No. 803,231. PATENTED OCT. 31, 1905.

E. HUNTLEY.

PIPE WRENCH.

APPLICATION FILED AUG. 15, 1904. RENEWED SEPT. 20, 1905.

Fig. 1

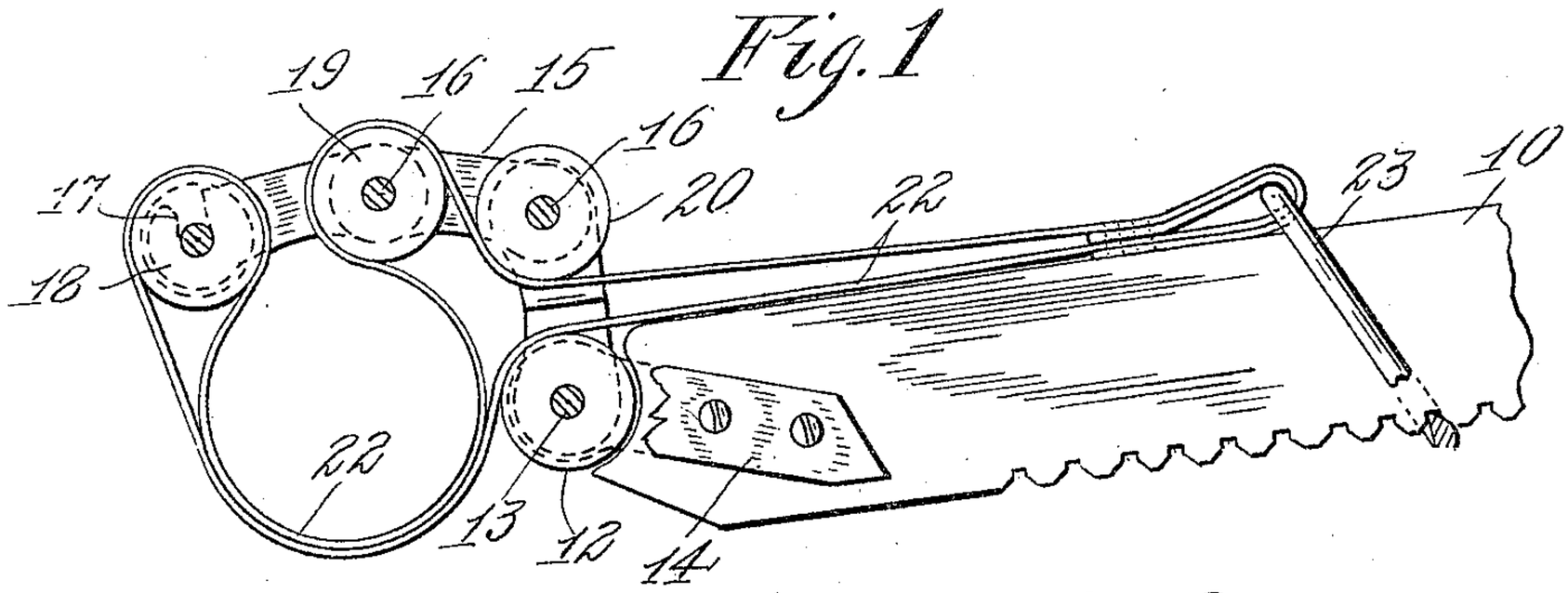


Fig. 2

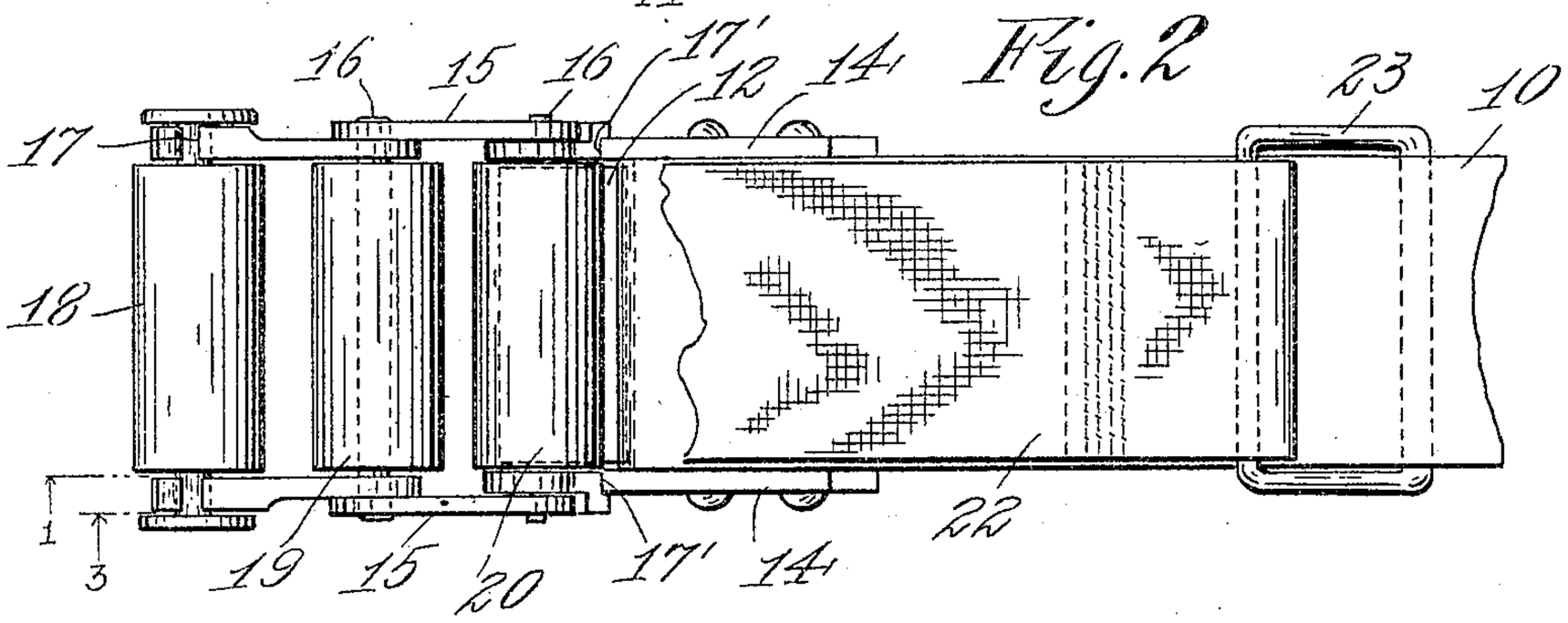


Fig. 3

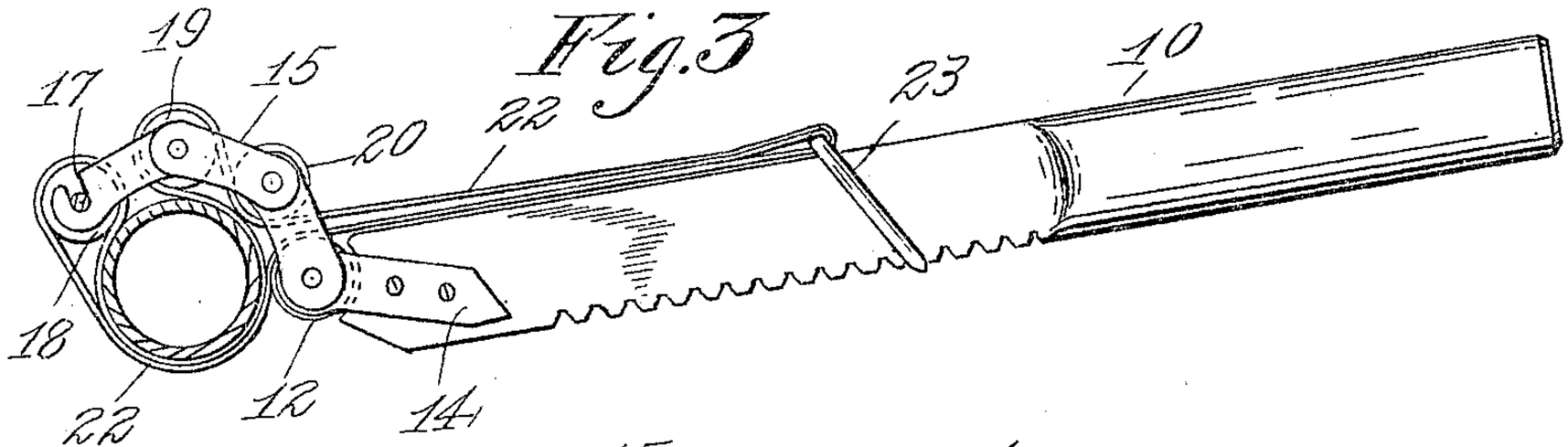
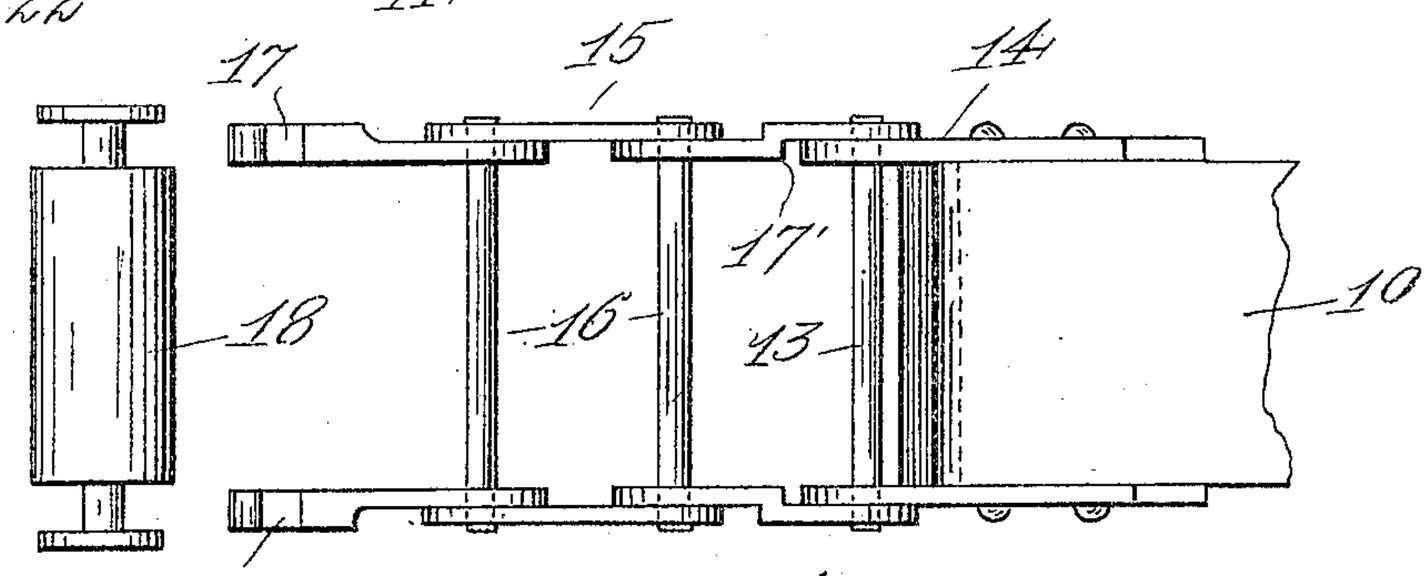


Fig. 4



Witnesses
Paul A. Talbot
Arlita Adams

Inventor
Elijah Huntley
By his Attorney Frank E. Adams

UNITED STATES PATENT OFFICE.

ELIJAH HUNTLEY, OF SEATTLE, WASHINGTON.

PIPE-WRENCH.

No. 803,231. Specification of Letters Patent. Patented Oct. 31, 1905.

Application filed August 15, 1904. Renewed September 20, 1905. Serial No. 279,313.

To all whom it may concern:

Be it known that I, ELIJAH HUNTLEY, a citizen of the United States of America, and a resident of the city of Seattle, in the county of King and State of Washington, have invented certain new and useful Improvements in Pipe-Wrenches, of which the following is a specification.

My invention relates to improvements in adjustable wrenches especially adapted for gripping pipe, and has for its object to provide a simple and inexpensive wrench of the above nature which can be readily adjusted and which shall be capable of taking a positive and powerful grip on a pipe without danger of marring the same.

The above-mentioned and other desirable objects are attained by the construction, combination, and arrangement of parts as disclosed on the accompanying drawings, set forth in this specification, and pointed out in the appended claims.

