

(No Model.)

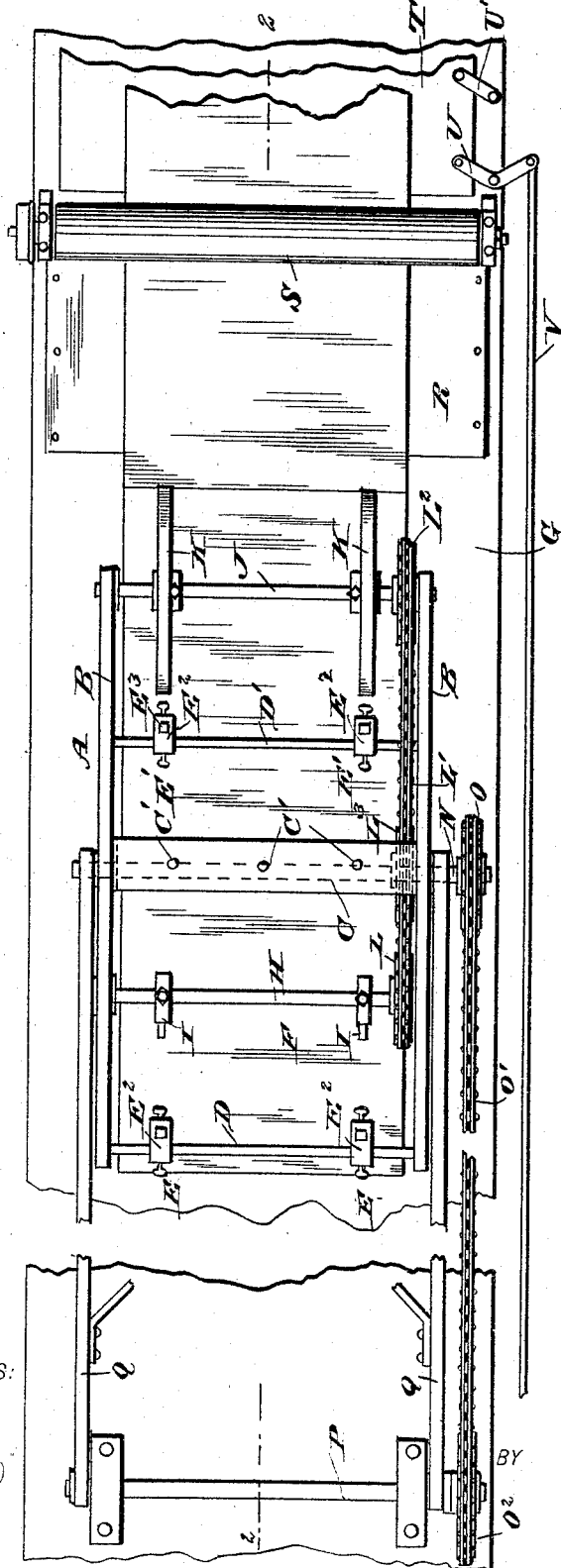
2 Sheets—Sheet 1.

N. LUX.  
PAPER FEEDING ATTACHMENT.

No. 492,218.

Patented Feb. 21, 1893.

*Fig 1*



WITNESSES:

*H. Walker*  
*C. Bedgwick*

INVENTOR:

*N. Lux*  
*Munn & Co*

ATTORNEYS.

(No Model.)

