

New Inventions.

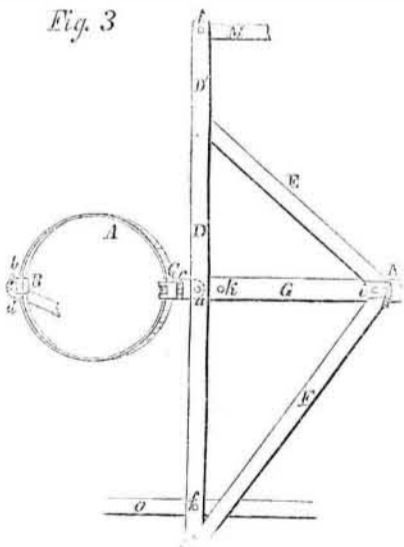
Improved Tailor's Measure.

When it is recollected that the human figure is the very acme of symmetry and grace, it is somewhat astonishing to see so many awkward and ungraceful-looking persons walking our streets, and we are forced into the conclusion that their tailor did not do them justice when he cut their clothes. Too much attention to dress, as a means of adornment, cannot be too highly censured in men, but a slovenly disregard is just as culpable; and as we must wear coats and the like, it is correct and proper that we should have them made a proper fit. "But how can we obtain this desirable end?" exclaim all our readers who wish to be well fitted. As we proceed in our description of the instrument invented by Simeon Corley, of Lexington, S. C., and patented by him December 29, 1857, for the purpose of taking accurate measurements of the body, and of afterwards drafting the garment on cloth, the question will be fully answered.

Figs. 1 and 2 are back and front views of a gentleman getting measured for a new coat, and at the same time showing the application of the instrument, of which Fig. 3 is a view of the principal portions, and Fig. 4 shows the method of drafting from measurements taken by the instrument.

The instrument itself consists of two principal parts, the band, A, of thin steel, or other metal, the object of which is to obtain exactly the measure of the "scye," and apply it to the cloth. This hoop can be contracted or enlarged, and has a set screw, b, and slide, B, which secure it at any circumference—the hoop being graduated into inches and fractions. It has also another slide, C, to which a pivot, a, is attached by a hinge, c; this slide can be moved to any position on the hoop. The slide, B, has a pivot, d, rigidly attached to it. The other principal part of the instrument is a triangle, D E F, also of thin steel, or other flexible and strong material, with an extending arm, D', forming a continuation of D.

Fig. 3



This slide, D and D', should be long enough to extend from the waist upwards, in front of the shoulder, and over it as far as the middle of the back of any customer. The sides, E and F, form respectively angles of about 50° and 40°. To the angle, E F, G is added, to strengthen the triangle, and also to keep the angle, E F, at the same distance from D, when drawn over the body, as when laid flat upon the cloth. At the bottom of D is a hole, f, and a pivot, g, and at the junction of E F G is a hole, h, and pivot, i, at the junction of D G is a hole and pivot, k, and at the top of the arm, E, is a hole, t. The pivots, g i k, project from both sides of the instrument, so that it can be made applicable to either side of the body. M N ● are three straps, each having a stud at one end, to hook into one of the holes, and at some distance from its other end, each is perforated at intervals of about half an inch. These straps serve to attach the

instrument to the body. A tape measure having a hole at one end, to hook on to any of the pivots, completes the arrangements.

Before taking a measurement, the height of

the neck seam, at the center of the back, should be marked on the customer, as seen at o, (Fig. 2,) and a mark should be made on the back seam, opposite or between the two

