(1.) * WOOL. *n. ſ.* [*wul*, Saxon; *wollen*, Dutch.] 1. The fleece of ſheep; that which is woven into cloth.—A gown made of the fineſt *wool*. *Raleigh*.—Cauſe clothiers to take *wool*, paying only two parts of the price. *Hayward*.—Struthium is a root uſed by the *wool*-dreſſers. *Arbuth.* 2. Any ſhort thick hair.—*Wool* of bat and tongue of dog. *Shak.*

(2.) WOOL is the covering of ſheep. See OVIS, and SHEEP. Wool reſembles hair in a great many particulars; but beſides its fineneſs, which conſtitutes an obvious difference, there are other particulars which may ſerve alſo to diſtinguiſh them from one another. Wool, like the hair of horſes, cattle, and moſt other animals, completes its growth in a year, and then falls off as hair does, and is ſucceeded by a freſh crop. It differs from hair, however, in the uniformity of its growth, and the regularity of its ſhedding. Every filament of wool ſeems to keep exact pace with another in the ſame part of the body of the animal; the whole crop ſprings up at once; the whole advances uniformly together; the whole looſens from the ſkin nearly at the ſame period, and thus falls off if not previouſly ſhorn, leaving the animal covered with a ſhort coat of young wool. Hairs are commonly of the ſame thickneſs in every part; but wool conſtantly varies in thickneſs in different parts, being generally thicker at the points than at the roots. That part of the fleece of ſheep which grows in winter, is finer than what grows in ſummer. While the wool remains in the ſtate it was firſt ſhorn off the ſheep's back, and not ſorted into its different kinds, it is called *fleece*. Each fleece conſiſts of wool of divers qualities and degrees of fineneſs, which the dealers therein take care to ſeparate. The French and Engliſh uſually ſeparate each fleece into three ſorts, viz. 1. Mother-wool, which is that of the back and neck. 2. The wool of the tails and legs. 3. That of the breaſt and under the belly. The Spaniards make the like diviſion into three ſorts, which they call *prime*, *ſecond*, and *third*; and for the greater eaſe, denote each bale or pack with a capital letter, denoting the ſort. If the ſeparation be well made, in 15 bales there will be 12 marked R, that is, refine, or prime; two marked F, for fine, or ſecond; and one S, for thirds. The wools moſt eſteemed are the Engliſh, chiefly thoſe about Leominſter, Cotſwold, and the Iſle of Wight; the Spaniſh, principally thoſe about Segovia; and the French, about Berry: which laſt are ſaid to have this peculiar property, that they will knot or bind with any other ſort; whereas the reſt will only knot with their own kind. Among the ancients, the wools of Attica, Megara, Laodicea, Apulia, and eſpecially thoſe of Tarentum, Parma, and Altino, were the moſt valued. Varro aſſures us, that the people there uſed to clothe their ſheep with ſkins, to ſecure the wool from being damaged.

(3.) WOOL SOCIETY, BRITISH, an aſſociation formed in Edinburgh, in 1791, for the purpoſe of obtaining the beſt breeds of fine-woolled ſheep, with a view of aſcertaining, by actual experiments, how far each ſpecies or variety is calculated for the climate of Great Britain; the qualities of their wool reſpectively; the uſes to which each kind of wool could be moſt profitably employed in different manufactures; and the comparative value of each ſpecies of ſheep, ſo far as the ſame can be determined.

