

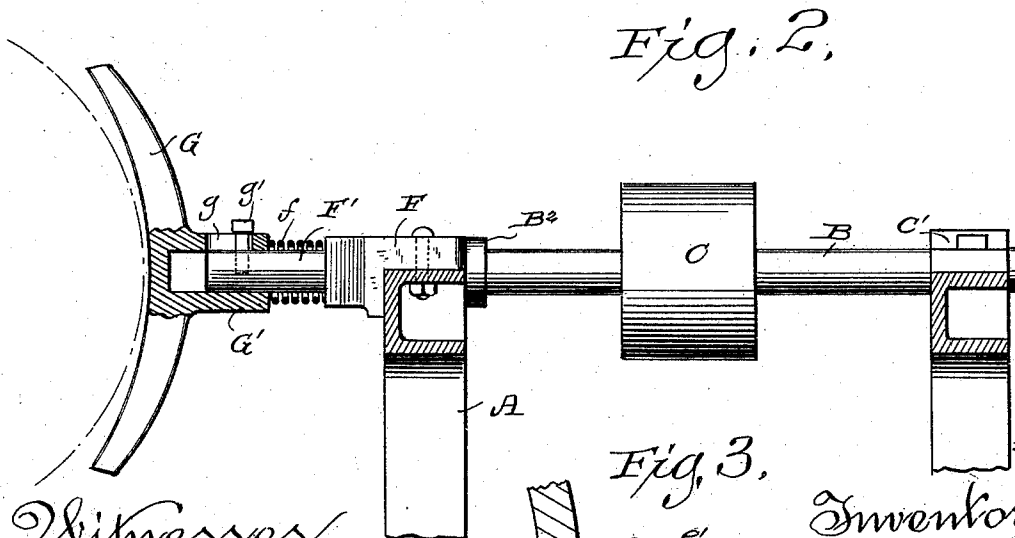
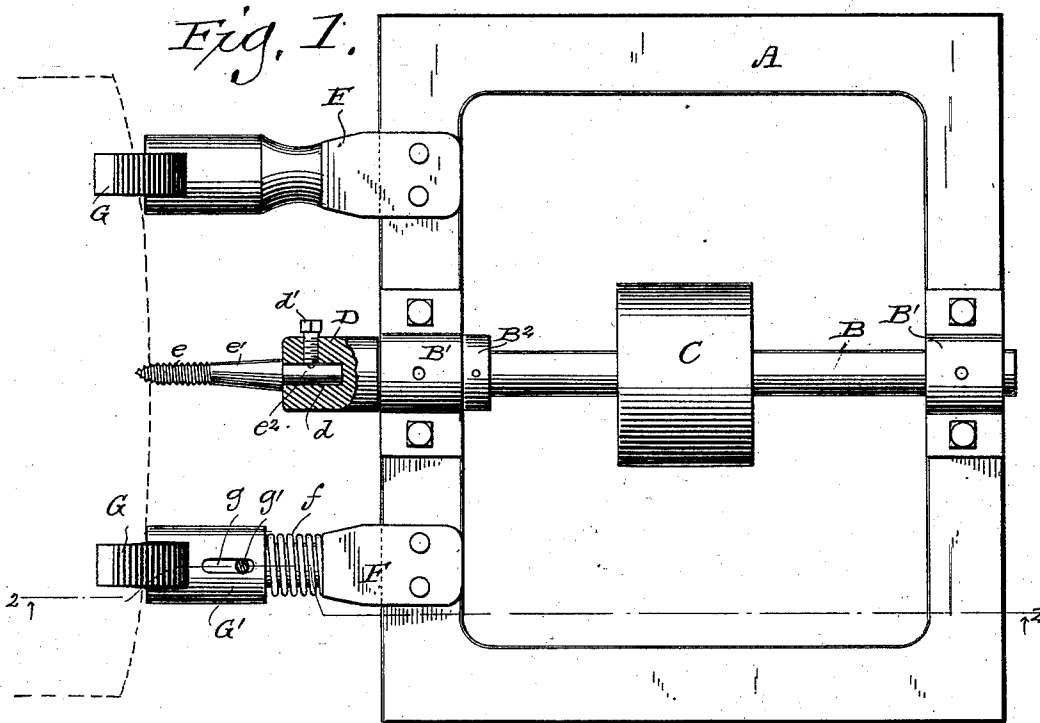
(No Model.)

