

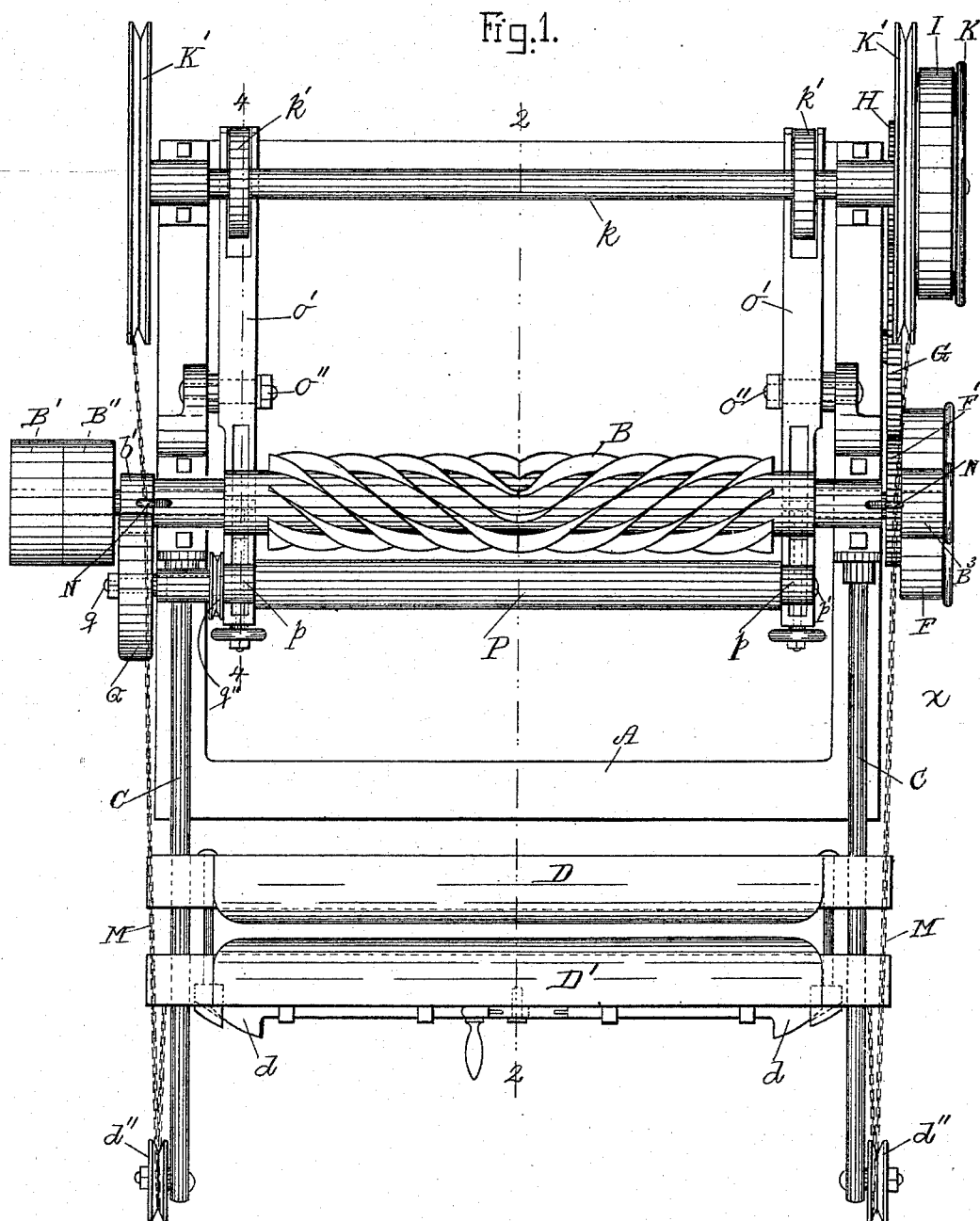
(No Model.)

