P. J. SMITH.

GLUE SPREADER.

APPLICATION FILED JULY 13, 1910.

1,009,593. **Patented Nov. 21, 1911.**

Fig. 1

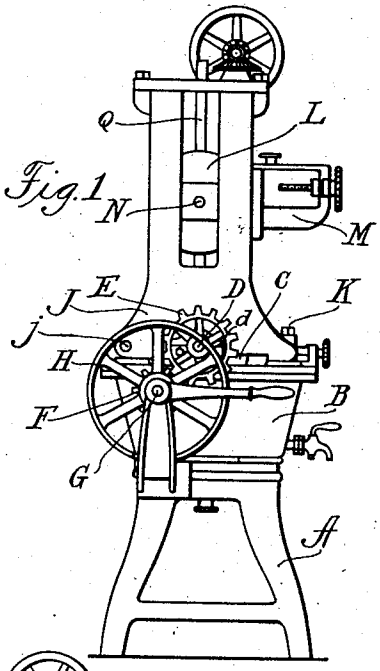


Fig. 2

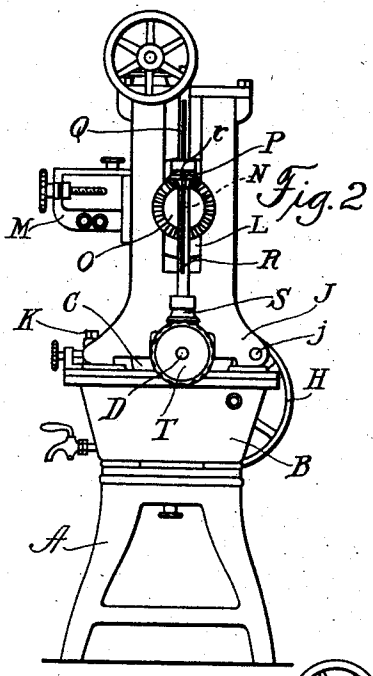


Fig. 3

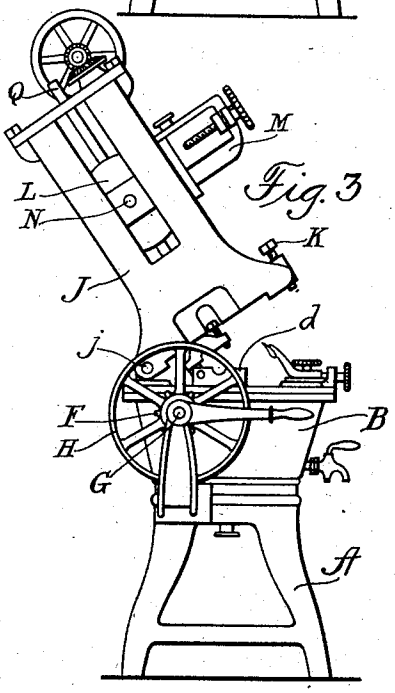
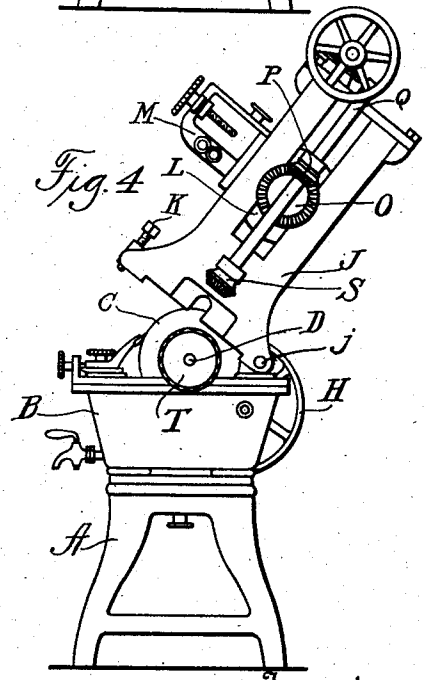


Fig. 4



Witnesses

B. I. Crawford.

Burton Macafee.

Inventor

Philip J. Smith.

By Edwin Guthrie.

Attorney

UNITED STATES PATENT OFFICE.

PHILIP J. SMITH, OF MONROE, MICHIGAN.

GLUE-SPREADER.

1,009,593. Specification of Letters Patent. Patented Nov. 21, 1911.

Application filed July 13, 1910. Serial No. 571,769.

To all whom it may concern:

Be it known that I, PHILIP J. SMITH, a citizen of the United States, residing at Monroe, in the county of Monroe and State of Michigan, have invented certain new and useful Improvements in Glue-Spreaders, of which the following is a specification.

This invention relates to glue spreaders, and belongs in that class of machines that are provided with rolls to which the glue is first applied and by which it is transferred to the surfaces upon which the glue is to be spread.