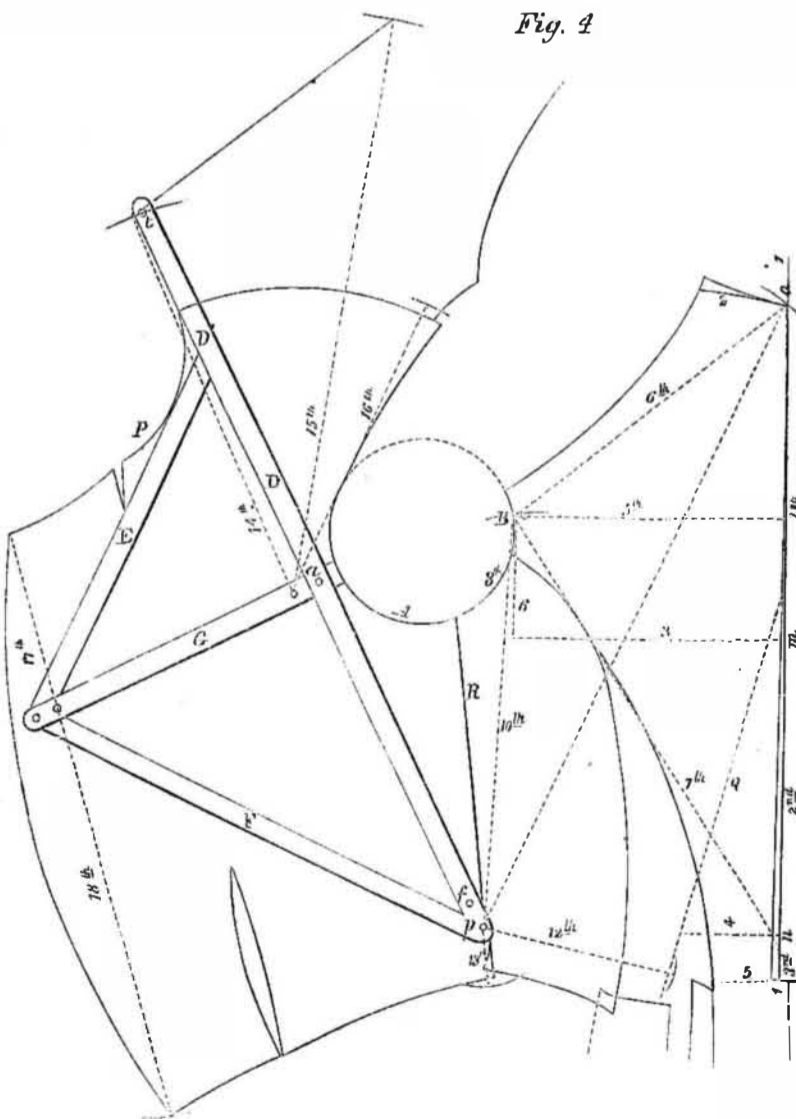
CORLEY'S INSTRUMENT FOR DRAFTING GARMENTS.



most prominent points of the blade bones (seen at m, Fig. 2), and the natural length of the waist should be marked on the back seam—seen at n, Fig. 2. These preparations being

made, extend the hoop, A, and slip it over the arm until it encircles the "scye" as close as possible to the body, and then contract it until it fits closely, but comfortably, taking

Fig. 4



care to bring the pivot, a, opposite the middle of the place where what is termed the "back scye" ought to be, then by turning the set screw, b, the hoop will be fixed to the right size. Suppose, for example, that the instrument is applied to the right side, as in Fig. 1;

place the triangle with its hole near k, on the pivot, a, of the slide, c, and bring the arm, D', against the collar seam, and draw it up, moving the slide, C, until the side, E, is near the collar seam, in front, and while in that position attach the strap, M, to the hole, t, and

lead the strap under the left shoulder back to the same place, as seen in Fig. 2. Then turn up the lapel of the coat, and pressing the triangle down flat against the center of the breast, draw the strap, N, under the left arm, and attach it to d; then pressing the triangle closely downward and backward, draw the strap, ●, tightly round the waist, and attach it to one of its own studs. The instrument being adjusted, take the first measure from o to m, Fig. 2, the second from m to n, the third from n to the waist, and the fourth from the waist for the length of the skirt. Then attach the tape measure to d, and take the fifth measure across to the "back seam;" the sixth to o, and the seventh to point n. Note the "scye" measure on the hoop, A, and the number of inches from d to C, which are the eighth and ninth measures. Next place the tape measure on point, g, and take the tenth measure to d, the eleventh to o, the twelfth to n, and the thirteenth to the natural waist. Then move the tape to k, and take the fourteenth measure over the right shoulder to o, the fifteenth over the same shoulder to m, and the sixteenth to d; afterwards remove the tape to i, and take the seventeenth and eighteenth measures, as seen in Fig. 1. Take the breast and waist measures in the usual way, and the operation is finished. The dotted lines on the arm, E, (Fig. 2,) show the position it should properly take when adjusted.