3 Sheets—Sheet 1.

C. J. MAYER.
FLESHING MACHINE.

No. 526,724.

Patented Oct. 2, 1894.



Witnesses.

Samuel J. Chaddock

Inventor.

Carl J. Mayer
by *Alvan Andrus*
his atty.

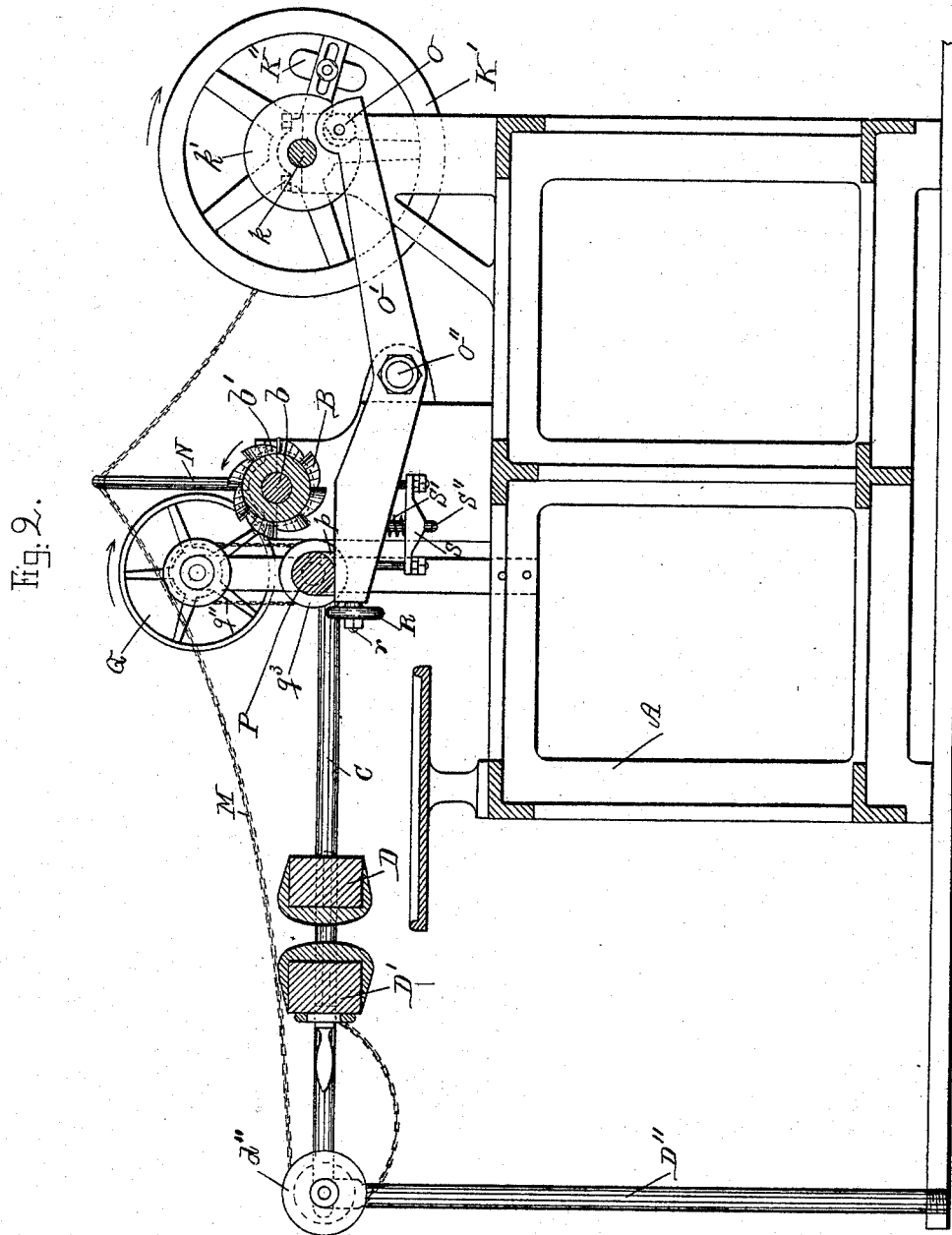
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3 Sheets—Sheet 2.