2 Sheets—Sheet 1.

J. U. KRAFT.
MACHINE FOR EXTRACTING BUNGS.

No. 477,599.

Patented June 21, 1892.



Witnesses
Geo. W. Young
John E. Miles

Fig. 3.

Inventor

John U. Kraft

By H. G. Underwood.
Attorney

(No Model.)

2 Sheets—Sheet 2.

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Fig. 4.

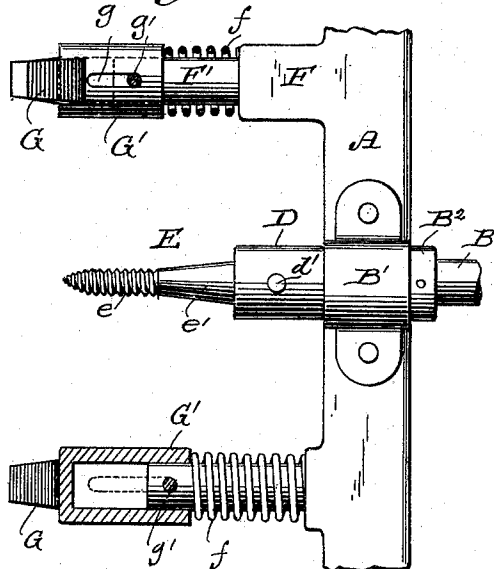


Fig. 5.

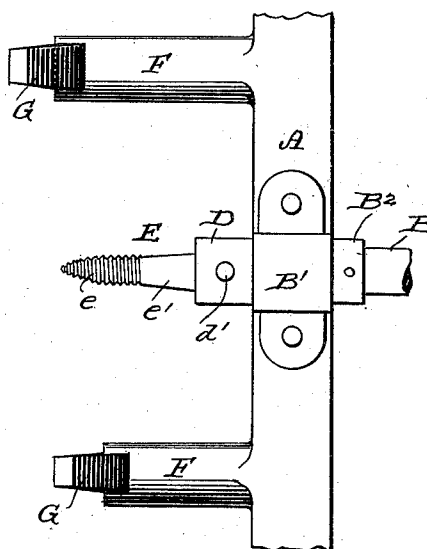


Fig. 6.

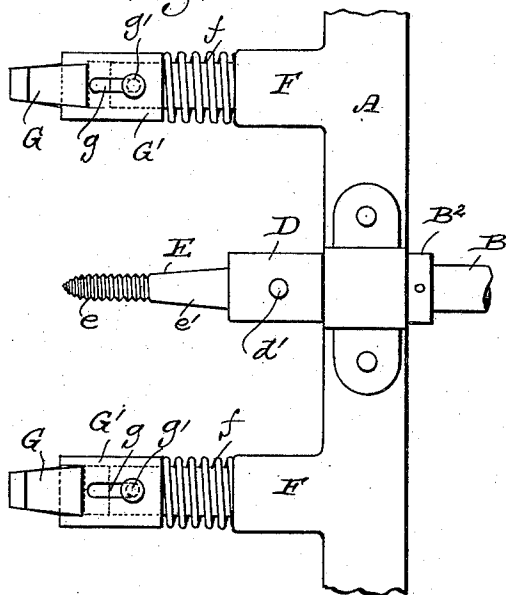
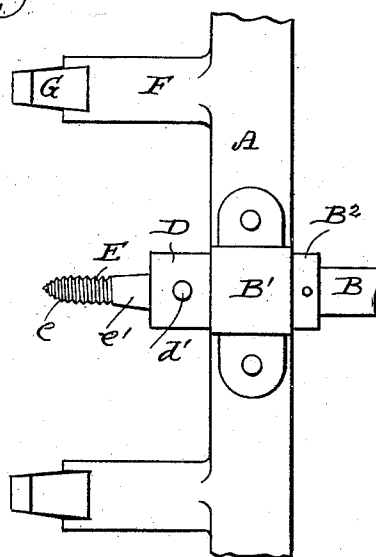


Fig. 7.