With reference to the drawings filed herewith and bearing like reference characters for corresponding parts throughout, Figure 1 is a side view of the head end portion of the wrench shown in partial section on line 1 of Fig. 2. Fig. 2 is a plan view of said head end portion, shown with a part of the gripping member removed. Fig. 3 is a side view of the wrench engaging a pipe and shown with the axle of the outer bearing-roller in transverse section on line 3 of Fig. 2. Fig. 4 is a plan view of the flexible support and head end of the handle with the bearing-rollers removed and shows the outer roller adjacent the support.

The invention includes a handle, as 10, the rear end portion of which is suitably formed to provide a handhold, and the under surface of the head end portion thereof is provided with transversely-disposed teeth which are approximately V-shaped in cross-section. At the head end of this handle is a forwardly-projecting nose consisting of a roller 12, supported by an axle 13, mounted on opposite lugs 14, conveniently connected with the handle and projecting forwardly therefrom.

Attached to the head end of handle 10 is a forwardly-extending support consisting of opposite flexible section 15, swingingly engaged at one end with the axle 13 and each composed of three links, the intermediate one of which is pivotally connected with the end links by means of pins 16, which extend across the support. The forward links of these sections are provided with journal-notches, as 17, in the upper edge adjacent the outer end, while the rear links are provided intermediate their ends with inwardly-projecting shoulders 17′, adapted to contact the upper edges of lugs 14 when the handle is swung in one direction, as will be later understood.

Mounted on the support are bearing members 18, 19, and 20, spaced apart and fitting between the sections 15, and the forward one, 18, of which is provided with stub-axles removably fitting in the notches 17 of the outer links and having collars at the outer ends which afford broad bearing-surfaces for the thumb and forefinger in removing and replacing the roller. The intermediate and rear roller 19 and 20 are rotatably engaged with the pins 16, being formed with suitable longitudinally-disposed apertures to receive the same.

Reference-numeral 22 indicates a flexible gripping member, preferably consisting of a strap of suitable length composed of strong textile material, such as webbing or ducking, and connected with this member is a catch 23, comprising a link of open form and of suitable size to receive the handle of the wrench freely. The lower bar of this link is beveled as viewed in cross-section, (see Fig. 1,) so as to provide a tapering tooth on the link which will readily engage in the grooves between the teeth on the handle, and the upper bar thereof is connected with both ends of the strap 22, the end portions of which are looped about said bar and fastened to the main portions in any suitable manner, whereby the said catch and teeth serve to adjustably connect the gripping member with the handle.

In placing the gripping member in the wrench it is folded upon itself, and the upper portion is passed over the intermediate bearing member, and the free ends of both portions are passed between the nose on the handle and the rear bearing member and fastened to the catch, as heretofore stated.

When desired to apply the wrench, the forward bearing member is removed from the support and placed in the gripping member at the point of fold, the catch is slipped forwardly on the handle, and the wrench is placed with the nose of the handle pressing both portions of the gripping member against the article to be gripped, the support passing over the article as viewed in Fig. 1. The said bearing member is then grasped endwise

between the thumb and forefinger, and the folded end of the gripping member is passed beneath and about the article and the said bearing member then engaged in the journal-notches of the support. The slack in the gripping member is then taken up by shifting the catch rearwardly on the handle, which is inclined upwardly and outwardly from the article as viewed in Fig. 3.

In operating the wrench to turn the article the rear end of the handle is forced downwardly, the axle of the nose thereof acting as a fulcrum and the strain thus imposed on the handle serving to draw the gripping member more tightly about the article as the angularity of the handle changes. If desired, the handle can be forced in the opposite direction to turn the article, the lugs 14 on said handle contacting with the shoulders 17′ on the support and changing the point of fulcrum to the axle-pin of the rear bearing member.

By swingingly connecting the handle with the support it can be swung to the desired angle to permit of the catch being adjusted to more freely take up the slack in the gripping member in applying the wrench, and, furthermore, this connection insures the handle drawing the gripping member tightly about the article in operating the wrench. By making the support for the bearing members flexible the wrench is adapted for gripping articles of various sizes and forms, and by rendering the bearing members and nose rotatable the gripping member is more readily drawn tightly about the article and a more perfect action of the wrench thereby attained.

This wrench is simple and inexpensive of construction, can be readily adjusted and applied, and is capable of taking a positive and powerful hold on an article without danger of mutilating the same.

