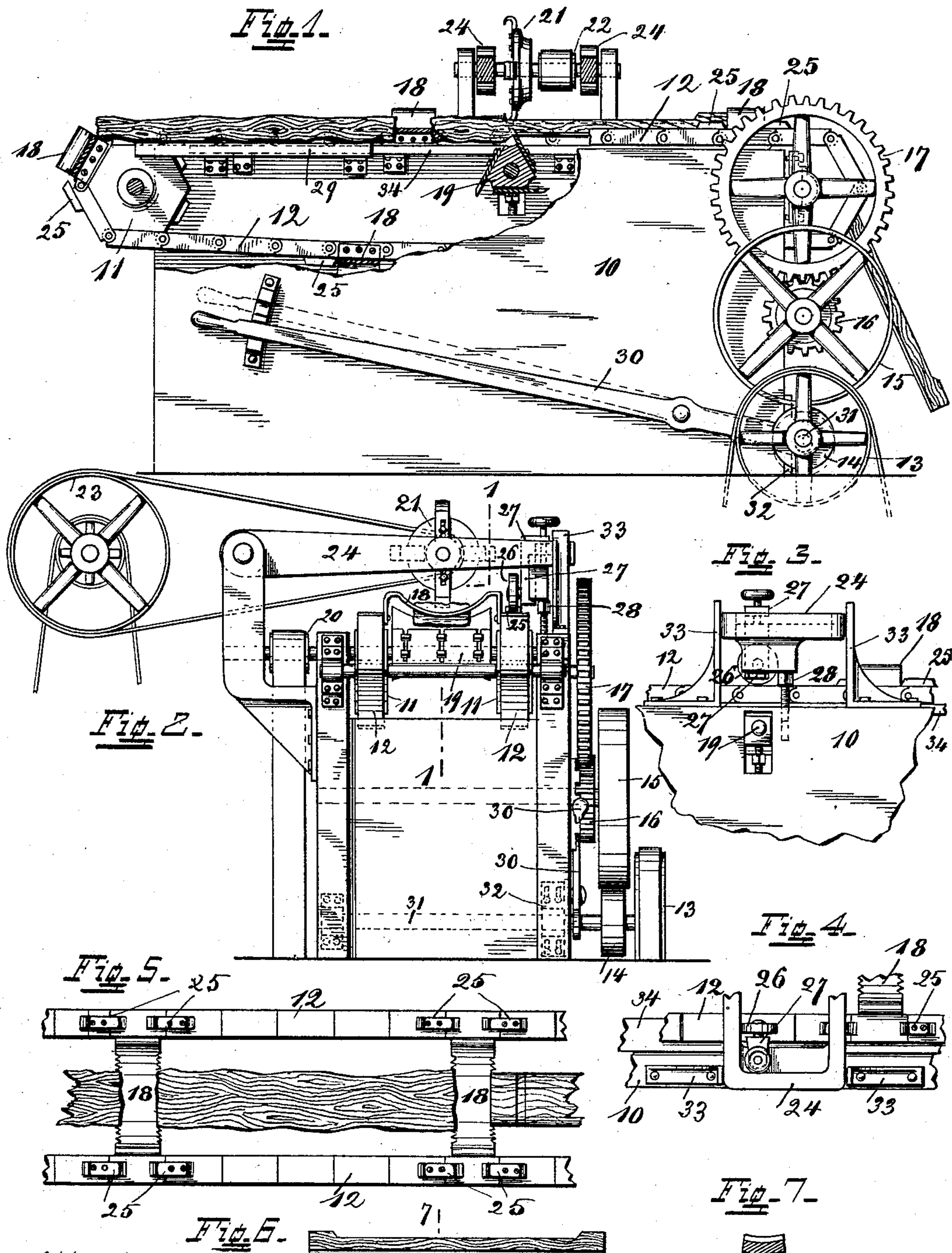


(No Model.)

C. SOMMER.  
STAVE DRESSING MACHINE.

No. 410,994.

Patented Sept. 10, 1889.



Attest  
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Inventor  
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# UNITED STATES PATENT OFFICE.

CHARLES SOMMER, OF SLOAN'S VALLEY, KENTUCKY.

## STAVE-DRESSING MACHINE.

SPECIFICATION forming part of Letters Patent No. 410,994, dated September 10, 1889.

Application filed October 16, 1888. Serial No. 288,236. (No model.)