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Witnesses.

Levinity N. Möller.
Samuel J. Craddock

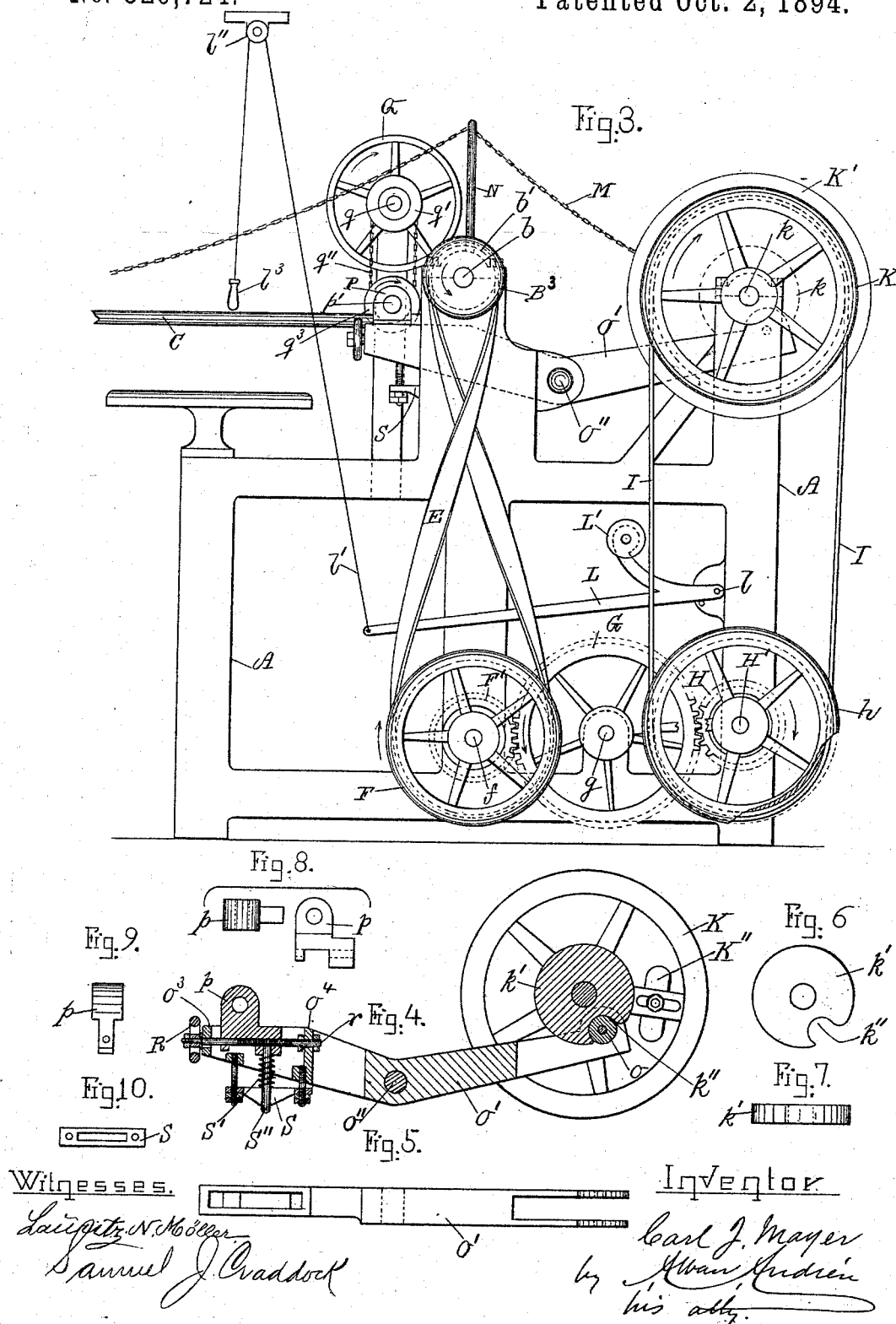
Inventor.

