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Boyd's Liquor Preserver.

There are many liquors which are far better when first tapped than after the cask has been allowed to remain partially filled, and consequently with an extensive surface in contact with the air, for a considerable period. This evil is so great as to induce, in many instances, the pouring of a quantity of olive oil into the bung, which oil, by spreading over the surface, protects the liquid from injury. The invention now to be described is intended to accomplish the same purpose in a cleaner and far more desirable manner. It consists in providing a thin flexible bag of sufficient size, when expanded with air, to fill the whole cask, but capable of being collapsed to very small and almost inappreciable dimensions as the cask is filled. The air is admitted to the interior of this bag; and as the liquor is withdrawn, the bag expands, and thus affords a free vent, but effectually prevents the actual contact of the two fluids.

In the accompanying figure, A represents a barrel on tap, B a vent hole, C the bag referred to, and C′ a small quantity of shot placed in the bag, which compels a portion to be immersed to a considerable depth in the

liquid. This arrangement prevents the possibility of the bag becoming entangled in any fold, and ensures its gradual and perfect expansion, as the liquor is withdrawn. D is a discharge tap or cock arranged in the ordinary manner.

It is sometimes much labor to keep barrels perfectly filled with liquor. The gradual change of volume due to fermentation or to other causes induces a sinking of the surface. When it is desired to keep the barrel perfectly filled, small quantities of liquor must be supplied at very short intervals. Our engraving represents a device for keeping any quantity of barrels perfectly filled, by the aid of this invention; the barrels being arranged side by side, and freely connected by the pipes, E. The cock, D, being left open, all the casks are kept perfectly filled, and the access of air to any part of the surface is effectually prevented.

This invention was patented April 21, 1857, by A. F. Boyd, of Zanesville, Ohio, from whom any further information may be obtained.

WHIPPLE'S RECIPROCATING SAW MILL.

Fig. 1.

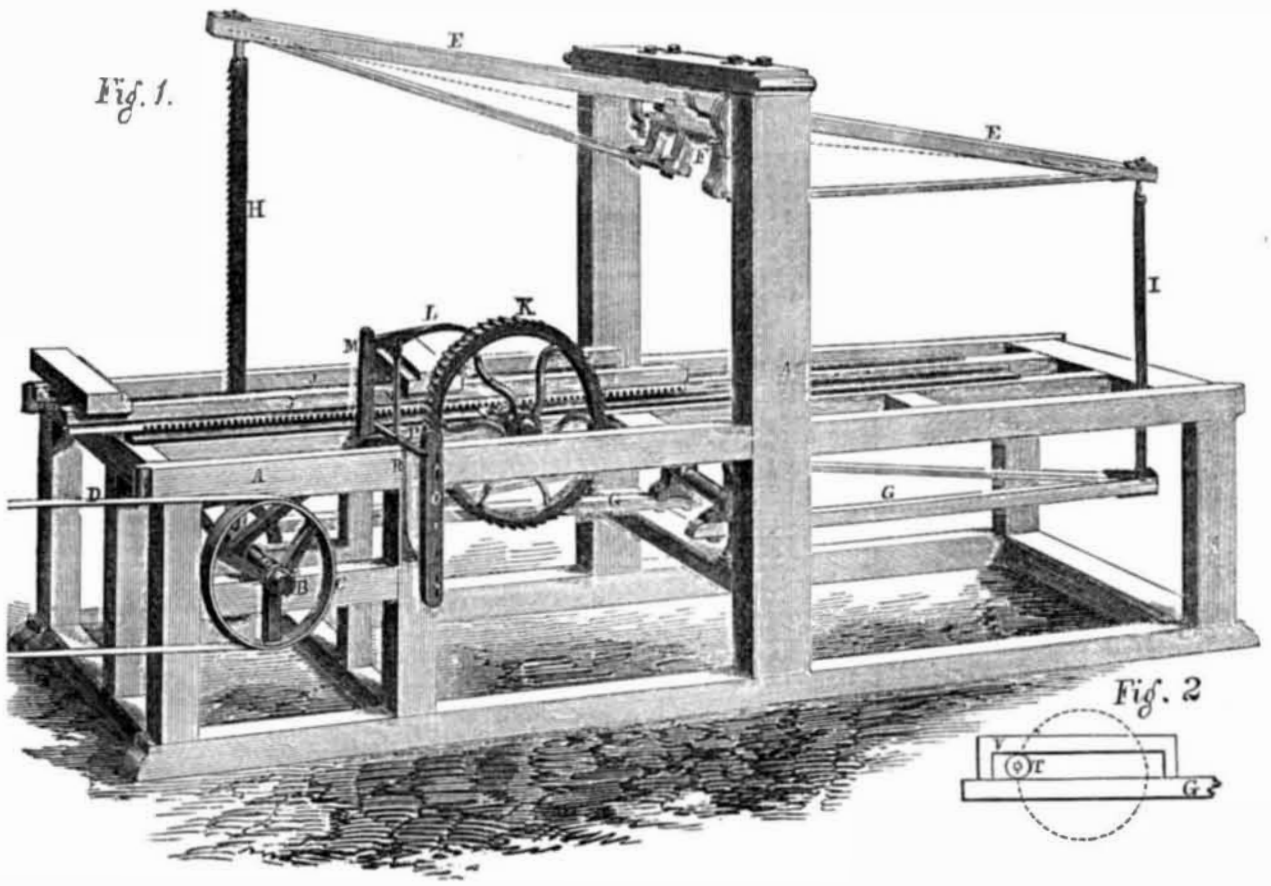

Fig. 2

The mill represented in the accompanying engraving is the invention of Carlyle Whipple, of Lewiston, Me., and was patented on the 13th of January last. In it, the saw is stretched between two reciprocating levers, each resembling the walking beam of a steamboat, the means by which the motion is communicated being represented separately in Fig. 2.

