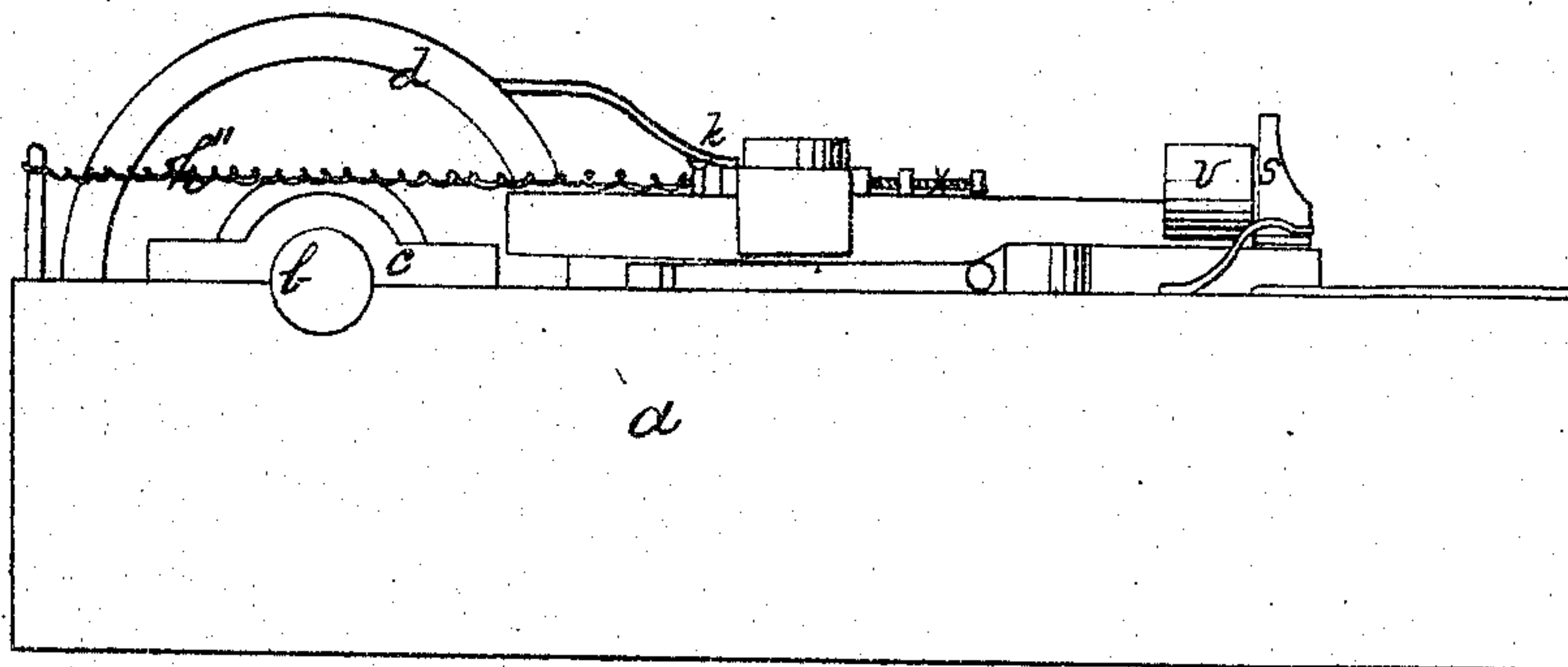


*H.D. Blake,  
Manuf. of Butt Hinges.*

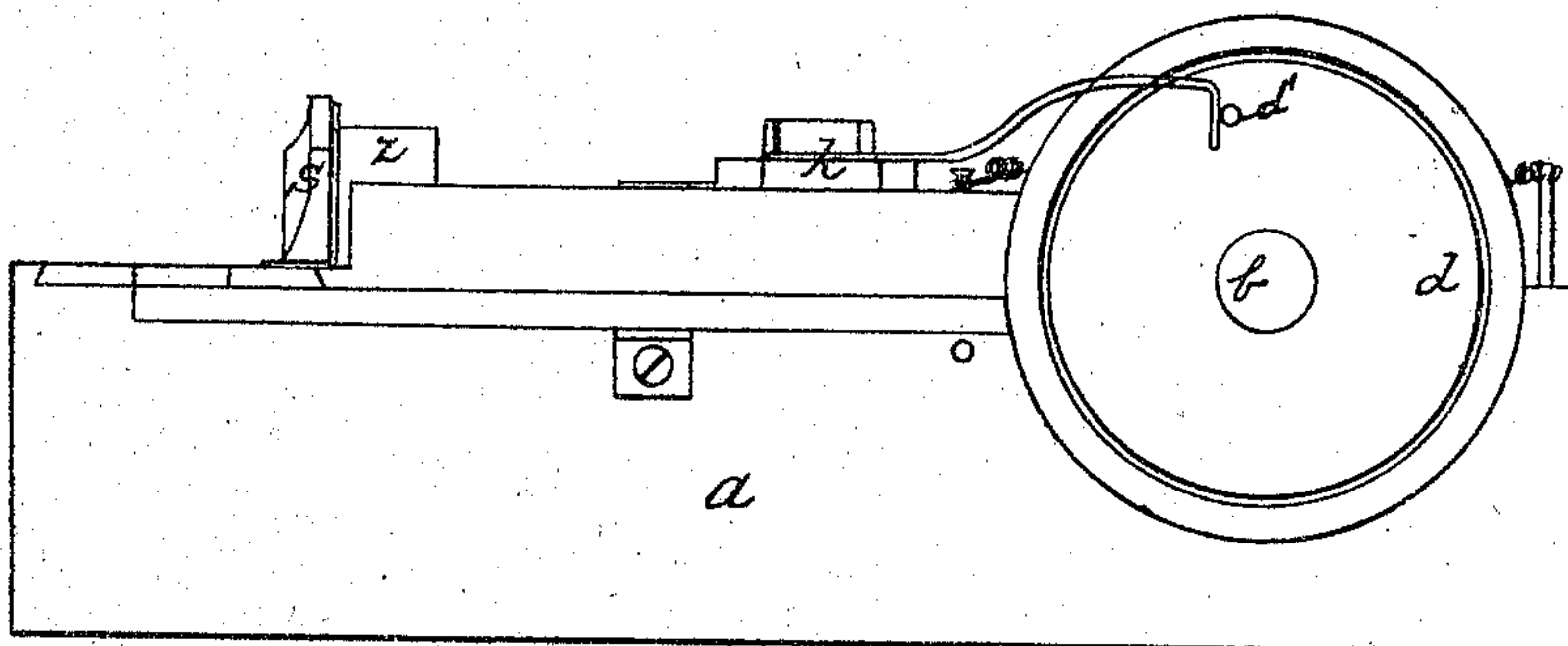
*No 75,724.*

*Patented Mar. 24 1868.*

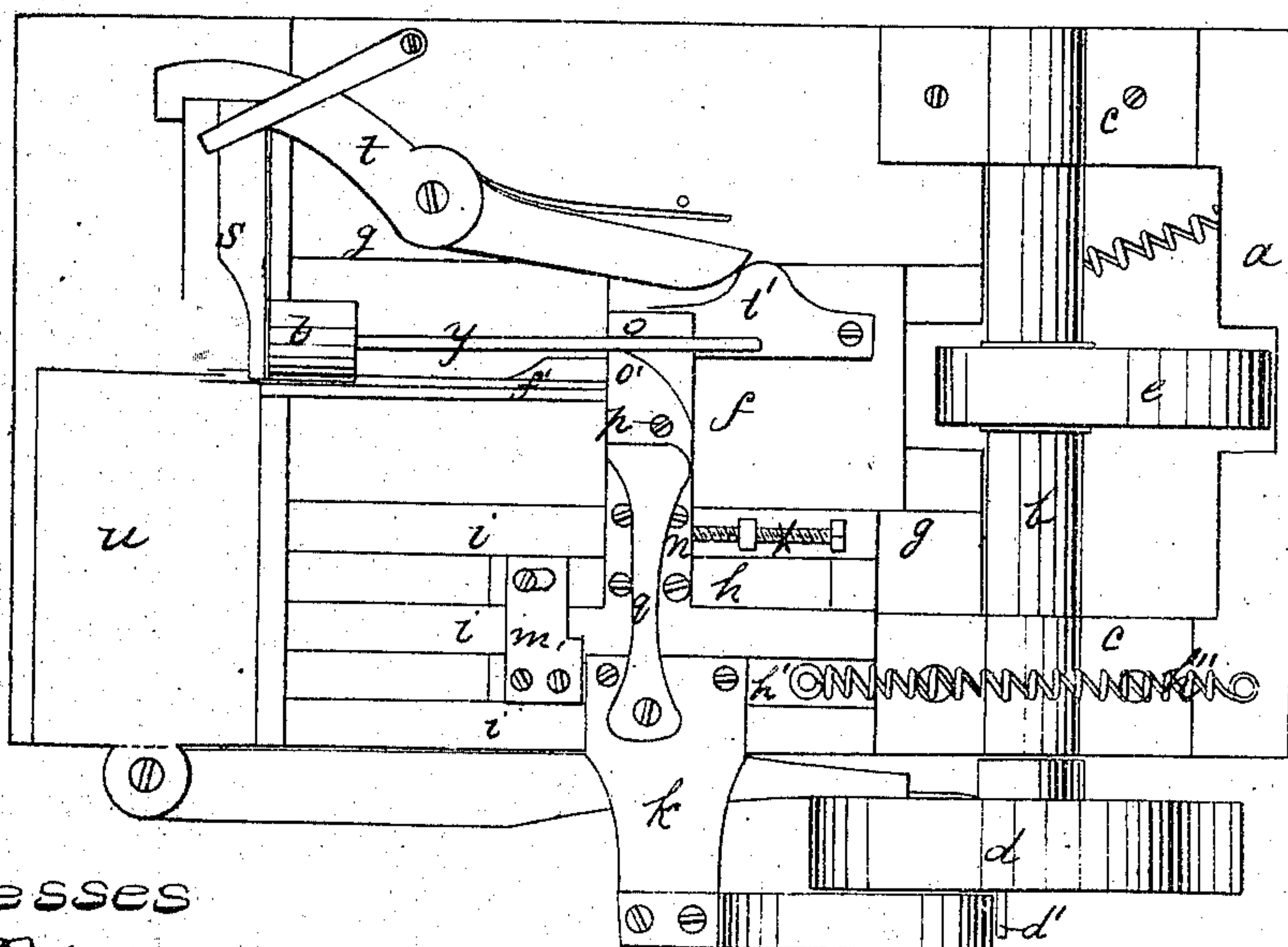
*Fig. 1*



*Fig. 2.*



*Fig. 3*



*Witnesses*

*H. B. Perry  
Mar. W. Perry*

*Inventor*

*Henry D Blake*



# United States Patent Office.

HENRY D. BLAKE, OF NEW BRITAIN, CONNECTICUT, ASSIGNOR TO P. AND F. CORBIN, OF SAME PLACE.

Letters Patent No. 75,724, dated March 24, 1868.

## IMPROVEMENT IN MACHINES FOR MAKING BUTT-HINGES.

The Schedule referred to in these Letters Patent and making part of the same.

TO ALL WHOM IT MAY CONCERN:

Be it known that I, HENRY D. BLAKE, of New Britain, county of Hartford, and State of Connecticut, have invented certain new and useful Improvements in Butt-Machines; and to enable others skilled in the art to make and use the same, I will proceed to describe its construction and operation by referring to the drawings, in which the same letters indicate like parts in each of the figures.

The nature of this invention consists in combining or uniting a feeding, gauging, and cutting-device, to the "driver-device, substantially such as patented to Thomas Tracy, March 19, 1867, No. 62,981," so that the wire may be drawn from a coil, gauged to a given length, cut, and driven into the butt automatically. In the accompanying drawings—

Figures 1 and 2 are side elevations.

Figure 3 is a top or plan view.