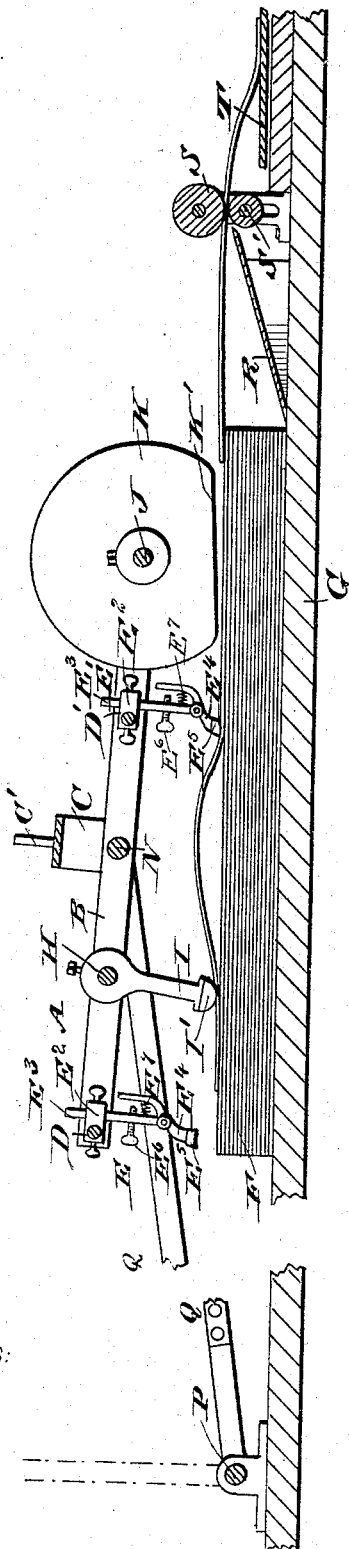
2 Sheets—Sheet 2.

N. LUX.  
PAPER FEEDING ATTACHMENT.

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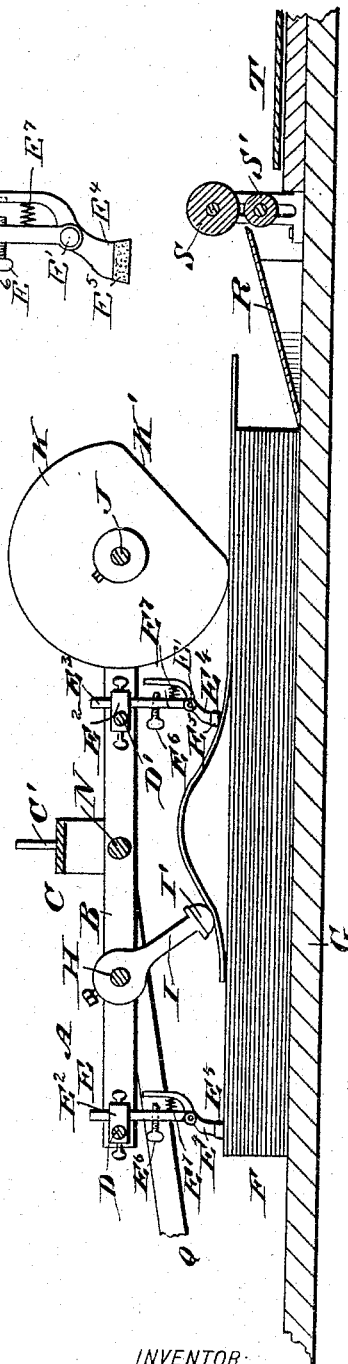
Patented Feb. 21, 1893.

FIG 2



WITNESSES:  
*H. Walker*  
*L. Sedgwick*

FIG 3



INVENTOR:  
*N. Lux*  
BY *Munn & Co*  
ATTORNEYS.

# UNITED STATES PATENT OFFICE.

NICHOLAS LUX, OF TOPEKA, KANSAS.

## PAPER-FEEDING ATTACHMENT.

SPECIFICATION forming part of Letters Patent No. 492,218, dated February 21, 1893.

Application filed February 16, 1892. Serial No. 421,898. (No model.)

### *To all whom it may concern:*

Be it known that I, NICHOLAS LUX, of Topeka, in the county of Shawnee and State of Kansas, have invented a new and Improved Paper-Feeding Attachment, of which the following is a full, clear, and exact description.

The invention relates to paper feeding attachments for printing presses, ruling machines, &c.

10 The object of the invention is to provide a new and improved paper-feeding attachment, which is simple and durable in construction, and arranged to automatically and accurately deliver a sheet of paper to the machine.

15 The invention consists of a frame provided with legs, and cams mounted to revolve on the said frame and adapted to lift the said legs off the paper, at the same time pushing the top sheet forward.

20 The invention also consists of certain parts and details and combinations of the same, which will be fully described hereinafter and then pointed out in the claims.

25 Reference is to be had to the accompanying drawings forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 is a plan view of the improvement; Fig. 2 is a sectional side elevation of the same, on the line 2—2 of Fig. 1; Fig. 3 is a similar view of the same in a different position. Fig. 4 is a detailed sectional elevation of one of the adjustable keepers and its supporting hanger or leg, hereinafter referred to.

