

No. 617,368.

Patented Jan. 10, 1899.

C. F. STACKPOLE.
LEATHER STAKING MACHINE.

(Application filed Sept. 20, 1897.)

(No Model.)

2 Sheets—Sheet 1.

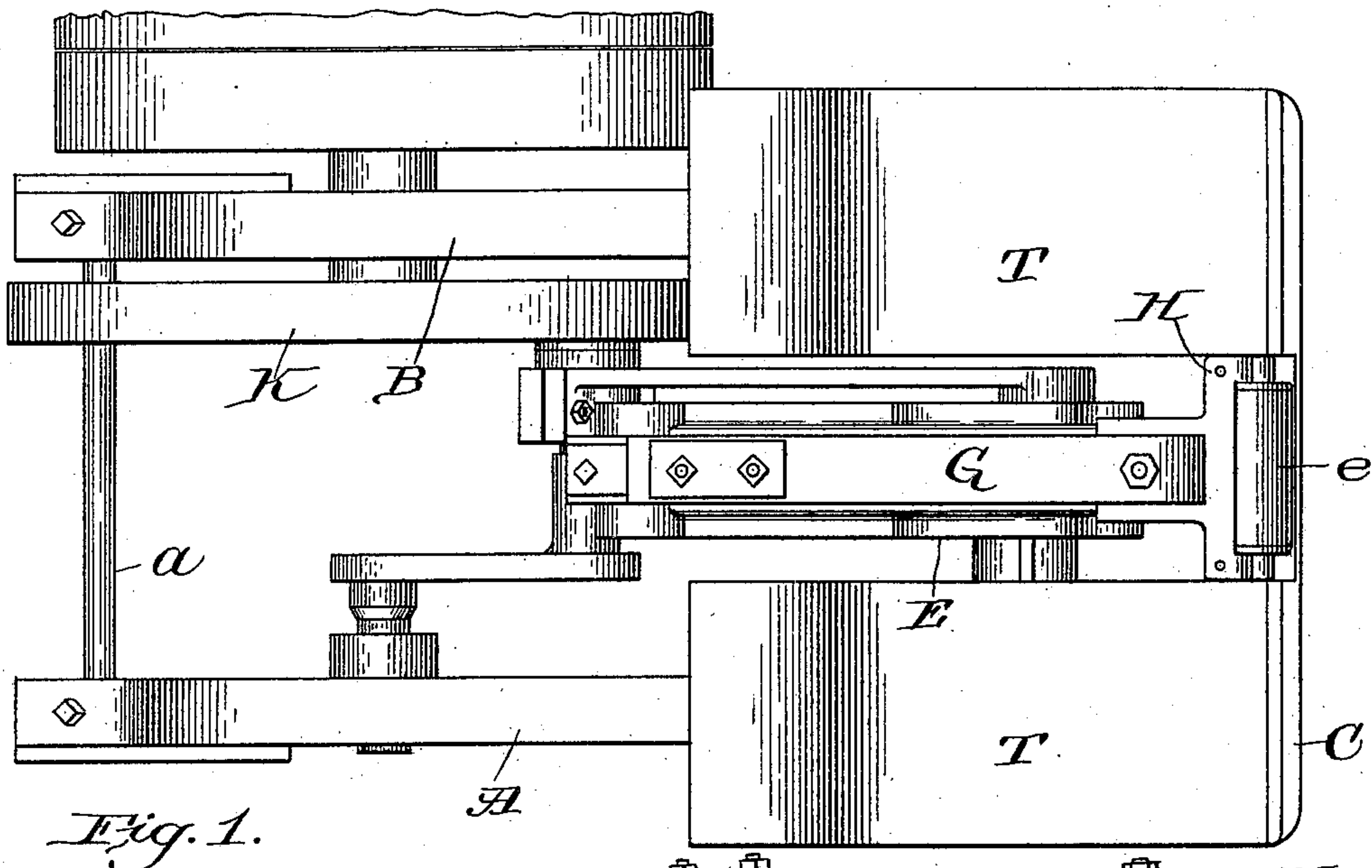
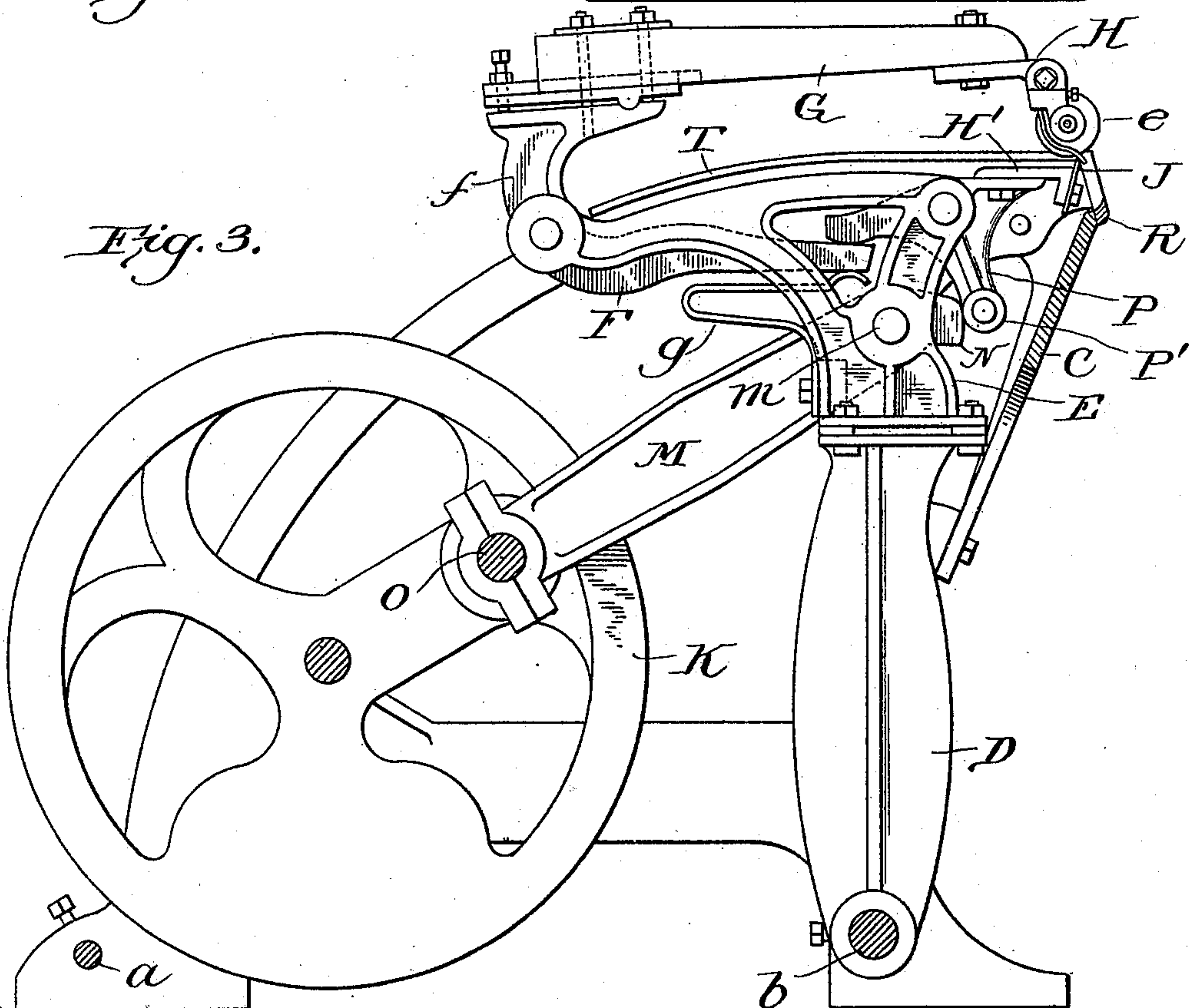