WOOL-COMBING, a well known operation, which, when performed by the hand, is laborious, tedious, and expenſive. The expence of it through all England has been calculated at no leſs a ſum than L. 800,000; and to leſſen this expence, the Rev. Edmund Cartwright of Doncaſter in Yorkſhire bethought himſelf, ſome years ago, of carding wool by machinery. After repeated attempts and improvements, for which he took out three patents, he found that wool can be combed in perfection by machinery, of which he gives the following deſcription: In *Plate* CCCXLVIII. *Fig.* 1. Is the crank laſher. A is a tube through which the material, being formed into a ſliver, and ſlightly twiſted, is drawn forward by the delivering rollers. B, a wheel faſt upon the croſs-bar of the crank. C, a wheel, on the oppoſite end of whoſe axis is a pinion working in a wheel upon the axis of one of the delivering rollers. When two or more ſlivers are required, the cans or baſkets, in which they are contained, are placed upon a table under the laſher (as repreſented at D), which, by having a ſlow motion, twiſts them together as they go up. *Fig.* 2. Is the circular clearing comb, for giving work in the head, carried in a frame by two cranks. *Fig.* 3. The comb-table, having the teeth pointing towards the centre, moved by cogs upon the rim, and carried round upon trucks, like the head of a windmill. *a*, *b*, the drawing rollers. *c*, *d*, callender, or conducting rollers. Underneath the table is another pair of rollers, for drawing out the backings.

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The wool, if for particular nice work, goes thro' three operations, otherwiſe two are ſufficient: the firſt operation opens the wool, and makes it connect together into a rough ſliver, but does not clear it. The clearing is performed by the 2d or, if neceſſary, a 3d operation. A ſet of machinery, conſiſting of 3 machines, will require the attendance of an over-looker, and 10 children, and will comb a pack, or 240 lb. in 12 hours. As neither fire nor oil is neceſſary for combing by the machine, the ſaving of theſe articles, or even of the *fire alone*, will in general, pay the wages of the overlooker and children; ſo that the actual ſaving to the manufacturer is the *whole* of what the combing coſts, by the old imperfect mode of combing by the hand. Wool combed by the machine is better, eſpecially for SPINNING by the machine, at leaſt 12 per cent; being all equally mixed, and the ſlivers uniform, and of any required length."

* WOOLFEL. *n. ſ.* [*wool* and *fell.*] Skin not ſtripped of the wool.—Wool and *woolfels* were ever of little value here. *Davies.*

(1.) * WOOLLEN. *adj.* [from *wool.*] Made of wool not finely dreſſed, and thence uſed likewiſe for any thing coarſe: it is likewiſe uſed in general for *made of wool*, as diſtinct from *linen.*—I was wont to call them *woollen* vaſſals. *Shak.*—I had rather lye in *woollen*. *Shak.*—*Woollen* cloth will tenter, linen ſcarcely. *Bacon.*—Spite of his *woollen* night-cap. *Dryden.*

(2.) * WOOLLEN. *n. ſ.* Cloth made of wool.—His breeches were of rugged *woollen*. *Hudib.*—Odious! in *woollen*! 'twould a ſaint provoke! *Pope.*—He is a bel-eſprit and a *woollen* draper. *Swift.*