Carl J. Mager
by Walter Andrew
his atty.

3 Sheets—Sheet 3.

No. 526,724.

Patented Oct. 2, 1894.



UNITED STATES PATENT OFFICE.

CARL J. MAYER, OF LYNN, MASSACHUSETTS.

FLESHING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 526,724, dated October 2, 1894.

Application filed July 10, 1894. Serial No. 517,051. (No model.)

To all whom it may concern:

Be it known that I, CARL J. MAYER, a subject of the Emperor of Germany, and a resident of Lynn, in the county of Essex and State of Massachusetts, have invented new and useful improvements in Fleshing-Machines, of which the following, taken in connection with the accompanying drawings, is a specification.

This invention relates to improvements in fleshing machines for the purpose of removing fat, flesh and loose membrane from the flesh side of skins and hides and it consists in means for automatically holding the skin supporting roller and the skin held thereon with a proper pressure against the rotary fleshing knife roller as will hereinafter be more fully shown and described, reference being had to the accompanying drawings, wherein—

Figure 1, represents a top plan view of the invention. Fig. 2, represents a longitudinal section on the line 2—2 shown in Fig. 1. Fig. 3, represents a side elevation seen from X in Fig. 1. Fig. 4, represents a detail section on the line 4—4 shown in Fig. 1. Fig. 5, represents a detail top plan view of the releasing lever shown in Fig. 4. Figs. 6 and 7 represent in side elevation and top plan the cam for actuating said releasing lever. Fig. 8, represents in top plan and side view the bearings for the skin supporting roller. Fig. 9, represents a detail front elevation of one of the bearings for said skin supporting roller; and Fig. 10, represents a detail top plan of the yoke for said roller bearing.

Similar letters refer to similar parts wherever they occur on the different parts of the drawings.

In the drawings A represents the frame or standard of a fleshing machine as usual in bearings in which is journaled the driving shaft *b*, to which the rotary knife roller B is secured as usual.

B' and B'' are the respective loose and fast pulleys on the shaft *b* as usual.

To the frame A are secured the usual horizontal guide rods C, C, on which the clamp bars D, D' are guided. Said clamp bars are adapted to clamp one end of the skin between them by means of any well known clamping or locking device *d, d*, shown in Fig. 1, as is common in machines of this kind.

On the driving shaft *b* is secured a pulley B³ from which leads a cross belt E to a pulley F secured on a shaft *f* and to the latter is secured a gear F' the teeth of which mesh in the teeth of an intermediate gear G loosely journaled on a stud *g* and meshing in a pinion H secured to a pulley *h* journaled on a stud or shaft H' as shown in Fig. 3.

From the pulley *h* leads a slack belt I to a pulley K secured to the shaft *k* which is journaled in bearings in the frame A as shown in Figs. 1, 2 and 3.

At *l* is pivoted the belt tightener lever L provided with a pulley L' which is adapted to be brought against the slack belt I when the lever L is swung upward and for this purpose I prefer to attach to said lever L a cord or strap *l'* which is guided over a pulley or roller *l''* journaled in a bearing secured to any stationary object over head as shown in Fig. 3 and preferably provided with a suitable handle *l'''* as shown in said Fig. 3 for the operator to take hold of whenever it is desired to set the pulley K and its shaft *k* in rotation.

D'' are standards secured to the forward ends of the horizontal guide rods C, C, as shown in Fig. 2.

