No. 670,391. Patented Mar. 19, 1901.

R. ROBINSON.

PRINTING PRESS FEED GAGE OR HOLDING DEVICE.

(Application filed Dec. 11, 1899.)

(No Model.)

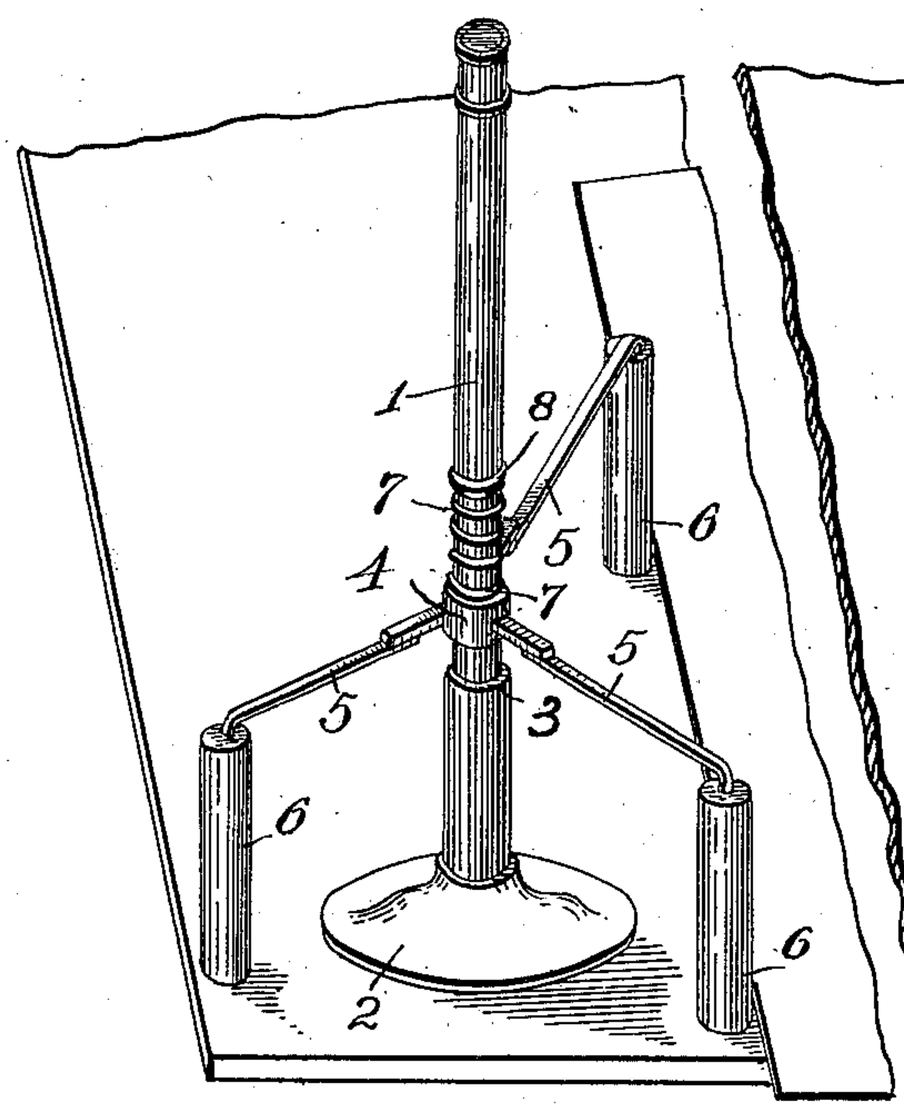

Fig. 1.

