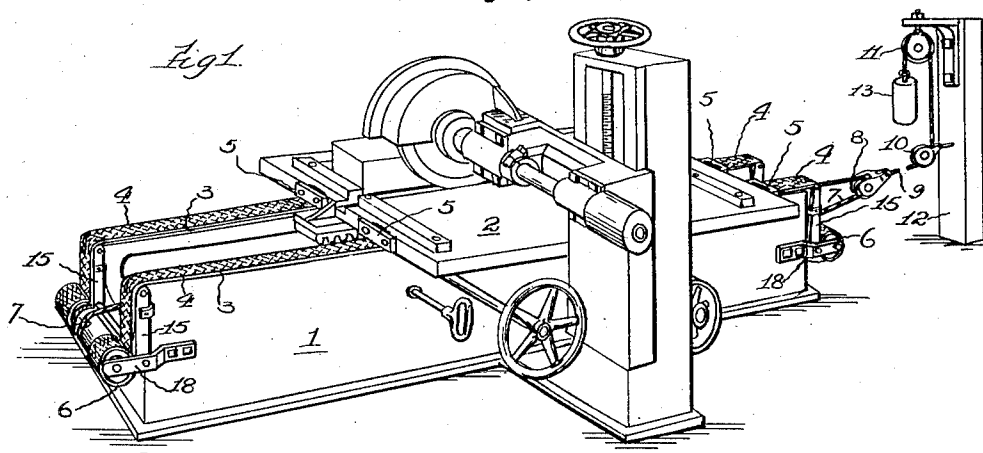
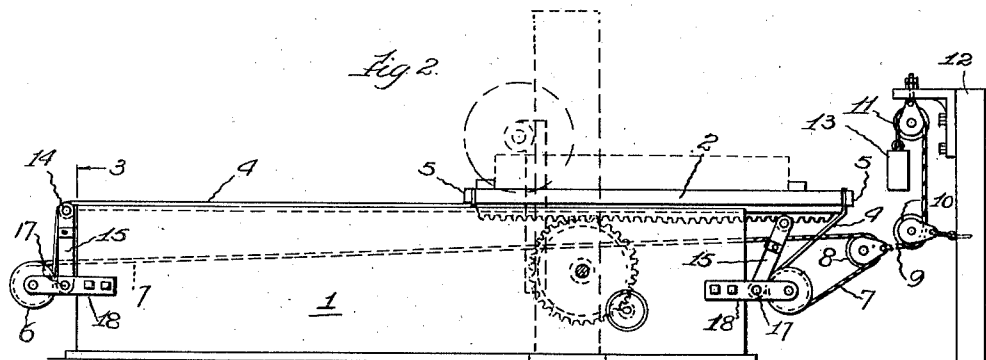
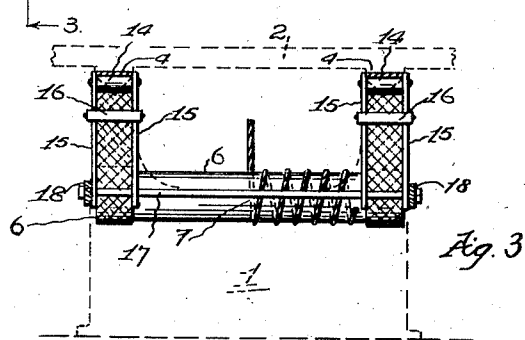
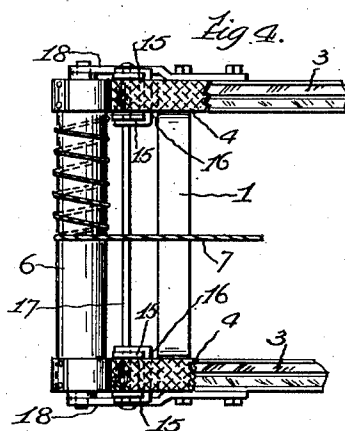


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AUTOMATIC SLIDE COVER
Filed Aug. 3, 1925



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UNITED STATES PATENT OFFICE.

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AUTOMATIC SLIDE COVER.

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The purpose of this invention is to provide automatic means for protecting the ways of a planer, or like machine having a reciprocating bed, from dust and chips resulting from the operation of the machine upon any given piece of work. It consists of certain features and elements of construction hereinafter described and shown in the drawings as indicated by the appended claims.

In the drawings:—

Figure 1 is a perspective side view of a jointing machine with dust-protecting slide covers or aprons applied thereto in accordance with this invention.

Figure 2 is a direct side elevation of the machine with some parts omitted or shown only in dotted outline.

Figure 3 is a vertical detail section taken as indicated at line 3—3 on Figure 2.

Figure 4 is a top plan view of one end of the machine showing the take-up roller for the aprons and parts associated therewith.

