No. 734,643. PATENTED JULY 28, 1903.

P. A. WHITNEY.

GRINDING MACHINE.

APPLICATION FILED APR. 15, 1903.

NO MODEL. 2 SHEETS—SHEET 1.

Fig. 1.

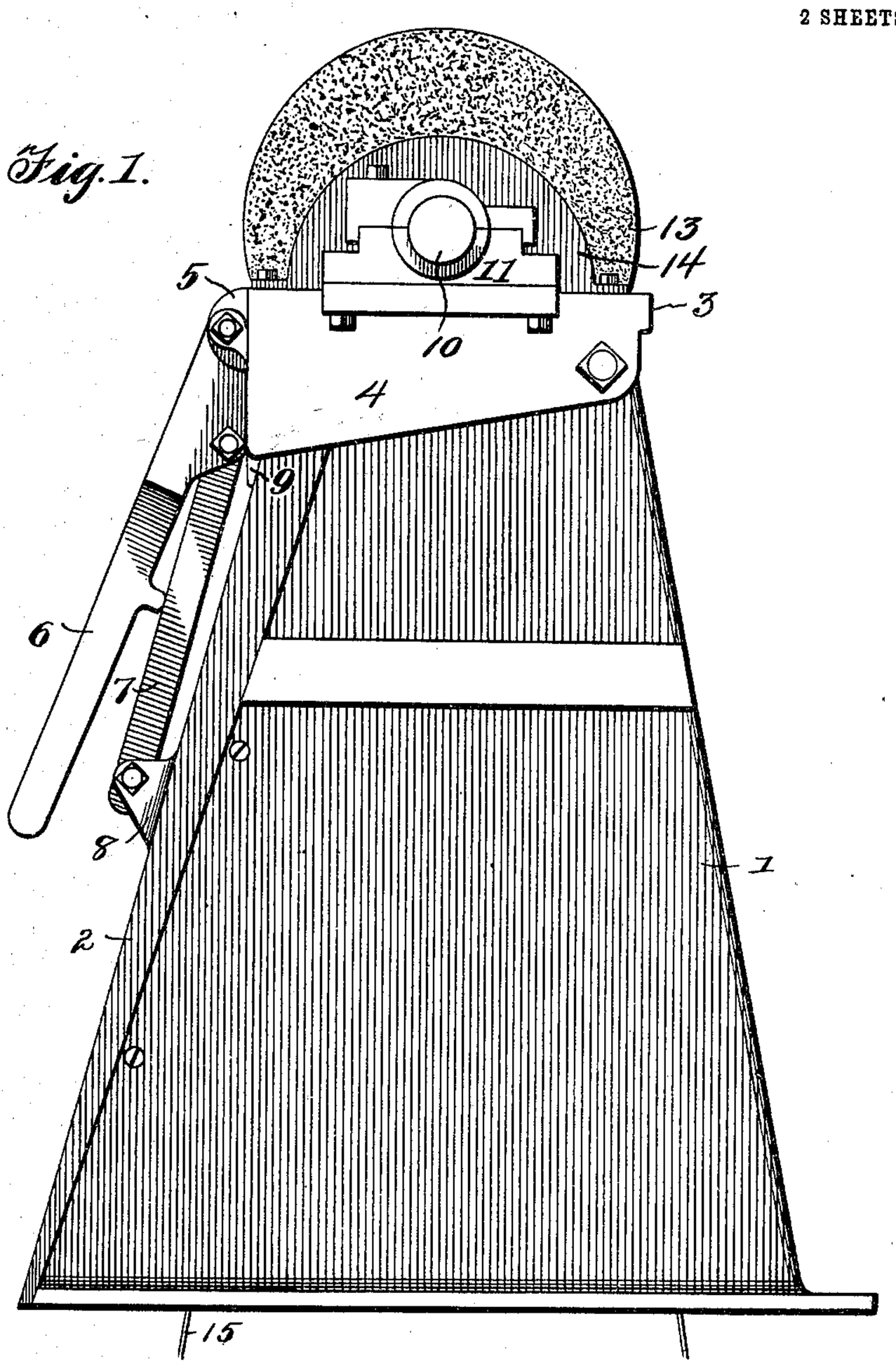


Fig. 3.