(3.) WOOLLEN CLOTH. See CLOTH, § 5 and 6. The following is the ſpecification of a patent granted to Mr Harmar, of Sheffield, for a machine for raiſing a ſhag on all ſorts of woollen cloths, and cropping or ſhearing them, which, together, come under the deſcription of *dreſſing woollen cloths*, and alſo for cropping or ſhearing of fuſtians. It is dated March 29, 1794. See *Plate* CCCXLVIII. *Fig.* 1. exhibits a ſide and end view of ſhearing cloth from liſt to liſt. A, is the frame, with its pillars, legs, and rails. B, is the cuſhion or ſhear-board over which the cloth is extended. C, the cropper's ſhears in their ſituation for working, with their bobs or levers. D, the harneſs or breeches fitted to each end of the riding blade of C; at the near end is hollowed the bow of C, and at both ends faſtened with ſcrews paſſing through the blade, or elſe is grooved to admit the blade, and is faſtened with wedges. It is compoſed of two ſtrong pieces of plank, with holes to admit ſcrews through to nut-ſcrews faſtened to their upper ſurface, and ſquare holes through which paſs ſmall pillars; other two pieces of plank are frames for wheels turning on pins (as in drawing) ſituated under the pieces faſtened to the riding blade; here the lower ends of ſcrews are rivetted to plates, but ſo as to turn, which plates are ſcrewed to the wheel-frames; alſo, in theſe lower pieces, ſmall pillars are fixed, which, paſſing through the upper pieces, ſteady the harneſs; thoſe ſcrews turned to right or left bring the edges of C to the angle of B, for the work of ſhearing. E, the inclined planes down which the wheels of D roll when the machine is working. F, is the working axle, with its rods or rails; the gudgeons of this axle reſt on the croſs rails of A; the axle has the inclination of B and E, as in drawing. Its rods, fixed to the ſides of it by projecting pieces, are about four inches from its centre, and the thimbles of G ride down them to keep pace with C in its progreſs. G, is the line communicating at the lower end by a thimble with the rods of F, and at the upper end with the bob or lever of C, as in drawing. H, is an axletree, with its handle, cog-wheel, and ſtop, fixed by ſtops, on which it turns, to the pillars of A. I, the lines communicating with the extremities of K at one end, and the other with H. K, levers, turning on their pins, and, by the action of K and I, work againſt E, to raiſe C from B, for all neceſſary purpoſes. L, pulleys in their frames, to give a proper direction to I, that the turning of H may have the effect before named. M, is a crank attached to the lower gudgeon of F; the crank handle has an eye in it, through which a ſquare leg paſſes, againſt which works the lower end of a ſcrew, the nut of which is one ſide of the ſaid eye. This ſcrew, turned to right or left, looſens or faſtens the leg in the eye at pleaſure. The ſaid leg at the other extremity has a handle where the near end of the catch N is fitted on. Now, as the leg is ſhifted by means of its eye and ſcrew in that end where the handle is further from the centre of F, N works O with more ſpeed. N, is the catch that works O. O, is the cog-wheel of N, with its ſcrew pinion on its axle. P, is an iron axle, with pulleys near both ends, with a cog-wheel. R, is a ſmall ſword, fitted into the mortiſe of the projection on the lower extremity of F, and pinned, and the other end is fitted to the crank handle of S. S, is the crank axle and pulley that carries the band which goes to the power that works the machine. The ſituation for R, as to that end that fits on the crank of S, is directly behind the lower end of F, and under the further extremity of B, where the crank end of S rides on a ſtop fixed to the further rail of A; the pulley end where the ſtop is rides on X. Now the crank S being put in motion, gives R the neceſſary vibration, and R works F, which alternately raiſing or falling its rods or rails by G, C works, and, to effect the progreſſion of C, F being in a working ſtate, M works N, and O works P, and C is carried forwards by T, and to carry C forwards faſter or ſlower, as neceſſary. For the due performance of ſhearing cloth, the handle of the leg of M, where N is fitted on, muſt be brought nearer to the centre of F for ſlacking, and more diſtant from the ſaid centre to increaſe the ſpeed, as then N will take more or leſs teeth in O. Or the progreſſion in this frame may be effected by the method deſcribed in the progreſſion of *fig.* 2, under the letters M, N, O, P. T, the lines for carrying forwards C by P. U, is a projection faſtened to D, and works againſt U when C is about to ſtop. V, is a rail and ſmall ſword paſſing through a mortiſe fixed to one of the legs of A, at nearly one end, and by a working joint, goes up to near the extremity of W. W, is a lever, paſſing through its fulcrum, and pinned

