

No. 888,125.

PATENTED MAY 19, 1908.

A. SHEDLOCK.

METAL WOOL AND FIBER MIXTURE.

APPLICATION FILED JAN. 13, 1906. RENEWED OCT. 5, 1907.

Fig: 1,



a *Fig: 2,*



Fig: 3,

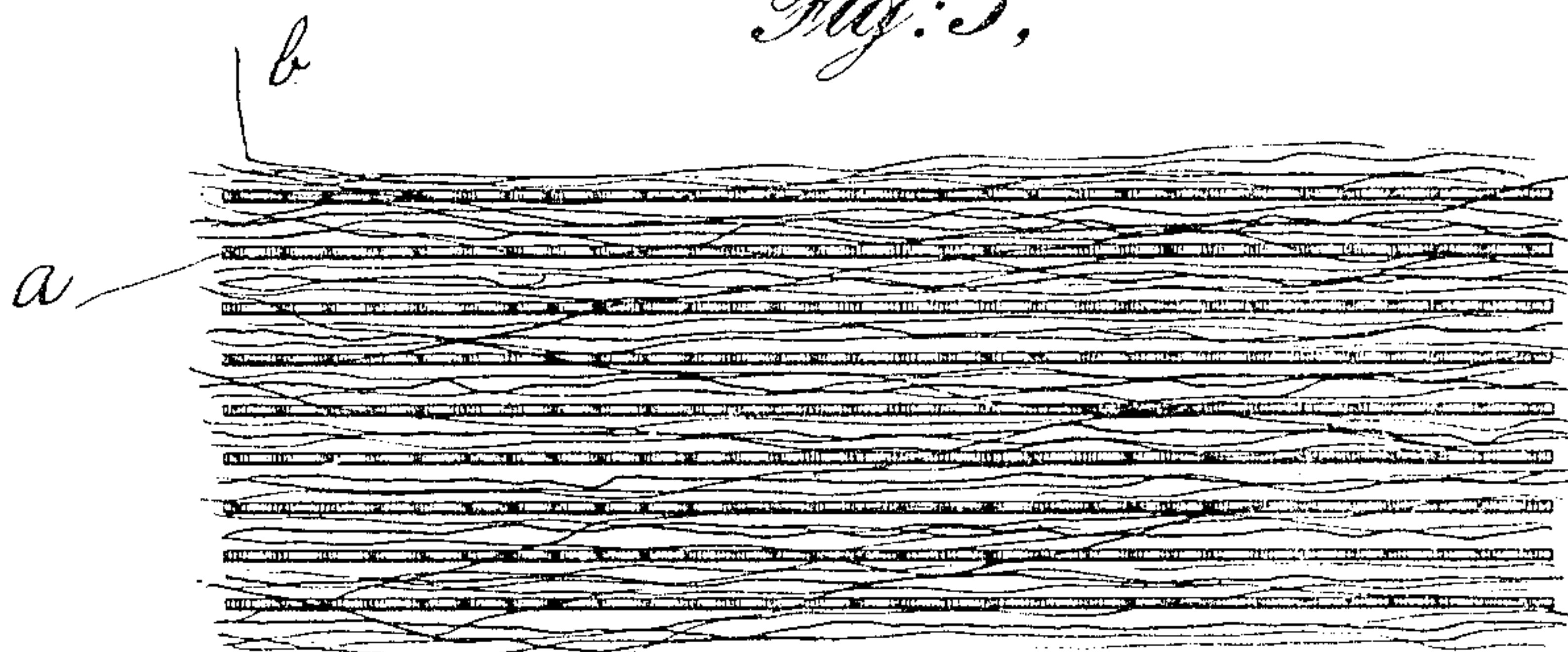
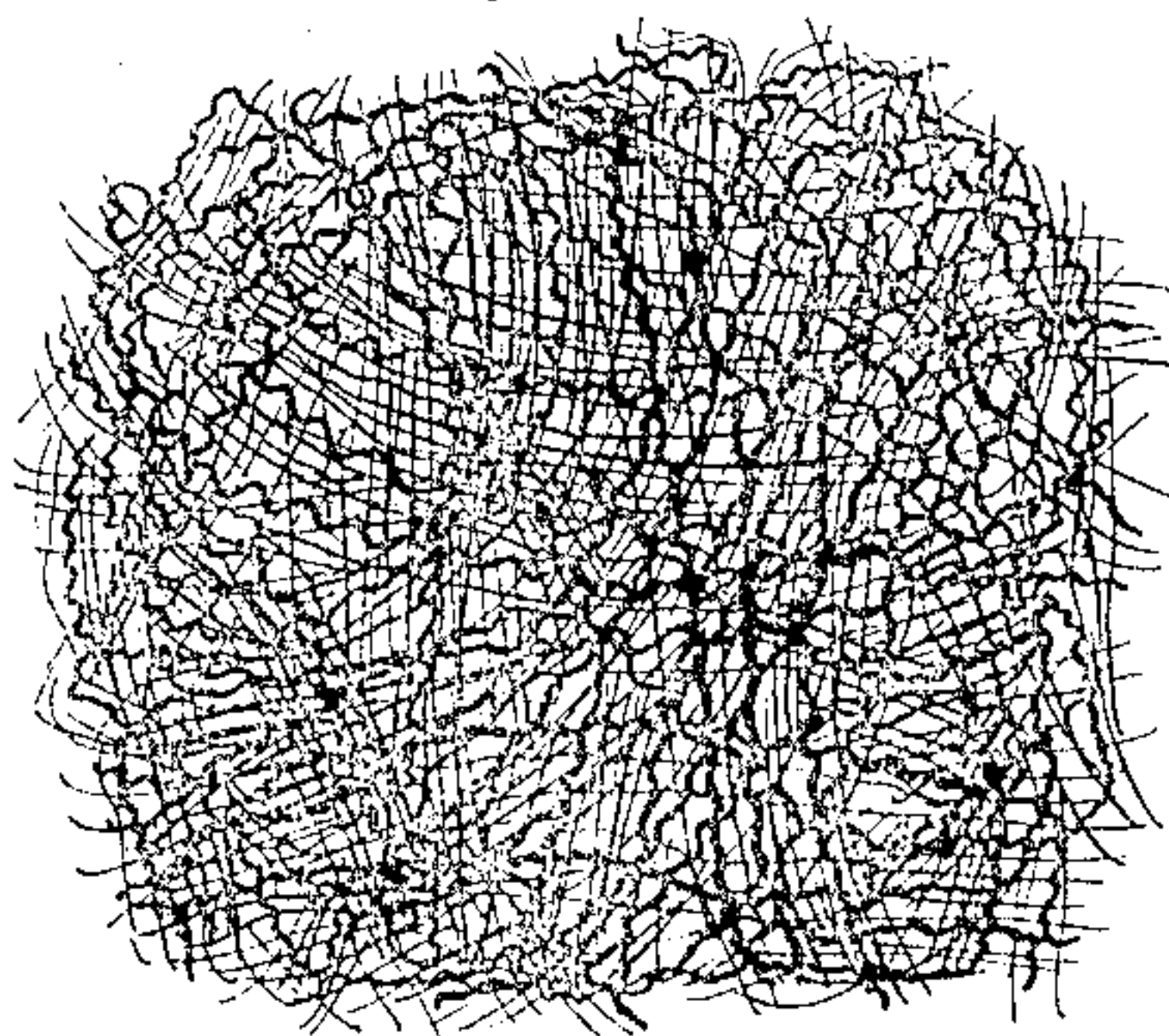


Fig: 4.



WITNESSES:

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METAL WOOL AND FIBER MIXTURE.

No. 888,125.

Specification of Letters Patent.

Patented May 19, 1908.

Application filed January 13, 1906, Serial No. 295,855. Renewed October 5, 1907. Serial No. 396,022.

