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PATENTED NOV. 13, 1906.

H. BAETZ.

FEED MECHANISM FOR DRYING APPARATUS.

APPLICATION FILED JULY 12 1906.

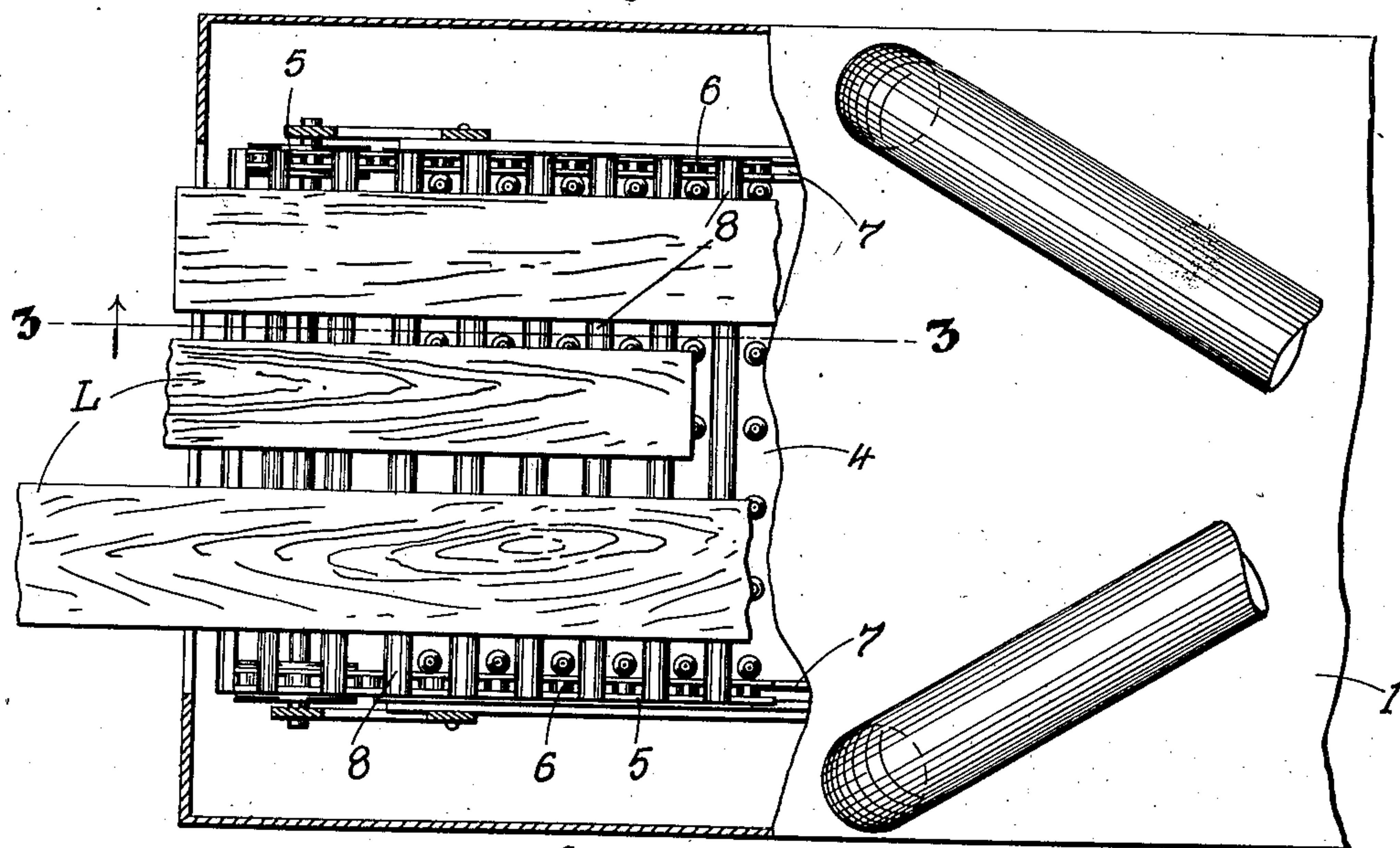
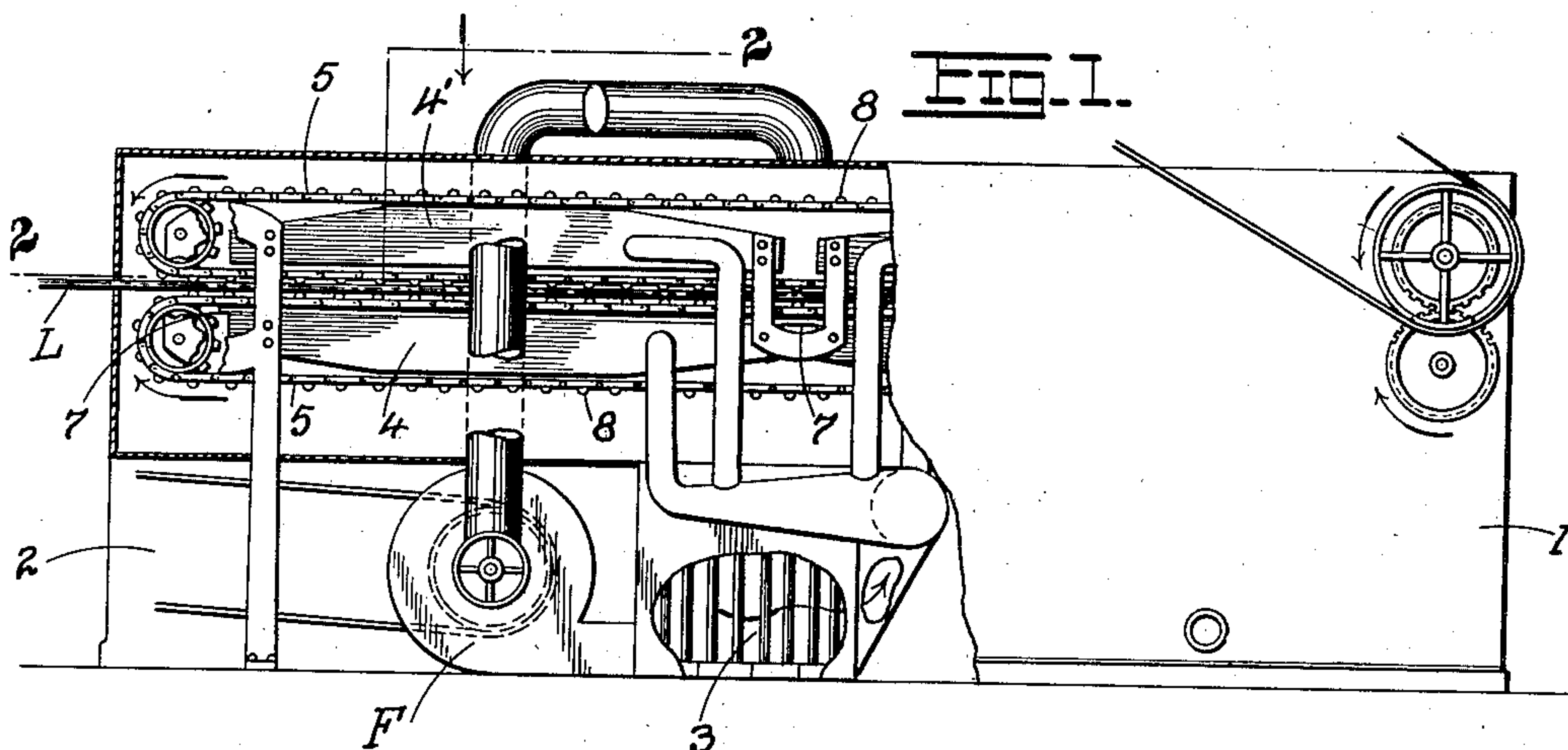