pinned to the upper end of X; and near the other end refts on a ſmall notch, ſunk in the inſide of the upper end of one of the pillars of A, and weighted in the extremity with lead or iron. X, is the ſtep of the pully end of S, and, by a ſmall ſword, goes up to W, on the near ſide of one of the pillars of A, through which X goes, and moves on a pin, and is the ſtep of one end of O; and the further ſide of the ſaid pillar, where the letter X ſtands, is the ſtep of the pulley end of S. Now when U or D works againſt U or V, W is thrown from its notch, and W, ſinking, raiſes X, and ſlackens the band on the pulley of S; then the machine ſtops, and X, raiſing the ſtep of S on the further ſide of the pillar of A, on the near ſide of it ſinks the ſtep of O, and the ſcrew-pinion is thrown out of the large cog-wheel of P. Y, is a ſmall axle on ſteps, faſtened to D, with its handle and bands going too near the extremity of Z. Z, two ſmall rails, with catches at their extremities, which fall into notches in D to faſten both the ſhears of C together. Now when the machine ſtops, by the means already deſcribed, the preſſure of the handle of Y raiſeth the catches of Z, from their notches in D, and the ſhears of C are at liberty, and may be driven by the hand to the neceſſary ſituation for ſhifting the cloth, firſt turning H to the right, to clear them from B. The cloth being ſhifted, bring the ſaid ſhears of C to their proper ſituation, and the catches of Z will faſten them; then turn H to the left, throwing back its catch, and the ſhears of C are brought to their work: when lift up to its notch, the extremity of W. and the band on S, is tightened, and the machine works. *Fig.* 2, a ſide and the two end views of ſhearing the length-way of the cloth. A, the frame, with its pillars, legs, and rails. B, a circular cuſhion, or ſhear-board, formed to the angle of the cropper's ſhears, and at each end reſting on ſteps fixed to the top rail of A, to be moved round, as occaſion ſhall require. C, the cropper's ſhears in its harneſs, or working poſition. D, the harneſs, attached to both ends of the ledger blade of the ſhears C, as particularly deſcribed in *fig.* 1, under the letter D; but this mode of ſhearing requires that the ſtrong pieces, attached by ſcrews to the ends of C, ſhould be framed together near the back of the ſaid laid ledger blade, to take the weight of the ends of the ſhears. When the whole width of a narrow cloth is ſhorn, the ſecond ſhear of C is placed behind that in drawing, and has another, B, for it to work upon, and I, to be worked by. And that part of D attached to the heel of C and letter E, are lengthened as deſcribed (*fig.* 3.) under the letter C; ſo in like manner the ſhears are ſituated behind each other in taking the width of a broad cloth. Here it muſt be noted, as in this mode of ſhearing the cloth having the progreſſion, the wheels of D are omitted, and pieces of wood, half rounded, ſupply their place. E, is a ſmall frame in its ſteps, with its arms and lines. The ſituation of E is ſeen under letter D, *fig.* 3; it is attached to the heel part of the harneſs, as there ſeen by the drawing. One of the lines of E goes down to the working-rail of E, in the aforeſaid, *fig.