*To all whom it may concern:*

Be it known that I, CHARLES SOMMER, a citizen of the United States, residing at Sloan's Valley, Pulaski county, State of Kentucky, have invented certain new and useful Improvements in Stave-Dressing Machines, of which the following is a specification.

My invention relates to improvements in that class of machines by which staves used in the manufacture of cooperage—such as beer-kegs, barrels, &c.—are dressed. Its object is to dress the staves on both sides at once, giving them at the same time the desired curve corresponding with the curve of the keg or barrel and providing at the two ends additional thickness, allowing depth for the croze. I attain this object by the construction illustrated in the accompanying drawings, in which—

Figure 1 is a side elevation of the whole machine, part of it in section on line I I of Fig. 2. Fig. 2 is an end view of the machine, one of the grippers next in front being removed to show the lower cutter more plainly. Fig. 3 is a partial side view of my machine, showing end of swinging frame. Fig. 4 is a top view of a part of swinging frame. Fig. 5 is a top view of a portion of the endless chains, showing a pair of grippers carrying a stave. Figs. 6 and 7 are side view and cross-section, respectively, of one of my staves.

This invention relates closely to the one patented by me September 21, 1886, No. 349,323. It is, however, simplified in several points, especially in the frame which carries the upper movable cutter-head.

10 is the frame.

11 are the chain-pulleys, of which there are two at each end.

12 are two endless chains guided and moved by said pulleys, which in turn derive motion from a belt-pulley 13, friction-pulleys 14 15, pinion 16, and gear-wheel 17, the latter on one of the shafts of pulleys 11. Pulleys 11 are polygonal, the lengths of their sides corresponding with the length of the links of the chain and having teeth which engage into indentations in the links of the chain to insure their positive motion.

18 are the grippers, which may be arranged in pairs, like in my old patent, or as shown in

Figs. 1 and 5, being toothed on both sides, in which case one gripper serves for two. They may be secured either to the top or to the sides of the chain-links, and are so shaped that they pass between the cutters, leaving sufficient clearance between it on each side of the cutters.

19 is the lower cutter-head, revolving in adjustable boxes and driven by a pulley 20. It may be constructed on the same principle as the cutter-head of an ordinary wood-planer. The knives, however, must be shaped so as to produce the convex curve corresponding with the outer circle of the keg. (See Fig. 7.)

21 is the upper cutter, revolving at right angles to the lower one and driven by pulleys 22 and 23. Its knives are hook-shaped and set in such a circle as to produce the concave shape of the stave (see Fig. 7) corresponding with the inner diameter of the keg.

In order to produce the thicker ends on the stave, (see Fig. 6,) the upper cutter-head is journaled in a swinging frame 24, which is lifted at the proper time by forming or pattern blocks 25, secured to the chain in corresponding positions. A roller 26, journaled into an adjustable bearing 27, forms the point of contact between said swinging frame and the pattern-blocks 25 on the chain.

28 is a screw on which the swinging frame rests and prevents it from resting on the chain, thereby taking unnecessary weight off the latter and lessening the friction.

By means of adjustable roller 26, adjustable cutter-head 19, and screw 28 the thickness of the staves—respectively, the additional thickness at their ends—may be properly regulated.

29 is a rest between the chains on which the stave is placed before the grippers take hold of it to pass it to the cutters.

30 is a lever by which the feed-motion may be stopped or started. It connects to the shaft 31 of belt and friction pulleys 13 and 14, respectively. Box 32 of the shaft 31 has a slight movement sufficient to raise the end of the shaft and connect or disconnect the two friction-pulleys 14 and 15.

33 are guides secured to the frame and intended to steady the swinging frame 24.

34 is a support on which the upper or feed-

ing portion of the chain moves and keeps it straight.

I do not claim, broadly, the construction of the machine as shown and explained, having  
5 done so only to aid me in the description of the particular feature I consider as new in this invention, and which is specifically the manner of supporting and guiding the upper yielding cutter-head, as follows:

10 In a stave-dressing machine, the combination of a stationary cutter 19, a swinging frame 24, a roller 26, journaled in adjustable bearing connected to frame 24, a cutter 21, journaled therein, a pair of endless chains

passing between the cutter-heads, pattern- 15 blocks 25, grippers adapted to hold staves, connected to the chains, a screw 28, secured in a suitable position to support frame 24, and suitable mechanical connection to move and revolve chains and cutter-heads, as 20 shown.

In testimony of which invention I hereunto set my hand.

CHARLES SOMMER.

Witnesses:

CARL SPENGEL,  
FRANCIS M. BIDDLE.