It will be understood that I do not limit myself to the exact form and construction of parts as shown, as various modifications can be made therein without departing from the spirit of the invention.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent of the United States of America, is—

1. A pipe-wrench comprising a handle, a support swingingly connected therewith, a flexible gripping member, bearing members for said gripping member on said support, and means to connect said gripping member with said handle.

2. A pipe-wrench comprising a handle, a flexible support connected therewith, a flexible gripping member, bearing members on said support for said gripping member, and means to connect said gripping member with the handle.

3. A pipe-wrench comprising a handle, a rotatable nose thereon, a support movably connected with said handle, a flexible gripping member, bearing members on said support for said gripping member, and means to connect said gripping member with said handle.

4. A pipe-wrench comprising a handle, a support swingingly connected therewith, a bearing member on said support, a rotatable bearing member on said handle, a flexible gripping member passing over both of said bearing members, and means to connect said gripping member with said handle.

5. A pipe-wrench comprising a handle, a support connected therewith, and consisting of pivotally-connected links, a flexible gripping member, bearing members for said gripping member on said support, and means to adjustably connect said gripping member with the handle.

6. A pipe-wrench comprising a handle, a support connected therewith and consisting of opposite flexible sections, a flexible gripping member, bearing members for said gripping member mounted on said support between the sections thereof, and means to adjustably connect said gripping member with the handle.

7. A pipe-wrench comprising a handle, a support comprising opposite sections swingingly connected with said handle, a flexible gripping member, bearing members for said gripping member mounted on said support between the sections thereof, and means to adjustably connect said gripping member with the handle.

8. A pipe-wrench comprising a handle, a support swingingly connected therewith, means on said support to limit the swing of said handle in one direction, a flexible gripping member, bearing members for said gripping member mounted on said support, and means to connect said gripping member with the handle.

9. A pipe-wrench comprising a handle, a support movably connected therewith, a flexible gripping member, bearing members for said gripping member on said support, one of said bearing members being removably mounted on the support, and means to connect said gripping member with the handle.

10. A pipe-wrench comprising a handle, a support swingingly connected therewith and composed of opposite sections consisting of pivotally-connected links, a flexible gripping member, rotatable bearing members for said gripping member disposed between said sections, and means to adjustably connect said gripping member with the handle.

11. A pipe-wrench comprising a handle, a support swingingly connected therewith and composed of opposite flexible sections each including a rear link, a forward link, and an intermediate link, a flexible gripping member, rotatable bearing members for said gripping member disposed between said sections adjacent the ends of the intermediate links and the free ends of the forward links, and means to adjustably connect said gripping member with the handle.

12. A pipe-wrench comprising a handle, a rotatable nose thereon, a support swingingly connected with said handle and composed of opposite flexible sections each including a rear link, a forward link and an intermediate link, a flexible gripping member, rotatable bearing members disposed between said sections adjacent the ends of the intermediate links and the free ends of the forward links, and means to adjustably connect said gripping member with the handle.

13. A pipe-wrench comprising a handle, a movable support connected therewith, bearings on said support including a forward member, a rear member, and an intermediate member, a flexible gripping member engaged with said forward member and passing over said intermediate member and beneath said rear member, and means to connect said gripping member with the handle.

14. A pipe-wrench comprising a handle, a support connected therewith, bearings on said support including a forward member, a rear member and an intermediate member, a flexible gripping member folded upon itself and passing beneath said rear member and receiving said forward and intermediate members between its portions, and means to adjustably connect said gripping member with the handle.

15. In a pipe-wrench, the combination with a handle, of a support swingingly connected therewith, a flexible gripping member, a bearing member for said gripping member on said support, and means to connect said gripping member with said handle.

16. In a pipe-wrench, the combination with a handle, of a support swingingly connected therewith, a flexible gripping member, means to connect said member with said support, and means to connect said member with said handle.

17. In a pipe-wrench the combination with a handle, of a rotatable nose thereon, a support swingingly connected with said handle, a flexible gripping member connected at one end with said handle, and means to detachably connect the other end of said member with said support.

18. In a pipe-wrench the combination with a handle, of a flexible support connected therewith, a flexible gripping member, means to connect said member with the support, and means to connect said member with said handle.

Signed at Seattle, Washington, this 4th day of August, 1904.

ELIJAH HUNTLEY.

Witnesses:
WILLIAM J. HEITESHU,
EDWARD MORRIS.