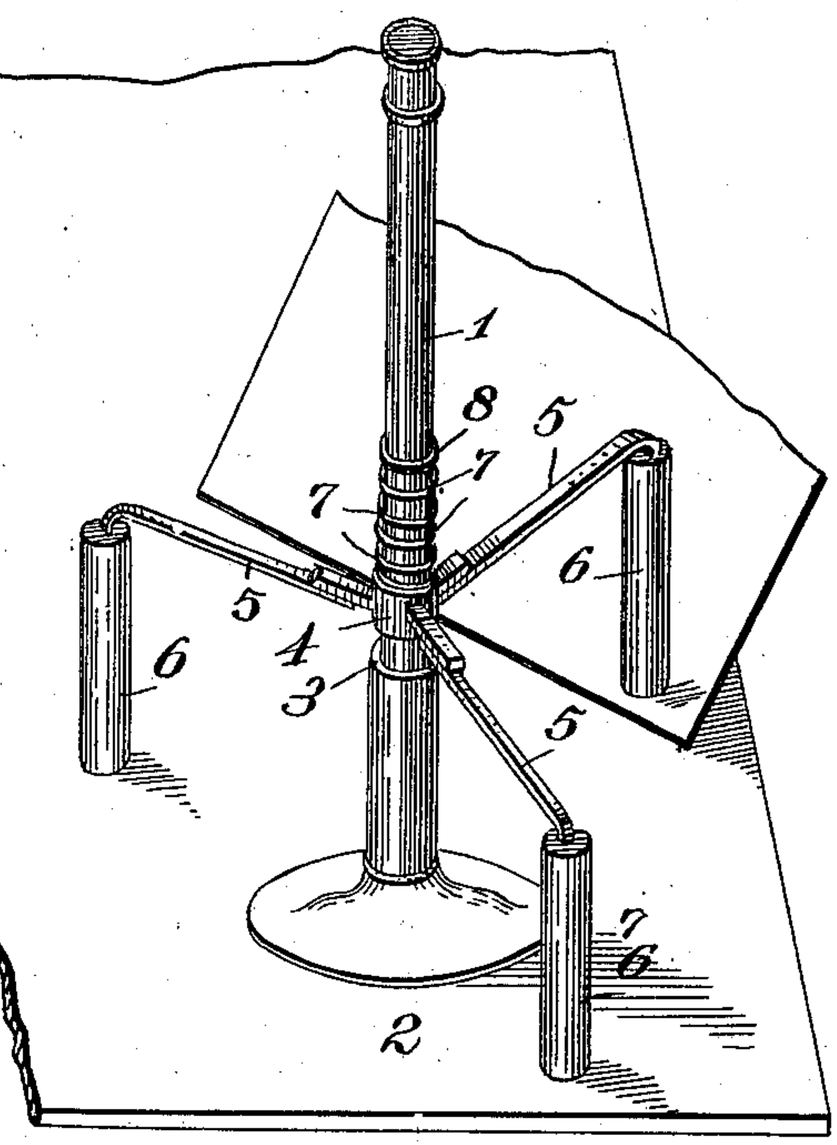

Fig. 2.

