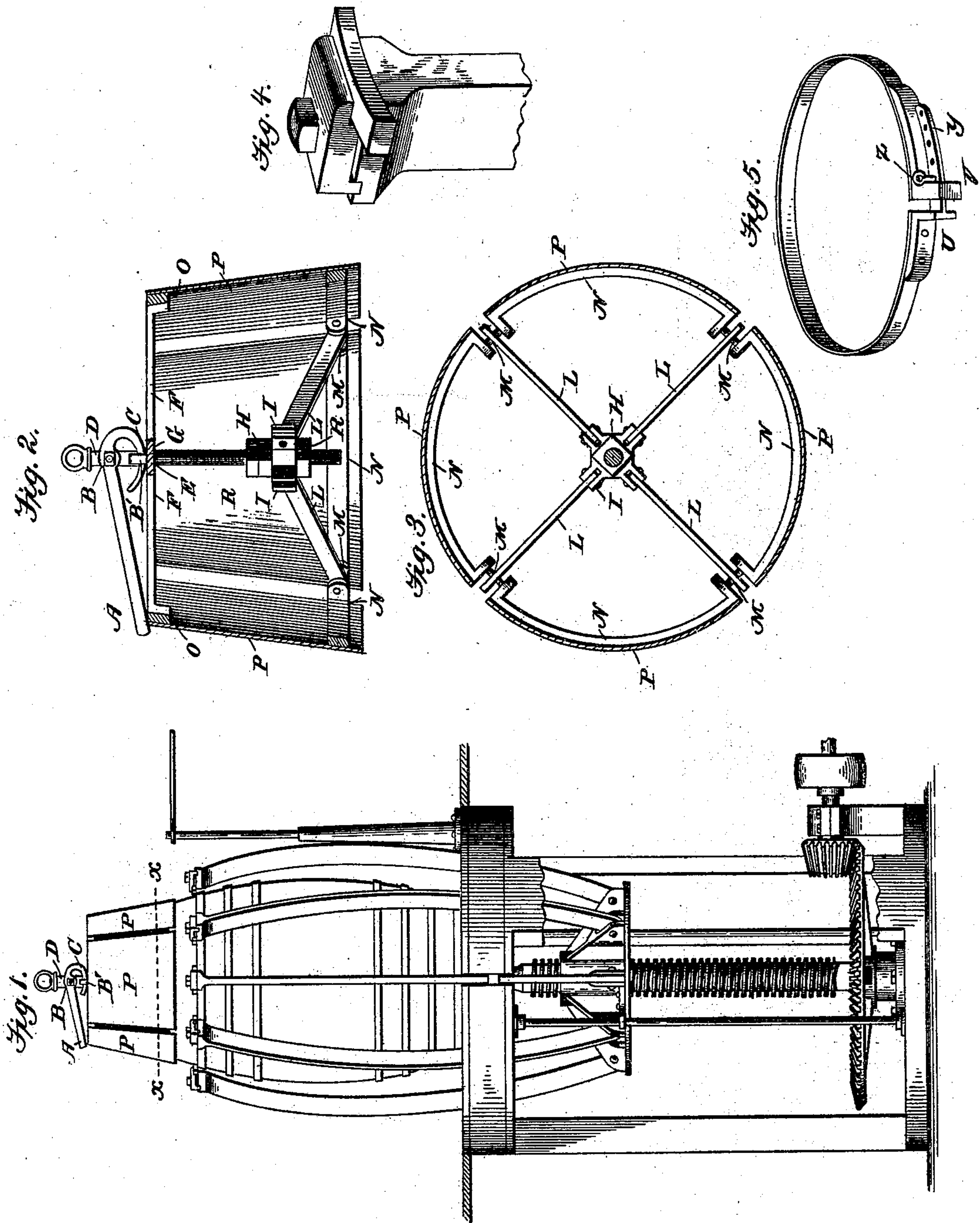


(No Model.)

R. WELCH.  
BARREL HOOPING MACHINERY.

No. 503,021.

Patented Aug. 8, 1893.



Witnesses

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# UNITED STATES PATENT OFFICE.

ROBERT WELCH, OF KEOKUK, IOWA.

