J. H. BELSER & S. G. B. BEALS.

Lag for Rag-Pickers, &c.

No. 209,376. Patented Oct. 29, 1878.

Fig. 1.

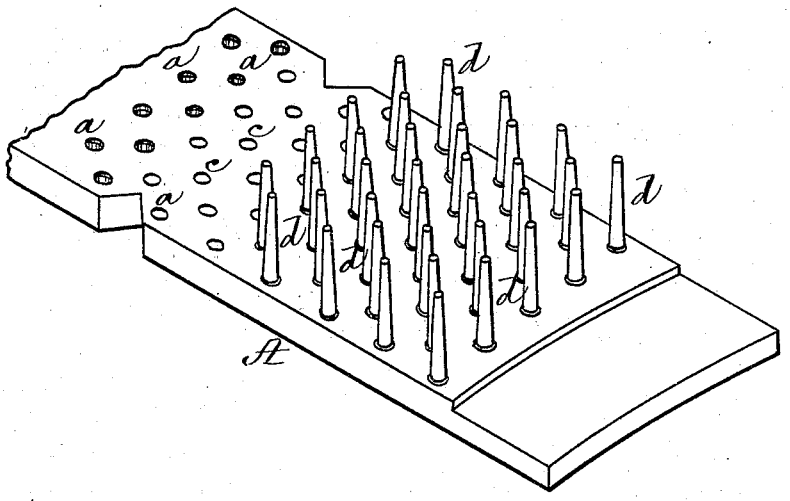
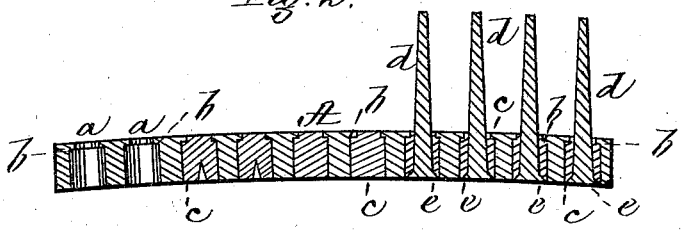


Fig. 2.



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UNITED STATES PATENT OFFICE.

JAMES H. BELSER AND SAMUEL G. B. BEALS, OF NORTHBOROUGH, MASS.

IMPROVEMENT IN LAGS FOR RAG-PICKERS, &c.

Specification forming part of Letters Patent No. **209,376,** dated October 29, 1878; application filed September 5, 1878.

To all whom it may concern:

Be it known that we, JAMES H. BELSER and SAMUEL G. B. BEALS, both of Northborough, in the county of Worcester and State of Massachusetts, have invented an Improvement in Picker-Lags for Tearing Rags, &c., of which the following is a full, clear, and exact description, reference being had to the accompanying drawings, making part of this specification, in which—

Figure 1 is an isometric view of a picker-lag constructed in accordance with our invention. Fig. 2 is a vertical section through the same, enlarged.

Our present invention relates to the construction of the exterior surface or covering of the revolving cylinders employed in picking or tearing into pieces rags, or other fibrous material, to be utilized in the manufacture of woolen, cotton, or other textile fabrics, said covering being composed of strips ordinarily termed "picker-lags," which have heretofore been made of wood, or iron with a soft-metal back cast in it to hold the teeth in place, extending longitudinally across the cylinder and bolted thereto. If made of wood, the construction is objectionable for the following reasons, viz: The wood is liable to shrink, and frequently splits on the lines of the rows of teeth, which consequently become loose and drop out; and as the strips of wood are necessarily of narrow width, and the teeth cannot be driven therein near their edges, a blank space (not occupied by teeth) occurs between two contiguous strips or lags, the consequence of which is that these blank portions of the lags do not act upon the rags in the same manner as a continuous picking-surface, and quantities of unpicked pieces pass through the machine, the work being thus very imperfectly performed. If made of iron with a soft-metal backing, the pins have no tendency to yield in their sockets; and if it is desired to remove one pin, all of them have to be disturbed by the throwing of the iron in the fire to melt out the backing.

To overcome the above-mentioned objections is the purpose of our present invention, which consists in a metallic (preferably wrought-iron) lag or covering-strip, provided with a series of separate holes for the reception of plugs or bushings of wood or other suitable material, each hole being provided with a shoulder for the purpose of keeping the plug or bushing in place when the picker-tooth is driven through it, by which construction the teeth are held firmly in place until worn out, when a worn one can individually be removed without disturbing any other one, and a new one can be driven into the same hole in the lag, which, being of metal, possesses unlimited durability, and allows of the teeth being placed so near the contiguous edges of two lags that no break or interruption occurs in the uniformity of the picking-surface.

To enable others skilled in the art to understand and use our invention, we will proceed to describe the manner in which we have carried it out.

In the said drawings, A represents a metal plate or lag, which forms a portion of the outer covering of a picker-cylinder for tearing rags or other fibrous material into pieces, to be utilized in the manufacture of shoddy or other textile fabrics, the several lags being intended to be secured to the cylinder by means of bolts and bands. (Not shown.) This metal plate or lag (which is preferably wrought-iron) is provided with a series of holes, *a*, each having a shoulder, *b*, formed at its top or outer end. Within each hole is placed a wooden plug or bushing, *c*, through which is driven a tapering metallic pin, *d*, of the form seen, having a head, *e*, at one end, these pins being driven through the plug or bushing from the inner side of the plate, the shoulders *b* serving to retain the plugs or bushings in place within their holes against the tendency of the pins when driven in to force them out.

The elastic nature of the wood relieves the pins of the rigidity which they would possess were they inserted directly within a metal lag and not surrounded with a bushing of yielding material. The plugs or bushings instead of being of wood may be of any other suitable yielding or elastic material.

The lags A, being made of metal, admit of the pins being inserted close up to their edges, so as to preserve the proper uniform distance between the pins throughout the entire surface of the picking-cylinder, to which the lags are applied, which results in the work being

performed in a more perfect and expeditious manner than heretofore.

Another advantage of our lag is its great durability, as after one set of pins has been worn out they can be removed and replaced by new ones, and this operation can be repeated an indefinite number of times, it being only necessary to employ new bushings.

What we claim as our invention, and desire to secure by Letters Patent, is—

1. A metallic lag, A, provided with a series of separate holes, *a*, for the reception of plugs or bushings *c*, through which the pins *d* are driven, each hole having a shoulder, *b*, for retaining the bushing in place, substantially as and for the purpose described.

2. The metallic lag A, having holes *a*, provided with shoulders *b*, in combination with the wooden or other bushings *c* and pins *d*, substantially as and for the purpose set forth.

Witness our hands this 3d day of September, A. D. 1878.

JAMES H. BELSER.
SAMUEL G. B. BEALS.

In presence of—
E. C. WHITNEY,
E. R. ALLEY.