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UNITED STATES PATENT OFFICE.

JOHN U. KRAFT, OF MILWAUKEE, WISCONSIN, ASSIGNOR OF ONE-HALF TO
HENRY RAVE, OF SAME PLACE.

MACHINE FOR EXTRACTING BUNGS.

SPECIFICATION forming part of Letters Patent No. 477,599, dated June 21, 1892.

Application filed January 26, 1892. Serial No. 419,306. (No model.)

To all whom it may concern:

Be it known that I, JOHN U. KRAFT, a citizen of the United States, and a resident of Milwaukee, in the county of Milwaukee, and in the State of Wisconsin, have invented certain new and useful Improvements in Machines for Extracting Bungs; and I do hereby declare that the following is a full, clear, and exact description thereof.

My invention relates to certain new and useful improvements in machines for extracting bungs from barrels and kegs; and it consists in the matters hereinafter described, and pointed out in the appended claims.

The object of my invention is to provide a machine for this purpose which may be operated by power to extract the bungs, the construction being such that the said bungs after being extracted will be automatically split and dropped from the extracting-tool.

The various features of my invention will be more fully hereinafter described with reference to the accompanying drawings, in which—

Figure 1 is a top plan view of a machine constructed in accordance with my invention. Fig. 2 is a vertical sectional view of the same, taken on line 2 2 of Fig. 1. Fig. 3 is a detail view of one of the parts. Figs. 4, 5, 6, and 7 represent slightly-different forms of my improved device.

In said drawings, A represents a suitable frame, B a shaft carrying a driving-pulley C, and journaled in suitable bearings B' B' at opposite sides of the frame. Upon the inside of one of the bearings B' B' a collar B² is secured to the shaft B, said collar being arranged to bear against the end of said bearing, so as to prevent outward movement of said shaft. Upon the end of said shaft, outside of said bearing, is provided a chuck or head D for holding a tool, to be hereinafter described, said head being arranged to bear against the outer end of said bearing so as to prevent inward movement of the shaft. This chuck or head is provided with a central bore or socket *d*, into which the shank of the tool is inserted and held by means of a set-screw *d'*.

The tool E comprises a sharp-pointed screw-threaded portion *e* at its outer end and a

portion *e'* gradually increasing in diameter from said screw-threaded portion and extending for a considerable distance therefrom, and upon its inner end a shank *e'* adapted to engage within the socket *d* in the chuck.

At suitable points upon the same side of the frame as that upon which the chuck or head D is located are provided outwardly-extending brackets F F, each having at its outer end a suitable support G for a barrel or keg. In the particular form of construction illustrated in Figs. 1 and 2 of the drawings one of these supports G is made yielding by means of a spindle F' upon the bracket with which it is engaged and a hub G' on said support having a sliding engagement with said spindle and pressed outwardly by a spiral-spring *f* on said spindle.

A slot *g* is preferably provided in said hub and is arranged to movably engage with a pin *g'*, projecting from said spindle F', as shown. This pin serves to prevent rotary motion of said hub, with its support G about the spindle without hindering the longitudinal motion of said hub and support. The other one of the supports is rigidly engaged with the bracket F, as shown, so as to rigidly support the end of the barrel or keg which may be held against it.

In the form illustrated in Fig. 4 both of the supports G G are yieldingly supported upon spindles in the manner just described, one of said supports being, however, arranged so as to have a greater range of motion than the other, while in Fig. 6 both of the supports are yieldingly supported upon the spindles and arranged to yield to an equal extent.

In the form illustrated in Fig. 5 both supports are made solid upon the brackets, one of said brackets being made shorter than the other, so as to permit of an unequal yielding of the ends of the barrel before they reach a bearing against said supports, while in Fig. 7 both of said supports are made solid, as before and of the same length.

