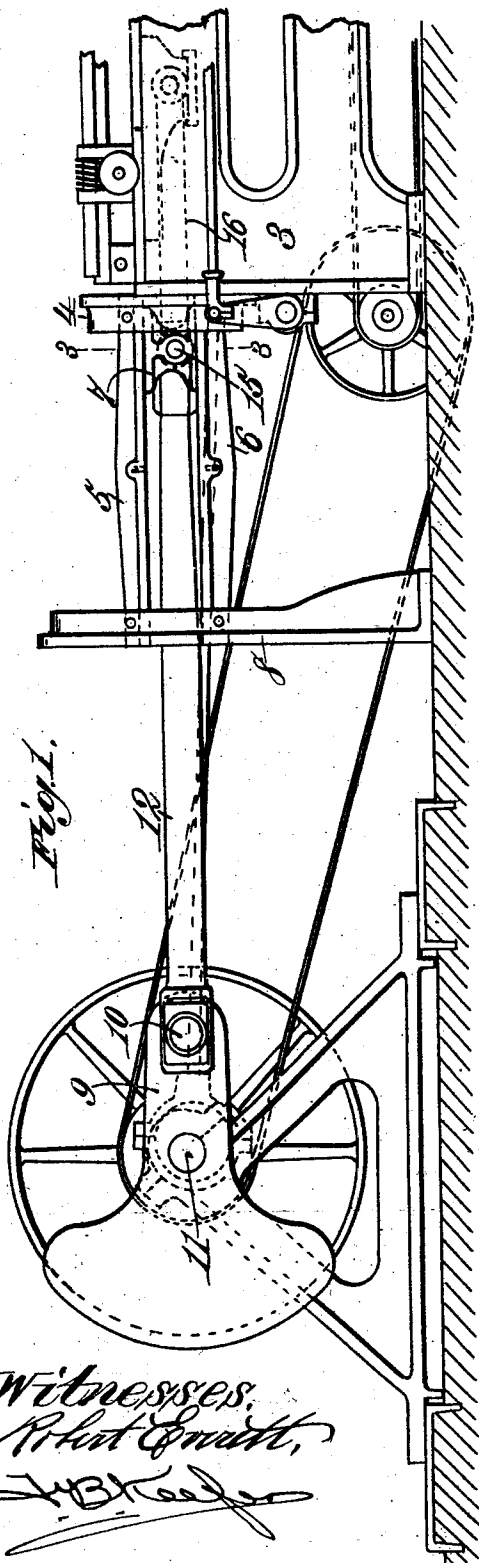


No. 846,318.

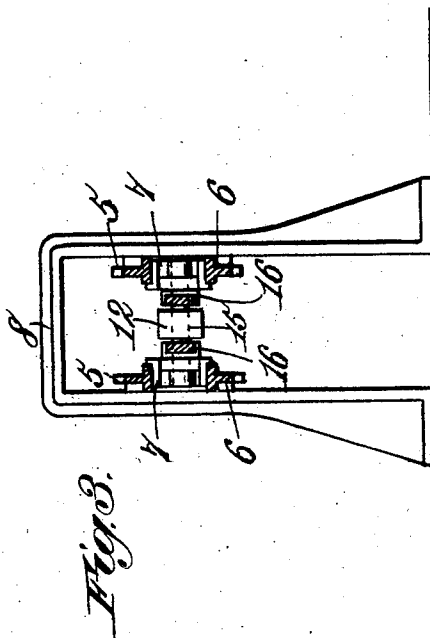
PATENTED MAR. 5, 1907.