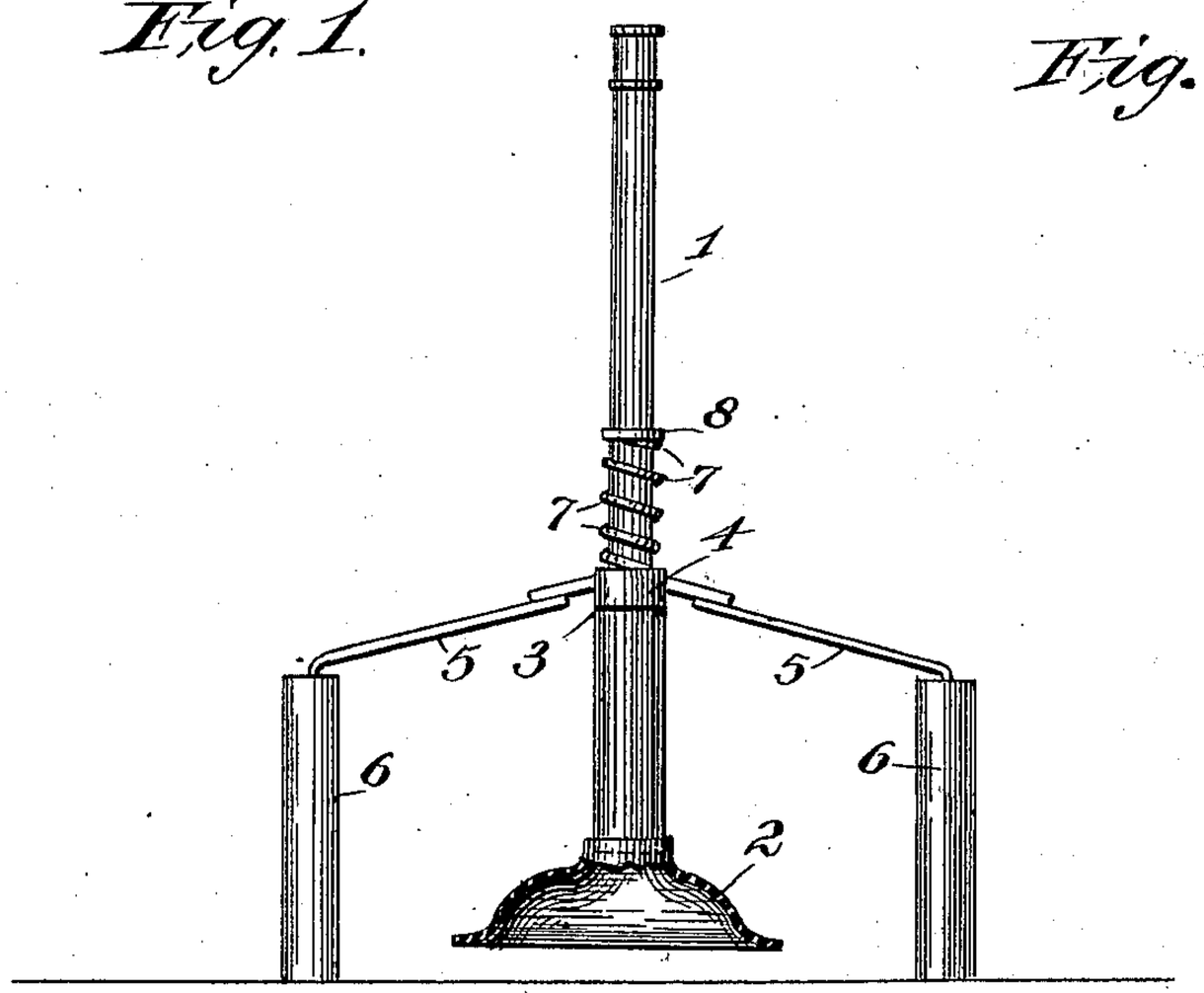

Fig. 3.

Witnesses.
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UNITED STATES PATENT OFFICE.

ROY ROBINSON, OF NEW WHATCOM, WASHINGTON, ASSIGNOR OF ONE-HALF TO ELMON SCOTT, OF SAME PLACE.

PRINTING-PRESS FEED-GAGE OR HOLDING DEVICE.

SPECIFICATION forming part of Letters Patent No. 670,391, dated March 19, 1901.

Application filed December 11, 1899. Serial No. 739,906. (No model.)

To all whom it may concern:

Be it known that I, ROY ROBINSON, a citizen of the United States, residing at New Whatcom, in the county of Whatcom and State of Washington, have invented new and useful Improvements in Printing-Press Feed-Gages or Holding Devices, of which the following is a specification.

This invention relates generally to printing-presses, but more particularly to feed gages or guides therefor; and its object is to provide a device of the character described adapted to keep the blank paper in alinement with the "form" and guide the same as it is fed to the cylinder printing-press.

While the primary object of my invention is to provide a new and more efficient form of feed-gage simple and cheap in construction, easily and quickly applied, adjusted, changed, or detached by the operator, another and further purpose is to provide in the same contrivance a cheap and efficient holding device—that is, the coördinating parts of the contrivance are so constructed as to make it introconvertible from a feed-gage to a holding device, and vice versa.

With these objects in view my invention consists of certain parts and combination of parts, which are described hereinafter, recited in the claims, and illustrated in the accompanying drawings, in which—

Figure 1 is a perspective view of the device as used as a feed-gage, a portion of the feed-table being shown to illustrate its application. Fig. 2 is a similar view showing the invention in use as a paper-holder; and Fig. 3 is a front elevation showing the pneumatic holding cup or shoe in section to illustrate its shape and construction, the tripod standing normally upon a level surface, with the cup or shoe somewhat above.