Fig. 3.



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CHARLES F. STACKPOLE, OF LYNN, MASSACHUSETTS.

LEATHER-STAKING MACHINE.

SPECIFICATION forming part of Letters Patent No. 617,368, dated January 10, 1899.

Application filed September 20, 1897. Serial No. 652,215. (No model.)

To all whom it may concern:

Be it known that I, CHARLES F. STACKPOLE, of Lynn, in the county of Essex and State of Massachusetts, have invented an Improved Leather-Working Machine, of which the following is a specification, reference being had to the accompanying drawings, in which—

Figure 1 is a plan, and Fig. 2 an elevation, of my improved machine. Fig. 3 is an elevation with one of the side frames removed. Fig. 4 is a front elevation with a part broken away. Figs. 5, 6, and 7 are details of the upper or supporting jaw.

My invention is an improvement in staking-machines, and I have shown it as applied to the staking-machine described in my Patent No. 501,593, dated July 18, 1893, and it relates, first, to the upper or supporting jaw, and, secondly, to the manner of opening and closing the jaws.

The first feature of my invention consists in making the upper or supporting jaw *e* in the form of a cylinder (instead of a curved sheet, as in my aforesaid patent) and its elastic bearing or support *e*⁵⁰ in the form of a roll, (instead of a rubber pad, as in my aforesaid patent.) By making the sheet of vulcanized fiber or equivalent sheet material (fully described in my aforesaid patent) in the form of a cylinder or jacket *e* and its pad *e*⁵⁰ in the form of a roll a new surface of the vulcanized-fiber sheet can be presented by adjusting the roll, and thereby the strains be distributed over the whole sheet instead of being confined to substantially one line across the sheet, as in my said aforesaid patent. Moreover, in many cases it is better that the upper jaw should revolve; but obviously this feature of my invention will be embodied in a staking-machine whose upper or supporting jaw is composed of a jacket of vulcanized fiber or equivalent material supported on an elastic pad in the form of a roll, whether the roll be fast in its bearings and readjusted by being partially revolved from time to time in order to bring a new surface of the jacket into operation or whether the roll revolve when in use in its bearings, so that the operating-surface of the jaw *e* changes constantly, for the result is the same in either case, although it is somewhat better to mount the roll so that

it and the jacket *e* will revolve when in use instead of mounting it so that it can be revolved or shifted for readjustment only. I have not therefore shown in the drawings any means for preventing the roll *e*⁵⁰ from revolving.