L. T. KLINE.
MECHANICAL CONNECTION.
APPLICATION FILED AUG. 8, 1906.

2 SHEETS—SHEET 1.



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J. B. Keeler



Inventor:
Lewis T. Kline.
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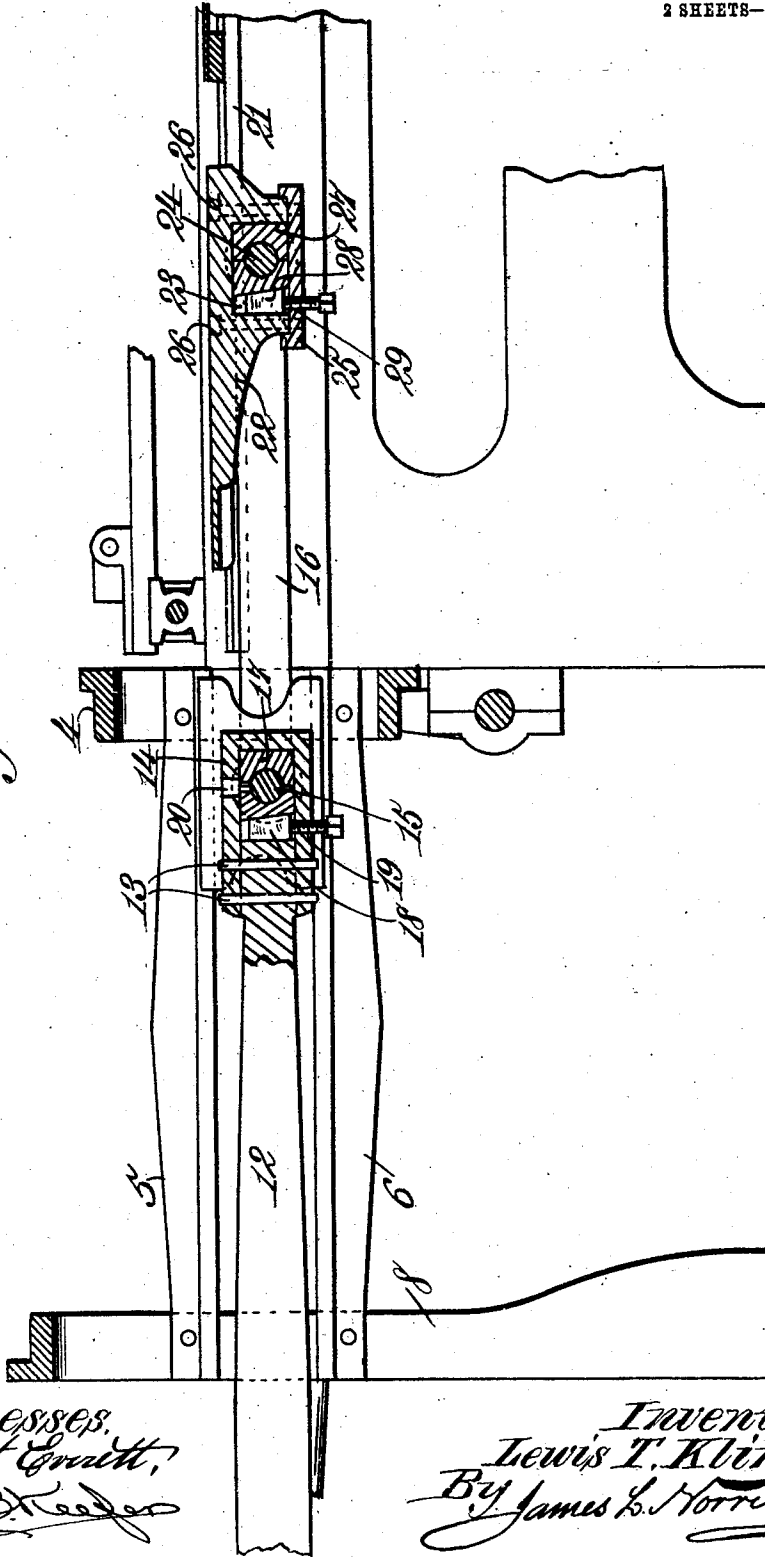
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2 SHEETS—SHEET 2.

Fig. 2.



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UNITED STATES PATENT OFFICE.

LEWIS T. KLINE, OF ALPENA, MICHIGAN.

MECHANICAL CONNECTION.

No. 846,318.

Specification of Letters Patent.

Patented March 5, 1907.

Application filed August 8, 1906. Serial No. 329,737.

To all whom it may concern:

Be it known that I, LEWIS T. KLINE, a citizen of the United States, residing at Alpena, in the county of Alpena and State of Michigan, have invented new and useful Improvements in Mechanical Connections, of which the following is a specification.

This invention relates to mechanical connections between a prime mover and a reciprocatory element and is particularly adapted for use in machines for manufacturing excelsior, and aims to provide in such machine a new and improved means in a manner as hereinafter set forth for operatively connecting the cutting frame or slide of the machine to a prime mover, so that the frame or slide will reciprocate in a regular and continuous manner, or, in other words, so that the frame or slide will travel without any jerky or irregular movement during the reciprocations thereof.

The invention further aims to provide, in a manner as hereinafter set forth, an operative connection between the prime mover and the reciprocatory element which will be strong, durable, efficient in its use, preventing any irregularities during the travel of the frame, and readily set up with respect to the machine.

