F. J. LOGAN.

BARREL TIPPER.

APPLICATION FILED JAN. 13, 1920. RENEWED NOV. 30, 1920.

1,367,063. **Patented Feb. 1, 1921.**

Fig. 1

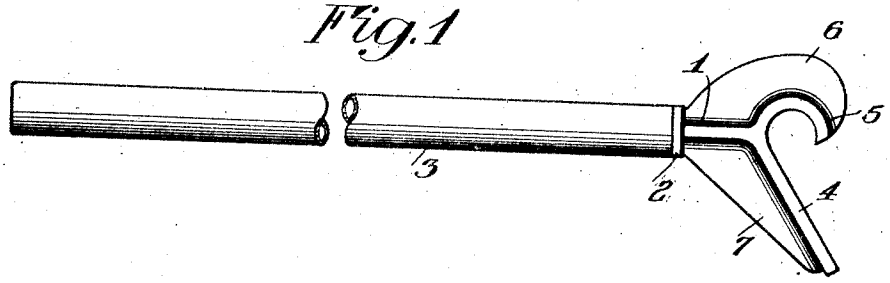


Fig. 2

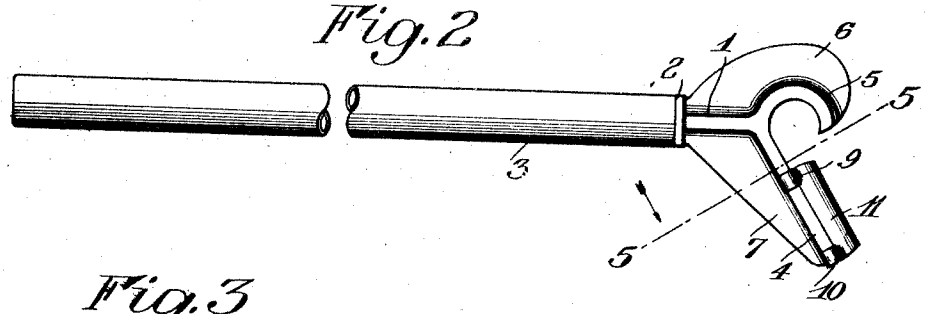


Fig. 3

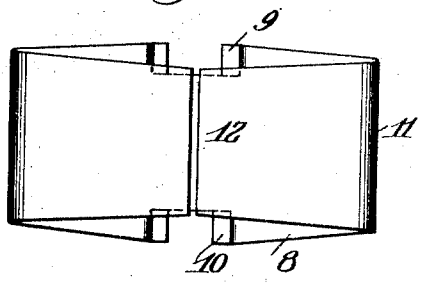


Fig. 5

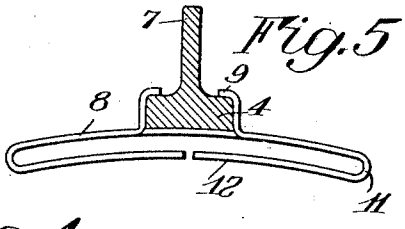
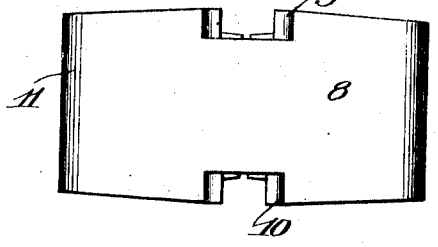


Fig. 4



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FRANK J. LOGAN, OF ROCHESTER, NEW YORK, ASSIGNOR OF ONE-THIRD TO CHARLES LEIBINGER AND ONE-THIRD TO SIMEON C. ALLEN, BOTH OF ROCHESTER, NEW YORK.

BARREL-TIPPER.

1,367,063. Specification of Letters Patent. Patented Feb. 1, 1921.

Application filed January 13, 1920, Serial No. 351,134. Renewed November 30, 1920. Serial No. 427,458.

To all whom it may concern:

Be it known that I, FRANK J. LOGAN, of the city of Rochester, in the county of Monroe and State of New York, have invented certain new and useful Improvements in Barrel-Tippers; and I do hereby declare the following to be a full, clear, and exact description of the same, reference being had to the accompanying drawings, forming a part of the specification, and to the reference-numerals marked thereon.

My present invention relates to tools for handling barrels and casks and has for its object to provide a simple and practical hand lever through the use of which barrels may be easily and quickly tipped or righted by taking hold of the chines thereof, and the improvements are directed in part to providing means whereby the reactive force exerted against the bilge portion is distributed so as not to be localized upon any particular stave and cause damage to the barrel, particularly in the case of sugar barrels, which are relatively light in their construction, though heavily loaded. To these and other ends, the invention resides in certain improvements and combinations of parts, all as will be more fully described and the novel features being pointed out in the claims at the end of the specification.