35 The improved paper feeding attachment is provided with a frame A, formed with the two side bars B, B, connected with each other at or near the middle by a yoke C formed, on its top, with pins C' for supporting weights to increase or diminish the weight of the said frame A. The side bars B, B, are connected with each other, near their rear ends, by a transversely extending bar D, supporting two or more legs E, and similar legs E' are arranged in front of the yoke C, the said legs being mounted on a cross bar or rod D' also attached to the side bars B, B. Each of the legs E or E' is provided with a keeper E<sup>2</sup>, fastened to the respective rod D or D' by means of a set screw or other device. In the keeper E<sup>2</sup> is held vertically adjustable a rod E<sup>3</sup>, fastened in place on the keeper by a set screw,

as is plainly indicated in the drawings. On the lower end of the rod E<sup>3</sup> is pivoted a foot E<sup>4</sup> lined, at its lower end, with rubber or other material E<sup>5</sup> adapted to rest on the ream of paper F, supported on the feed table G of the machine on which the attachment is applied. The movement of the upper end of the foot E<sup>4</sup> toward the rod E<sup>3</sup> is limited by a set screw E<sup>6</sup> and a spring E<sup>7</sup> presses said upper end outwardly.

Between the cross bar D and the yoke C is arranged a transversely extending shaft H, journaled at its ends in the bars B of the main frame A. On this shaft H are secured by set screws or other means, two or more cam arms I, each formed at its lower end with a lining I' made of rubber or other suitable material. The cam arms I are somewhat longer than the rear legs E, so that when the cam arms I move in contact with the top sheet of the ream of paper F, then the rear legs E are lifted off the paper, as is plainly shown in Fig. 2.

On the front end of the main frame A, is arranged a transversely extending shaft J also journaled in the side bars B, and carrying two or more cams K, preferably made in the shape of disks, having part of their peripheries formed with a flat surface K', as is plainly shown in Figs. 2 and 3. When the flat surface K' is directly above the top sheet of the ream of paper F, then the front legs E' rest on the top sheet of the paper, but when the shaft J turns so that the peripheries of the disks engage the top sheet of the paper, then the front legs E' are raised off the paper, as is plainly illustrated in Fig. 3.

On the shaft H is secured a sprocket wheel L, over which passes a sprocket chain L' also passing over a sprocket wheel L<sup>2</sup> on the shaft J, and also passing over a sprocket wheel L<sup>3</sup> secured on a shaft N extending transversely and mounted to turn in suitable bearings in the side bars B of the main frame A directly below the yoke C. Thus, when the shaft N is rotated, the sprocket wheel L<sup>3</sup> imparts a traveling motion to the sprocket chain L', which latter thus simultaneously revolves the sprocket wheels L and L<sup>2</sup>, so that the shafts H and J are set in motion and the cam arms I and cams K are actuated to lift the legs E and E' off the paper and to push the top sheet

of the ream of paper F forward, as herein-  
after more fully described.

On one end of the shaft N, is secured a  
sprocket wheel O over which passes a sprocket  
chain O', also passing over a sprocket wheel  
O<sup>2</sup> secured on a shaft P, mounted to turn in  
suitable bearings secured to the rear end of  
the table G. The shaft P is connected with  
suitable machinery for imparting a rotary  
motion to the said shaft, so that the feeding  
attachment is set in motion to feed the sheets  
of paper to the machine at the proper time.

On the shaft P is hung a frame Q formed  
with side arms engaging the shaft N, so that  
the entire feeding attachment can be swung  
off the ream of paper F whenever desired, the  
said frame Q then assuming a vertical posi-  
tion, as indicated in dotted lines in Fig. 2.

In front of the ream of paper F is arranged  
an inclined feed board R secured at its lower  
end on the feed table G, but extending, at its  
upper end, close to the rollers S and S', jour-  
naled in suitable bearings on the feed table G.  
The board R serves to guide the sheet of pa-  
per pushed off the ream F between the said  
rollers S and S', which latter feed the sheet  
forward onto the straightening plate T pivot-  
ally connected, at one side, with the links U  
and U', of which the link U is formed with an  
extension connected with a rod V for placing  
the said plate T in a normal position with the  
sheet of paper resting on top of the same, so  
as to push the sheet against the usual stops to  
guide the sheet in the proper direction to be  
taken up by the pressing or ruling machine.