For purposes of illustration the drawings show a simple form of jointer of the type employed in working and polishing stone. The principles of the invention, however, are equally applicable to metal-working machinery and many other mechanisms in which upwardly open guideways or runways are provided for a reciprocating member such as the work-carrying bed of a planer. In such structures the deposit of grit, dust or metal chips on the guideways and the resulting rapid abrasion of the ways, 2, causes them to wear to such a degree as to seriously impair the proper alignment and smooth working of the parts, requiring expensive refinishing and readjustment of the ways and loss of working time for the machine as a whole. This is particularly true of stone-working machinery because of the gritty nature of the stone dust thrown off from the work.

In the machine illustrated the base casting, 1, supports the reciprocating bed, 2, on horizontal guideways, 3, which are shown as V-shaped grooves, and for protecting these grooves from dust and grit I provide flexible strips or aprons, 4, which are secured by clamps, 5, to the opposite ends respectively of the movable bed, 2. At each end of the base there is rotatably mounted a take-up roller, 6, upon which the end portions of the

aprons, 4, are wound. Around the middle portions of each of the rollers, 6, I have shown several turns of a flexible member such as a rope or cable, 7; the intermediate portion of the rope, 7, passes over a pulley, 8, which is attached to the end of a second rope or cable, 9, passing around guide pulleys, 10 and 11, supported in fixed position by a post, 12, standing at a short distance from one end of the planer and in line therewith. Any suitable form of yielding tensioning means may be used in connection with the cable, 9, for keeping the cable, 7, tight so that it will wind up the aprons, 4, on one of the take-up rollers, 6, as the bed, 2, approaches the roller, while the other roller, 6, is permitted to pay out its aprons, 4, at the other end of the bed, 2. The tensioning means shown is in the form of a weight, 13, suspended by the cable, 9; with this arrangement the pulley, 8, will undergo practically no movement because the rope, 7, will unwind from one of the rollers, 6, at the same rate at which it is wound upon the other during the major portion of the stroke of the bed, 2.

As indicated in Figure 2, the machine may be adjusted so that the end of the bed, 2, will travel beyond the end of the ways, 3. For this reason the guide rollers, 14, over which the aprons pass at each end of the ways, 3, are mounted in swinging frames consisting of side bars, 15, and a cross bar, 16, pivotally mounted at their lower ends on a cross-rod, 17, which is supported on the bracket arms, 18, which also carry the roller, 6. It will be understood that the under side of the bed, 2, is formed with the usual ribs for engaging the guide grooves, 3, whereas the aprons, 4, extend normally in planes just above the grooves, 3. Therefore, the rollers, 14, extend normally in the path of the downwardly extending ribs of the bed, 2, and are struck by said ribs as the bed moves beyond the end of the base, 1. By this encounter the frame arms, 15, are swung away from the base, 1, about pivot, 17, as shown in Figure 2, thus permitting the ribs of the bed to pass over the rollers, 14. In this portion of the stroke the aprons, 4, may even be carried off the rollers, 14, but are held in tension by the take-up rope, 7, and winding rollers, 6. As the bed, 2, returns, the aprons,

4, again engage the rollers, 14, and swing back the frame bars, 15, to their normal vertical position against the end of the base.

Thus throughout the reciprocating movement of the bed, 2, the upwardly open runways, 3, are kept covered by the aprons, 4, extending from the ends of the bed, 2, while the bed itself covers the intermediate portion of the ways. Thus a large percentage of the dust and grit is effectively excluded from the ways, 3, and their useful life is greatly prolonged, and particularly in stone working operations requiring the grinding tool to be flushed with water, the water is kept out of the ways 3, by the slide covers or aprons 4, and proper lubrication of the ways is thus facilitated.

I claim:—

1. In a machine having a reciprocating part with an upwardly-exposed runway on which it travels, a pair of flexible aprons extending from opposite ends of the reciprocating part respectively for covering the exposed portions of the runway; a take-up roller for each apron around which the end portion of the apron is wrapped in direction to be wound up as the reciprocating part moves toward the end of the runway which the apron covers, and means interconnecting the take-up rollers for winding up one apron as the other unwinds.

2. In a machine having a reciprocating part with an upwardly-exposed runway on which it travels, a pair of take-up rollers disposed at opposite ends of the runway respectively, a pair of aprons extending from opposite ends of the reciprocating part for covering the exposed portions of the runway and arranged to be wound on said rollers respectively, a flexible member whose opposite ends are wound on said rollers respectively in directions opposite to the winding of the aprons, whereby unwinding of said member will rotate the roller in direction to wind up its apron, and means operating between the ends of said flexible member to maintain it in tension between the rollers.

3. In a machine having a reciprocating part with an upwardly-exposed runway on which it travels, flexible aprons extending from said part in opposite directions to cover the exposed portions of the runway, take-up rollers for said aprons respectively, and a flexible member having its opposite ends wound upon said take-up rollers in direction for causing one roller to wind up its apron as the other apron unwinds; a pulley engaging said flexible member intermediate its ends, and yielding tensioning means attached to said pulley.

J. B. MONDLOCH.