The operation of my improved device is as follows: The shaft B is constantly revolved by power applied to the pulley C, so as to cause the chuck or head D to rotate constantly in a direction such as will cause the

screw-threaded end of the tool E to enter the bung, which may be held in contact with it. When it is desired to extract a bung from a barrel or keg, said barrel or keg is held in a position to bring the bung against the point of the tool E, as shown by dotted lines in Figs. 1 and 2. By the rotation of said tool its screw-threaded end is turned into the bung, and this operation serves to draw the barrel or keg against the supports G G, when a continued rotation of said tool will operate to draw the bung from the bung-hole in an obvious manner. The length of the brackets relative to the length of the tool is such that the said tool will be turned well into the bung before the yielding motion of the barrel or keg is stopped. The next bung that is extracted will engage with the one already on the tool, and will obviously serve to crowd it farther onto said tool, and as the operation of extracting the bungs is continued the bungs will be successively forced upon the tapered portion of said tool, so as to cause them to split and fall off. Several of the bungs may be upon the tool at one time in the various stages of splitting and dropping off.

By the form of construction illustrated in Figs. 1 and 2, in which only one of the supports is permitted to yield and the other is made solid, the ends of the barrel or keg are given an unequal yield before coming to a firm bearing, this unequal motion of the ends of the barrel or keg operating to give a side twist to the bung to more easily start the same. This operation is also obtained by the form of construction illustrated in Fig. 4, in which both supports are permitted to yield, but to an unequal extent. Similarly in the form illustrated in Fig. 5 by the arrangement of the supports to project from the frame to an unequal extent, the motion of the ends of the barrel or keg before coming into engagement with said supports is rendered unequal, and the same object is attained.

In the forms illustrated in Figs. 6 and 7 the motion of the ends of the barrel or keg are rendered equal, and the bungs are extracted by a straight pull of the tool E.

By my improved apparatus the operation of extracting bungs is very rapidly and satisfactorily performed, the necessity of removing the bungs from the tool by hand being entirely obviated and the bungs being automatically split and dropped from said tool without attention on the part of the operator after they have been extracted.

I would have it understood that I do not desire to limit myself to the exact form or forms of construction illustrated in the drawings and herein described, as various modifications may be made in the details of con-

struction without departure from my invention, and any device of this nature which employs a tool screw-threaded at one end and adapted to be turned into the bungs and with a portion of gradually-increasing diameter, upon which said bungs are crowded, I would regard as coming within the scope of my original invention.

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

1. A machine for extracting bungs, comprising a suitable frame provided upon one side with brackets carrying supports for opposite ends of the barrels or kegs, a shaft journaled in said frame and carrying a driving-pulley, said shaft being arranged to project beyond the side of the frame between said brackets, and a screw-threaded tool secured to the outer end of said shaft and adapted to engage with the bungs to be extracted, substantially as set forth.

2. An apparatus for extracting bungs from barrels and kegs, comprising a suitable frame, brackets extending from the side of the frame and provided with supports for opposite ends of the barrels or kegs, a shaft journaled in said frame and carrying a driving-pulley, said shaft being arranged to project beyond the side of the frame between the said brackets, and a tool secured to the outer end of said shaft and consisting of a screw-threaded point, and a tapered or frustum-shaped portion gradually increasing in diameter from the termination of the screw-threaded portion of said tool, substantially as set forth.

3. An apparatus for extracting bungs from barrels and kegs, comprising a suitable frame, brackets extending therefrom and provided with supports for opposite ends of the barrels or kegs, a shaft journaled in said frame and carrying a driving-pulley, said shaft being arranged to project beyond the side of the frame between the said brackets, a tool secured to the outer end of said shaft and consisting of a screw-threaded point, and a frustum-shaped portion gradually increasing in diameter from the termination of the screw-threaded portion, the support for one end of the barrel being arranged to permit a greater degree of inward movement of said end than the other, substantially as set forth.

In testimony that I claim the foregoing I have hereunto set my hand, at Milwaukee, in the county of Milwaukee and State of Wisconsin, in the presence of two witnesses.

JOHN U. KRAFT.

Witnesses:

JOHN E. WILES,

H. G. UNDERWOOD.