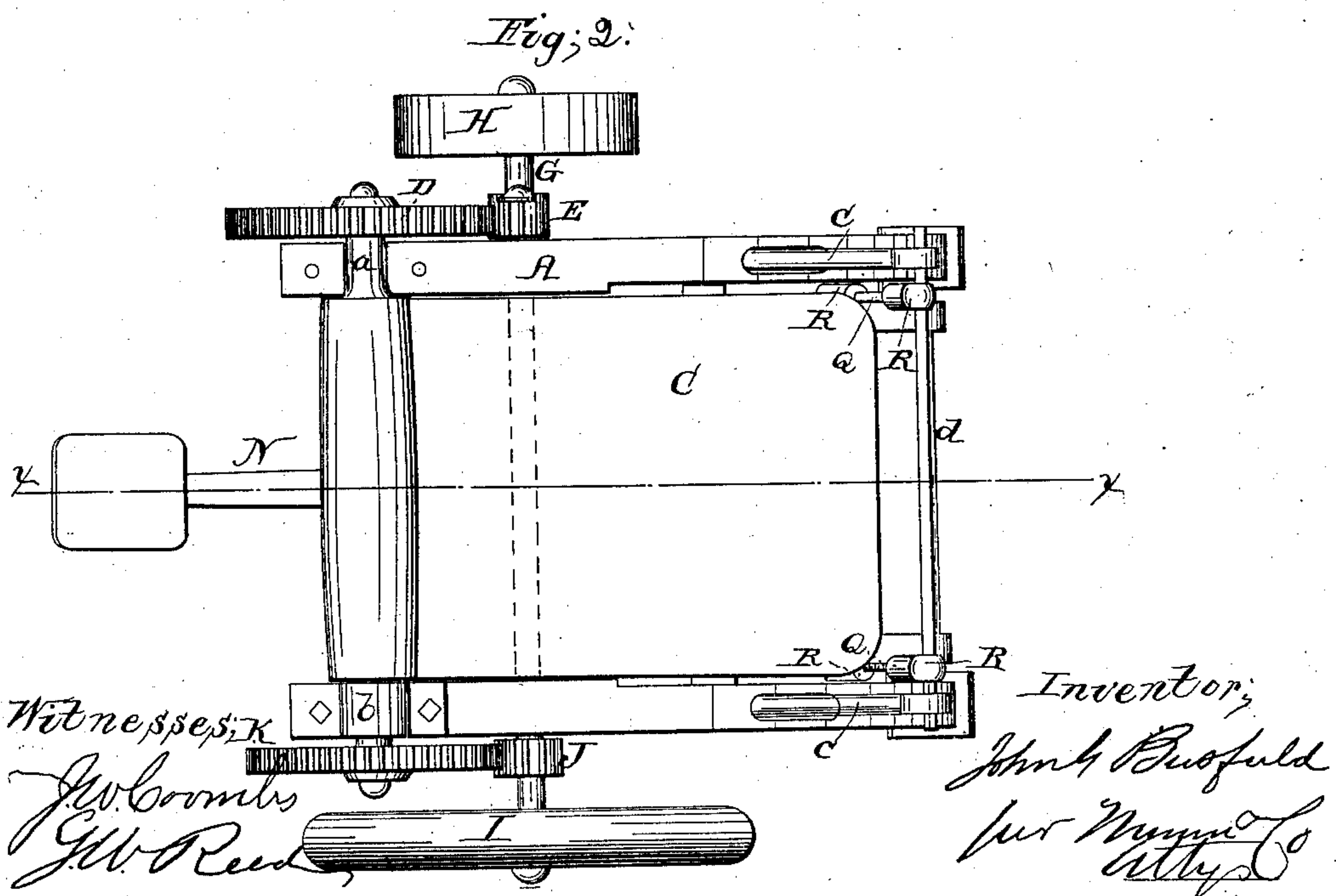