To draft from the above measurements, draw upon the cloth a straight line, l, Fig. 4, and a short one, 2, nearly square; mark out on line 1, commencing with its junction with 2, the first, second, third and fourth measurements. Erect at the terminal points of these measures upon line 1, the perpendiculars, 3, 4 and 5, and measure out on line 3, the fifth measure, and square line 6 up to it. Then place the end of the tape at the junction of 1 and 2, which corresponds with o, Fig. 2, and take the sixth measure to line 6, from thence take the seventh measure to the waist, and draw the line. Next draw the line from a point in the line 1, opposite the intersection of the fifth and sixth measures on the line 6, to the terminus of the seventh measure, where the natural length of the waist is indicated, and mark out and cut the back to any shape that fancy or fashion may dictate. The outline of the back is shown in Fig. 4 on the right of R by firm black line. Next lay the "indicator," or "form transfer," or instrument, on any part of the cloth from which the front part of the garment can be cut with advantage, and apply the eighth measure, by marking around the inside of the hoop, A, and afterwards apply the tenth measure, to establish the proper position of the triangle relatively to the hoop; then mark around the triangle to fix its position, so that it may not be lost in future markings. Then lay off the eleventh, twelfth, and thirteenth measures, from the pivot, g, describing a short arc at the end of each. Afterwards lay off the fourteenth, fifteenth and sixteenth measures, from the pivot, k, and the seventeenth and eighteenth from the pivot i. Next take the back that has been cut, and place the intersecting lines of the fifth, sixth and seventh measures on the back, to the pivot, a, and bring the back in the position relatively to the front in which the measures were taken, that is to say, the top of the back to the arc of the measure 11, and mark the upper part of the side seam on the front from the back. Afterwards place the hand on the line 3, where it crosses at the side seam, and draw the middle of the back at the waist up to the arc described by the twelfth measure, and then form the remainder of the side seam from the back. Now remove the back, and place it as represented, in the upper part of Fig. 4, bringing the point, o, to the arc described by the fourteenth measurements, and the terminal point of the fifth and sixth measurements to the arc described by the eleventh measurement, and the point, m, to the arc described by the fifteenth measurement, letting the top of the back or neck rest on the line indicated by the edge of the arm, D', of the instrument. While the back is in position mark from it the

shoulder seam, the neck gorge, and the "scye." Then apply the nineteenth measure to mark the throttle, and the breast and waist measures, adding to the breast any surplus for lapel as fashion may demand. From the bottom of the fore part to the measures thirteen and eighteen, give the spring to the seam under the arm, as the measure thirteen may indicate.

The advantages obtained by the use of this instrument may be set forth as follows:—First, Getting the exact size of the "scye" at the right place, by keeping the hoop, A, close against the body during the time of taking the measurement. Second, By placing the arm, D, of the triangle against the neck seam, and drawing all sides of the triangle closely against the breast, as described, a base line is unerringly established from neck to waist, thus bringing the pivot, G, at the waist backward or forward on the side of the customer, as his shape may need—the measures from the pivot, G, establishing correctly the relative positions of all the other points of the garment. Third, The relative positions of all points in coat-drafting are established, and every part of the garment is enabled to be delineated accurately in its relation to every other part, without which no garment can fit. For tailors it is a valuable addition to their usual tools of trade.

For further information address the inventor as before stated.

Scientific American.

NEW YORK, MARCH 27, 1858.

Legislation upon the Patent Laws.

The constitution of the United States confers upon Congress the power to promote the progress of science and the useful arts by securing to inventors the exclusive right to their discoveries for a limited time, and to make all necessary laws for carrying into execution such power. The first act having this object in view was passed on the 10th of April, 1790. Under this act, the fee required for receiving and filing a petition for a patent was only *fifty cents*! Two dollars were required for making out the patent, and an extra charge of one dollar was made for affixing the great seal. We suppose this great seal bore some resemblance to the mammoth turnip-like appendage which the British government is wont to attach to similar documents at the present day. Subsequent to this act, the power of Congress was invoked to amend it by the passage of bills during the years 1793 and 1794; also in 1800, 1819, and 1832. With the progress of the country, and the necessary demand for increased facilities to meet the wants of commerce, agriculture, and the industrial arts generally, it became evident that a more comprehensive and better system of protection was required to guard the rights of that class who alone could furnish the means necessary to develop those great interests. The next attempt at legislation on this subject was made during the years 1836-7, under the administration of President Jackson. Hitherto the system was almost "without form and void." The power to grant or refuse a patent was delegated to the Secretaries of State and War, and to the Attorney General. No examination was made into questions of novelty; it was left discretionary with those functionaries to grant a patent or not, according to their own notions of utility in the invention presented to them. This relic of a barbarous age is still continued in some European countries, and finds a warm defender in M. Jobard, of Belgium—an able writer, and one whose knowledge upon this subject could be worthily employed in breaking it down, instead of defending it against a successful experience of twenty years under an opposite system in this country. The acts of 1836-37 were steps in the right direction. Previous to this time there were few applications for patents, and

there was no security even in the issue of a patent, owing to the want of revision by men of artistic knowledge and experience. No one feared to infringe a patent, and the reputation of this species of property was so bad that it was with great difficulty that patentees could induce capitalists to aid them in bringing out their improvements.