* 3; and the other line communicates with the lever or bob of D. F, the roller, with its handle, on which the cloth to be ſhorn is wound. G, the ſmall rollers, to guide the cloth to B; the middle one which ſwells riding on it, lighteneth the lifts of the cloth as it rides forwards: the ſwells are moveable, for the purpoſe of ſuiting cloths more or leſs longlifted. H, the rod, cranked on every ſide, with the pulley for the progreſſion, and that alſo which carries a band to the working power ſituated at the upper end of A, near Q. I, is the thimble fitted on the crank, with the line going up to near the extremity of the bob working C. K, and axle, with its cog-wheel and ſtop, as particularly deſcribed (*fig.* 1.) under the letters H, I, K, L, and produce a like effect, and muſt be fixed to this figure the ſame as in that. L, the check to F, faſtened by a pin at the near end, and paſſing under F, being hollowed to it, the further extremity (being carried under C and B) having a weight ſuſpended on it. M, the roller, with a cog-wheel, to which the end of the cloth is attached; and being tightened by the handle of F, the weight on L keeps it in that tight ſtate as it is carried through the work. N, an iron axletree, carrying a large pulley with one groove, and a five-groove pulley with its ſteps, that out of ſight lies under A on a croſs rail. O, an iron axletree, carrying a five-groove pulley and ſcrew pinion on ſteps, as in drawing. P, bands going from the ſmall pulley of H to the large pulley of N; and from the five-groove pulley of N to the five-groove pulley of O. Now theſe five-grooved pulleys gradually deſcend in their dimenſions from fourteen inches to three inches in one, and the other may be the ſame dimenſions, or very conſiderably ſmaller; or it may be reduced to a pulley of three inches diameter with one groove. Theſe five-groove pulleys ſtand, in reſpect to each other, in contrary directions. Now when the crank by a band on the pulley on its upper extremity is ſet to work, the band B, from the other pulley, puts O and P in motion, and carries forward M. That M may have different ſpeed, the band of the five-groove pulleys muſt be ſhifted for that purpoſe to the different grooves, which give them more or leſs ſpeed. *The Stop-Frame*—Q, the ſtep where rides the upper end of H, which ſtep at one end is tenoned into the pillar of A, and pinned. R, is a ſmall ſword, at the lower end tenoned into the extremity of Q, and pinned; and at the upper end is mortiſed, ſo as to admit the further end of S. S, is the lever, tenoned into the mortiſe of R, and pinned, and paſſing through a mortiſe in the pillar of A. Now to ſtop the machine, the near extremity of the lever S muſt be preſſed down, and that ſlackeneth the band communicating from the acting power to the pully of H. When ſet agoing the ſaid extremity of S muſt be lifted up, and pinned there. To work this machine, put the cloth to work as directed under letter M; then throw back the ſtop of G, and the ſhears are brought to their work; then raiſe the extremity of S, and the machine works. *Fig.* 3, ſhews an mode of ſhearing cloth the length way, a ſide and end view. A, is the frame, with its pillars, legs, and ſide and end rails. B, the inclined planes, as *fig.* 1, under E. C, the ſhear boards, over which the cloth is ſtretched from H to H: every ſhear has its board, and is placed by the ſide of each other,