The object of this invention is the production of a glue spreader having parts of special construction and particular arrangement enabling the machine to be easily and conveniently operated, attended and cleaned, and by which the glue is economically used and evenly spread.

This invention is illustrated by the accompanying drawings, of which—

Figure 1 represents a view from one side showing the frame in a vertical position. Fig. 2 is a view from the other side, also showing the frame vertical. Fig. 3 is a side view as in Fig. 1 but showing the frame tilted, and Fig. 4 is a side view as in Fig. 2, but showing the frame tilted.

The same reference letter marks the same part in the drawings and description.

Upon suitable legs A there is supported the trough B within which revolves the lower roller C on the shaft D. On the end of shaft D is a gear wheel E that may engage pinion F on shaft G. The driving pulley H on the shaft G operates the gears and turns the roller. The bearings for shaft D are carried by the trough at each end, and one of the bearings is shown in Figs. 1 and 2 and is designated by the reference letter *d*. Upon the rim or flange of the trough the frame J stands. One side of the lower end of frame J is connected with the trough by means of the pivot pins *j*, *j*, and the other side of the lower end of frame J is secured to the trough by means of the screws K, K.

The upper roll L and its glue tank M are supported upon the upper shaft N. In Fig. 2 it will be seen that the gear O is located outside the frame J upon the end of the shaft N, and that it is engaged by the pinion P on the vertical shaft Q. The shaft Q has a longitudinal groove R, and a pin or spline *r* engages the groove. It will now be understood that the pinion P will be rotated by the shaft Q, whether the pinion be higher or lower upon that shaft, depending upon the adjustment of the upper roll L. The upper roll L and its glue tank, the upper roll shaft N and gear O, the vertical shaft Q with the pinion P movable along it, and the pinion S at its lower end are all movable bodily with the frame J when it is tilted. At the lower end of the shaft Q will be noted the pinion S that engages a corresponding gear on the end of shaft D. That is to say, the gear T and pinion S engage when the frame J is in its upright position. When that frame is tilted those gears are disengaged. The upper roll can only be driven, therefore, when frame J is upright.

The operation of this invention may be explained as follows: The lower roll C is rotated by the engagement of gear E on shaft D, and pinion F on shaft G. The upper roll L is rotated by the engagement of the gear T on the other end of shaft D with pinion S on shaft Q, and by the engagement of the pinion P with the gear O on shaft N. The engagement of the pinions and gears operating the upper roll L takes place when the frame is vertical as illustrated in Figs. 1 and 2. When it is desired to clean the machine, the frame J is tilted upon its pivot pins *j*, after unscrewing the screws K. The bearings *d* may then be opened as illustrated in Fig. 3, and the shaft D, gear E and lower roll C lifted out, affording convenient access to the interior of the trough. In Fig. 3 the roll C and its shaft D have been removed. Considering Fig 4, it will be seen that when the frame J is tilted, the pinion S is disengaged from the gear T, which is as described on the shaft D and removable, therefore, with the lower roll C. Attention is also invited to the fact that the tilting of frame J not only enables the lower roll and attachments to be conveniently taken out, but it may at the same time bring the upper roll and its adjuncts downwardly into a convenient position for needed cleansing or repair work upon them. Considering Figs. 3 and 4, it will be seen that the frame J is shown as tilted slightly rearwardly. The frame may be turned in the same direction until the top of the frame and all parts borne by the frame are brought near the floor upon

which the legs A stand, thus bringing all the upper parts within easy reach for any attention required.

Having now described this invention and explained the mode of its operation, what I claim is:—

1. In a glue spreader, the combination with a trough, of a lower roll arranged within the trough, means for revolving said roll, a frame arranged upon the trough and devices constructed to secure the frame in its upright position, the said frame being pivotally connected with said trough, an upper roll and an upper shaft carrying said upper roll both movable up and down in said pivoted frame, and means constructed to revolve said upper roll and shaft in any higher or lower position comprising separable devices constructed to engage said revolving-means for the lower roll when the said pivoted frame is upright and becoming disengaged when said frame is tilted.

2. In a glue spreader, the combination with a lower roll, of means constructed to support said roll, means for revolving said roll, a frame pivotally attached to the said supporting-means and arranged above said lower roll, devices constructed to secure the said frame in its upright position, an upper roll movable up and down in said pivoted frame, and means constructed to revolve said upper roll in any higher or lower position comprising separable devices constructed to engage said revolving-means for the lower roll when the said pivoted frame is upright and becoming disengaged when said frame is tilted.

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

PHILIP J. SMITH.

Witnesses:
WM. L. HOYT,
WILLIAM C. COULISH.