The statute of 1836 changed the whole aspect of this matter. Confidence was inspired, and a stimulus was given to men of true genius who had hitherto kept out of a field mainly occupied by pretenders. The history of the progress of invention and discovery in our country is in a general way familiar to all intelligent readers; and if those who seem to delight to scoff at the sons of genius, because they sometimes exhibit an undue zeal for some *ignis fatuus*, will but reflect a moment, they will at once see that, without this useful class of patient thinkers, the world would be trudging along at a snail pace. The acts of 1836-7, considered as a whole, constitute a patent system the most perfect ever devised by the wit of man. It has not only wrought wonderful things for our country, but it has also thrown the shield of its protection over the rights of the inventor, and thus interposing, it guards both interests with judicious care. It is due to the memory of Hon. John Ruggles, then United States Senator from Maine, to acknowledge his indefatigable exertions in this matter. He devoted himself to this subject with equal zeal and success, from the inception of the bill to its final signature by the President, and at a time when his term of office was about to expire. Like all other works of human wisdom, however, time and experience have traced upon it certain slight imperfections, and it is necessary that Congress should know what they are, in order to legislate upon them in a proper manner.

The history of every attempt at patent law legislation, since the passage of the amendment of 1842, has resulted in failure. It is true many attempts at reforms have been made; conventions pretending to represent inventors have been held, but were composed generally of speculators and schemers; lawyers skilled in all the intricacies of their profession have been consulted, and of course could stop short of nothing but a "new code," more complicated with details than the first. The press has fulminated its views upon this subject with a zeal sometimes not according to knowledge. Senators and Representatives have from time to time peered into these mysterious statutes, seeming to wonder what all this rigmorole is about; and if they have not confessed it, their action has usually indicated either a profound ignorance or a stolid indifference to the whole subject. Senator James, of Rhode Island, tried his hand at this business while he was in the Senate, and made a sad blunder. Mr. Taylor has during this session unwittingly adopted a bill which, we doubt not, he is now ashamed of; and so the matter has gone on with all the irregularity of a disordered clock until now.

A very sensible movement was made during the last Congress, by the House Committee on Patents, to amend the laws; a bill was reported, printed, and—neglected. There was no one to engineer it through, as no one in particular was likely to be benefited by its passage. If it had only contained a clause which could be tortured into a revival of some dead patents, the bill would have had friends among the gang of lobbyists who seem to hover about the Capitol, watching their own interests like crows over a dead carcass.

The bill reported by Senator Evans, as published in the last number of the *SCIENTIFIC AMERICAN*, is altogether the most sensible movement at reform in the patent law that has been attempted for many years. It wisely ignores the lobby gang, and confines itself to a few simple changes in the present admirable system, without undertaking to tear down and build anew.

We will briefly sum up the disabilities

which are designed to be removed by this bill. It confers upon the Commissioner the power to compel the attendance of witnesses in contested cases pending before the Patent Office. At present the Commissioner has no power whatever in such cases; and it is oftentimes exceedingly difficult to adjudicate upon them, for the want of such testimony as he cannot secure, unless he is willing to pay *experts*, which, of course, he will not do. The cause of justice and truth can oftentimes be maintained by the proper exercise of the power proposed to be conferred on the Commissioner by this bill. It is unnecessary for us to argue in favor of the establishment of an Appeal Board to hear and decide upon rejected cases. We have already fully exhibited its great importance, in previous articles. It is working now most admirably, and should become an established branch of the Patent Office. If this Appeal Board does not do justice to the applicant, he can appeal his case to the Commissioner upon the payment of a moderate fee, instead of being compelled to take it to an outside tribunal. The bill dispenses with models of designs, and authorizes the Commissioner to restore to applicants or otherwise dispose of all models of rejected cases. The utility of this provision of the bill must be apparent to all. A very large space in the Patent Office is given up as a sort of receiving tomb for this class of models; they are in a state of wretched disorder—covered with dust and rust. Many of them cost much money to the applicants who would gladly receive them back, and they are certainly of no use to the Patent Office, as the drawings and specifications are retained for reference.

This bill, should it become a law, will wipe from our statute-book an ugly blot which has disgraced it for many years past. We refer to that feature which specifies that a British subject shall pay \$500 on making his application for a patent, and all other foreigners shall pay \$300. We can scarcely call to our aid language sufficiently strong to express our abhorrence of this contemptible discrimination. The English press has spoken against it with great justice, and we confess to a sense of humiliation when we look this matter full in its face. We are glad this bill proposes to abolish the needless and indecent distinction, and thus invite upon one common platform the sons of genius from every quarter of the globe.