In the drawings:

Figure 1 is a side elevation of my barrel tipper.

Fig. 2 is a similar view with my improved yielding jaw in place thereon.

Fig. 3 is an enlarged face view of the yielding portion of the jaw, detached.

Fig. 4 is a rear view of said yielding member and

Fig. 5 is an enlarged section on the line 5—5 of Fig. 2.

Similar reference numerals throughout the several figures indicate the same parts.

Referring first to Fig. 1, 1 indicates a casting having a shank 2 driven into a pipe or tubular barrel 3 forming a handle. The casting 1 comprises an angularly disposed flat jaw 4 to react against the bilge or side of the barrel during the engagement of a short hook-shaped jaw 5 with the chine. The jaws are reinforced with ribs 6 and 7, making them T-shaped in cross section as shown in Fig. 5, and the bilge jaw 4 is tapered on both dimensions as shown.

To distribute the pressure imposed by the bilge jaw 4 over several staves of a light barrel, I provide the attachment shown in detail in Figs. 3 and 4. It consists of a sheet metal plate 8, having pairs of ears offset rearwardly from the top and bottom thereof, as shown at 9 and 10 in Fig. 4. The ears 10 are nearer together than the ears 9, so that they conform to the taper of the bilge jaw 4, and afford means for attaching the plate as shown in Fig. 2 by a jam fit. The ears are slightly resilient so that they firmly grip the casting when the plate is driven into place thereon. The sides or ends of the plate are looped inwardly toward each other at 11, so that the extremities 12 are free and resilient, though stiff in their yielding action, and they are spaced from the body 8 of the plate. They are also nearly flat or curved on a greater radius than the plate so that when the device is applied to a barrel, the free ends of the yielding member 12 will first go into engagement with the bilge surface and then yield more or less according to the strain. As they yield, they increase or lengthen their contact in lateral directions until the yielding pressure is distributed to every point, though the free ends 12 may be finally brought against the body of the plate 8. They then, of course, cease to yield, but their function has been accomplished and excessive strain is still borne by the whole surface acted against.

Through the use of this attachment, light barrels may be handled much more safely, while in the case of heavily constructed barrels, the plate 8 may be knocked off and the device used in the condition represented in Fig. 1.

In the form of the invention illustrated in Fig. 1, it will be noted that a handle 3 extends at an angle to the longitudinal direction of the bilge jaw 4 so that when this jaw is placed against the bilge or side of a barrel and the jaw 5 is hooked over the chine, the handle will substantially bisect the angle formed by the side and head of the barrel. This is important for the reason that, in lifting a barrel lying on its side, the line of support drawn from the point at which the opposite end of the barrel rests upon the ground to the point at which the operator applies the lifting force upon the handle 3 (his grip) passes substantially through or above the center of gravity of the barrel which is usually its geometrical center.

There is therefore little or no tendency for the barrel to roll or tilt laterally, it being suspended in a state of equilibrium and the energies of the operator are concentrated upon lifting and not dissipated in attempts to counteract difficult lateral strains. For this reason, a single or narrow contact of each jaw with the barrel is sufficient.

I claim as my invention:

1. A barrel tipper comprising a chine jaw, a relatively prolonged bilge jaw and a handle extending angularly to the line of prolongation of the bilge jaw.

2. A barrel tipper comprising a hook shaped chine jaw, a relatively prolonged and substantially straight bilge jaw, and a handle extending in the plane of both jaws but at an angle to the bilge jaw and adapted to approximately bisect the angle formed by the head and bilge of a barrel to which the tipper is applied.

3. In a barrel tipper, the combination with a chine jaw and a bilge jaw, of a laterally projecting extension on the bilge jaw, leaving a resilient stave engaging portion on its inner side.

4. In a barrel tipper, the combination with a chine jaw and a bilge jaw, of a pair of resilient sheet metal arms proceeding laterally from the bilge jaw in opposite directions and thence inwardly toward each other, their free ends constituting resilient stave engaging portions.

5. In a barrel tipper, the combination with a chine jaw and a bilge jaw, of a detachable resilient arm on the bilge jaw forming a yielding stave engaging element on the inner side of the latter.

6. In a barrel tipper, the combination with a chine jaw and a tapered bilge jaw, of a detachable resilient metal plate having offset lugs engaging the bilge jaw with a jam fit on the taper thereof, the side portions of the plate proceeding laterally in opposite directions and thence inwardly toward each other to constitute resilient stave engaging portions at their free ends.

FRANK J. LOGAN.