## BARREL-HOOPING MACHINERY.

SPECIFICATION forming part of Letters Patent No. 503,021, dated August 8, 1893.

Application filed April 26, 1892. Renewed June 29, 1893. Serial No. 479,174. (No model.)

*To all whom it may concern:*

Be it known that I, ROBERT WELCH, a citizen of the United States of America, residing at Keokuk, in the county of Lee and State of Iowa, have invented certain new and useful Improvements in Barrel-Hooping Machinery, of which the following is a specification, reference being had therein to the accompanying drawings.

My invention relates to barrel hooping machines, and consists of a combined guide and truss.

The object of my invention is to guide wooden hoops in hooping barrels by machinery, and at the same time to answer the purpose of what is commonly known as the truss hoops.

In the accompanying drawings: Figure 1 is an elevation showing my invention as connected with an ordinary barrel hooping machine. Fig. 2 is a vertical section of my improved guide and truss. Fig. 3 is a horizontal section of my improvement taken on the line  $x-x$  of Fig. 1 looking down. Fig. 4 is a detail in perspective of one of the hoop drivers. Fig. 5 represents an adjustable iron hoop to be placed around the bilge of the barrel while hooping it.

Referring to the drawings by letters of reference, A, indicates a lever pivotally connected at B, to a vertical screw shaft D, the end of the lever being bent so as to form a cam C, the bent end passing under a hook B', on the transom bar G. The screw shaft D, moves vertically through a hole E, in the transoms formed by the bars F, and G, which cross each other at right angles, and are connected to an iron hoop, (see Fig. 2,) the bar G, being shown in section. Near the lower and threaded end of the shaft D, there is fitted a sleeve H, which is provided with lugs or ears I. To these lugs are pivoted one end of the arms L, the other ends being pivoted at M, to the iron sections N. The sleeve H, is adjustable vertically upon the shaft D, by means of nuts R.

P, indicates sections of sheet iron or other suitable material, which connect the hoop O, at the top and the lower hoop-sections N, at the bottom.

The operation of the device is as follows:

After the barrel is placed in the hooping machine and the guide properly adjusted, the lever A is raised vertically in line with the screw shaft D. This acts to spread out the bottom of the guide by lowering the sleeve H, and straightening the arms L, so that the flanges formed by the lower edges of the sections P, will be on the outside of the chine. The lever is then pulled down, which draws the sections in, causing the flanges to press tightly around the chine holding the head and staves securely in their place and allowing the truss-hoop on the barrel to be knocked off, thus dispensing with any interference by the truss-hoop while hooping the barrel. The iron hoop-sections N, inside of the flange rest on the ends of the staves, thereby relieving the head of any pressure from the guide which would tend to press the head out of the croze. The four parts of the guide O, are securely but flexibly riveted together at M, and form a circle around the chine, the guide being slightly adjustable by means of the screw D.

Fig. 5 represents an iron hoop open upon one side and provided with an adjustable coupling consisting of parts U, and V, the part U, being provided with an extension Y, which is perforated to receive a pin Z. This hoop or its equivalent is indispensable in hooping barrels with wooden hoops by machinery, the strong pressure of the hooping machine having a tendency to rack the bilge and make the barrel leak. This hoop being adjustable can be driven tightly near the center of the bilge, holding it firmly while hooping the barrel, and it is then easily removed by taking out the pin.

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

1. The main body of the guide and truss consisting of the hoop O, having cross transoms F and G, hoop-sections N, and connecting side-sections P, in combination with the operating mechanism consisting of the lever A, provided with a hooked end forming a cam C, and being pivoted to a shaft D, provided with a screw thread, said shaft and the sleeve H, adjustable thereon and the arms L, communicating between the sleeve and the hoop-sections N, at the bottom.

tions N, substantially as described and for the purpose specified.

2. The operating mechanism for a guide and hoop truss in a barrel making machine, consisting of the lever A, pivotally connected to the screw shaft D, and provided with a hooked end forming a cam C, in combination with said shaft, the sleeve H, upon said shaft, and the arms L, connecting the sleeve and

shaft with the hoop-sections N, substantially as described and for the purpose specified.

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

ROBERT WELCH.

Witnesses:

L. HAGERMAN,

J. D. HOLLINGSHEAD.