Describing now the drawings by reference-numerals, 1 indicates the central main stem, of suitable material, on the lower end of which and shown firmly secured thereto is a flexible pneumatic suction cup or shoe 2, of rubber or other suitable material adapted to adhere to a smooth surface. It will be noticed that the stem 1 is reduced a short distance above the cup 2 to provide the shoulder 3, and sleeved on this reduced portion is the tripod or head 4, from which project radiating arms 5, carrying at their respective free ends the legs 6, which are designed as the guides for the paper when the device is used as a feed-gage and to hold the paper when used as a holding device.

Coiled around the stem 1 above the radiating-arms' head 4 is a spiral spring 7, one end of which rests on said head and the other end being firmly attached and held to the stem 1 at 8 against displacement or further upward sliding. When the stem 1 is pressed downward and the cup 2 engaged, the pressure of the spring 7 on the head 4, through the arms 5 to the legs 6, holds the latter firmly to the surface wherever placed to the end that they may serve the purposes for which intended. The stem 1 slides freely through the sleeve of the head 4, but is limited by the spring 7, the shoulder 3, and the cup 2.

All of the parts being assembled, the operation of the device is as follows: The operator grasps the stem 1, places the device where desired, and forces the stem 1 downward, depressing the spring 7 and pressing the cup 2 against an even surface, such as an ordinary printing-press feed-table, thereby expelling the air therefrom. The stem 1 then being released is forced upward by the spring 7 in so far as permitted by the atmospheric pressure on the pneumatic cup 2, the cup adhering to the level surface from force of atmospheric pressure. The stem 1 being thus firmly held to the even surface by the atmospheric pressure on the suction-cup 2, the downward tension of the spring 7 on the head 4 holds the legs 6 rigidly in position until moved by the operator.

It is obvious from the foregoing description that when the suction-cup 2 is once firmly engaged, as described, to an even surface all of the parts of the device will retain rigidly the position in which placed, held there by pressure from the spring 7, and they are so constructed and arranged as to serve as a feed-gage (illustrated by Fig. 1) or as a holding device. (Illustrated by Fig. 2.) It is also obvious that the device can be easily detached from the table or other smooth surface and

readily adjusted to any desired position or to direct the paper to any size of form"

When used as a holding device, one or more of the legs 6 are slightly elevated by the operator by sliding the head 4 upward on the stem 1, and whatever is to be held is placed thereunder. Then releasing the leg or legs it is clear that the tension of the spring 7 will cause the legs to take a firm hold on what is placed thereunder and will effectually prevent its displacement.

It will be seen from the description and drawings that the legs are designed, primarily, to be used alternately as guides or holders and that the functions of the stem, spring, and cup are to hold and control the legs and make them serve the purposes for which intended.

While I have attempted to describe in detail what appears to me to be the very best means of accomplishing the desired results, I would have it understood that I do not limit my rights and claims to details of construction, but hold that slight changes and alterations, such as would suggest themselves to the mechanic, might easily be made without departing from the spirit and scope of my invention.

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

1. In a feed-gage having guides or holders, the combination with a stem and a pneumatic suction-cup at one end thereof, of a spring constructed to hold the guides or holders in position, substantially as described.

2. In a paper-holder or feed-guide, the combination with a spring, of a stem, with a suction-cup at one end thereof, constructed to control the holder or guide and to render the device adjustable to any desired position on a smooth surface, substantially as described.

3. In a device of the character described, the combination with a central stem of a pneumatic suction-cup secured thereto and adapted to engage a suitable support, a series of legs to keep the device in position, carried by said stem, and a spring for forcing said legs against the support of the device, substantially as described.

4. The combination with a central stem of a series of legs used as guides or holders, sleeved thereon and a pneumatic suction-cup on one end of the stem, substantially as described.

5. The combination with a stem of a plurality of spring-pressed legs used as guides or holders, carried by the stem, and a suction-cup at one end of said stem to secure the same to a surface as a base, substantially as described.

6. The combination with a holding device or feed-gage, of a stem detachably secured to a firm support, the stem being provided with a spring adapted to control the device and hold it in any position it may be placed, substantially as described.

7. In a feed-gage or holding device, a central stem with suction-cup in combination with radiating legs which keep the device in position and act as paper guides or retainers, as the case may be, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROY ROBINSON.

Witnesses:
Mrs. F. M. RUEMBEAUGH,
S. L. BUTLER.