The present system of allowing two-thirds of the patent fee to be withdrawn in cases of rejection is undoubtedly a bad one. There are claims of this character resting against the Patent Office running over a space of twenty years; they are liable to be presented at any time; and are sufficient in amount to bankrupt the Office. We are confident that we but speak the sentiment of every reflecting inventor, when we say that this system should be abolished without delay. The schedule of fees is, on the whole, very satisfactory. We think, however, that a fee of *ten* instead of twenty dollars would be sufficient to require from an applicant on an appeal to the Commissioner of Patents; and that ten cents per hundred words is quite sufficient for certified copies of papers deposited in the Office. We hope the committees will make these changes; or else the above tax is likely to bear very heavily upon a few, particularly that clause in regard to certified copies.

We have now presented a brief and necessarily imperfect view of the history of patent law legislation in this country, together with a synopsis of the bill now before Congress. It is an important subject; one which ought to receive earnest attention. This bill is the best amendment which has been reported since 1837, and deserves to be incorporated into the statute-book without delay. Will it be done? We have strong fears on this point. The committee are cautious and need to receive strong assurances that there is no snake in the grass; and we call upon inventors throughout the country to write at once to their Congressional Representatives, urging upon them the importance of the bill. Members of Congress are strangely indifferent to

this whole subject; political questions absorb their attention; and thus inventors are forgotten. Opposition to the passage of this bill it is expected will be made by those whose selfish schemes have been frustrated, and who would like to saddle down inventors by a complicated system which would destroy their future prospects. Inventors will you remain unconcerned in this matter? or will you do something to aid the passage of this simple bill as reported by Senator Evans?

The Polypi.

These are a division of the animal kingdom one step higher in their organization than the infusoria, of which we gave a short account some time ago. They were first observed by M. Leeuwenhoeck, of London, in 1703, in some fresh water; but since that time we have become aware of their existence in water of all kinds, fresh and salt. The name of "polypi" is derived from two Greek words, signifying many feet, as all of them have a number of long arms or feet (it is scarcely proper to call them either) placed around their mouth, which is in the center of their bodies. Indeed, if you take an india rubber bag, and place a number of strings around its mouth, you have a very good typical polyp.

The polypi are not all microscopic, but some attain the size of the cuttle-fish, from which we obtain the beautiful color *sepia*. This is a dark liquid secreted by the animal, which cannot move very fast; so when a large fish casts his greedy eye upon him, the cuttle-fish squirts out this *sepia*, and makes a watery cloud so thick around him that the enemy is quite be-fogged, and is glad to escape from so dense a mist, instead of having the meal he expected. The actinia are members of this division—the beautiful sea anemones; they fasten themselves to a stone or rock, and spreading out their colored tentacles or arms, wave them gracefully beneath the waves. The eye is never tired of gazing on their elegant motions and gorgeous hues; they are the most lovely flowers in old Ocean's garden. These are soft-bodied polypi, having no skeleton; but there are some which make for themselves outside coats of carbonate of lime. Not only do myriads live together in a single concrete house, but so numerous are they that they form islands so large that men can live on them, and animals roam in woods growing on land raised from the sea by a little thing not much larger than a pin's head; these are the corals, whose history is always interesting, and the story of whose life is the romance of aqueous creation.

The most extraordinary of all the polyps' peculiarities is the fact that some of them can be cut up into little bits, and each piece will instantly begin life on its own account, as a new and perfect polyp. They increase by *gemination*, or the young ones grow like branches from the parent stem, and when they are old enough, disconnect themselves and float away. These arms, with which they are all provided, are their means of offense and defense, and with them they also collect their food, by forcing a current of water down the central aperture of their bodies, or mouth. Some can dilate their mouths to an enormous width, and the sense of touch is very finely developed in them. Some naturalists have thought they have seen traces of a rudimentary eye.

The anatomy and life of polyps is a most interesting study, and is calculated in the highest degree to call forth human admiration at the skill and order of their construction and habits. The study of life is always gratifying to living beings, and never more so than when observed in these, the lowest forms.

Chalk for Warts.

A correspondent—W. H. Bennett, of Warwick, R. I.,—informs us that by rubbing chalk frequently on warts, they will disappear. In several instances known to him in which this simple remedy was tried, it proved successful. We have known slightly moistened pearl-ash to remove warts by rubbing it upon them.