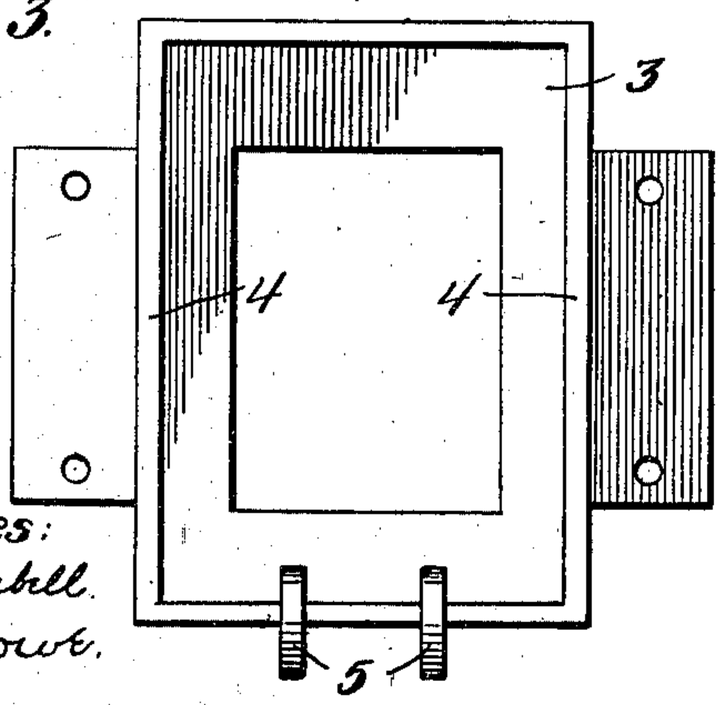
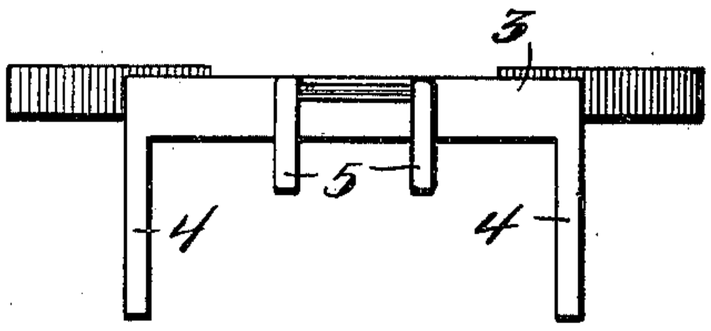


Fig. 4.



Witnesses:
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E. M. Lowe.

Inventor:
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NO MODEL. 2 SHEETS—SHEET 2.