To all whom it may concern:

Be it known that I, ALFRED SHEDLOCK, a citizen of the United States, residing in Jersey City, county of Hudson, State of New Jersey, have invented an Improved Metal Wool and Fiber Mixture, of which the following is a specification.

The product constituting the subject-matter of this invention comprises a mixture of absorbent fibers, such as those of cotton-waste, and filaments of metal-wool, wherein the absorbent fibers are laid in parallelism, or substantially so, with the metal filaments, the assemblage of fibers and filaments being then adapted to be rolled or massed into aggregations of desired size. The primary purpose for which this product is intended is as a substitute for cotton-waste for packing journal boxes of cars and locomotives.

The metal-wool filaments may be formed as described in my application No. 295,853, filed January 13, 1906 and may or may not be crimped as described in my application No. 295,854, filed January 13, 1906. That is to say the filaments may be produced by severing a rolled thin sheet of metal in lines parallel, or substantially so, with the grain of the metal. The thickness of the filaments is the same as the thickness of the metal sheet from which they are cut, their width being determined by the spaces between the parallel cuts. When a rolled thin sheet of metal is divided into a plurality of filaments by cuts parallel, or substantially so, with the grain of the metal the grain is not materially disturbed. The advantages of a metal wool of this character are: that it does not crumble or break, each filament retaining the characteristics of the metal in the original sheet, although the metal is somewhat hardened by the shearing operation and the filaments have, therefore, the elastic or resilient qualities of the sheet from which they are cut, such qualities being slightly emphasized by the operations to which the metal is subjected. Filaments of this character may be readily distinguished under a glass, or even by the naked eye, from metal-wool filaments heretofore produced by planing or turning operations. As described in my application No. 295,854, the metal filaments may be

crimped or corrugated transversely of their length. In practice, I have made this metal wool from metal sheets of from three to nine one-thousandths of an inch thickness, the filaments being cut to a width of about twenty one-thousandths of an inch.

The terms, parallel or substantially so: and substantial parallelism; are intended to convey the meaning that the filaments of the metal wool and the fibers of other material have the same general direction, *i. e.* are in general arrangement longitudinal with respect to each other, in contradistinction to the heterogeneous mixture heretofore made of such material.

The fibers of the cotton waste or other absorbent material are relatively straight and in parallelism when they and the correspondingly arranged filaments are first brought together as shown in Fig. 3, and such general arrangement is not obstructed when such a group of fibers and filaments is massed or bunched as in Fig. 4. The ordinary operation of "combing" may be employed to produce such arrangement of the fibers.

In the accompanying drawings: Figure 1 shows a straight metal filament: Fig. 2 shows such filament crimped or transversely corrugated; Fig. 3 shows a number of metal filaments associated with fibrous strands or fibers, the filaments and fibers lying in the same general direction: and Fig. 4 shows a mass or aggregation of filaments and fibers formed by bunching such a collection thereof as is shown in Fig. 3.

In Fig. 1, *a*, represents one of the straight metal filaments, and Fig. 2 shows such a filament with crimps or transverse corrugations *a'*. In Fig. 3 the filaments *a* are disposed in substantially straight parallel lines, somewhat separated: and the combed, or relatively straight fibers *b* are superposed upon them. The flat masses or layers thus formed may be bunched or rolled into masses of desired size, one of which masses is indicated in Fig. 4.

The thickness and width of the metal filaments are determined, respectively, by the stock used and the cut: and may be such as to adapt the material to desired uses. I have above given dimensions of filaments produced by me. They may, however, be

made of materially smaller dimensions if desired.

I claim:—

A mixture of metal-wool and absorbent fibers in which the general arrangement of fibers and metal filaments is longitudinal with respect to each other.

In testimony whereof, I have hereunto subscribed my name.

ALFRED SHEDLOCK.

Witnesses:

L. F. BROWNING,
EDWARD C. DAVIDSON.