ther, ſo as to take the width of the cloth; and the ſhears, ſituated for the like purpoſe on them, the harneſs H, and ſmall working frame E, *fig.* 2. are lengthened accordingly. D, the cropper's ſhears in its harneſs, and bob or working lever, with E, *fig.* 2, in its proper ſituations, attached by the ſteps to the harneſs of D. E, the axle, with the line communicating with the bob at one end, and at the other with one of the axle rods, by a thimble, deſcribed under F and G, *fig.* 1. F, the line and thimble before named. G, a ſmall axle, with its lines, levers, pulleys, &c. particularly deſcribed under letters H, I, K, L, *fig.* 1. H, rollers for the cloth, and their cog-wheels and ſtops. I, a lever, with its catch and ſtop to the wheel of H, which is on the other ſide of the pillar of A, near the middle of it, and falls into the cog-wheel of H, which line communicates with the lower end of the catches on H and L, and paſſeth through ſmall pulleys, fixed under the catches, on the inſide of the frame A, that, by the preſſure of the upper extremity of the ſaid lever, the catches are raiſed out of the cogs of their wheels, to give liberty for winding the cloth when ſhorn on the roller of H, ſituated near to I. K, a roller to guide the cloth, when wound forwards, that it may keep its ſituation on the ſurface of C: it is placed near the axle G, on ſteps, in the ſame direction fixed to the pillars of A. L, an axle, with its handles, cog-wheel, and ſtop, reſting on B, with its near ſtop. This axle has an aperture through the middle of it lengthwiſe, to admit the cloth through. Now when the cloth is ſtretched from one of the rollers of H to the other, by turning L to the right, more regular tightneſs is given to the cloth, and better fits it for the action of ſhearing. For effecting the progreſſion in ſhearing and working the ſhears, M is a ſmall ſword, fitted on the handle of the projection of E at one end, and at the other on the crank handle of N. N, a crank, with its pully with one groove, and a ſmall five-groove pulley. Or this may be reduced to a ſmall one-groove pulley, of about 3 inches diameter. The larger one-groove pulley carries a band to the power that drives the machine. The ſituation of this crank is nearly the ſame as S, *fig.* 1, and produces the like effect. O, is an axle, with a large five-groove pulley and ſcrew pinion. Theſe pulleys of N and O have their bands, and deſcend in their dimenſions, as particularly deſcribed under letter P, *fig.* 2. P, a roller, with its cog-wheel, on which the bands wind that carry forward D, with all the other ſhears, more or leſs, faſtened together by a rail, at their proper diſtances from each other (as in drawing), that each may take its proper ſhare of cloth, being ſituated as deſcribed under letter C. Bands from P to D carry forward the ſhears of D. For ſtopping this frame, the ſtop part of *fig.* 1, under letters U, V, W, X, muſt be put to it, fixed to the rails and pillars of A. Q, is a projection attached to D, and will ſtop this frame when the parts above directed are fixed to it in the manner directed, *fig.* 1. R, is a line attached to the ſhears of D, and paſſing through a ſmall pulley fixed in the back rail of A, runs through another pulley fixed in a convenient ſituation over the frame of this ſaid *fig.* 3, and by pulling its extremity draws back the ſhears of D when they have cut their board of cloth. For working this machine, the cloth is wound on the upper roller of H, and round a ſmall roller at the upper end of A, and extended down C, and under K, and to the other roller of H, where it is attached; the ſtop of the upper roller falling into its wheel, the cloth is tightened by the lower roller and the handles of the roller. L, their reſpective catches falling into the cogs of their wheels, which keep the cloth in a tight ſtate, then throwing back the catch of G, the ſhears of D are let down to their work, when, by means of R, they are brought to their proper ſituation on B. Then lift up the lever of the ſtop-frame into its notch, as directed under letter S, *fig.* 2, and the machine works. When the machine ſtops, as before directed, and particularly deſcribed, *fig.* 1, under X, to ſhift the cloth for cutting another length, preſs down the near extremity of I of this third figure, and wind the cloth that is cut on H. When lifting up the ſaid extremity of I, the cloth may be tightened as above deſcribed, and the ſhears of D ſhifted to continue their work. *Fig.* 4. For raiſing a ſhag on cloth preparatory to ſhearing. A, the ſide and end rails, legs and pillars, with its teaſle, frames, and cotters. B, the frames, one open and the other ſhut, which turn on hinges, and when ſhut ready for work, are faſtened by buttons ſcrewed looſely to C. C, is a frame mortiſed, to fit four ſides of B, when ſhut; and by projections, or ſides fixed to its four corners, rides in the groove of a third frame, fixed to the rails of F. D, a third frame in the inner grooves, or two ſides of it; C rides this frame, is attached to F, its projection ſlides through the gutters or flutes of L, when working. E, the double crank, with its large pulley, which by a band goes to the working power. Theſe cranks ſtand in contrary directions, on the ſame axle, that the frame may work alternately. F, working rails, fitted on the crank handles, and faſtened on by ſcrews. Theſe rails have a working joint near the ſide of G, and on the further ſide of G are attached, by ſcrews, to each end of D; and as E works the frames of D, which carry C and B, works round L, and ſo raiſe the ſhag. G, the pulleys, fixed in their frames, over which F rides. H, the board for raiſing, in its inclined poſture, with the cloth paſſing over it from one roller of I to the other. I, the rollers, ſituated before and behind H, and attached to the legs of A, by ſcrews, the gudgeons riſing on ſteps; and at the upper end of H is a ſmall roller, to guide the cloth round the end of H, with ſwells for both lifts of the cloth, after the manner of *fig.* 2, under the letter G. K, the check to the fore roller I, which at one end is attached to one of the legs of A, and near that end lies over the ſame roller, and hollowed to fit it, and at the other end carries a weight, as in drawing. L, two pieces of plank, ſituated on both ſides H, at the upper termination of M. The inſide of the ſaid planks are fluted or guttered to the angles of L, which ſtands at the foot of A. The ſmall projection at the top of L is a pattern of the ſlides fixed to the ſides of D, which paſs through the aforeſaid angle when the frames are working, which raiſe them to and from the cloth.