Fig. 2

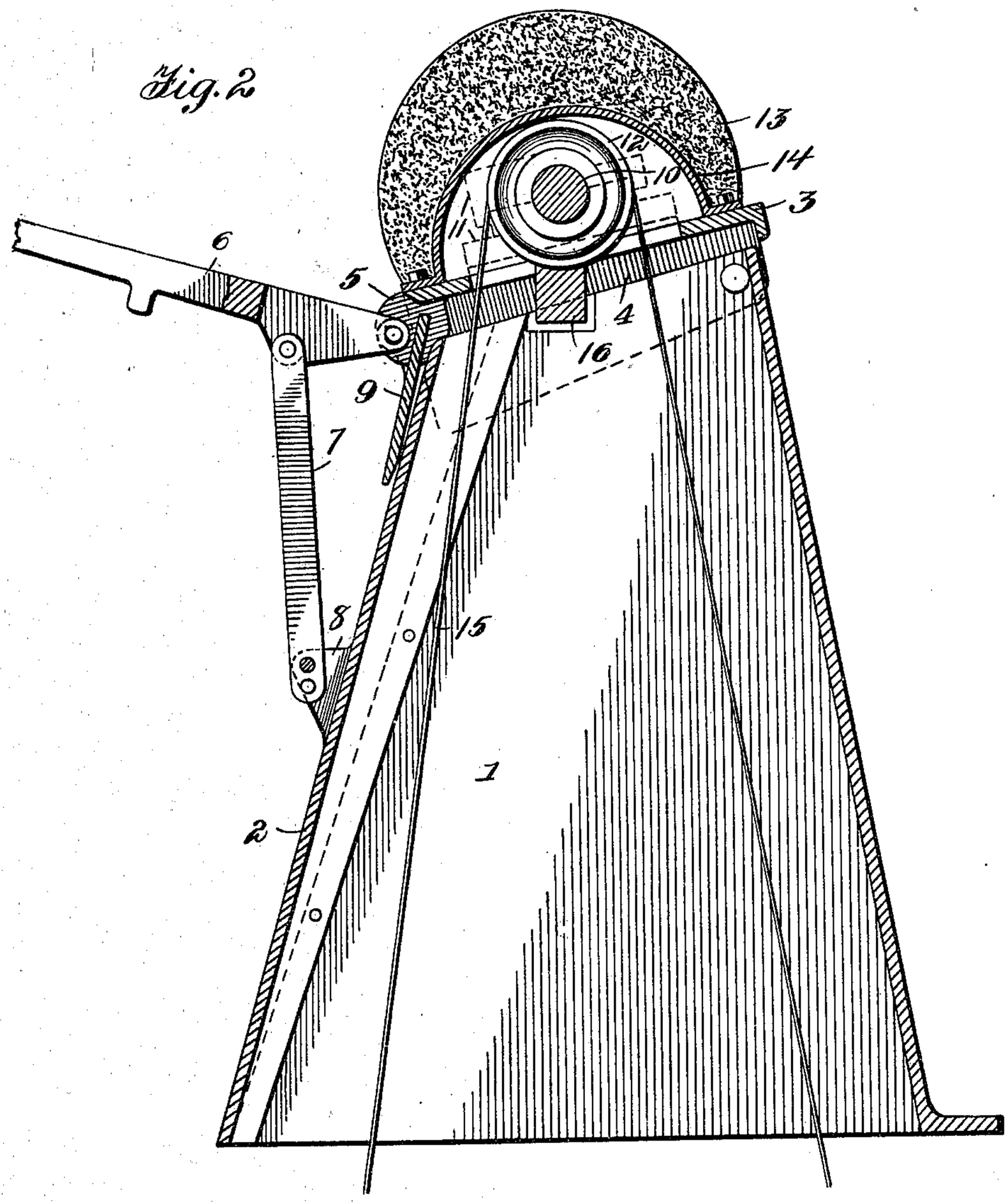

Fig. 5.

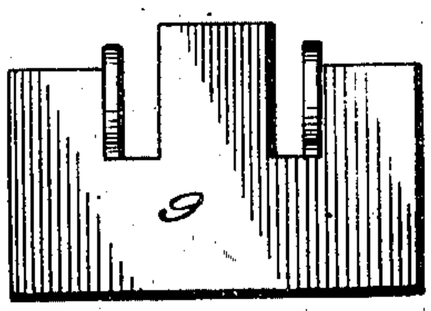

Fig. 6

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No. 734,643. Patented July 28, 1903.

UNITED STATES PATENT OFFICE.

PARDON A. WHITNEY, OF SOUTHINGTON, CONNECTICUT.

GRINDING-MACHINE.

SPECIFICATION forming part of Letters Patent No. 734,643, dated July 28, 1903.

Application filed April 15, 1903. Serial No. 152,737. (No model.)

To all whom it may concern:

Be it known that I, PARDON A. WHITNEY, a citizen of the United States, residing at Southington, in the county of Hartford and State of Connecticut, have invented certain new and useful Improvements in Grinding-Machines, of which the following is a specification.

This invention relates to a grinding, polishing, or buffing machine.

The object of this invention is to provide a simple and strong machine of this character with a grinding, polishing, or buffing wheel that can be quickly thrown into or out of operative condition without shifting the driving-belt, which, together with the driving-pulley, is entirely concealed and completely protected from dust and material abraded during the use of the machine.

The embodiment of the invention that is illustrated has a hollow base with a bed connected with the rear of the upper part of the base by a hinge and connected to the front part of the base by a lever and link, whereby the bed may be turned on its hinge for raising and lowering the pulley and wheel, which are mounted on a shaft held in bearings carried by the bed.