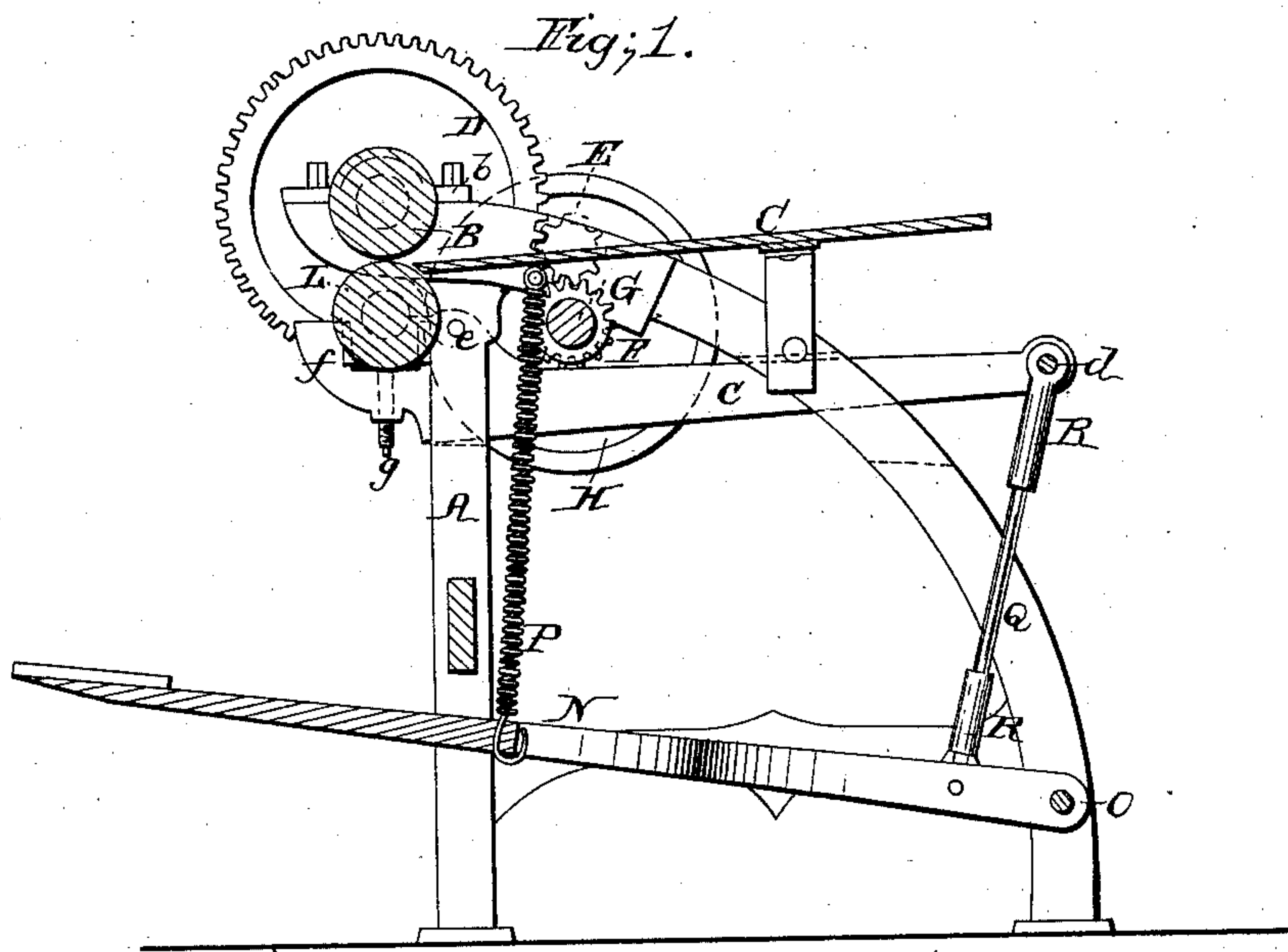


