

(No Model.)

C. SINNING.
LASTING MACHINE.

No. 480,145.

Patented Aug. 2, 1892.

Fig. I.

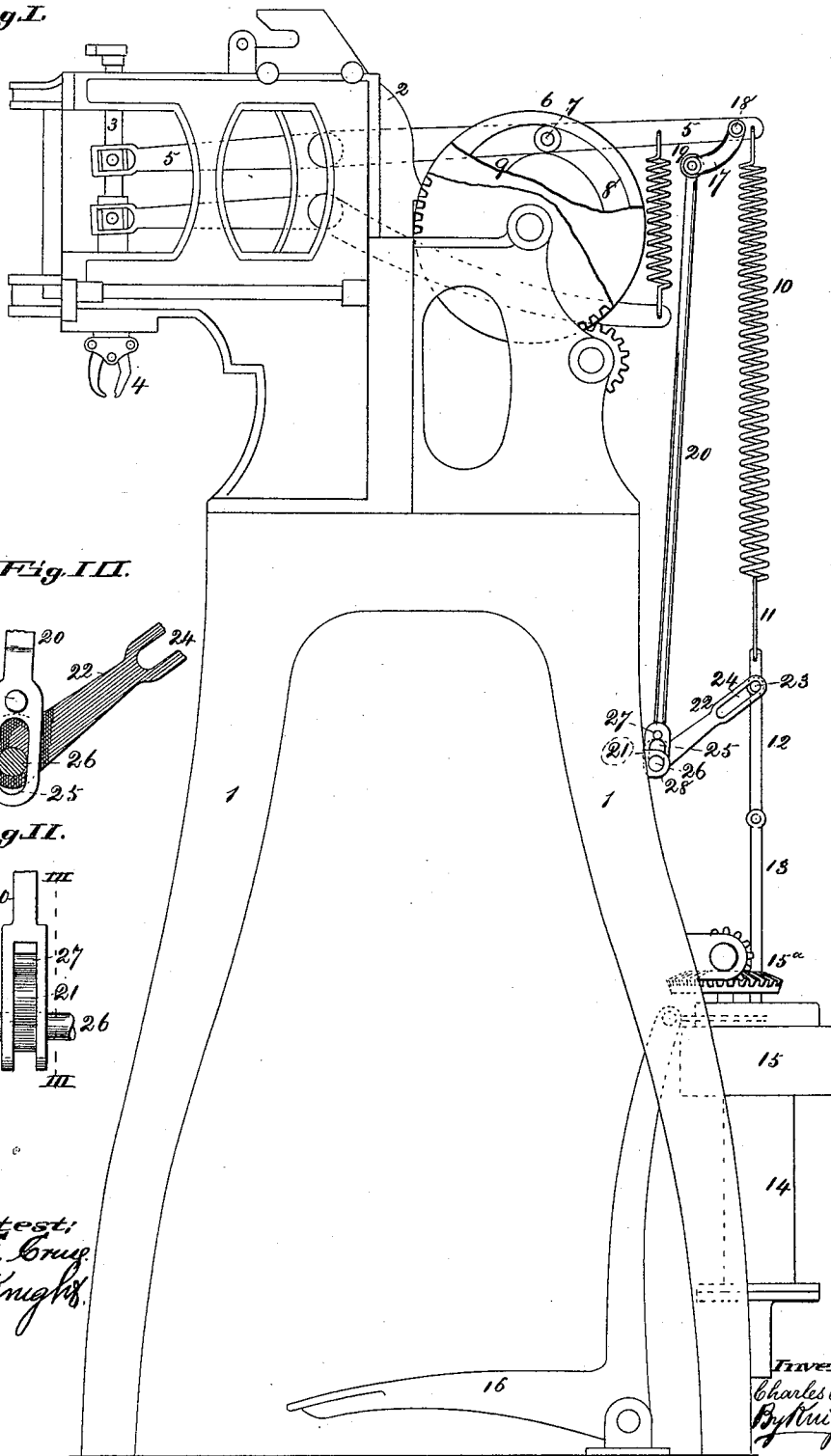


Fig. II.

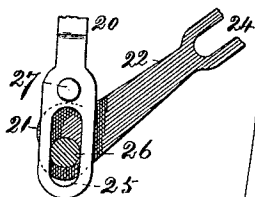
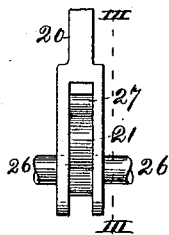


Fig. III.



Attest:
S. E. Group.
E. A. Knight.

Inventor:
Charles Sinning
By Knight & Co.
Attys.

UNITED STATES PATENT OFFICE.

CHARLES SINNING, OF ST. LOUIS, MISSOURI, ASSIGNOR TO THE SINNING
LASTING MACHINE COMPANY, OF SAME PLACE.

LASTING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 480,145, dated August 2, 1892.

Application filed March 21, 1892. Serial No. 425,786. (No model.)

