, the companion sections 1 and 2 may be moved toward or away from each other as occasion requires and by providing each of the ends of the base members with two bolts 3, the same are connected without danger of lateral movement of one of said members with relation to the other. The wing nut 4 is adapted to engage the bolts 3 in a well known manner. Each of the base members has its inner or opposite face centrally provided with a rounded depression 5, and each of the members has centrally secured upon its upper face, a block 6. These blocks have their lower inner or adjacent faces depressed to provide the upper inner faces with lips 7 which are curved inwardly or are centrally concaved. The blocks have their upper faces, adjacent their longitudinal edges formed with vertically disposed ears 8 and 9 respectively, the said ears being of a length almost equaling the width of the block upon which it is formed, and the spaced ears are provided with a plurality of registering openings 10, and passing through two of said openings in each of the pairs of ears is a pintle in the nature of a bolt 11, the said bolt being sustained upon the ears through the medium of nuts 12. Arranged between each pair of ears upon each of the blocks is a gripping jaw, the jaw upon the block arranged upon the base 1 being designated by the numeral 13, while the second jaw upon the base section 2 is designated by the numeral 14. Each of the jaws is of a width equaling the space between the ears to which it is connected, the inner faces of the ears providing abutment walls which, engaging with the opposite sides of the jaws, prevent a lateral movement of the jaws. The jaw 13 has its end, below its pivot 11, arranged angularly of its longitudinal plane, as indicated by the numeral 15, and the said angular end is adapted to abut with the block 13 to limit the outward movement of the said jaw upon the block 7. Each of the jaws has its upper edge provided with a substantially V-shaped mouth 16, the opposite walls of the mouths being formed with diagonally disposed teeth 17.

The jaw 14 has its lower pivoted end rounded so that the rotary movement of the same is not restricted by the block 6, said rounded end being arranged out of the path of contact with the said blocks, and arranged between the said rounded end of the jaw 14 and the block 6 is the curved end of a flat spring 18, the opposite end of said spring bearing against the rear face of the jaw 14 to swing the said jaw toward the jaw 13.

In the application of my device, the base sections 1 and 2 are moved away from each other upon the bolts 3 a sufficient distance to permit of their rounded depressions 5 being received upon the opposite sides of the well casing, the lips 7 also engaging the said casing. The nuts 4 are then adjusted so that the base of the block members 1 and 2 are brought and held in tight frictional engagement with the casing. Suitable mechanism is provided for engaging the well tube to withdraw the same from the casing, the space between the lip 7 being sufficient to permit of the free operation of the said tube, which is shown in Fig. 3 of the drawing, and indicated by the numeral 50. The jaws 13 and 14 have their substantially V-shaped engaging faces which are provided with teeth 17 gripping upon the opposite sides of the pipe or tube 50 to permit of the said tube being drawn in an upward direction without danger of the same slipping down-

wardly within the casing when a fresh grip is obtained by the lifting mechanism (not shown).

When it is desired in inserting the pipe within the casing to attach an additional length of pipe, the jaws 13 and 14 are brought to engage and to securely hold against rotation the lower section of the pipe, or the pipe which is already partly inserted within the casing. The second length of pipe may be then easily and quickly screwed to the first mentioned length and this process may be repeated until all of the sections are connected, it being understood that the jaws are swung out of engagement with the sections of pipe to be lowered within the casing until the said sections are sufficiently lowered to receive an additional pipe section.

From the above description, taken in connection with the accompanying drawing, the simplicity of the device as well as the advantages thereof will, it is thought, be perfectly apparent to those skilled in the art to which such invention appertains without further detailed description.

Having thus described the invention, what I claim is:

In a device of the class described, in combination, a pair of blocks, a pair of ears integrally disposed upon each of said blocks substantially throughout their width, said pair of blocks being formed with a longitudinal spaced apart series of openings in registration, a pair of gripping jaws, pivots connecting each pair of said ears and adapted for insertion in any of said openings, said jaws being fulcrumed upon said pivots, one of said gripping jaws being formed adjacent said blocks with an inwardly beveled edge disposed contiguous to said block, each of said jaws being formed at its outer gripping end with an outwardly beveled transverse V-shaped edge, said V-shaped edges being formed with oppositely sloping teeth, another of said gripping jaws being formed adjacent said block with an arcuate edge, a flat spring bearing flat upon one of said blocks and secured thereto, said spring being curved under and around the arcuate edge of said gripping jaw and having a terminal arranged to press against said jaw to hold it biased, said other gripping jaw arranged at a bias to contact said remaining gripping jaw.

In testimony whereof I affix my signature in presence of two witnesses.

FELTA B. GIST.

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