The term "vulcanized fiber" is now well known and largely used in the market to describe a kind of stout paper with a smooth surface, which is flexible, practically non-extensible, and not readily torn; but other sheet materials having these qualities will answer, and for wet or damp work a jacket of duck with a smooth surface of vulcanized rubber is preferable.

As skins differ widely as to the pressure required between the jaws *e* and *J*, I make the roll *e*⁵⁰ pneumatic—that is, hollow and fluid-tight—so that its softness and resiliency can be varied by varying the internal pressure of the fluid, and making the pad or support for the jaw *e* not only in the form of a roll, but also in the form of a pneumatic roll, with provision for varying the internal pressure, is also a feature of my invention.

In the drawings I have shown the supporting-pad *e*⁵⁰ as a cylinder of rubber partly closed at its ends and clamped between collars 8 and 9 by the nut 10 on a hollow shaft 5, whose projecting ends form journals which enter boxes secured to bracket H. One end of the hollow shaft 5 is plugged at 6, while the other end receives the nozzle of the inflating-pump. Valve 11 closes when the inflating operation is completed, and pin 13 serves to keep valve 11 near its seat. The hollow shaft is of course perforated, as at 12, so that the inflating fluid may enter the rubber cylinder *e*⁵⁰. By this construction the jaw *e*, while affording all the advantages due to the fact that it is composed of tough smooth sheet material, stiff, but pliable, and presenting a surface always substantially parallel with the scraping-jaw *J*, has the important additional advantage that it is supported on a pad whose yielding and resilient qualities can be readily altered to suit the skins to be staked by simply varying the internal pressure. It is preferable to make the pad *e*⁵⁰ thicker at its middle, as shown at 4 in Fig. 5, and for heavy work it may even touch the

shaft near its middle, as the jacket-jaw *e* is thereby less likely to be injured by being too much bowed or forced much more toward shaft 5 at its middle than at its ends.

5 The frame of my machine, as shown in the drawings, is composed of two side frames A and B, connected by the cross-rods *a b*, the apron C, and support R for the usual bolster. The carrier H for the jacket-jaw *e* is bolted to
10 arm G, and arm G is fast to shoe *f*, which is adjustably secured to lever F. Lever F is fulcrumed between the sides of bracket E, which is bolted to the upper end of its carrier D. The three-armed lever P is also ful-
15 crumed to bracket E, and one arm of lever P engages one end of lever F. The carrier H' for the scraping-jaw J is fast to a second arm of lever P, while the third arm carries the roll P', as explained below.

20 Bracket E and the parts carried by it are reciprocated by pitman M and crank-pin O on driving-wheel K, as will be plain. The cam N is fast to shaft *m*, which is fast to pitman M and is actuated by the motion of pit-
25 man M and opens the jaws, as shown in Fig. 2, and closes them, as shown in Fig. 3, through its action on cam-roll P' and lever P, for that arm of lever P which carries jaw J is moved toward the jacket-jaw *e* when the cam-roll P'
30 is moved by cam N, and at the same time that arm of lever P which acts on lever F moves lever F against the force of spring *g*, and thereby moves jaw *e* toward jaw J. On the other hand, when cam N allows roll P' to
35 approach the axis *m* spring *g* moves lever F to carry jaw *e* away from jaw J and at the same time moves lever P to carry jaw J away from jaw *e*. The spring *g* acts against lever F and through lever F and lever P holds
40 the cam-roll P' in close contact with cam N, so that cam N acts through cam-roll P' to throw lever P in one direction and through lever P to throw lever F against the stress of spring *g*, and spring *g* acts to throw lever F

in one direction and through lever P acts to 45 hold cam-roll P' in contact with cam N.

Mounting the staking-jaws on a rocking support rocked by a pitman, which support carries mechanism for actuating the jaws and the system of levers carrying staking-jaws, in 50 combination with a cam acting on one of the levers and a spring acting on the other, so that the motion of one of the levers imparted to it by the cam will close the jaws and the mo- 55 tion of the other lever imparted to it by the spring will open the jaws, constitute the third and fourth features of my invention.

What I claim as my invention is—

1. In a staking-machine, a jacket-jaw com- 60 posed of a cylinder of stiff elastic sheet material and an elastic roll as a backing, in combination with a scraping-jaw and means for operating said jaws, substantially as de- scribed.

2. In a staking-machine a jacket-jaw com- 65 posed of a cylinder of stiff elastic sheet material and a pneumatic roll as a backing, in combination with a scraping-jaw and means for operating said jaws, substantially as de- scribed. 70

3. In a staking-machine, levers carrying staking-jaws; mechanism for actuating the jaw-carrying levers and a rocking support which serves as a carriage for the jaw-carry- 75 ing levers and the actuating mechanism all combined substantially as described.

4. In a staking-machine the combination of a cam; a lever actuated by the cam in one direction; a second lever actuated by the first; and a spring actuating the second, and 80 through the second actuating the first in a direction opposed to that given to the first by the cam, all substantially as described.

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Witnesses:

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