To all whom it may concern:

Be it known that I, CHARLES SINNING, of the city of St. Louis, in the State of Missouri, have invented a certain new and useful Improvement in Adjustable Stop-Motions for Lasting-Machines, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, forming part of this specification.

This invention is an improvement on Letters Patent No. 456,225, granted to me for a lasting-machine July 21, 1891, and No. 458,920, granted to the Sinning Lasting Machine Company September 1, 1891.

The present invention relates to an adjustable stop mechanism for the lever 129 of the former patent, by which the crimping-pinchers are drawn upward, the position of the stop changing with change of tension in the lifting-spring of the said lever. Letters Patent No. 458,920 relate to means for changing the tension of the said spring.

The present invention will be fully described hereinafter, and the novel features set forth in the claims.

Figure I is a side elevation showing sufficient details of a lasting-machine to illustrate my present invention. Fig. II is a detail back view of the stop cam or eccentric. Fig. III is a vertical detail section taken at III III, Fig. II.

1 is the stand of a lasting-machine, and 2 the head.

3 is the pincher-rod.

4 are the crimping-pinchers.

5 is the lever by which the pinchers are moved upward and downward.

6 is a rotary cam by which the rear end of the lever 5 is moved upward, forcing the pinchers downward. To this end the lever has upon the side a stud 7, with anti-friction roller working in a cam groove or channel of the cam-wheel. This groove has a part 8 concentric with the periphery of the wheel, so that when the stud 7 is in the part 8 of the groove the pinchers are held steadily in their lower position. The groove is enlarged inwardly at 9, so as to allow the descent of the rear end of the lever and the ascent of the pinchers. The rear end of the lever 5 is drawn down by a spring 10 to draw up the pinchers 4 and stretch the up-

per-leather on the last. These devices are described in Letters Patent No. 456,225 aforesaid, and no novelty is claimed for them in the present application.

The force of the spring 10 must be varied according to the condition of the work, for where the leather is heavy and strong it is obvious that more force will be required to stretch it on the last than where it is thin, and also that the heavier leather will bear a greater strain without injury. In Letters Patent Nos. 456,225 and 458,920 aforesaid means are described and claimed for adjusting the tension of the pinchers-lifting spring, and no claim is made in the present application for the device for this purpose *per se*. The means shown herein is substantially the same as that described in the specification of Letters Patent No. 458,920, one end 11 of the spring being connected by a rod 12 to the rod 13 of a piston working in a cylinder 14, the position of the piston being governed by a valve in the circulating-pipe of a rotary pump 15, as described in the said Letters Patent No. 458,920. At 15^a is seen the actuating-gear of the pump, the said valve being actuated by the treadle 16.

As no novelty is claimed in the devices for regulating the tension of the spring 10 *per se* and as I do not limit myself to any special means for so doing, I shall not here describe such device, but refer to the Letters Patent above as descriptive of means for this purpose. In both of these a treadle, as 16, is used. The novelty in the present improvement will now be described.

17 is a link pivoted at 18 to the lever 5 and at 19 to the upper end of a rod 20. As the rear end of the lever descends it impinges on the top 19 of the rod 20 and its descent is arrested, and thus the ascent of the pinchers 4 is limited. The vertical position of the rod is governed by a cam 21, having an arm 22, connected to the rod 12 by a stud 23 on the rod 12, that works in a slot 24 of the arm. The rod 20 has a slot 25, occupied by the axial pin 26 of the cam, and has a roller or pin 27, resting on the cam. The construction of these parts is such that as the free end of the arm 22 descends the cam allows the descent of the rod 20, and thus the pinchers are allowed to

ascend to a greater elevation. While the pinchers descend positively to a constant point, they ascend only till the resistance of the leather counterbalances the force of the spring 10 or until the lever 5 impinges upon the stop 19 at the top of the rod 20 and the position of the stop is proportional to the tension of the spring. The cam pin or shaft 26 rocks in bearings 28.

10 I claim as my invention—

1. The combination, with the lever 5 and spring 10, of means for elongating the spring 10, the rod 20, forming a stop for the lever 5, a connection between the lever and the rod, the cam 21, supporting the rod 20, and an arm 22 of the cam, connected with the extensible end of the spring 10, substantially as and for the purpose set forth.

2. The described combination of the lever

5, the spring 10, the link 17, rod 20, with roller 20 27, cam, and slotted end 25, working on the axis of the cam, the cam-arm 22, slotted at 24, the rod 12, connected with the spring 10 and having a stud 23, engaging in the slot 24, and means for stretching the spring 10, substantially as and for the purpose set forth.

3. The combination, with the stand, the head, the pincher-rod, the crimping-pinchers, the lever, the spring, the rod, and the means for adjusting the tension of the spring, of a movable stop device for the said lever connected with the latter and with the rod and having bearing on the stand, substantially as described.

CHARLES SINNING.

In presence of—

SAML. KNIGHT,

BENJN. A. KNIGHT.