FIG. 2.

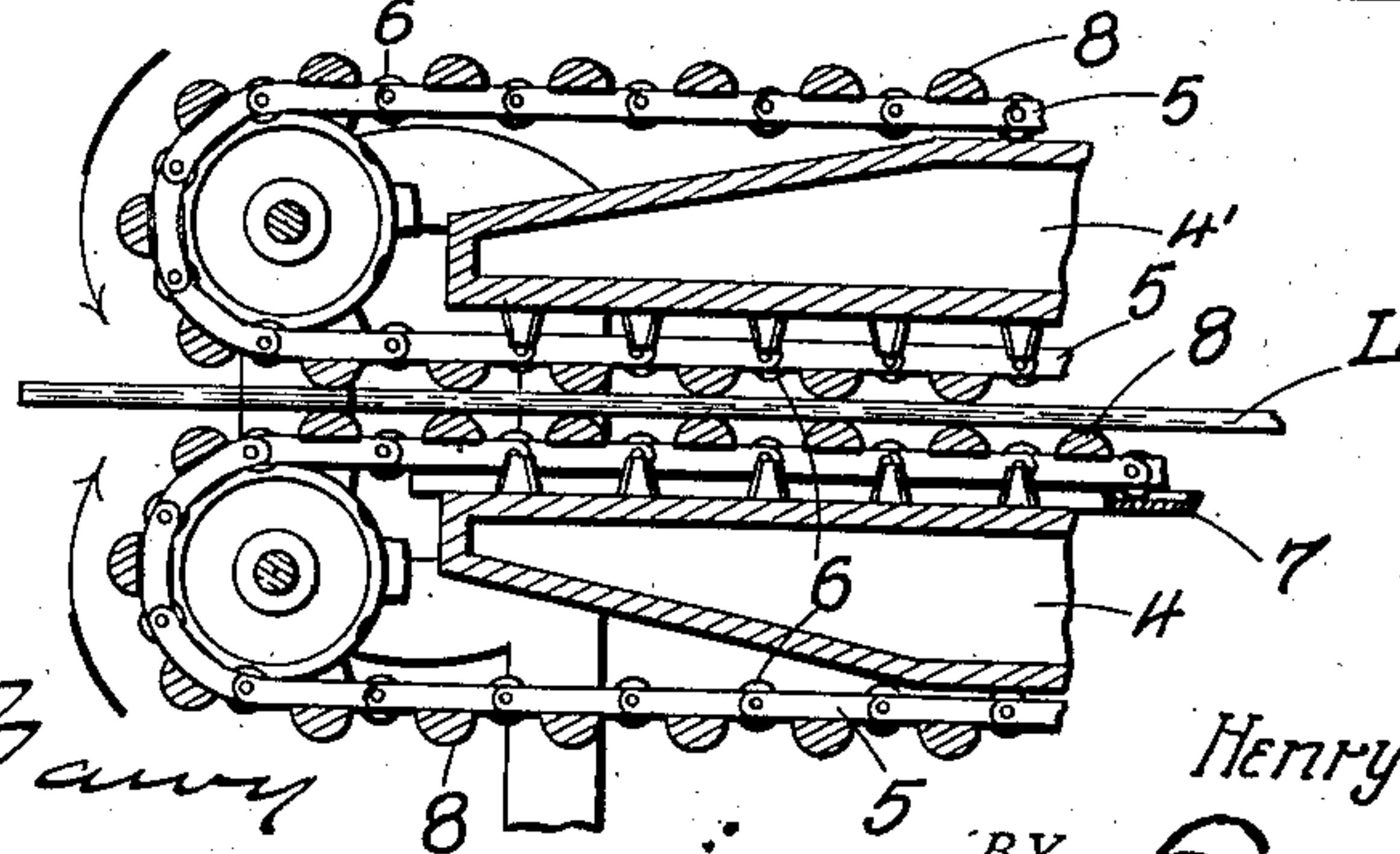


FIG. 3.

WITNESSES:

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FEED MECHANISM FOR DRYING APPARATUS.

No. 835,843.

Specification of Letters Patent.

Patented Nov. 13, 1906.

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To all whom it may concern:

Be it known that I, HENRY BAETZ, a citizen of the United States, residing at St. Louis, State of Missouri, have invented certain new and useful Improvements in Feed Mechanism for Drying Apparatus, of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming a part hereof.

My invention has relation to improvements in feed mechanism for drying apparatus; and it consists in the novel arrangement and combination of parts more fully set forth in the specification and pointed out in the claims.

In the drawings, Figure 1 is a side elevation of a drying apparatus with walls partly broken away, showing my invention applied thereto. Fig. 2 is an enlarged horizontal section on the broken line 2 2 of Fig. 1, and Fig. 3 is a vertical section on line 3 3 of Fig. 2.