A represents the frame of the mill, and B the driving shaft, receiving its motion from the belt, D, acting on a pulley, C, or in any other suitable manner. E E represent the two parts of the upper beam, and F the rocking shaft or main center on which it is mounted. G G represent the lower beam, mounted on a corresponding center, directly below the other. H is the saw, and I the tie-rod connecting the other extremity of the beams. The length of this tie-rod may be adjusted by a screw, and consequently any desired degree of tension may be given to the saw. J is a carriage on which the saw is mounted; K the ratchet wheel; L the pawl, and M the feed lever, which latter, actuated by a cam on the driving shaft, B, gives motion to L. N is a forked rod by which the pawl L may be lifted out of connection with K by the gravity of weight, O, which is connected to N by a lever, not represented. P is a detaching lever, so mounted as to be pressed by the spring, R, into a notch in the side of O, and sustain it until P is moved by the usual stop, S, under the carriage, by which movement the weight, O, is released, and in its descent lifts the pawl L out of gear. The carriage is gigged back in any ordinary manner.

A natural effect of mounting the saw on levers is to give each end a slight forward and backward motion, in addition to the vertical movement at each stroke. This would tend to induce the saw to advance into the wood during the first half of its descent, and to retreat therefrom during the remaining half, but this effect is modified by the peculiar position of the beams. Both beams are practically straight—that is, the fulcrums or centers of motion lie in a right line between the end centers or those to which the saw and tie-rod are attached, but the beams are not mounted in positions parallel to each other. The tie-rod is considerably shorter than the saw. When the saw is up and ready to perform its downward journey, the position of the beam is such that the top of the saw is thrown back of a right angle line with the carriage, and when the saw is half way down, the lower end commences to recede, giving the sawdust which is cut from the top of the log a chance to escape. The bottom of the saw strikes the wood first and does its work while the top remains back, and when the saw has finished its journey down, it should be at right angles with the log. The top beam can be set forward or back, to give the saw more or less rake forward.

The turning centers upon the lower beam are level when the saw is half way down, and the centers upon the upper beam should be level when the saw is down or nearly so. Both beams are trussed so as to give great strength with a small amount of material, and there is sufficient elasticity to allow for the slight inequality in the strain due to the want of parallelism of the beams. The motion of the crank is transmitted directly, through the agency simply of a suitable well-fitted wheel which travels in a corresponding slot or hollow frame, bolted on the lower beam, as shown in Fig. 2. There is consequently little or no lost motion in the mechanism, and the vertical depth of the mill may be considerably less than usual. The crank is turned in the direction indicated by the arrow, so that greater leverage is obtained when the saw descends; and the invention has been highly commended as a strong and admirable form for all ordinary purposes. It is also applicable for jig saws.

For further information, the inventor may be addressed as above.

Wool.

The Cleveland *Plaindealer* estimates that the aggregate clip of this year will exceed that of 1856 by three millions of pounds. The prices paid for the greater portion range from forty to fifty cents, and in some of the best districts fifty-five and sixty cents have been paid. The amount of cash distributed in Ohio alone for wool this year will exceed six millions of dollars. This State has become the leading wool-growing one in the Union.

The increased quantity is not due entirely to the increased number of sheep, but partly to the fact that the shearing occurred a month later this year than last, and the increase of the growth of wool during this time affords an increase of eight per cent to the clip. Within a few years past, the Eastern States have to a considerable extent abandoned the competition, and left Ohio to furnish the best wools now grown. The counties in the center of that State are now as famous for their fine wool, as they formerly were for their great crops of wheat.

Advance Wages for Seamen.

The practice of paying sailors a portion of their wages in advance originated no doubt in a desire to enable this improvident class to provide themselves with suitable clothing and comforts for the voyage. But this end is so rarely attained in practice, owing to the land sharks, or keepers of sailors' dens, always managing to keep them drunk until they are in debt to the whole amount of their advance wages, that a very earnest and general effort to abandon the practice, has been lately made by ship owners, who, in order to secure crews, have offered higher wages on the new system, but generally with very poor success. The owners of Liverpool packets offer $20 a month, with no advance, or the usual price of $17 and advance; but so far, sailors have accepted the latter price. The ship *Devonshire*, for London, has been put on the shippers' bulletin for $22 per month, without advance, and the ship *Rhine*, also for London, has offered $20, and yet sailors prefer to accept the old terms, $17 a month with the advance; being led on by the landlords whom, apparently, they dare not disobey.