Figure 1 of the accompanying drawings shows a side elevation of the machine with the bed raised and the wheel in operative condition. Fig. 2 shows a central vertical section with the bed lowered and the belt slack, so that the wheel will not be rotated. Fig. 3 is a view looking at the under side of the bed. Fig. 4 is a front view of the bed. Fig. 5 is a front view of the lid, that is hinged to the front of the bed; and Fig. 6 is an edge view of the lid.

The hollow cast-iron base 1 is smaller at the top than at the bottom, and its upper end is inclined toward the rear. The front panel 2 of the base is preferably removable, so as to permit access to the interior. The bed 3 is hinged at the rear to the higher portion of the base, and the side walls 4 of the bed extend down upon the outsides of the upper end of the base, so as to close it in. Two lugs 5 project from the front of the bed, and pivoted between them is a lever 6, that is connected with a link 7, that is pivoted between lugs 8, projecting from the front panel of the base. When the handle of this lever is raised, the front of the bed drops down, and when the lever-handle is depressed the front of the bed is raised. The joints between these parts are so arranged that when the lever is down and the front of the bed is up the weight of the bed tends to force the upper end of the link against the base. This supports the base very firmly and locks the link and lever, so they cannot accidentally swing out and let the bed drop down. A lid 9 is hinged to the lugs that project from the front of the bed. This lid swings out when the front of the bed is dropped down and swings back and closes the opening in front at the top of the base when the front of the bed is raised, so as to exclude dust from the interior of the bed and base.

The shaft 10 is held by bearing-blocks 11, secured to the top of the bed. On the shaft between the bearing-blocks is a driving-pulley 12, and on one end of the shaft is a wheel 13, which may be a grinding, polishing, or buffing wheel, as desired. A cover 14 is fastened to the top of the bed to close the pulley in. The driving-belt 15 runs around the pulley down through the base to a pulley on a shaft below the floor on which the machine stands.

A block 16 may be placed in sockets formed on the inside of the walls of the upper end of the base for supporting the pulley when the front of the bed is lowered. This block will also act as a brake to stop the rotation of the pulley, shaft, and wheel when the belt is loosened by lowering the bed.

In order to start one of these machines, it is simply necessary to depress the handle of the lever and raise the front of the bed. To stop the machine, the handle is lifted and the front of the bed dropped down, so as to loosen the belt. The belt, which is always on the pulley, is quickly tightened in this way for starting the machine, and should it become loose the bed may be raised a little higher by changing the pivot-point of the lower end of the link.

The belt of this machine is entirely out of the way. It is not in position to interfere with or to injure the operator when using the machine, and it is protected from dust and hot particles which are abraded from the material being ground, polished, or buffed.

I claim as my invention—

1. A machine having a base, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a pulley on the shaft, and a connection between the base and bed for raising and lowering the bed on its hinge, substantially as specified.

2. A machine having a hollow base, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a pulley borne by the shaft between the bearings and a connection between the base and bed for raising and lowering the bed on its hinge, substantially as specified.

3. A machine having a base, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a pulley borne by the shaft, a lever pivoted to the bed, and a link connecting the lever and the base, substantially as specified.

4. A machine having a base, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a pulley borne by the shaft, a lever pivoted to the bed, a link connecting the lever and the base, and a lid hinged to the front of the bed, substantially as specified.

5. A machine having a base, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a pulley borne by the shaft, a cover inclosing the pulley and secured to the bed, and means for raising and lowering the bed on its hinge, substantially as specified.

6. A machine having a base, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a pulley borne by the shaft, a lever pivoted to the bed, and a link connected with the lever and adjustably connected with the base, substantially as specified.

7. A machine having a base, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a pulley borne by the shaft, a block supported by the base beneath the pulley, and means for raising and lowering the bed on its hinge, substantially as specified.

8. A machine having a base with a removable front panel, a bed hinged to the upper part of the base, bearings carried by the bed, a shaft held by the bearings, a lever pivoted to the bed and a link connecting the lever and the removable panel of the base, substantially as specified.

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Witnesses:
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