To the shaft *k* is secured a pair of chain pulleys K' K' to which are attached one end of the respective chains M, M, which are guided in stationary posts N, N, and carried over pulleys *d'' d''* journaled on pins at the forward ends of the guide rods C, C, as shown in Figs. 1 and 2 and secured to the clamping bar D' as shown. On the shaft *k* is secured a pair of cam disks *k' k'* each such cam disk having a peripheral notch or recess *k''* adapted to receive a pin or pin and roll O on the levers O' O' which are pivoted at O'' O'' and provided in their forward ends with adjustable bearings *p, p*, in which the shaft *p'* of the pressure roller P is journaled. The pressure roller P is set in a rotary motion in direction of arrow shown in Fig. 3 when the skin is introduced between it and the knife roller B by the following mechanism.

On the shaft *b* is secured a friction pulley *b'* adapted to bear against a friction pulley Q secured to a pin or shaft *q* journaled in a bearing attached to or forming part of the frame A. On said shaft *q* is secured a chain

pulley q' from which leads a chain q'' to a similar chain pulley q^3 on the pressure roller shaft p' as shown.

- As long as the rolls O, O, on the levers O' 5
O' are in the recesses $k'' k''$ on the cams $k' k'$ the chain q'' is kept taut so as to cause the roller P to rotate in the direction shown by arrow thereon in Fig. 3 and thus cause the skin to be fed between the said roller P and 10
knife roller B during the forward motion of the clamping bars D D'. After the said clamping bars D D' have been moved with the skin held between them to the limit of their stroke relative to the supporting roller 15
P the operator pulls down on the handle l^3 by which the lever L is rocked sufficiently to bring the belt tightener L' against the belt I by which the latter is tightened sufficiently to impart motion to the shaft k , its pulley K, 20
chain pulleys K' K' and cams $k' k'$ causing the pin and rolls O on the levers O' to move out of the cam recesses k'' by which the levers O' are rocked and their forward ends automatically raised sufficiently to bring the 25
roller P and the skin carried thereon in yielding contact with the rotary fleshing roller B at the same time as the clamping bars D D' and the skin clamped between them are drawn toward the operator by the influ- 30
ence of the chains M M and the chain wheels K' K' thus causing the knives on the fleshing roller B to remove the flesh and fatty substances from the skin; and when the roller P is thus held raised its chain q'' is slackened 35
allowing it to rotate freely in an opposite direction to that shown by arrow in Fig. 3 thus enabling the skin to be drawn freely toward the operator during the fleshing operation.

- After one end of the skin has been fleshed, 40
the operator removes it from between the clamps D D' and reverses its position and clamps the opposite end thereof between the clamps D D' and proceeds with such other end of the skin in a similar manner.

- For the purpose of aiding in returning the 45
pulley K to its original position shown in Figs. 3 and 4 I provide it with an adjustable counter weight K'' shown in Figs. 2 and 4 which in connection with the chains M M as 50
the clamps D D' are pushed toward the roll P causes the shaft k and its connections to be automatically returned to the locking position shown in Figs. 2, 3 and 4.

- For the purpose of adjusting the roller P to 55
and from the knife roller B I employ a pair of handles R R attached to screws $r r$ journaled in bearings $o^3 o^4$ in the front end of the levers O' O' and screwed through the bearings $p p$ as shown in Fig. 4; and for the purpose 60
of causing the said roller P to yield to and from the knife roller B to compensate for inequalities in the thickness of the skin or hide that is being fleshed I secure to each of said levers O' a yoke S between which and the 65
under side of each of said bearings p is located a spring S' on a spindle S'' as shown in Fig. 4. To compensate for such yielding

of the roller P I make the front bearings o^3 of the spindles R R slotted as shown in Fig. 4.

By turning the handle R and its screw 70
spindle r , the bearings p , p for the shaft of the roller P may be adjusted to and from the rotary knife roller B according to the thickness of the hide that is being fleshed. The spring S' interposed between the under side 75
of each bearing p and the yoke S normally holds said bearings with a yielding pressure in their highest position and allows said bearings and the roll P journaled therein to yield automatically relative to inequalities in the 80
thickness of the hide that is being fleshed.