The operation is as follows:—When the  
frame A is over the ream of paper F, the front  
and rear legs E and E' rest on the uppermost  
sheet of paper, the cam arms I then being off  
the paper. Now, when the shaft P is set in  
motion, the shafts H and J are rotated, so that  
the cam arms I swing downward, their linings  
I' engaging the top sheet, thus lifting the rear  
part of the frame A upward, whereby the rear  
legs E are raised off the ream of paper to per-  
mit the cam arms I to push the rear end of the  
top sheet forward. It is understood that at  
this time the flat surfaces K' of the cams K  
are directly opposite the top sheet of the pa-  
per F, so that the front legs E' really form  
the fulcrum for the frame A to swing on. The  
top sheet of paper is caused by the arms I to  
assume, between the latter and the front legs  
E', a curved position, as indicated in Fig. 2.  
At this time the motion of the shaft J brings  
the peripheries of the cams K into contact  
with the top sheet of paper near its front end,  
so that the front legs E' are lifted off the top  
sheet of paper, and at the same time the cam  
arms I still push forward on the top sheet,  
and also the cams K act on the top sheet to  
move the same forward, see Fig. 3. At this  
time the rear legs E rest on the next following  
sheet of paper. The movement of the cams  
K causes the top sheet to be fed forward on  
the ream of paper, the sheet passing upon the

board R and from the latter between the feed  
rolls S and S', to finally be delivered by said  
rolls on the plate T for straightening and de-  
livering of the paper to the press or ruling  
machine. The above described operation is  
then again repeated, that is, the cam arms I  
again engage the top sheet of paper on the  
ream F lifting the rear legs off and pushing  
the rear part of the sheet forward to cause  
the top sheet to assume a curved position, as  
shown in Fig. 2. Next, the front cams K lift  
the front legs off the top sheet and force the  
latter forward, as described.

It will be seen that when it is desired to  
feed by hand, the operator simply takes hold  
of the frame Q and swings the same upward,  
so that the entire feeding attachment is moved  
upward from the ream of paper F and the  
feed table G. Thus the entire feeding attach-  
ment is out of the way and does not hinder  
the operator from feeding by hand in the usual  
manner.

The weight of the frame A is increased or  
diminished by placing additional weights on  
the pins C', as previously mentioned. This  
is necessary according to the nature and size  
of the paper to be fed to the printing or rul-  
ing machine.

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

1. A paper feeding attachment, comprising  
a frame provided with front and rear legs  
adapted to rest on the paper, a pivoted sup-  
port for said frame cam arms mounted to re-  
volve on the said frame between the said legs,  
and cams mounted to revolve on the said  
frame in front of the front legs; substantially  
as shown and described.

2. In a paper feeding attachment, the com-  
bination, with a frame provided with legs rest-  
ing on the paper, a pivoted support for the  
frame of cam arms mounted to swing and  
journaled on the said frame, the said cam  
arms being adapted to engage the paper to  
lift the said legs off the same, substantially  
as shown and described.

3. A paper feeding attachment, provided  
with a frame having pivoted front and rear  
legs adapted to rest on the paper, a pivotal  
support for such frame and cam arms mounted  
to swing in the said frame between the front  
and rear legs, substantially as shown and de-  
scribed.

4. A paper feeding attachment, provided  
with a frame having pivoted front and rear  
legs adapted to rest on the paper, a pivoted  
support for said frame, cam arms mounted to  
swing in the said frame between the front and  
rear legs, and disk cams having flat surfaces  
and mounted to turn in the said frame in  
front of the front legs, substantially as shown  
and described.

5. A paper feeding attachment, provided  
with a frame having yielding front and rear  
legs adapted to rest on the paper, arms mount-

ed to swing in the said frame between the front and rear legs, disk cams having flat surfaces and mounted to turn in the said frame in front of the front legs, and an auxiliary  
5 pivoted frame pivotally connected with the said main frame and adapted for use in raising the said frame and its attachments bodily

off the paper, substantially as shown and described.

NICHOLAS LUX.

Witnesses:

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WM. GIER SCH.