*a* is the bed or framework of the machine. *b* is the operating-shaft, having its bearings in the boxes *c c'*. *d* is a driving-wheel secured to the outer end of the shaft *b*. *e* is a cam, or its mechanical equivalent, secured upon the shaft *b*, the object of which is to move forward or actuate the stock *f* and wire-driver *f'*, which are arranged to work back and forth between the ways *g*. This stock is reacted to its resting-place by a spring or other mechanical equivalent. *h h'* are sliding stocks, arranged to work back and forth between the ways *i*. *k* is an arm, secured to the stock *h'*, and extends outward, and by the side of the wheel *d*, and is acted upon by the cam or pin *d'*, in or upon the side of said wheel, to move the stocks *h h'* forward at each revolution of said wheel. These stocks are reacted to their resting-place by a spring, *h''*, or its mechanical equivalent. These two stocks, *h h'*, are connected together by a plate, *m*, one end of which is firmly secured to the stock *h'*. The object of the slit in the plate *m* is to allow the stock *h'* to move back and forward on the pin *h'''*, a little in advance of the stock *h*. *n* is a clamp-stock, secured firmly to the stock *h*. *o o'* are clamp-jaws, one of which, *o*, is formed or secured firmly on the outer end of the stock *n*; the other, *o'*, is secured loosely to the stock *n*, so as to oscillate upon a fulcrum-pin, *p*. It is also provided with an arm, *q*, which extends back over and is connected to the arm *k* by a screw or pin, *q'*.

Thus it will be seen that when the stock *h'*, by the action of the cam *d'*, moves forward, it causes the jaw *o'* to gripe the wire *y*, and, by the connection *m*, is moved forward the full extent of the driving-mechanism or cam *d'*, and quickly yield its hold the instant it commences its backward motion.

*r* is a holding-stock or die, into which the wire is introduced, and through which it is driven by the action of the clamp-jaws *o o'*. *s* is an oscillating-cutter, arranged so as to work closely to the die *r*. This cutter is operated by a cam or wedge-shaped formation upon the end of the lever *t*. Said lever is actuated by a cam, *t'*, secured to the sliding stock *f*. This lever and cutter are reacted back to their resting-place by springs. *u* is a slide or cut-off, arranged so as to allow one wire at a time to drop into a hopper, (said hopper being arranged when the machine is ready for operation,) so as to receive the wires as they drop from the cutter, and hold them in position directly over the channel, protected on all sides, so as to prevent the wire from kinking while being driven into the joint of the butt. This slide or cut-off is operated by an oscillating-lever, actuated by a cam upon one side of the driving-wheel *d*, and reacted by a spring, so as to allow only one wire to drop from the hopper into said channel.

The mechanism for holding the butt-blanks is arranged at the end of the machine, directly in front of the driver *f'*, so as to bring the orifice in the blanks in line with and close to the driver *f'* when it is pushed forward to its extreme distance by the action of the cam *e*. The length of the wire is determined or regulated by the screw *x*, which regulates or fixes the backward motion of the stocks *h h'*.

Now when the machine is in readiness for operation, one end of the wire is introduced into the machine through the clamp-jaws *o o'*, thence into the holding-die *r*. When motion is given to the wheel *d*, the cam or pin *d'*, acting upon the arm *k*, causes the clamp-jaws *o o'* to gripe the wire *y*, and push it forward through the holding-die *r*, by means of the cam *e*, acting against the stock *f*, and at the same time, through the action of the cam *e*, cam *t'*, wedge-shaped lever *t*, the cutter *s* cuts and drops a wire into the hopper, in readiness to be separated, one at a time, by the action of the cut-off *u*, and driven into the joint of a butt by the driver *f'*.

Thus by the combined action of the mechanism described, the wire is fed into the machine, gauged and cut to a proper or desired length, and driven successively into the joint of butt-blanks, thus greatly facilitating the manufacture of butts.

I believe I have thus shown the nature, construction, and advantage of this improvement, so as to enable others skilled to make and use the same therefrom.

I claim the jaws *o o'*, arranged upon the stock *h*, and actuated by cam *d'*, through the stock *h'*, arm *k*, plate *m*, or their equivalents, to feed the wire *y* into the holding and cutting-die *r*, substantially as and for the purpose described.

I claim, in combination with the above, the screw *x*, or its equivalent, for fixing the extent of the backward motion of the stock *h*, whereby the length of the wires being cut is regulated.

I claim the combination of the cams *e t'*, lever *t*, shear *s*, for cutting the wire at each successive revolution of the shaft *b*, and all constructed and arranged substantially as described.

HENRY D. BLAKE. [L. S.]

Witnesses:

H. B. PIERRE,

MERRITT BRONSON.