The present invention, though specifically designed as an improvement in connection with the drying apparatus patented to me under date of August 9, 1904, No. 767,198, may be installed in any drier wherein veneer, lumber, or sheets of any description whatsoever are treated, the object of the invention being to so confine the pieces in their passage through the drying air-current that while they are free to shrink the tendency to warp is reduced to a minimum and in the majority of cases disappears altogether. This insures a substantially uniform product, the shape of the dry piece conforming substantially to what it was before the drying operation, and hence minimizing the waste incidental to such operations. The feed mechanism herein, though eminently adapted for the feeding of lumber, is applicable to any material which has a tendency to behave similarly under the same circumstances. The advantages of the invention will become better apparent from a detailed description of the invention, which is as follows:

Referring to the drawings, and preferably reviewing so much of the patented apparatus with which the present feed mechanism is directly associated, 1 represents a suitable casing provided with a fan or blower F, located in a chamber 2, the air being drawn into the blower-casing and forced through the heater 3, and suitable pipe connections into the air-chambers or headers 4 4', spaced a suitable distance apart, the hot air being discharged from the headers into and across

the space between them. Passing around each chamber or header is an endless conveyer 5 5, the adjacent laps of the conveyers traveling jointly in the space between the chambers and forming a feed mechanism for the lumber to be dried. The lumber is fed to this feed mechanism through the open front of the casing the same as in my patent aforesaid, except that in the present case the pieces to be dried are inserted longitudinally instead of laterally, the reason therefor being as follows: Each conveyer 5 is of the roller-link variety, the rollers 6 of the upper lap of the lower conveyer traveling in a track or channel 7, disposed above the header 4, as shown, the lower lap of the chain being allowed to sag. The chains of each conveyer are connected by a series of transverse bars or strips 8, substantially semicircular in cross-section, the curved portions being presented outwardly. These are spaced about three or four inches apart, making collectively a conveyer-belt whose supporting-surface is composed of a series of transverse ribs, bars, or slats. As the lumber pieces are fed between the adjacent laps of these belts the pieces are gripped and held between the opposing members of each pair of slats, and since the surfaces of the latter are rounded they contact with the lumber L, substantially along single lines or very reduced surfaces, thus permitting the exposure of a maximum surface of the lumber to the hot-air currents traversing the space between the headers 4 4' and permitting the hot air to freely circulate around the material treated. Each piece of lumber or veneer being thus confined between a series of slats or bars is prevented from bending or warping during the drying process, and hence when finally removed from the drier the piece has undergone little or no change in shape, save the small per cent. in shrinkage incident to all drying operations.

Such features of construction shown, but not referred to herein, are either well known or covered by the patent aforesaid and require no description in this connection.

Having described my invention, what I claim is—

1. A feed mechanism comprising a pair of juxtaposed conveyers, and having transverse rib formations between which the articles may be confined, substantially as set forth.

2. A feed mechanism comprising a pair of juxtaposed endless conveyers having a series of transverse ribs or bars spaced suitable dis-

tances apart, the material treated being inserted between the adjacent laps of the conveyers and held between the aforesaid transverse formations, substantially as set forth.

5 3. A feed mechanism comprising a pair of juxtaposed endless conveyers having a series of transverse rib or bar formations curved in cross-section, whereby the articles inserted
10 between the adjacent laps are held in position substantially along lines of contact, substantially as set forth.

4. In combination with a pair of hot-air chambers or headers spaced a suitable distance apart and delivering jets of air into
15 and across said space, an endless conveyer traveling around each header, the adjacent laps of the conveyers traveling in the space between the headers, rollers on the sides of the conveyers, a track or channel for the
20 rollers, and a series of transverse rounded bars or slats forming the surface of each conveyer, whereby the articles inserted between the laps are gripped and held along lines of

contact and the air is free to circulate around the articles, substantially as set forth. 25

5. In combination with a pair of hot-air chambers spaced a suitable distance apart, a suitable endless conveyer operating in the space between the chambers and having transverse rib formations spaced suitable
30 distances apart for permitting the free circulation of air between and around said formations, substantially as set forth.

6. A feed mechanism comprising a pair of endless conveyers in juxtaposed relation, and
35 having transversely-disposed rods or slats on their adjacent laps between which the articles are gripped, and held against warping, substantially as set forth.

In testimony whereof I affix my signature 40 in presence of two witnesses.

HENRY BAETZ.

Witnesses:

EMIL STAREK,
T. EVANS.