The operation of this my improved fleshing machine is as follows: The knife roller B is continuously rotated in the direction shown by arrow in Fig. 2, as are likewise the pulleys 85
B³ and F, intermediate gear G and pulley h in direction of arrows shown in Fig. 3. The operator then takes a skin and clamps one end thereof between the clamping bars D D' and places the opposite end between the ro- 90
tary feed roller P and knife roller B and pushes the said clamping bars toward the feed roller P which by its rotation causes the skin with the flesh side uppermost to be fed freely between said rollers P and B without being 95
acted upon by the latter during such feed of the skin. The operator then pulls downward on the handle l^3 by which the belt tightener L' is brought against the slack belt I causing the shaft k with its pulley K, cams $k' k'$ and 100
chain pulleys K' K' to be rotated a part of a revolution in the direction of arrow shown in Figs. 2 and 3 and in so doing the pin and rolls O at the rear ends of the levers O' are depressed by the cams $k' k'$ causing the roll P to be raised 105
sufficiently to bring the flesh side of the skin in proper contact with the rotary fleshing knife B and causing the roller P to be disengaged from the chain pulley q' and while the skin is thus being acted on by the fleshing roller 110
B it is automatically drawn toward the operator by the chain wheels K' K' and the chains M M connected to the clamping bars D D' until the skin is entirely drawn free from the fleshing roller. The operator then detaches 115
the skin from between the clamping bars and reverses its position therein by securing the now fleshed end between the clamping bars and as the latter are pushed toward the feed 120
roller P the chains M M are tightened causing the chain wheels K' K' and cams $k' k'$ to be reversed and returned to their normal positions shown in Figs. 2 and 3 aided by the counterweight K'' after which the operator proceeds as before stated to flesh the remain- 125
ing portion of the skin by pulling down the handle l^3 and thereby causing the roller P to hold the flesh side of the skin in contact with the rotary fleshing roller B and causing it to be drawn from between the latter and the 130
feed roller P and so on during the operation of the machine.

What I wish to secure by Letters Patent and claim is—

1. In a fleshing machine a rotary knife roller and longitudinally movable clamps adapted to slide to and from the knife roller in combination with a feed roller journaled on
5 pivoted levers and cams $k' k'$ for automatically actuating said levers to hold the skin against the knife roller during the fleshing operation substantially as and for the purpose set forth.

10 2. In a fleshing machine a rotary knife roller and longitudinally movable clamping bars in combination with pivoted levers $O' O'$ a feed roller P journaled in their forward ends a rotary pulley h having a slack belt
15 I leading to a pulley K on the shaft k , cams $k' k'$ on said shaft and a belt tightener L' for operating said cams and causing the feed roller to automatically hold the skin in contact with the rotary knife roller during the
20 fleshing operation substantially as and for the purpose set forth.

3. In a fleshing machine a rotary knife roller and longitudinally movable clamps combined by a cam shaft k having cams $k' k'$ piv-

oted levers $O' O'$ actuated by said cams a 25 starting device for operating said cams and a feed roller journaled in longitudinally adjustable and vertically yielding bearings at the forward ends of said pivoted levers substantially as and for the purpose set forth. 30

4. In a fleshing machine a rotary knife roller and longitudinally movable clamps and connecting chains from the latter to chain wheels $K' K'$ on a cam shaft k having cams $k' k'$ and balance weight K'' combined with 35 pivoted levers $O' O'$ a feed roller P journaled at their forward ends and means for actuating said cam shaft substantially as and for the purpose set forth

In testimony whereof I have signed my 40 name to this specification, in the presence of two subscribing witnesses, on this 2d day of July, A. D. 1894.

CARL J. MAYER.

Witnesses:

ALBAN ANDRÉN,
A. B. HOFFMANN.