With the foregoing and other objects in view the invention consists of the novel construction, combination, and arrangement of parts hereinafter more specifically described, and illustrated in the accompanying drawings, wherein is shown the preferred embodiment of the invention; but it is to be understood that changes, variations, and modifications can be resorted to which come within the scope of the claims hereunto appended.

In describing the invention in detail reference is had to the accompanying drawings, wherein like reference characters denote corresponding parts throughout the several views, and in which—

Figure 1 is a side elevation of a portion of a machine showing the operative connection between a prime mover and the reciprocatory element, as shown, a portion of a cutting frame or slide. Fig. 2 is a longitudinal sectional view thereof. Fig. 3 is a section on the line 3 3 of Fig. 1 looking toward the prime mover.

Referring to the drawings by reference characters, 3 denotes one end of a machine-frame, having secured thereto a supporting-yoke 4 for the ends of two pairs of guide-bars 5 6. Each pair of guide-bars extends in a

longitudinal direction from the frame, and the guide-bar 5 is arranged above the guide-bar 6 and is suitably spaced apart, so that the guide-bars 5 6 of each pair constitute tracks for the shoes 7. The other ends of the pairs of guide-bars 5 6 are supported by a yoke 8, which is secured to the foundation for the machine-frame.

The reference character 9 denotes a crank, having a wrist-pin 10, the crank being connected to a prime mover 11. To the wrist-pin 10 of the crank is attached one end of a pitman-rod 12, while the other end of said rod 12 has fixed thereto, by the holdfast devices 13, a hollow cap 14, the said cap projecting from the end of the pitman 12. The cap 14 is adapted to be positioned between the shoes 7, as well as being connected thereto by a pin 15, which extends through suitable openings in the shoes. The pin 15 is fixed to the outer ends of a pair of links 16, there being a link 16 upon each side of the cap 14. Within the hollow cap 14 are arranged brasses 17 for the pin 15, and the said brasses are fixed in position through the medium of the wedge 18. An opening 19 is provided to enable the driving home of the wedge 18, and an opening 20 is provided to enable the lubricating of the pin 15. By such an arrangement it is evident that when the crank 9 is rotated a reciprocating movement will be imparted to the pitman 12, which in turn will impart a like movement to the shoes 7 and links 16.

Depending from the lower face of a reciprocatory element 21, as shown, a portion of the cutting frame or slide of an excelsior-machine is a hanger 22, provided with a square opening 23, and the said hanger 22 is positioned between the inner ends of the links 16. The inner ends of the links 16 carry a pin 24, which extends through the opening 23 in the hanger 22 and is connected to the hanger 22 by means of a plate 25, secured to the said hanger by the holdfast devices 26 and, furthermore, by the brasses 27 and wedge 28. The brasses 27 are mounted within the opening 23 of the hanger 22 and retained therein by the plate 25. The wedge 28 acts as a means for retaining the brasses 27 fast. An opening 29 is provided in the plate 25 to permit of driving the wedge 28 home.

From the foregoing construction it is evident that the operative connection for the frame or slide 21 will when the pitman is op-

erated cause a more even movement of the frame or slide than if the pitman was directly connected at one end to the slide and at the other end to the wrist. The interposition of the links 16 causes, as has been found in practice, the reciprocation of the frame or slide to be even and not in any manner irregular, so that even and continuous cuts can be had.

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

1. In a mechanical connection, the combination with a reciprocatory element, of a hanger depending therefrom and provided with an opening, a plate secured to the hanger, a pin extending through the opening in the hanger, bearings for the pin mounted within the opening and supported by the plate, means arranged within the opening for adjusting the bearings, means extending through the plate for shifting said adjusting means, a pair of links positioned one at each side of the hanger and connected to said pin, a reciprocatory pitman, a pair of guide-shoes, a pin extending through one end of the pit-

man and guide-shoes and connected to the links, bearings carried by the pitman for the last-mentioned pin, and adjustable means for the bearings.

2. In a mechanical connection, the combination with a reciprocatory element, of a hanger depending therefrom, a pair of links between which the hanger extends, a pin extending through the hanger and connected to the links, adjustable bearings carried by the hanger for the links, a reciprocatory pitman, a pair of guide-shoes arranged between the links, a pin extending through one end of the pitman and through the shoes and secured to the links for connecting the links to the pitman, and adjustable bearings for the pin carried by one end of the pitman.

In testimony whereof I have hereunto set my hand in presence of two subscribing witnesses.

LEWIS T. KLINE.

Witnesses:

N. L. BOGAN,
CHAS. S. HYER.