J. G. Busfield,
Dressing Leather,
N^o 41,363. Patented Jan. 26, 1864.



UNITED STATES PATENT OFFICE.

JOHN G. BUSFIELD, OF FELTONVILLE, MASSACHUSETTS.

LEATHER-ROLLING MACHINE.

Specification forming part of Letters Patent No. **41,363**, dated January 26, 1864.

To all whom it may concern:

Be it known that I, JOHN G. BUSFIELD, of Feltonville, in the county of Middlesex and State of Massachusetts, have invented a new and useful Improvement in Machines for Rolling Leather; and I do hereby declare that the following is a full, clear, and exact description of the same, reference being had to the accompanying drawings, making a part of this specification, in which—

Figure 1 is a side sectional view of my invention, taken in the line *x x*, Fig. 2; Fig. 2, a plan or top view of the same.

Similar letters of reference indicate corresponding parts in the two figures.

This invention relates to a new and useful arrangement of the lever-frame in which the lower and adjustable roller is hung, as hereinafter fully shown and described, whereby said roller may be raised and lowered to regulate the pressure on the leather as may be desired, without in the least affecting the gearing by which the lower or adjustable roller is driven.

The invention also relates to an improvement in attaching the treadle to the lever-frame of the adjustable roller, whereby the movement of the former may be regulated as desired; and the invention further relates to the employment or use of adjustable bearings arranged in the lever-frame to receive the journals of the lower or adjustable roller to admit of an independent adjustment of the latter as may be required. By these improvements it is believed that a very simple and durable machine for the purpose specified is obtained, one that may be operated or manipulated with the greatest facility and perform superior work.

To enable those skilled in the art to fully understand and construct my invention, I will proceed to describe it.

A represents the frame of the machine, which may be of cast-iron, with a roller, B, placed on its upper end, and having its journals *a* fitted in permanent bearings *b b*.

C represents a feed-board, which is placed in the upper part of the frame A and has a slightly inclined position. The roller B has a toothed wheel, D, at the end of one of its journals, and into the wheel D a pinion, E, gears, the latter gearing into a pinion, F, on a driving-shaft, G, which is in the upper part

of the frame A and underneath the feed-board C. The driving-shaft G has a driving-pulley, H, on one end of it, and a fly-wheel, I, at its opposite end, and it has also upon it a pinion, J, which gears into a toothed wheel, K, on one of the journals of a roller, L. The roller L is directly underneath the roller B, and it is fitted in the front end of a lever-frame which is formed of two parallel levers, *c c*, connected at their back ends by a rod, *d*. The fulcrum *e e* of the levers *c c* are in the front part of the frame A, a short distance back of the roller L, and the bearings *f* of said roller are made separate from the levers *c c* and fitted in grooves or recesses made in them, and rest upon set-screws *g*, by adjusting which the bearings *f* may be raised and lowered, and the roller L adjusted as desired.

N is a treadle, which is fitted in the lower part of the frame A and works on a rod or shaft, O. This treadle is connected by a spring, P, with the upper part of the frame A, said spring having a tendency to keep the front part of the treadle elevated and the roller L in a depressed state. The back part of the treadle N is divaricated or of forked form, and is connected by rods Q Q to the rod *d* of the levers *c c*. The rods Q Q have right and left screws cut on their upper and lower ends, which are fitted in sockets R, attached to the rod *d* and treadle N. By turning the rods Q it will be seen that they may be screwed farther into or out from the sockets R, and the connection between the treadle N and levers *c c* lengthened or shortened, as may be desired. By this arrangement, when the outer end of the treadle N is depressed to elevate the roller L, between which and the roller B the leather is compressed, the wheel K will not be varied materially in position relatively with the pinion J to affect the proper working of the two. They will always remain properly in gear with each other, and hence their teeth will not be worn or liable to be injured, as is the case with other machines for the same purpose.

By having the bearings *f f* made adjustable, as shown, wear of the journals is compensated for, and the pressure of the rollers B L regulated as desired. The extent of the movement of the treadle N may also be regulated by adjusting the rods Q Q to control in a certain degree the pressure of the rollers.

Having thus described my invention, what

I claim as new, and desire to secure by Letters Patent, is—

1. The combination and arrangement of the levers *c c* and treadle *N*, placed within the frame *A* and connected by the adjustable rods *Q Q*, substantially as and for the purpose set forth.

2. The adjustable bearings *f f* of the roller

L, placed in the levers *c c*, with *an* used in combination with the treadle *N* and the roller *B*, for the purpose herein specified.

JOHN G. BUSFIELD.

Witnesses:

GEO. S. RAWSON,

JOHN H. PETERS.