

(No Model.)

J. JENSIK & C. STOLL.
PERFORATING WHEEL.

No. 424,676.

Patented Apr. 1, 1890.

Fig. 1.

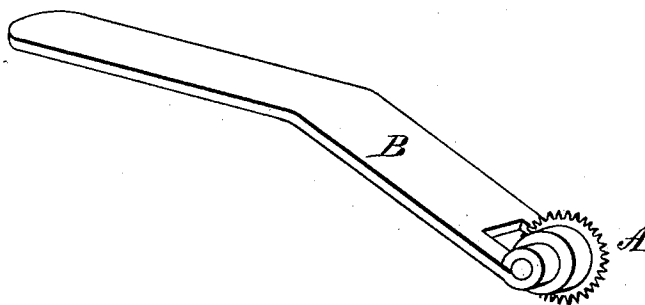


Fig. 3.

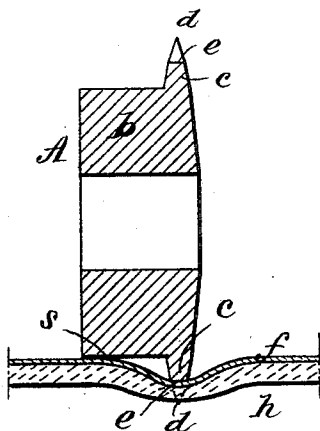
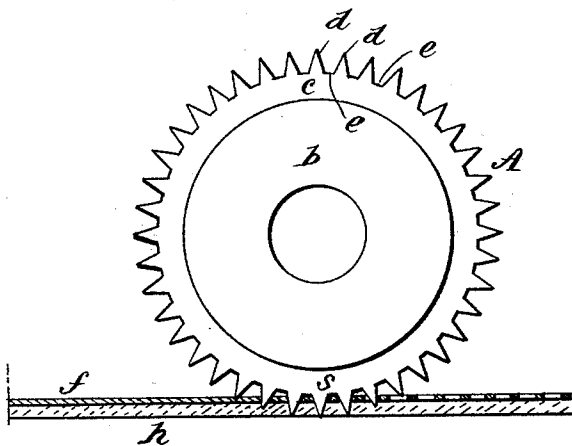


Fig. 2.



WITNESSES:

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JOSEPH JENSIK AND CHARLES STOLL, OF CHICAGO, ILLINOIS.

PERFORATING-WHEEL.

SPECIFICATION forming part of Letters Patent No. 424,676, dated April 1, 1890.

Application filed December 21, 1889. Serial No. 334,525. (No model.)

To all whom it may concern:

Be it known that we, JOSEPH JENSIK and CHARLES STOLL, both of Chicago, in the county of Cook and State of Illinois, have invented a new and useful Improvement in Perforating-Wheels, of which the following is a full, clear, and exact description.

This invention relates to wheels for perforating paper, including checks, drafts, bills, and other instruments or papers which require to be separated from their stub or duplicate by tearing them through the lines or rows of perforations made by the wheel or wheels.

The improved perforating-wheel is mainly designed to be used in paper-ruling machines and to be carried by a holder which may be attached to a clamp, as ruling-pens in such machines are secured, with or without striker attachment, and as a ruling-machine attachment it will be found very serviceable in small binderies, where it would not be profitable to have a separate perforating-machine.

Our invention consists in a novel construction of the perforating-wheel, substantially as hereinafter described, and pointed out in the claim, and whereby a very slight pressure is required when such wheels are used upon a ruling-machine to effect the necessary perforations without injuring the cloth on which the paper rests, although the perforating devices may be regulated, as ruling-pens are set to mark light or heavy, according to the thickness of the paper to be perforated, and a continuous score is formed on the paper by each perforating-wheel.

Reference is to be had to the accompanying drawings, forming a part of this specification, in which similar letters of reference indicate corresponding parts in all the figures.

Figure 1 represents a view in perspective of one of our improved perforating-wheels as carried by a holder suitable for attachment to a ruling-machine by clamp, as the ruling-pens are secured. Fig. 2 is a side view, upon a larger scale, of said wheel detached and as in the act of perforating a piece of paper; and Fig. 3 is a central transverse section of said wheel also in operation on the paper.

A indicates the wheel, and B its holder. Said wheel, which is preferably made of steel, consists of a main body part *b*, having a peripheral bearing-face *s*, with a rim portion *c* around the one side or edge of it, forming a

peripheral projection from the body, and perforating-teeth *d*, arranged to project in radial directions from said rim. We find from experiment that the diameter of the wheel is best not to exceed three-eighths of an inch, and may be even less, and that the same should have from thirty-five to forty-five teeth to the inch, said teeth being about one-twentieth of an inch from their points to the rim *c*, and the distance of the teeth apart leaving a shoulder-surface *e* between them of preferably a little less than one-twentieth of an inch. The teeth are thus made smaller at their base than the distance from their points to the rim, which causes a continuous mark or score to be formed on the paper *f* without any tendency of the perforations to run one into the other, the rim *c* gradually tapering on its sides from where it joins the body *b* of the wheel to where it joins the roots of the teeth. Were the teeth to project directly from the body of the wheel without the intervention of the peripheral shoulder or rim *c*, the same effect would not be produced, and the perforations would not admit of that neat tearing of the paper as it does when a continuous score is made on the sheet. The body *b*, by its peripheral bearing-surface *s*, keeps the perforating-rim *c* from going too deep, and also serves to bind the paper *f* to the cloth *h* and prevent it from slipping and from sticking or stopping. By this construction of the perforating-wheel I am enabled to use five or six perforating-wheels in a machine without producing stoppage of the sheet, whereas with the ordinary construction of perforating-wheels but two could be used.

Having thus described our invention, we claim as new and desire to secure by Letters Patent—

The within-described perforating-wheel, consisting of a body part having a peripheral bearing-surface and a peripheral rim or shoulder on the one side or edge of said body part, provided with pointed teeth projecting radially from said rim, and constructed to leave a space between them on the rim and smaller at their base than the distance from their points to the rim, substantially as specified.

JOSEPH JENSIK.
CHARLES STOLL.

Witnesses:

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