To

To effect the revolution of the ſlides that carry C, the top piece of L is faſtened to the ſide of its plank, at or near the upper end, by a ſcrew, on which it moves, and at or near the bottom end it is faſtened to its plank, but with the liberty to play. Now when D, by its ſlides, has paſſed through the gutter, the lower end of the top piece of L falls, and forms a bridge, to carry the ſlides of L to the top of the gutter, for the making of another revolution. M, are ſmall ſwords, terminating in L, and faſtened with pins, and paſſing through ſockets fixed to the rail of A, and mortiſed at the lower extremity into N, where they move on pins. N, a ſtrong rail, extending along the ſide of A, having a joint in it, and turning on pins in a mortiſe fixed to the pillars of A. O, an axle, with ſmall projections at its ends, in ſteps, lying on the lower rail of A, extending from one ſide of the machine to the other. P, ſmall ſwords, one tenoned into the projection of O, and the other admitting the near extremity of N, through a mortiſe where it moves upon a pin. Q, an upright leg, faſtened at the lower end to the axle of O, near the lower rail of A. Now by turning this leg to right or left, it moves O, and O, by its projection, raiſes and lowers the near extremity of N, and N raiſes and ſinks L, which has a like a effect on B, C, D; ſo that, by theſe mediums, B is brought into contact with H in all neceſſary degrees. R, is a cog-wheel, its ſituation is on the further extremity of the back roller of I. S, two catches, for carrying forwards R, attached to I at one end in mortiſes, and moving on pins, and the other working the cogs of R. T, the working leg, fixed to the further pillar of A by a ſcrew, as in drawing. The upper extremity of the ſaid leg goes through a ſocket, fixed to the further rail of F, near the upper part of it. Now, by the vibration of this ſaid extremity of T, in its ſocket, by E working F, S carries round R, and by varying the pins of S nearer to, or more diſtant from, the centre of its motion, the ſaid R is carried forwards either faſter or ſlower. For ſhifting B and C to right and left of H, for the purpoſe of raiſing more regularly, U, a cog-wheel and ſtop of the under ſide, with a handle near the periphery of the ſaid cog-wheel, to act as a crank on the top-ſide. V, three rails. The rail that croſſes the top of H is tenoned into the extremities of thoſe that form or lie to the right and left of it. W, the ſteps on which V rides, with pins to keep the rails of V in their place. X, bands faſtened at one end to C, and the other extremity paſſing through nuts fixed to V, where they are faſtened by the end ſcrews working through the ſide of their nuts againſt them. Y, two legs, faſtened together at the lower end by a working joint at the upper ends. The further is attached to the near rail of F, and that nearer works upon a pin, a little ſhort of its extremity, with a catch falling into the teeth of W; and as it works U round, there is another catch on the ſame ſide, which prevents the ſaid U from working back. Now F works Y, and Y works U, and U works by its crank V, and X ſhifts C from right to left by turns in the degree neceſſary by tightening and ſlackening the band X. Z, is the near ſtop of E, ſcrewed to a ſhort rail at one end, tenoned into the near pillar of A, near which the ſtep of A is ſituated. The other extremity of the ſaid rail is fixed under a pin, on a ſhort upright leg, which at the lower is ſcrewed to the inſide of the near rail of A, near which the ſtep of A is ſituated. Now to ſet this machine to work, or to ſtop it when working; for the latter, move the ſaid rail from under its pin, and by raiſing it the band on E ſlackens, and the machine ſtops; and having extended the cloth from the near roller I, on which it is wound, to that behind H, and fixed the handles in B, with its cutters, and buttoned them down, you muſt then bring the extremity of Z under its ſaid pin, and the machine works.

Mr. Harmar's Machine for Dressing Woollen-Cloth &c. Plate CCCXLVIII.